J. N. REDDY

jnreddy@tamu.edu; http://mechanics.tamu.edu/
https://orcid.org/0000-0002-9739-1639
https://www.webofscience.com/wos/author/record/1785472
https://scholar.google.com/citations?hl=en&user=SAzgqS0AAAAJ

Short Vitae

Dr. Reddy is a Distinguished Professor, Regents' Professor, and the holder of the *O'Donnell Foundation Chair* IV in J. Mike Walker '66 Department of Mechanical Engineering at Texas A&M University, College Station, Texas. Dr. Reddy earned a Ph.D. in Engineering Mechanics (1974) from University of Alabama in Huntsville. He worked as a Post-Doctoral Fellow in Texas Institute for Computational Mechanics (which is now known as Oden ICES) at the University of Texas at Austin (1974), Research Scientist for Lockheed Missiles and Space Company, Huntsville (l974-75), and taught at the University of Oklahoma (1975-1980), Virginia Polytechnic Institute & State University (1980-1992), and at Texas A&M University from 1992 till now.

Dr. Reddy's earlier research has involved the development of dual-complementary variational principles in theoretical mechanics, mathematical theory of finite elements (especially mixed finite element formulations), refined mathematical models of laminated composite plates and shells, penalty formulations of the flows of viscous incompressible fluids, least-squares formulations of solid and fluid continua, and extensions and applications of the finite element method to a broad range problems, including: composite structures, numerical heat transfer, computational fluid dynamics, and biology and medicine. His shear deformation plate and shell theories and their finite element models and the penalty finite element models of non-Newtonian fluids have been implemented into commercial finite element computer programs like ABAQUS, NISA, and HyperXtrude.

The current research of Dr. Reddy and his group deals with refined shell theories and associated robust shell elements which are free of all types of locking and nonlocal beam and plate theories using the ideas of Eringen, Mindlin, Koiter, and others. He and his group developed a thermodynamically based strain gradient elasticity theory that contains Mindlin's model as a special case. The group also conceived a transformative non-parametric network-based methodology to study damage and fracture in solids (GraFEA), which yields mesh independent results for fracture and its propagation and does not require user input about the possible fracture initiation and propagation. His works on nonlocal mechanics ideas and their incorporation into structural theories to predict the bending, buckling, and vibration response (the main idea is to embed micropolarity, which brings an additional layer of kinematics through the micro-rotation degrees of freedom within a continuum model to account for the microstructural effects during deformation to study architected materials and structures) are receiving attention of fellow researchers around the world.

Dr. Reddy is the author of a large number of journal papers and 25 books (several with second, third, and fourth editions) on energy principles, variational methods, plates and shells, composite materials, mechanics of solids, and the finite element method (linear and nonlinear) and its applications. Dr. Reddy has delivered over 210 plenary, keynote, and special lectures at international conferences; taught about 130 short courses on continuum mechanics, variational methods, linear and nonlinear finite elements, composite materials, and nonlocal structural theories; he advised 60 postdoctoral fellows, visiting professors, and research visitors, and guided and co-guided 128 graduate students (78 Ph.D. and 50 M.S. students).

Dr. Reddy has earned both teaching and research awards at every institution he has served. He also mentored and collaborated with faculty members at other universities in Europe and Asia. At Texas A&M, he has won the departmental graduate teaching award, College of Engineering's Association of Former Students' (AFS) Award for teaching, University level AFS Awards for Teaching Excellence. He received the Ralph R. Teetor Education Award from the Society of Automotive Engineers and the Archie Higdon Distinguished Educator Award from the American Society of Engineering Education. Professor Reddy's teaching and mentorship have profound local and global impact. He helps not only the students who come in direct contact through his classes and advising on MS and PhD degrees, but all those around the world who are connected to Dr. Reddy through his books, papers, and lectures.

The most significant national and international awards are:

- *The Lifetime Achievement Award*, International Conference on Computational & Experimental Engineering and Sciences (ICCES), Singapore (2024)
- *Michael Païdoussis Medal*, Royal Society of Canada, Waterloo, Canada (2023)
- *Leonardo da Vinci Award*, European Academy of Sciences, Madrid, Spain (2023)
- *IACM Congress (Gauss-Newton) Medal,* International Association of Computational Mechanics (IACM)(2022)
- *Member*, the European Academy of Sciences and Arts (2021)
- SEC Faculty Achievement Award from Texas A&M University (2020)
- Honorary Member, *The European Academy of Sciences* (2020)
- Corresponding Member, *The Royal Academy of Engineering of Spain* (2019)
- Foreign Member, The Chinese Academy of Engineering (2019)
- Stephan P. Timoshenko Medal, American Society of Mechanical Engineers (2019)
- Eugenio Beltrami Senior Scientist Prize, the International Research Center for Mathematics & Mechanics of Complex Systems (M&MoCS), Università dell'Aquila, Italy (2019)
- Theodore von Karman Medal, American Society of Civil Engineers (2018)
- JN Reddy Medal in Mechanics of Advanced Materials and Structures (inaugural) (2018)
- JS Rao Medal in Vibration Engineering, Vibration Institute of India (2017)
- John von Neumann Medal, US Association for Computational Mechanics (2017)
- Foreign Fellow, Brazilian National Academy of Engineering (2017)
- Foreign Fellow, Canadian Academy of Engineering (inaugural batch) (2017)
- Prager Medal from the Society of Engineering Science (2016)
- ASME Medal, American Society of Mechanical Engineers (2016)
- Member, the Academy of Medicine, Engineering & Science of Texas (TAMEST), 2015.
- Foreign Fellow, Indian National Academy of Engineering (2015)
- Member, US National Academy of Engineering (2015)
- IACM O.C. Zienkiewicz Award, International Association of Computational Mechanics (2014)
- Raymond D. Mindlin Medal, American Society of Civil Engineers (2014)
- Honorary Member, American Society of Mechanical Engineers (2011)
- Distinguished Research Award, American Society for Composites (2004)
- Belytschko Medal, US Association for Computational Mechanics (2003)
- Excellence in the Field of Composites, American Society for Composites (2000)
- Nathan M. Newmark Medal, American Society of Civil Engineers (1998)
- Archie Higdon Distinguished Educator Award, American Soc. of Engineering Education (1997)
- Charles Russ Richards Memorial Award, American Society of Mechanical Engineers (1995)
- Worcester Reed Warner Medal, American Society of Mechanical Engineers (1992)

Dr. Reddy is a *life fellow* of the American Society of Mechanical Engineers (ASME), and a *fellow* of the American Academy of Mechanics (AAM), the American Institute of Aeronautics and Astronautics (AIAA), the American Society of Civil Engineers (ASCE), the American Society for Composites (ASC), International Association of Computational Mechanics (IACM), U.S. Association of Computational Mechanics (USACM), the Aeronautical Society of India, and the Institution of Structural Engineers, United Kingdom.

Dr. Reddy serves on the editorial boards of about two-dozen journals in applied and computational mechanics. He is the founding Editor-in-Chief of *Mechanics of Advanced Materials and Structures, International Journal of Computational Methods in Engineering Science and Mechanics,* and *International Journal of Structural Stability and Dynamics*.

Dr. Reddy is ranked 10th internationally and 4th nationally in Mechanical and Aerospace Engineering by https://research.com/scientists-rankings/. Dr. Reddy is one of the original top 100 *ISI Highly Cited Researchers* in Engineering around world with over **47,813** citations and h-index of 97 as per Web of Science; the number of citations is over **105,992** with h-index of 122 and i10-index of 712 (i.e., 712 papers are cited at least 10 times) as per Google Scholar. For more complete information, visit **http://mehanics.tamu.edu/**

CURRICULUM VITAE

PERSONAL

Naturalized U.S. citizen

EDUCATION

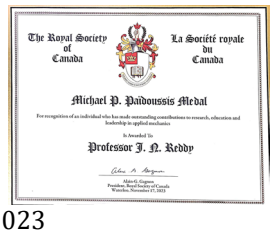
- B.E. (5yr Course), Mechanical Engineering, Osmania University, Hyderabad, Telangana, India, 1968.
- M.S., Mechanical Engineering, Oklahoma State University, Stillwater, Oklahoma, 1970.
- Ph.D., Engineering Mechanics (*Advisor:* Dr. J. T. Oden), University of Alabama in Huntsville, 1974.
- Post-Doctoral Fellow, Texas Institute for Computational Mechanics, University of Texas, Austin, 1973-1974.

PROFESSIONAL EXPERIENCE

- **1974**: *Research Scientist*, Lockheed Missiles and Space Company, Huntsville, Alabama.
- **1975-1978**: *Assistant Professor*, School of Aerospace, Mechanical, and Nuclear Engineering, University of Oklahoma, Norman.
- **1978-1980**: *Associate Professor*, School of Aerospace, Mechanical, and Nuclear Engineering, University of Oklahoma, Norman.
- **1980-1985**: *Professor*, Engineering Science and Mechanics Department, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- **1986-1992**: *Clifton C. Garvin Professor* of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia.
- **1992-2020**: Inaugural appointment to the *Oscar S. Wyatt, Jr. Chair* in J. Mike Walker '66 Department of Mechanical Engineering
- **1998-present**: *Distinguished Professor*, Texas A&M University, College Station, Texas.
- **2010-present**: *Regents' Professor*, Texas A&M University, College Station, Texas.
- **2020-present**: the *O'Donnell Foundation Chair* IV in J. Mike Walker '66 Department of Mechanical Engineering; **adjunct faculty appointments** in Department of Civil Engineering, Department of Aerospace Engineering, Department of Mathematics, and Department of Material Science and Engineering at Texas A&M University, College Station, Texas.

HONORS AND AWARDS

Significant Institutional, National, and International Honors and Awards



- **The Lifetime Achievement Award**, 30th International Conference on Computational & Experimental Engineering and Sciences (ICCES), Singapore, August 2024
- **The Michael Païdoussis Medal**, Royal Society of Canada, Nov 2023
- **Leonardo da Vinci Award**, European Academy of Sciences, Oct 2023
- **The IACM Congress (Gauss-Newton) Medal**, International Association of Computational Mechanics (IACM), July 2022
- **Distinguished Visiting Professor**, the Mechanics, Surface, and Materials Processing (MSMP), Laboratory of Arts et Metiers ParisTech (ENSAM) at Aix en Provence (2020-2022)
- **Foreign Member, the European Academy of Sciences and Arts** (2021)
- **O'Donnell Foundation Chair IV**, Texas A&M University (Sept. 2020)

- **SEC Faculty Achievement Award**, Texas A&M University (April 2020)
- **Honorary Member** (only engineer in this category of Nobel laurets), The European Academy of Sciences (Feb 2020)
- **Foreign Member**, The Chinese Academy of Engineering (Nov 2019)
- **Corresponding Member**, The Royal Academy of Engineering of Spain (Nov 2019)
- ***The S. P. Timoshenko Medal,*** American Society of Mechanical Engineers, 12 November 2019, Salt Lake City, Utah.
- ***The Eugenio Beltrami Senior Scientist Prize***, the International Research Center for Mathematics & Mechanics of Complex Systems (M&MoCS), Università dell'Aquila, Italy, June 2019.
- *Member*, NAE Awards Committee, The Council of the National Academy of Engineering (2019-2020 – a two-year term)
- *Honorary Professor*, College of Engineering, Universidad Peruana de Ciencias Aplicadas, Lima, Peru, 2018-present.
- *Graduation Speaker,* College of Engineering, Vaal University of Technology, South Africa, 12 September 2018.
- ***The JN Reddy Medal in Mechanics of Advanced Materials and Structures,*** Inaugural Recipient, The First International Conference on Mechanics of Advanced Materials and Structures (MAMS), 18-20 July 2018, Torino, Italy.
- **Special Issue of the Mechanics of Advanced Materials and Structures** (MAMS) journal, Honoring Professor J. N. Reddy on his 70th Birthday, Vol. 25, Nos. 15-16, DOI: 10.1080/15376494.2018.1503627, 2018.
- **SES–Prager special issue of MAMS** (*Mechanics of Advanced Materials and Structures*) journal honoring Professor J. N. Reddy as recipient of the Prager Medal, Vol 25, No. 14, DOI: 10.1080/15376494.2018.1469229, 2018.
- ***The Theodore von Karman Medal***, The American Society of Civil Engineers (ASCE), 2018; it is the highest mechanics award from ASCE.
- ***The JS Rao Medal in Vibration Engineering 2017***, Inaugural Recipient, The Vibration Institute of India, Dec 28, 2017.
- ***Foreign Fellow***, Brazilian National Academy of Engineering, November 2017.
- ***The John von Neumann Medal***, The US Association of Computational Mechanics (USACM), 2017; it is the highest award given by USACM to honor individuals who have made outstanding, sustained contributions in the field of computational mechanics generally over periods representing substantial portions of their professional careers.
- ***Foreign Fellow*** (inaugural batch), The Canadian Academy of Engineering, June 2017.
- ***The Arthur Newell Talbot Distinguished Lecture***, University of Illinois at Urbana-Champaign, April 2017.
- ***ASME Medal*****,** American Society of Mechanical Engineers, 13 November 2016 (ASME Medal, established in 1920, is the highest award that the Society can bestow and is to recognize "eminently distinguished engineering achievement." Only one ASME Medal is awarded annually. Although Reddy has been honored by both the ASME Medal and Honorary Membership, each award has been made on the basis of different accomplishments).
- ***William Prager Medal***, Society of Engineering Science, July 2016; the prize is awarded for outstanding research contributions in either theoretical or experimental solid mechanics or both.
- ***Simpson Distinguished Visiting Professor,*** Department of Mechanical Engineering, Northwestern University, April-May 2016.
- ***Special Issue in Honor of 70th Birthday of Professor J. N. Reddy***, *International Journal of Structural Stability and Dynamics*, Vol. 15, No. 7, October 2015.

- ***Honoree**, Current Trends in Non-Classical Continuum Mechanics,* 14-15 December, Goa, India (a conference dedicated to Professor J. N. Reddy on his 70th birthday).
- ***Honoree**, International Conference on Computer Aided Engineering* 2015, 10-12 December 2015, GITAM University, Hyderabad, INDIA (conference dedicated to Professor Reddy on his 70th birthday).
- ***Honoree**,* Special Session titled, Design and Modelling of FGM Structures in Honor of Prof. J. N. Reddy, was organized at the *XXXVI IberoLatin American Congresso on Computational Methods in Engineering* (CILAMCE 2015), Pontifical Catholic University of Rio de Janeiro, Brazil, 22-25 November 2015.
- ***Honoree***, *52nd Annual Technical Meeting of the Society of Engineering Science* (symposium titled, ***Advances in Continuum Mechanics and Computational Engineering Science***, was organized in honor of Professor J. N. Reddy)
- ***Inductee**,* The Hall of Fame of the College of Engineering, Architecture and Technology, Oklahoma State University, Stillwater, October 17, 2015.
- ***Honoree**, International Conference on Composite Science and Technology* (ICCST/10), 2-4 September 2015, Lisbon, Portugal (conference was dedicated to Prof. J. N. Reddy on his 70th birthday).
- ***Foreign Fellow**,* the Indian National Academy of Engineering, September 2015.
- Member, The Interdisciplinary Committee of the World Cultural Council (by invitation only), 2015.
- ***Honoree***, *International Conference on Advances in Applied and Computational Mechanics* (a conference organized in honor of Professor JN Reddy on the occasion of his 70th birthday), 5-7 August 2015, Izmir, Turkey.
- ***Honoree***. Special Sessions organized in honor of Professor JN Reddy at the *Eighth International Conference on Advances in Steel Structures* (ICASS) and *IJSSD Symposium on Progress in Structural Stability and Dynamics*, July 22-24, 2015, Technical University of Lisbon, Portugal (a special issue of the *International Journal of Structural Stability and Dynamics* in honor of JN Reddy is published).
- ***Honoree***. Special Sessions organized in honor of Professor JN Reddy at the *18th International Conference on Composite Structures*, held in Lisbon, Portugal, June 15-18, 2015, Lisbon, Portugal (a special issue of the *Composite Structures* journal in honor of JN Reddy has appeared).
- ***Honoree***. Special issue of *Mechanics of Advanced Materials and Structures* journal on the occasion of the 70th Birthday of Professor Reddy has appeared.
- ***Member***, US National Academy of Engineering (NAE), Washington, DC, 2015.
- ***Member**,* the Academy of Medicine, Engineering & Science of Texas (TAMEST), 2015.
- *Distinguished Visiting Professor*, Centre for Advanced Composite Materials, the University of Auckland, New Zealand, 2015.
- ***The IACM Award*** (now named as the **O.C. Zienkiewicz Award**) from the International Association for Computational Mechanics (IACM), 2014.
- ***Raymond D. Mindlin Medal*** from the American Society of Civil Engineers, 2014.
- ***Finland Distinguished Professor*** (FiDiPro), Aalto University and National Technology Agency of Finland (Tekes), 2014-2018.
- *Visiting Professor* of the *Science without Boarders Program* of Brazil (University of Sao Paulo), 2014-2016.
- ***Chair of Excellence***, Universidad Carlos III de Madrid, Spain, 2014-2015.
- *Distinguished Visiting Professor,* City University of Hong Kong, Hong Kong, 2014.
- *Recognition for Career Achievement*, presented by the organizers of the *17th International Conference on Composite Structures* (ICCS/17), at the University of Porto, Porto, Portugal, 17-21 June 2013.
- *Distinguished Visiting Fellowship*, The Royal Academy of Engineering, London, UK, 2013.
- *Top 100 Scientists*, International Biographical Centre, Cambridge, England, October 2012.
- *Satish Dhawan Visiting Professor,* Department of Aerospace Engineering, Indian Institute of Science, Bangalore, 2012-2013.

- ***Special Issue Honoring the Lifelong Contributions of Professor J. N. Reddy***, *Mechanics of Advanced Materials and Structures* journal, **19**(1-3, 2012), https://doi.org/10.1080/15376494.2012.650031
- "Alternative Least-Squares Finite Element Models of Navier-Stokes Equations for Power-Law Fluids," (coauthored with V. P. Vallala and K. S. Surana), *Engineering Computations* (International Journal for Computer-Aided Engineering and Software), Vol. 28 No. 7, pp. 828-852, 2011. **Selected as a Highly Commended paper at the Literati Network Awards for Excellence 2012**.
- ***Computational Mechanics Award,*** the Japanese Society of Mechanical Engineers (JSME), Oct. 2012.
- "Alternative least-squares finite element models of Navier-Stokes equations for power-law fluids," (by V. Vallala, J. N. Reddy, and K. S. Surana) published in *Engineering Computations* Dec 2010, has been chosen as a Highly Commended Award Winner at the Emerald Literati Network Awards for Excellence 2012.
- *Leading Scientists of the World*, International Biographical Centre, Cambridge, England, August 2012.
- ***Bharat Jyoti Award***, India International Friendship Society, New Delhi, India, Jan 2012.
- ***ASME Honorary Member***, American Society of Mechanical Engineers (ASME), Nov. 2011 (an Honorary Member, first awarded in 1880, shall be a person who has made "distinctive contributions" to engineering, science, industry, research, public service, or other pursuits allied with and beneficial to the engineering profession).
- ***Honorary Doctorate Degree,*** Odlar Yurdu University, Baku, Azerbaijan, September 2011.
- ***Life Fellow,*** American Society of Mechanical Engineers (ASME), June 2011.
- *Award for Career Achievement*, presented by the organizers of the ACE-X 2010, Paris, July 2010.
- *AIAA Best Paper Award* for "Continuous Sensitivity Analysis of Fluid-Structure Interaction Problems Using Least-Squares Finite Elements, " (authored by Douglas Wickert, Robert Canfield, and J. N. Reddy) AIAA Paper 2008-5931, the 2008 AIAA Best Paper; certificate presented by the AIAA Multidisciplinary Design Optimization Technical Committee, September 2010.
- *The Bert Distinguished Lecture*, School of Aerospace and Mechanical Engineering, University of Oklahoma, Norman, OK, March 6, 2009.
- ***The 2009 Landis-Epic Lecture*** (presented once in 5 years), Department of Civil and Environmental Engineering, University of Pittsburgh, Pittsburgh, March 20, 2009.
- *Distinguished Lecture Series Lecturer*, College of Engineering, West Virginia University, Morgantown, WVA, March 27, 2009.
- ***Honoris Causa,*** Honorary degree from the Technical University of Lisbon, Portugal, Feb. 16, 2009.
- ***JN Reddy Symposium***, Symposium organized in honor of J. N. Reddy for life time achievements and contributions to composite materials, the *23rd Annual Technical Conference on Composite Materials*, American Society of Composite Materials, Memphis, Tennessee, 9-11 September 2008.
- *Honorary Professor*, South China University of Technology, Guangzhou, China, 2007-present.
- *Editor-in-Chief*, *Applied Mechanics Reviews*, American Society of Mechanical Engineers, New York, 2007-2012.
- ***JN Reddy Book Prizes,*** presented to the top students in 1st, 2nd, and 4th year of the Engineering Science Programme at the National University of Singapore (instituted in 2006). All *JN Reddy Book Prize* winners have graduated with top honors and went on to top schools like Harvard, Cambridge, Stanford, and MIT for graduate studies or joined top professional organizations (Professor Reddy was the first and last head of the Engineering Science Programme).
- *B. R. Seth Memorial Lecture,* the 51st Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM), December 18-21, 2006, Andhra University, Visakhapatnam, INDIA.
- *Fellow,* the Institution of Structural Engineers, Singapore, 2005.
- *Fellow,* the American Institute of Aeronautics and Astronautics (AIAA), May 2005.
- ***Distinguished Research Award*** of the American Society for Composites, October 2004.

- *The Dow Chemical Best Paper Award* for the paper "Assessment of Plastic Failure of Polymers due to Surface Scratches," (with G. T. Lim and H.-J. Sue) in the General Category of the Failure Analysis and Prevention Special Interest Group at *ANATECH* 2004, Chicago, 2004.
- *Winner* of the Poster Competition in *the International Conference on Polyolefins,* Houston, 2004.
- ***Computational Solid Mechanics Award*** (now renamed as the ***Belytschko Medal***) of the US Association for Computational Mechanics, July 2003.
- *C. S. Krishnamoorthy Memorial Lecture*, Indian Institute of Technology, Madras, December 10, 2002.
- *Fellow* of the American Society for Composites (ASC), October 2002.
- *Alumni of Achievement,* the University of Alabama in Huntsville, Alabama, February 4, 2002.
- *TANA Award for Excellence in Education and Research* from the Telugu Association of North America, July 2001, New York.
- *Distinguished Alumni (Engineering)* from the University of Alabama in Huntsville, Huntsville, Alabama, May 11, 2001.
- *Nanyang Professorship,* Nanyang Technological University, Singapore, 2002-2005.
- ***Excellence in the Field of Composites Award*** from the American Society for Composites, September 2000.
- ***Nathan M. Newmark Medal*** from the American Society of Civil Engineers, October 1998.
- *Outstanding Educator Award* from the American Telugu Association, Detroit, July 1998.
- *Fellow,* the International Association of Computational Mechanics (IACM), 1998.
- ***Melvin R. Lohmann Medal*** from Oklahoma State University, Stillwater, OK, 1997.
- ***Archie Higdon Distinguished Educator Award***, the American Society of Engineering Education, June 1997.
- *Karunesh Memorial Lecture*, the 42nd Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM), Regional Engineering College, Surat, India, Dec 28, 1997.
- ***Charles Russ Richards Memorial Award****,* American Society of Mechanical Engineers, 1995.
- *Distinguished Visiting Professor*, Institute for High Performance Computing (IHPC) and the National University of Singapore, 1998-1999.
- *Technical Achievement Award,* the National Academy of Engineering (NAE), 1995.
- *Fellow*, the U.S. Association of Computational Mechanics (USACM), 1995.
- *Visiting Professor*, Institute for Computer Applications and Design, University of Stuttgart, Germany, 1994.
- *NATO Fellow*, Middle East Technical University, Ankara, Turkey, 1994.
- *Fellow,* the American Society of Civil Engineers (ASCE), 1992.
- *The Neelakantam Memorial Lecture,* presented at the Annual Convention of the Aeronautical Society of India, December 11, 1992, Bangalore, India.
- ***Worcester Reed Warner Medal***, the American Society of Mechanical Engineers, 1992.
- *Invited Speaker, Southwest Mechanics Lecture Series* (University of Oklahoma, Texas A&M University, Rice University, and University of Houston), 1991.
- *Fellow,* the Aeronautical Society of India, 1991.
- *Oscar S. Wyatt, Jr., Chair Lecture*, Texas A&M University, November 11, 1991.
- *Fellow*, the American Society of Mechanical Engineers (ASME), 1989.
- *Visiting Scientist*, Alcoa Centennial Technical Seminars on Mechanics, Hilton Head, 1987.
- *Visiting Professor*, University of Missouri-Rolla, 1986.
- The *Alexander von Humboldt Foundation Research Fellowship*, Germany, 1986.
- The German Academic Exchange Service Research Grant, Germany, 1986.

- *Fellow,* the American Academy of Mechanics (AAM), 1985.
- ***Walter L. Huber Civil Engineering Research Prize***, American Society of Civil Engineers, 1983.
- *Who's Who in Computational Science and Engineering*, 2003.
- ***Ralph R. Teetor Education Award***, Society of Automotive Engineers (SAE), l976.
- *2000 Outstanding Scholars of the 21st Century,* First Edition, 2001.
- *Who's Who in Executives and Professionals*, 2001.
- ***Highly Cited Researchers***, 2000.
- *Outstanding Man of the 21st Century*, 2000.
- *Dictionary of International Biography*, 27th Edition, l998.
- *Five Hundred Leaders of Influence*, l998.
- *Five Thousand Personalities of the World*, 6th Edition, l998.
- *The International Directory of Distinguished Leadership*, l998, 2001.
- *Outstanding People of the 20th Century*, l998.
- *Who's Who in Engineering Education,* Academic Keys, 2005.
- *Who's Who in America*, 52nd Edition, l998.
- *Men of Achievement*, l994.
- *Most Admired Men & Women of the Year*, l994.
- *Who's Who Among Asian Americans*, l994.
- *Who's Who in Science and Engineering*, 2nd Edition, l994.
- *Who's Who in Technology*, 1979-present, 6th Edition, 1988.
- *Personalities of America*, 4th Edition, l985.
- *Outstanding Young Men of America*, l979.
- *American Men and Women of Science*, 17th Ed., l978.
- *Who's Who in the South and Southwest*, l976-1996 (24th Ed.)
- *Who's Who in Computer Education and Research*, l975.
- *Who's Who in America*, 2004 (59th edition).
- *American Medal of Honor* (American Biographical Institute), 2006.
- *2000 Outstanding Intellectuals of the 21st Century* (International Biographical Centre, England), 2006.

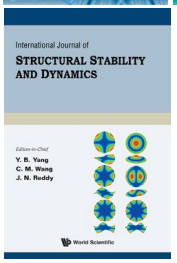
Significant Institutional Awards

- *Distinguished Achievement in Graduate Student Mentorship* Award, Association of Former Students (AFS), Texas A&M University, 2022.
- College/TEES Engineering Genesis Award (to Srikanth Saripalli, JN Reddy, and several others) for winning a large ($1M+) grant/contract, Spring 2022**.**
- *The O'Donnell Foundation Chair IV,* Texas A&M University, 2020-present
- College/TEES Engineering *Genesis Award* (to Tom Lacy, Waruna Kulatilaka, JN Reddy, and Justin Wilkerson) for winning a large ($1M+) grant/contract, Fall 2019.
- Master's student advisee, Ms. Sravani Nuti, Received the *2014-2015 Outstanding Engineering Master's Graduate Student Award* from College of Engineering at TAMU, November 2014, for her thesis "Dynamic Simulations of Elastic Rods for Medical Applications," (co-advised with Dr. Annie Ruimi, TAMU-Q).
- *Regents' Professor*, Texas A&M University, College Station, Texas, December 2010.
- *Distinguished Achievement in Teaching* Award, Association of Former Students (AFS), Texas A&M University, 2007.
- *Distinguished Lecture* of the Sigma Xi, Texas A&M University, October 2005.

- *Distinguished Research Award* of the Sigma Xi, Texas A&M University, March 2005.
- *Texas A&M Bush Excellence Award for Faculty in International Research*, 2003.
- *Distinguished Achievement in Teaching* Award, Association of Former Students (AFS), Texas A&M University, 2002.
- *Lockheed Martin Fort Worth Company Excellence in Teaching*, Texas A&M University, 2002.
- *Distinguished Achievement in Research* Award, Association of Former Students (AFS), Texas A&M University, 2000.
- *Outstanding Graduate Teaching* award, Department of Mechanical Engineering, Texas A&M University, 1995.
- *Oscar S. Wyatt, Jr. Chair*, Texas A&M University, 1992-present.
- *Clifton C. Garvin Professorship*, Virginia Tech (VPI&SU), 1985-1992.
- *Certificates of Teaching Excellence*, Virginia Tech (VPI&SU), 1981 and 1990.
- The *Alumni Research Award*, Virginia Polytechnic Institute and State University, l985.
- Finalist for *Sporn Teaching Award*, Virginia Polytechnic Institute & State University, 1983.
- *Outstanding Faculty Achievement in Research* (the inaugural recipient), University of Oklahoma, l979.
- *Purple Shaft Award* (for a caring but tough faculty member) University of Oklahoma, 1978.

EDITORSHIP OF ARCHIVAL JOURNALS AND SERIES

- **Founding Editor-in-Chief**, *Mechanics of Advanced Materials and Structures,* Taylor and Francis, Philadelphia (1994-2016); formerly known as *Mechanics of Composite Materials and Structures* (1994 - 2001).
- **Founding Editor-in-Chief**, *International Journal for Computational Methods in Engineering Science and Mechanics*, Taylor and Francis, Philadelphia (2005-present); formerly known as, *International Journal of Computational Engineering Science (IJCES,* World Scientific, Singapore).



- **Founding Editor-in-Chief** (with Y. B. Yang and C. M. Wang) *International Journal of Structural Stability and Dynamics (IJSSD),* World Scientific, Singapore, (2001-present).
- **Founding Series Editor** *Computational Mechanics and Applied Mathematics*, CRC Press, Boca Raton, Florida, (1995-present).

MEMBERSHIP ON EDITORIAL BOARDS OF JOURNALS

Present Memberships

1. *Computer Methods in Applied Mechanics and Engineering*, Elsevier Science, England (1997-present).
2. *International Journal for Numerical Methods in Engineering*, John Wiley & Sons, London (1984-present).
3. *International Journal for Numerical Methods in Biomedical Engineering*, John Wiley & Sons, London (1984-present).
4. *Composite Structures,* Elsevier, London (2011-present)
5. *Engineering Computations*, MCB University Press, West Yorkshire, England (1984-present).
6. *Finite Elements in Analysis and Design* (the international journal of applied finite elements and computer aided engineering), Elsevier, London; member of the editorial board, 2001-present.
7. *Annals of Solid and Structural Mechanics,* Springer-Verlag, Member of Editorial Board (2009-present).
8. *Latin American Journal of Solids and Structures* (www.lajss.org), University of Sao Paulo, Brazil, member of International Advisory Board, 2010-present.
9. *International Journal for Multiscale Computational Engineering*, Begell House, Inc., NY, (Editorial Board member, 2000-present).

10. *Asian Journal of Civil Engineering* (*Building and Housing*), The Building and Housing Research Centre, Tehran, Iran, member of Editorial Advisory Board, 1999-present.
11. *Journal of Solid Mechanics* (www.jsm-iauarak.com), Department of Mechanical Engineering, Islamic Azad University, Arak Branch, Iran, member of Editorial Board, 2009-present.
12. *International Journal of Applied Mechanics*, Imperial College Press (published by World Scientific, Singapore), member of Editorial Board, 2009-present.
13. *International Journal of Mechanics and Materials in Design*, University of Toronto, Canada; member of the editorial board (2002-present).
14. *Interaction and Multiscale Mechanics: an International Journal (IMMIJ)*, Techno-Press, member of the Editorial Board (2002-present).
15. *International Journal for Integrated Computer-Aided Engineering* (ICAE), ISO Press, member of the Editorial board (2007-present).
16. *Journal of Engineering and Applied Sciences (IJEAS),* Member of Honorary Editorial Board (2009-present).
17. *International Journal of Computational Materials Science and Engineering (IJCMSE),* published by Imperial College Press, Member of the Editorial Board (2011-present).
18. *Journal of Computational and Applied Research in Mechanical Engineering (JCARME),* Member of the Advisory Board and member of the Editorial Board (2012-present) http://jcarme.srttu.edu.
19. *International Journal of Aerospace and Lightweight Structures (IJALS),* published by
20. Imperial College, Member of the Editorial Board Member (2011-present).
21. *Computer and Experimental Simulations in Engineering and Science (CESES),* published by Malliarispedia (www.j-ceses.com), member of Editorial Board, 2008-present.
22. *International Journal of Virtual Technology and Multimedia,* published by Inderscience (www.inderscience.com), member of the Editorial Board, 2008-present.
23. *Chinese Journal of Solid Mechanics (*English title of *Acta Mechanica Solida Sinica)*, Huazhong University of Science and Technology, Wuhan, Hubei, 430074, 1996-present.
24. *International Journal of Computational and Numerical Analysis and Applications*, Bulgaria, 2001-present.
25. *International Journal of Mechanics and Solids*, RIP (Research India Publications), 2006-present.
26. *Curved and Layered Structures*, (www.degruyter.com), University of Bologna, Italy, 2014-present.
27. *Journal of Modeling in Mechanics & Materials,* 2016-present (http://www.multi-science.co.uk/) .
28. *Mathematical and Computational Applications*, MDPI Publishers, Switzerland, 2016-present.
29. *Vietnam Journal of Mechanics,* Vietnam Academy of Science and Technology, Member of the Editorial Board, 2020 – present (http://vap.ac.vn/Vietnam-Journal-of-Mechanics).
30. *Journal of Science and Technology in Civil Engineering* (STCE Journal); member of the International Editorial Board, 2021 – present (http://stce.nuce.edu.vn/index.php/en).
31. *Computational Algorithms and Numerical Dimensions* (CAND), Ayandegan Institute of Higher Education, Iran; member of the Editorial Board, (2022-present).

Past Memberships

1. **Founding Editor-in-Chief**, *Mechanics of Advanced Materials and Structures* (formerly, *Mechanics of Composites Materials and Structures*, John Wiley & Sons, Chichester, UK, 1994-1996); Taylor and Francis, Philadelphia (1997-2016).
2. **Editor-in-Chief**, *Applied Mechanics Reviews*, American Society of Mechanical Engineers, 2006-2012.
3. **Editor**, *USACM Newsletter*, the U.S. Association of Computational Mechanics, 1988-1993.

4. **Associate Editor,** *Journal of Applied Mechanics*, American Society of Mechanical Engineers, New York (1992-2006).
5. **Associate Editor,** *Journal of Engineering Mechanics*, the American Society of Civil Engineers (ASCE), New York, (1992-1994).
6. *Scholarly Research Exchange,* Hindawi Publishing Corporation (www.hindawi.com), Member of the Advisory Board, 2008-2009).
7. *Manufacturing Technology & Research, An International Journal*, Birla Institute of Technology, Mesra, Ranch, INDIA; member of the editorial board (2003-present).
8. *Journal of Mathematical and Physical Sciences*, the Indian Institute of Technology, Madras, India (1989-present).
9. *Journal of the Aeronautical Society of India*, the Aeronautical Society of India, India (1995-??).
10. *Journal of Aerospace Sciences and Technologies*, the Aeronautical Society of India, India (2003-??).
11. *The Institution of Engineers*, Singapore, six journals published by IES, (International Advisory Panel member, 1998-??).
12. *Sadhana* (Academy Proceedings in Engineering Sciences), Indian Academy of Sciences, Bangalore, India, 2001-2008.
13. *Iranian Journal of Science and Technology* (Transactions: Technology), School of Engineering, Shiraz, Iran, 1996-2008.
14. *Asian Journal of Structural Engineering*, The Building and Housing Research Centre and Iran University of Science and Technology, Tehran, Iran (1993-2008).
15. *Computers & Structures*, Pergamon Press, London (1985-2002).
16. *International Journal for Numerical Methods in Fluids*, John Wiley, London (1984-2002).
17. *Journal of Applied Mechanics, the American Society of Mechanical Engineers*, ASME, New York, (Associate Editor, 1992-1999).
18. *Journal of Engineering Mechanics, the American Society of Civil Engineers*, ASCE, New York, (Associate Editor, 1992-1996).
19. *Computational Mechanics Advances*, an official publication of the International Association for Computational Mechanics (IACM), North-Holland, The Netherlands (1992-1996).
20. *Mathematical Modeling and Scientific Computing*, the International Association for Mathematical and Computer Modeling, Principia Scientia, St. Louis, 1993-1995.
21. *Modeling and Computational Experiment in Engineering and Technology*, University of Kocaeli, Izmit, Turkey, 1994-1996.
22. *IACM Bulletin*, Newsletter of the International Association of Computational Mechanics, IACM, John Wiley, London, (Editor, 1992-1996).
23. *USACM Newsletter*, the U.S. Association of Computational Mechanics (USACM), (Editor, 1988-1993).
24. *Meccanica*, International Journal of the Italian Association of Theoretical and Applied Mechanics, Kluwer, Netherlands (1989-1994).
25. *IACM Expressions*, magazine of the International Association of Computational Mechanics, IACM, IACM Secretariat, Barcelona, Spain, (member, 1996-2000).
26. *Structural Engineering and Mechanics*, Techno-Press, S. Korea, 1999-2009.
27. *Engineering Structures*, Elsevier Science, Oxford, England (1997-2002).
28. *Associate Editor***,** *Journal of Engineering Mechanics*, the American Society of Civil Engineers (ASCE), New York, (2012-2014).

OTHER PROFESSIONAL MEMBERSHIPS

- **International Advisory Committee Member**, Engineering Science Programme, National University of Singapore, 2015 – present.

- **Member of the International Advisory Board**, SRM Institute of Science and Technology, Thamilnadu, INDIA, 2009-present.
- **Member of the Executive Advisory Board**, Gokula Education Foundation, Bangalore, INDIA, 2019-present.

KEYNOTE AND PLENARY LECTURES AND SPECIAL SEMINARS DELIVERED

1. J. N. Reddy, "Recent Developments in the Analysis of Composite Plates and Shell Structures," *Symposium on Mechanics of Structures*, Faculty of Engineering, University of Rome II, Italy, May 4-7, 1982.
2. J. N. Reddy, "Nonlinear Analysis of Layered Composite Structures," *FEMSA/83 Symposium*, Jan. 10-12, 1983, University of Cape Town, South Africa.
3. J. N. Reddy, "A Shear Deformable Shell Element for Laminated Composites," *NASA Lewis/University*/ Industry Workshop on Nonlinear Analysis for Engine Structures, April 19-20, 1983, NASA Lewis Research Center, Cleveland, OH.
4. J. N. Reddy, "On the Transient Response of Laminated Anisotropic Shells," the *17th Israel Convention on Mechanical Engineering*, July 12-14, 1983, Tel Aviv University, Tel Aviv, Israel.
5. J. N. Reddy, "Unilateral Contact Approach to Laminated Plates," the *CISM Symposium on Unilateral Problems in Structural Analysis*, September 22-24, 1983, Ravello, Italy.
6. J. N. Reddy, "On Mixed and Displacement Finite Element Models of a Refined Shear Deformation Theory for Laminated Anisotropic Plates," *Fourth International Conference on Applied Numerical Modeling*, National Cheng Kung University, Tainan, Taiwan, Dec. 28-31, l984.
7. J. N. Reddy, "On Computational Schemes for Global-Local Stress Analysis," *Workshop on Computational Methods for Structural Mechanics and Dynamics*, NASA Langley Research Center, Hampton, VA, June 20-21, 1985.
8. J. N. Reddy, "Finite Element Models of Fluid Flow," *International Symposium on Variational Methods in Geosciences*, University of Oklahoma, October 15-17, 1985.
9. J. N. Reddy, "Finite Element Models of Plates and Shells," *Applications of Mathematics in Mechanics, Ecole Nationale dÍngenieurs de Tunis*, Monastir, Tunisia, July 17-19, 1986.
10. J. N. Reddy, "A Mixed, Updated Lagrangian Computational Model for Plane Elastic Contact Problems," *Symposium on Unilateral Problems in Mechanics*, The International Society for the Interaction of Mechanics and Mathematics, Universita di Roma 2, April 6-8, 1987.
11. J. N. Reddy, "On Refined Theories of Composite Laminates," Alcoa Laboratories, *Centennial Technical Seminar on Mechanics: Micromechanics to Product Design Symposium*, Hilton Head, SC, April 8-11, 1987.
12. J. N. Reddy, "An Overview of Computational Methods in Composites," **Keynote Lecture**, the *10th Conference on Computer Methods in Mechanics*, May 22-28, 1989, Rytro, Poland.
13. J. N. Reddy, "A Computational Model for Study of Local Effects," *Inter. Conference on Engineering Software*, December 4-7, 1989, Indian Institute of Technology, New Delhi, India.
14. J. N. Reddy, "On New Developments in the Refined Theories of Plates," *New Developments in Structural Mechanics*, University of Catania, Italy, July 4-6, 1990.
15. J. N. Reddy, "Modeling of Delamination in Composite Laminates Using a Layer-Wise Plate Theory," *Indo-US Workshop on Composites for Aerospace Applications*, Bangalore, India, July 23-27, 1990.
16. J. N. Reddy, "Current Research in the Modeling of Laminated Composite Structures," *EMRC's Conference and Lecture Program*, Engineering Mechanics Research Corporation, Troy, MI, Oct. 3, 1990.
17. J. N. Reddy, "Finite Element Modeling of Structural Vibrations: Recent Developments," **Keynote Lecture** delivered at the *International Congress on Recent Developments in Air- and Structure-Borne Sound and Vibration*, March 6-8, 1990, Auburn University, AL.
18. J. N. Reddy, "On the Modeling of Thick Composite Laminates," **Keynote Lecture**, the *First U. S. National Congress on Computational Mechanics*, Chicago, IL, July 21-24, 1991.
19. J. N. Reddy, "Advances in the Modeling of Laminated Plates," **Keynote Lecture**, the *First International Conference on Computational Structures Technology*, Heriot-Watt University, Edinburg, U.K., August 20-22, 1991.

20. J. N. Reddy, "Global-Local Analysis of Composite Laminates Using Hierarchical Finite Elements and Mesh Superposition," **Keynote Lecture**, the *IBM Europe Institute on Structural Analysis*, Oberlech, Austria, July 20-24, 1992.
21. J. N. Reddy, "Analysis of Composite Laminates Using Variable Kinematic Finite Elements," **Keynote Lecture**, the *7th Brazilian Symposium on Piping and Pressure Vessels,* October 7-9, 1992, Florianopolis, Santa Catarina, Brazil.
22. J. N. Reddy, "The Modeling of Composite Laminates: Intuition to Generality and Theory to Practice," ***the Neelakantam Memorial Lecture*** presented at the Annual Convention of the Aeronautical Society of India, December 11, 1992, Bangalore, India.
23. J. N. Reddy, "Global-Local Computational Methodologies for the Analysis of Composite Laminates," **Keynote Lecture**, the *International Congress on Computational Method in Engineering*, Shiraz, Iran, May 3-5, 1993.
24. J. N. Reddy, "On Computational Strategies for the Analysis of Thick Composites," **Keynote Lecture**, the *Advanced Technology on Design and Fabrication of Composite Materials and Structures*, Politecnico di Torino, Torino, Italy, May 24-28, 1993.
25. J. N. Reddy, "Recent Developments in the Modeling of Laminated Composite Structures," **Keynote Lecture**, the *Nonlinear Finite Element Analysis and ADINA*, Boston, MA, June 23-25, 1993.
26. J. N. Reddy, "An Evaluation of Equivalent-Single-Layer and Layerwise Theories of Composite Laminates," **Keynote Lecture**, the *Seventh International Conference on Composite Structures*, University of Paisley, Scotland, 5-7 July 1993.
27. J. N. Reddy, "Modeling of Composite Structures," **Plenary Lecture,** the *Advanced Study Institute on Computational Methods for Engineering Analysis and Design*, Indian Institute of Technology, Madras, India, August 2-11, 1993.
28. J. N. Reddy, "A Multiple Model Approach for Laminated Composite Structures," **Keynote Lecture**, the *First Pan-Pacific Conference on Computational Engineering*, Korea Advanced Study Institute of Science and Technology, Seoul, Korea, November 1-5, 1993.
29. J. N. Reddy, "A Hierarchical Multi-Model Approach to the Analysis of Laminated Composite Structures," **Keynote Lecture**, the *Third World Congress on Computational Mechanics (WCCM III),* Chiba, Japan, August 1-5, 1994.
30. J. N. Reddy, "Recent Developments in the Modeling of Composite Structures," **Keynote Lecture**, presented at the *Energy Technology Conference & Exhibition (ETCE),* Houston, January 28-February 2, 1996.
31. J. N. Reddy, "A Computational Methodology for Global-Local Analysis of Composite Structures," **Keynote Lecture**, the *Mathematics of Finite Elements and Applications IX (MAFELAP 1996),* Brunel University, Uxbridge, U.K., June 25-28, 1996.
32. J. N. Reddy, "Refined Theories and Computational Procedures for the Modeling of Smart Composite Structures," **Keynote Lecture**, the *First International Conference on Composite Science and Technology,* Durban, South Africa, June 18-20, 1996.
33. J. N. Reddy, "Computational Structural Dynamics: Present and Future," **Keynote Lecture** the *67th Shock & Vibration Symposium*, Monterey, CA, November 18-22, 1996.
34. J. N. Reddy, "Recent Developments in Mechanics of Composite Materials," **Keynote Lecture**, the *Second International Conference on the Application of Numerical Methods in Engineering,* Universiti Pertanian Malaysia, Malaysia, June 23-25, 1997.
35. J. N. Reddy, "Developments in Computational Structural Dynamics," **Keynote Lecture**, the *Sixth International Conference on Recent Advances in Structural Dynamics,* The Institute of Sound and Vibration Research, University of Southampton, England, July, 14-17 1997.
36. J. N. Reddy, "Recent Developments in Mechanics of Smart Structures," **Plenary Lecture**, the *Symposium on Mechanics of Composite Materials (Simp□sio em Mecânica dos Materialis Compósitos),* Instituto de Engenharia Mecânica (IDMEC), Instituto Superior Tecnico (IST), Lisbon, Portugal, July 22, 1997.

37. J. N. Reddy, "Theoretical Models and Computational Procedures for the Analysis of Plate Structures," ***Karunesh Memorial Lecture*** of the *42nd Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM),* Regional Engineering College, Surat, Gujrat, India, December 28-31, 1997.
38. J. N. Reddy, "Computational Mechanics: Current Trends and Future Directions," **Keynote Lecture**, the *20th World Conference on the Boundary Element Method (BEM20)* University of Central Florida, Orlando, FL, August 19-21, 1998.
39. J. N. Reddy, "Computational Modeling of Local Stress Fields and Delamination Failures in Composite Laminates," **Keynote Lecture**, the *Integrity · Reliability · Failure, An International Conference* University of Porto, Portugal, July 19-22, 1999.
40. J. N. Reddy, "An Overview and Recent Developments in Vibrations of Laminated Composite Plates and Shells," **Keynote Lecture**, the *Asia-Pacific Vibration Conference '99 (A-PVC`99),* Nanyang Technological University, Singapore, December 12-14, 1999.
41. J. N. Reddy, "Future Directions in Computational Methods and Simulations," **Keynote Lecture**, the *Fourth Asia-Pacific Conference on Computational Mechanics (APCOM`99),* National University of Singapore, Singapore, December 14-16, 1999.
42. J. N. Reddy, "Recent Developments and Future Directions in Theoretical and Computational Mechanics," **Keynote Lecture**, the *Twentieth Southeastern Conference on Theoretical and Applied Mechanics (SECTAM XX),* Callaway Gardens, Pine Mountain, Georgia, April 16-18, 2000.
43. J. N. Reddy, "Developments in Structural Dynamics with Special Focus on Shear Deformation Theories of Plates and Shells," **Keynote Lecture**, the *International Conference on Structural Stability and Dynamics,* Taipei, Taiwan, December 7-9, 2000.
44. J. N. Reddy, "Developments in Theoretical and Computational Mechanics of Composite Materials and Structures," **Keynote Lecture**, the *National Conference on Theoretical and Applied Mechanics,* Taipei, Taiwan, December 10-11, 2000.
45. J. N. Reddy, ``A New Mathematical and Computational Basis for BVP and IVP," **Keynote Lecture**, the *Fifth World Congress on Computational Mechanics,* Vienna, Austria, July 7-12, 2002.
46. J. N. Reddy, "On Computational Modeling of Functionally Graded Materials and Smart Structures," **Keynote Lecture**, the *Second World Engineering Congress,* Kuching, Sarawak, Malaysia, July 22-25, 2002.
47. J. N. Reddy, ``Computational Modeling of Advanced Materials and Structures," ***C. S. Krishnamoorthy Memorial Lecture***, Indian Institute of Technology, Madras, December 10, 2002.
48. J. N. Reddy, "The *k*-Version Finite Element Method: A New Computational Methodology for Boundary Value Problems," **Plenary Lecture,** *International Conference on Smart Materials Structures and Systems*, Indian Institute of Science, Bangalore, India, Dec 12-14, 2002.
49. J. N. Reddy, "An Accurate and Robust Computational Methodology for Structural Dynamics Problems," **Plenary Lecture**, the *International Conference on Structural Stability and Dynamics,* Singapore, December 16-18, 2002.
50. J. N. Reddy, "Computational Modeling of Advanced Materials and Structures," **Keynote Lecture,** the *VII National Congress on Applied and Computational Mechanics,* Évora, Portugal, April 14-16, 2003.
51. J. N. Reddy, "Novel Computational Procedures for Modeling of Problems of Mechanics," ***Seth Memorial Lecture***, 48th ISTAM (Indian Society of Theoretical and Applied Mechanics) Congress, Dec. 18-21, 2003, Birla Institute of Technology (BIT) Mesra, Ranchi, INDIA.
52. J. N. Reddy, "A Robust Computational Methodology for Numerical Simulation of Physical Processes," **Guest and Plenary Lecture** (and Guest of Honor) at the *International Conference on Theoretical, Applied, Computational and Experimental Mechanics* (ICTACEM 2004), Indian Institute of Technology, Kharagpur, India, December 28-30, 2004.
53. J. N. Reddy, "Computational Modeling of Materials and Structures and New Computational Methodology," the *US-Africa Workshop on Mechanics and Materials,* University of Cape Town, South Africa, January 23-28, 2005.

54. J. N. Reddy, "Advances in Computational Modeling of Materials and Structures," **Keynote Lecture**, the *Fifth International Conference on Composite Science & Technology* (*ICCT'05*) and *International Conference on Modeling, Simulation & Applied Optimization* (*ICMSAO'05*), American University of Sharjah, Sharjah (UAE), February 1-3, 2005.
55. J. N. Reddy, "A Refined Finite Element for Geometrically Nonlinear Analysis of Shell Structures," **Keynote Lecture**, the 5th International Conference on Computation of Shell and Spatial Structures June 1-4, 2005, Salzburg, Austria.
56. J. N. Reddy, "Refined Computational Models of Functionally Graded and Smart Structures and Materials," **Keynote Lecture**, *II ECCOMAS Thematic Conference on Smart Structures and Materials*, Instituto Superior Técnico, Lisbon, Portugal, 18-21 July 2005.
57. J. N. Reddy, "Novel Computational Methods and Materials Modeling*,"* **Plenary Lecture***, XXVI Iberian Latin American Congress on Computational Methods in Engineering* (CILAMCE 2005), October 19-21, 2005, Guarapari, Espírito Santo, Brazil.
58. J. N. Reddy, "A Consistent Shell Element for Nonlinear Analysis of Composite and Functionally Graded Structures," **Opening Plenary Lecture** (and Guest of Honor) at *International Conference on Advances in Structural Dynamics and Its Applications* (ICASDA-2005), 7-9 December 2005, Visakhapatnam, Andhra Pradesh, India.
59. J. N. Reddy, "A Finite Deformation Shell Formulation for the Analysis of Composite and Functionally Graded Material Structures," *Symposium on Physics and Mechanics of Advanced Materials*, January 18-20, 2006, Singapore.
60. J. N. Reddy, "Role of Computational Engineering Science in Modeling of Physical Phenomena," *Symposium on Engineering Science*, April 20, 2006, Singapore.
61. J. N. Reddy, "A Consistent Finite Element Model for Nonlinear Analysis of Composite and Functionally Graded Shell Structures," **Opening Plenary Lecture**, at ***I****nternational* ***C****onference on* ***C****omposite Materials and Nano-****S****tructures* (IC2MS-06), April 26-29, 2006, Shah Alam (Kaula Lumpur), Malaysia.
62. J. N. Reddy, "Nonlinear Analysis of Composite and FGM Shell Structures Using Tensor-Based Shell Elements," **Keynote Lecture**, *III European Conference on Computational Mechanics, Solids, Structures and Coupled Problems in Engineering*, Laboratório Nacional de Engenharia Civil, (LNEC), Lisbon, Portugal, June 5-8, 2006.
63. J. N. Reddy, "Nonlinear Analysis of Functionally Graded Shell Structures Using Tensor-Based Shell Element," **Opening Plenary Lecture**, *5th International Conference on Mechanics and Materials in Design (M2D'2006),* Porto, Portugal, July 24-26, 2006.
64. J. N. Reddy, "On Nonlinear Analysis of Composite and Functionally Graded Shell Structures," *Tenth East Asia Pacific Conference on Structural Engineering and Construction*, August 2-4, 2006, Bangkok, Thailand.
65. J. N. Reddy, "Computational Models of Viscous Flows and Shell Structures," Opening Plenary Lecture, *International Conference on Enhancement and Promotion of Computational Methods in Engineering Science and Mechanics*, Changchun, China, Aug 10-12, 2006.
66. J. N. Reddy, "Nonlinear Analysis of Composite and FGM Shell Structures Using Tensor-Based Shell Elements," *International Workshop in Mechanics of Composites*, Bad Herrenab, Germany, November 26-29, 2006.
67. J. N. Reddy, "Forty Years of Significant Developments in Mechanics of Composite Materials and Structures" **Special Invited Lecture**, *International Workshop in Mechanics of Composites*, Bad Herrenab, Germany, November 26-29, 2006.
68. J. N. Reddy, "Computational Engineering Science: The Third Scientific Methodology for the 21st Century and Beyond," ***B. R. Seth Memorial Lecture*** at the *51st Congress of Indian Society of Theoretical and Applied Mechanics (ISTAM)*, December 18-21, 2006, Andhra University, Visakhapatnam, INDIA.

69. J. N. Reddy, "The Finite Element Method in Structures and Beyond," **Plenary Lecture**, SPDC ASME USB (Student Professional Development Conference), University of Simon Bolivar, Caracas, Venezuela, May 9-13, 2007.
70. J. N. Reddy, "Coupled Blood Arterial Wall Analysis Using Fluid Biphasic Interface Models" (with Ginu Unnikrishnan and Vinu U Unnikrishnan), **Keynote Lecture** presented in *Mechanics of Nano-, Bio- and Cellular Materials* session at *McMat 2007, ASME Applied Mechanics and Materials Conference*, June 3-7, 2007, University of Texas at Austin, Austin, Texas.
71. J. N. Reddy, "Nonlinear Analysis of Composite and FGM Shells using Tensor-Based Finite Elements," (with R. A. Arciniega), **Keynote Lecture**, *The Fifth International Conference on Nonlinear Mechanics (ICNM-V)*, June 11-14, 2007, Shanghai University, Shanghai, China.
72. J. N. Reddy, "Engineering Science: Educating Engineer-Scientists," Lecture presented on the occasion of the appointment of ***Consultant Professor*** at South China University of Technology, Guangzhou, June 14, 2007.
73. J. N. Reddy, "Continuum Modeling of the Cell," *Second GEM4 Summer School on Cell and Molecular Mechanics in Biomedicine with a focus on cancer* (in connection with the **GEM4 Conference on Cancer 2007**), June 25-July 6, 2007, National University of Singapore.
74. J. N. Reddy, "Role of Engineering Science in Education with Special Focus on Modeling of Nanosystems," *Teaching Nanoscience and Nanoengineering* at **International Conference on Materials for Advanced Technologies 2007**, 1-6 July 2007, Suntec Singapore International Convention and Exhibition Centre, Singapore.
75. J. N. Reddy, "A New Mathematical and Computational Framework for BVP and IVP," **Keynote Lecture**, delivered in the session *The k-Version of the Finite Element Method and h-p-k Adaptive Processes* at the 9th US National Congress on Computational Mechanics, San Francisco, CA, July 22-26, 2007.
76. J. N. Reddy, "Tensor-Based Shell Element and Modeling of Biological Cells," Plenary Lecture (and Guest of Honor)**,** the *International Conference on Recent Developments in Structural Engineering (RDSE-2007)*, Manipal Institute of Technology, Manipal, India, 29 August – 1 September, 2007.
77. J. N. Reddy, "Simulation Based Computational Engineering Science: Least-Squares FEM," ***Lindberg Lecture Series,*** Department of Mechanical Engineering, University of Wisconsin, Madison, September 27, 2007.
78. J. N. Reddy, "A First-Order Shell Theory with Thickness Stretch and Locking-Free Shell Finite Element," **Opening Plenary Lecture** (and **Chief Guest**), *International Conference on Computer Aided Engineering*, December 13-16, 2007, Indian Institute of Technology-Madras, Chennai, India.
79. J. N. Reddy, "Thermomechanical Analysis of FGM Shells," (with Roman A. Arciniega), a **Keynote Lecture** presented at the *Sixth International Conference on Computation of Shell & Spatial Structures* (*Spanning Nano to Mega*), International Association of Shell Structures (IASS) International Association of Shell Structures (IASS) and International Association of Computational Mechanics (IACM), Cornell University, Ithaca, May 28-31, 2008.
80. J. N. Reddy, "Computational Modeling of Glucose Distribution in Hollow Fiber Membrane Bioreactors," (with V. U. Unnikrishnan and G.U. Unnikrishnan), a **Keynote Lecture** presented at the *Sixth International Conference on Computation of Shell & Spatial Structures* (Spanning Nano to Mega), International Association of Shell Structures (IASS) and International Association of Computational Mechanics (IACM), Cornell University, Ithaca, May 28-31, 2008.
81. J. N. Reddy, "Multiscale Computational Analysis of Biomechanical Systems," (with V. U. Unnikrishnan and G.U. Unnikrishnan) **Invited Lecture** presented at the *IUTAM Symposium on Multi-Functional Material Structures and Systems*, Indian Institute of Science, Bangalore, INDIA, 10-13 December 2008.
82. J. N. Reddy, "Multiscale Analysis of Biomaterials and Nanostructures," **Plenary Lecture** and (and Guest of Honor), *International Conference on Computational Methods in Engineering and Sciences*, January 8-10, 2009, Hyderabad, India.

83. J. N. Reddy, "Analysis of Composite and FGM Shells Using a Refined Shear Flexible Shell Finite Element," ***Bert Lecture*** in the School of Aerospace and Mechanical Engineering, University of Oklahoma, Norman, March 6, 2009.
84. J. N. Reddy, "Modeling and Simulation of Complex Structures: From Physical to Biological Systems," ***The 2009 Landis-Epic Lecture***, University of Pittsburgh Department of Civil and Environmental Engineering, Friday March 20, 2009, Frick Fine Arts Auditorium, Pittsburgh.
85. J. N. Reddy, "Nonlinear Analysis of Laminated Composite Structures Using a Refined Shell Finite Element," ***Distinguished Lecture*** in the Department of Mechanical Engineering, University of West Virginia, Morgantown, Mar 27, 2009.
86. J. N. Reddy, "Micromechanics Based Biphasic Model Of Biological Cells," (with G.U. Unnikrishnan, V. U. Unnikrishnan), **Keynote Lecture** presented in the *Symposium on Cell & Molecular Biomechanics - Experiments & Computation* at *International Conference on Computational and Experimental Engineering Sciences* (ICCES09), Phuket, Thailand, 8-13 April 2009.
87. J. N. Reddy, "Developments in the Mathematical Modeling and Numerical Simulation of Composite Materials and Structures," **Plenary Lecture** presented at the *IISc Centenary International Conference and Exhibition on Aerospace Engineering* (ICEAE2009), Indian Institute of Science, Bangalore, India, 18 – 22 May 2009.
88. J. N. Reddy, "Numerical modeling of complex structures: shells and cells," **Opening Plenary Lecture**, at the *3rd International Conference on Advanced Computational Engineering and Experimenting* (ACE-X 2009), Rome, Italy, 22-23, June, 2009.
89. J. N. Reddy, "Multiscale Thermal Analysis of Nanostructures" (with V. U. Unnikrishnan and D. Banerjee), **Keynote Lecture** at the *Third International Conference on Integrity, Reliability and Failure: Challenges and Opportunities* (IRF2009), University of Porto, Porto, Portugal, July 20-24, 2009.
90. J. N. Reddy, "Computational Mechanics: Present and Future," **Opening Plenary Lecture** at the VII Congreso Colombiano de Modelamiento Numerico, Universidad de los Andes, Bogota, Colombia, August 10-14, 2009.
91. J. N. Reddy, "Recent Developments in the Analysis of Carbon Nanotubes and Nonlinear Shell Theories," (with Román A. Arciniega and C. M. Wang) , **Opening General Lecture** presented at the *9th Conference on Shell Structures, Theory and Applications*, Gdańsk-Jurata, Poland, 14-16, October 2009.
92. J. N. Reddy, "Nonlinear Analysis of Laminated Composite and FGM Structures Using a Refined Shell Element," **Plenary Lecture** (Track 11), *2009 ASME International Engineering Congress & Exposition*, November 18, 2009, Lake Buena Vista, Florida.
93. J. N. Reddy, "Multiscale Analysis and Nutrient Transport in Carbon Nanotube Reinforced Nanofiber Bioreactor," (with V. U. Unnikrishnan and G.U. Unnikrishnan), **Plenary Lecture** and **Honorary Chairman**, 2nd *International Symposium on Computational Mechanics* and *12th International Conference on Enhancement and Promotion of Computational Methods in Engineering and Science*, Nov 30 – Dec 3, 2009, Hong Kong – Macau, China.
94. **J. N. Reddy** and G. S. Payette, "Least-Squares Finite Element Technology in Fluid Dynamics and Structural Mechanics," **Opening Plenary Lecture**,*4th International Conference on Advanced Computational Engineering and Experimenting (ACE-X2010*) 08-09 July 2010, Hotel Concordia La Fayette, Paris, France.
95. **J. N. Reddy**, K. S. Surana, and G. S. Payette, "Least-Squares Finite Element Models and the k-version FEM: an Overview and Recent Developments," **Semi-Plenary Lecture**, *9th World Congress on Computational Mechanics and 4th Asian Pacific Congress on Computational Mechanics (WCCM/APCOM 2010*), Sydney, Australia, 19 – 23 July 2010.
96. J. N. Reddy, "Computational Modeling of Materials and Structures: Composite Shells and Biological Cells," **Keynote Lecture**, *International Conference on Applied Mechanics, Materials and Manufacturing (ICAMMM*), Sultan Qaboos University, Muscat, Oman, 13 – 15 December 2010.
97. **J. N. Reddy**, V. U. Unnikrishnan, and G.U. Unnikrishnan, "Multiscale Modelling of Biological Systems," **Plenary Lecture**, *Second International Conference on Multiscale Modeling and Simulation (ICMMS 2010*), Guangzhou, China, 17 – 19 December 2010.

98. J. N. Reddy, "Nanocomposites," **Plenary Lecture**, *International Conference on Composites for 21st Century: Current and Future Trends*, Indian Institute of Science, Bangalore, Jan 4-7, 2011.
99. J. N. Reddy, "Multiscale Processes in Analysis of Nanotube Reinforced Tissue Engineering Bioreactors," **Plenary Lecture**, *2nd International Conference on Mathematical and Computational Biomedical Engineering - CMBE2011,* March 30 - April 1, 2011, George Mason University, Washington D.C.
100. V. U. Unnikrishnan, G.U. Unnikrishnan, and **J. N. Reddy**, "Biomechanics of Breast Density and Collagen Content in Cancer Formation," **Invited Lecture**, *Workshop on Microscale Modeling in Biomechanics and Mechanobiology*, Hotel Vila Gal, Ericeira, Portugal, May 30 - June 1, 2011.
101. J. N. Reddy, "Modelling of Composite and Functionally Graded Structures: Theories and Computational Models," **Plenary Lecture**, *16th International Conference on Composite Structures* (*ICCS 16*), June 28-30, 2011, University of Porto, Porto, Portugal
102. **J. N. Reddy** and A. Muliana, "Thermomechanical Response of Functionally Graded Structures," **Plenary Lecture,** *5thInternational Conference on Advanced Computational Engineering and Experimenting*, *ACE-X 2011* –Algarve, Portugal, 3 -6 July 2011.
103. **J. N. Reddy**, V. U. Unnikrishnan, and R. Arciniega, "Analysis of Composite and Multifunctional Materials: Recent Developments," **Guest *and* Opening Plenary Lecture**, *International Symposium on Advances in Applied Mechanics and Modern Information Technology 2011 (AAM&MIT'11)*, 22-23 Sep. 2011, Baku, Azerbaijan.
104. G. Payette and **J. N. Reddy**, "Recent Developments in Shell Finite Elements for Large Deformation Analysis," **Semi-Plenary Speaker**, *Third International Symposium on Computational Mechanics* (*ISCM III*) in conjunction with the *Second Symposium on Computational Structural Engineering* (*CSE II*), Taipei, Taiwan, 5-7 December 2011.
105. J. N. Reddy, "Modified Couple Stress Theories of Functionally Graded Shear Deformable Beams and Plates," **Plenary Lecture**, *Fourth International Conference on Structural Stability and Dynamics*, Malavia National Institute of Technology, Jaipur, India, 4-6 January 2012.
106. J. N. Reddy, "Numerical Simulations: The Third Scientific Methodology," **Plenary Lecture**, *Pragyan 2012*, National Institute of Technology, Trichy, India, 23-26 Feb 2012.
107. **J. N. Reddy** and Gregory S. Payette, "A Higher-Order Spectral/hp Shell Finite Element for the Nonlinear Analysis of Laminated Composites and Functionally Graded Elastic Shell Structures," **Opening Plenary Lecture**, *International Iranian Mechanical Engineering Conference*, Shiraz University, May 14-17, 2012, Shiraz, Iran.
108. J. N. Reddy "A Nonlinear Modified Couple Stress-Based Theories of Functionally Graded Beams and Plates," **Opening Technical Plenary Lecture**, *International Conference on Mechanics of Nano, Micro and Macro Composite Structures*, 18-20 June 2012, Politecnico di Torino, Italy.
109. G. S. Payette and **J. N. Reddy**, "A General Shell Element with Thickness Stretch for Large Deformation Analysis of Composite Structures," **Plenary Lecture**, *SOMIM Conference*, Salamanca, Mexico, 19-21 September 2012.
110. J. N. Reddy "Modified Couple Stress-Based Theories of Functionally Graded Beams and Plates," **Plenary Lecture**, *International Conference in Innovations in Design and Manufacturing (InnDeM 2012)*, 5-7 Dec 2012, IIITDM Jabalpur, India.
111. G. S. Payette and **J. N. Reddy** "A General Shell Finite Element for Large Deformation Analysis of Composite Structures," **Opening Plenary Lecture,** *International Congress on Computational Mechanics and Simulation* (ICCMS2012), Indian Institute of Technology, Hyderabad, India, 10-12, December 2012.
112. J. N. Reddy, "Spectral Finite Element Technology for Large Deformation Analysis of Composite Shells," **Keynote Lecture,** *Indo-US Workshop on Recent Developments in Composite Materials and Structures*, JFWTC- GE Global Tech. Center, Bangalore, India, March 18-20, 2013.
113. **J. N. Reddy**, G. S. Payette, and V. Vallala, "A Spectral/hp Shell Finite Element for the Nonlinear Analysis of Laminated Composites and Functionally Graded Elastic Structures," **Opening Guest** and **Plenary Lecture**, *the Fourth International Symposium on Solid Mechanics - MecSol 2013,* Porto Alegre, Rio Grande do Sul, Brazil, 18-19 April 2013.

114. **J. N. Reddy**, G. S. Payette, and V. Vallala, "Spectral/hp Approximations in the Finite Element Analysis of Solid and Fluid Mechanics Problems," **Plenary Lecture***, Fourth International Conference on Mathematical and Computational Applications* (*ICMCA 2013***)**, June 11-13, 2013, Manisa, Turkey.
115. J. N. Reddy, "Refined Theories and Computational Models of Composite Beams, Plates, and Shells," **Plenary Lecture**, *the 17th International Conference on Composite Structures* (*ICCS/17*)*,* at the University of Porto, Porto, Portugal, 17-21 June 2013.
116. J. N. Reddy, "On Nonlocal Elasticity and Peridynamics with Applications to Beams and Plates," **Plenary Lecture**, *6th ECCOMAS Thematic Conference on Smart Structures and Materials* (*SMART2013*), 24-26 June 2013, Politecnico di Torino, Torino, Italy.
117. **J. N. Reddy** and A.R. Srinivasa, "On Microstructural Length Scales and Discrete Peridynamics for Beams and Plates," *Opening Talk* (Keynote Lecture) presented in a session on *nano systems* at the *7th International Conference on Advanced Computational Engineering and Experimenting* (ACEX2013), 1-4 July 2013, Madrid, Spain.
118. Greg Payette, V. Vallala, and **J. N. Reddy**, "Higher-Order Spectral/hp Finite Element Technology for Large Deformation Analysis of Shell Structures," **Plenary Lecture** presented at the *2nd International Conference on Advances in Computational Modeling and Simulation,* 17-19 July 2013, Kunming, China.
119. **J. N. Reddy** and A. R. Srinivasa, "On Rotation Gradient Dependent Elasticity and Specialization to Beams and Plates with Moderate Rotation," **Plenary Lecture** presented at the *4th Canadian Conference on Nonlinear Solid Mechanics* (*CanCNSM2013*), 23-26 July 2013, Montreal, Canada.
120. J. N. Reddy "Incorporation of Material Length Scales in Structural Theories of Beams and Plates," **Plenary Lecture,** *International Conference on Science and Technology of Heterogeneous Materials and Structures (ICSTHMS),* Wuhan University, Wuhan, China, 11-13 October 2013.
121. J. N. Reddy, "Computational Mechanics: The Third Pillar of Engineering and Technology," **Keynote Lecture**, *Computational Mechanics Division Meeting* of the Japan Society of Mechanical Engineers, 1-3 November 2013.
122. **J. N. Reddy** and A. R. Srinivasa, "On Nonlocal Gradient Elasticity Models with Application to Beams and Plates," **Keynote Lecture,** *International Conference on Computer Aided Engineering,* Indian Institute of Technology Madras, Chennai, India, 19-21 December 2013.
123. J. N. Reddy, "The Role of Computational Mechanics in Addressing Materials Challenges," **Keynote Lecture**, *Materials Science and Engineering Symposium 2014*, Qatar University, Doha, Qatar, 18 February 2014.
124. J. N. Reddy, "Computational Modeling of Complex Engineering Systems," ***Keynote Lecture and Chief Guest*** *at the Second International Conference on Innovation in Automation and Mechatronics Engineering 2014*, GH Patel College of Engineering and Technology, Vallabh Vidyanagar, Gujarat, INDIA, March 7-8, 2014.
125. **J. N. Reddy** and A. R. Srinivasa, "Nonlocal and strain gradient elasticity in structural theories for beams and plates," **Plenary Lecture,** *First International Conference on Mechanics of Composites*, State University of New York at Stony Brook, Long Island, June 8-12, 2014.
126. J. N. Reddy "Non-classical Structural Theories of Beams and Plates with Nonlocal and Strain Gradient Effects," Distinguished Lecture, Hong Kong Society of Theoretical and Applied Mechanics (HKSTAM), City University of Hong Kong, July 17, 2014.
127. J. N. Reddy, "Computational Mechanics: Past, Present, and Future," Lecture presented on Boeing Educational Network (broadcast to over 5,000 people worldwide), July 10, 2014, Ed Wells Partnership, Seattle, Washington.
128. J. N. Reddy, "Nonlinear theories of FGM beams and plates with nonlocal and strain gradient effects," **Keynote Speaker**, *Multiscale, Multifunctional and Functionally Graded Materials 2014 (MM&FGM2014),* October 19-22, 2014; Taua Resort, SP, Brazil.
129. J. N. Reddy, "Computational Modeling of Shells and Viscous Fluids," *Recent Trends and & Challenges in Civil Engineering* (RTCCE-2014), **Chief Guest and Plenary Speaker**, December 12-14, 2014, Motilal Nehru National Institute of Technology (MNNIT), Allahabad, INDIA.
130. J. N. Reddy, "Nonlocal and Gradient Elasticity in Structural Mechanics," *International Conference on Multifunctional Materials and Structures* and Applications (ICMMSA-2014), **Chief Guest and Plenary Speaker**, December 22-24, 2014, Motilal Nehru National Institute of Technology (MNNIT), Allahabad, INDIA.

131. J. N. Reddy, "Large Deformation Analysis of Composite and Functionally Graded Shells," **Chief Guest** and **Plenary Lecture,** *Sixth International Conference on Theoretical, Applied, Computational, and Experimental Mechanics* (ICTACEM 2014), Dec. 29-31, 2014, IIT Kharagpur, India.
132. J. N. Reddy, "Non-classical Structural Theories of Beams and Plates with Nonlocal and Strain Gradient Effects," **Chief Guest and Keynote Speaker**, *International Conference on Vibration Problems* (ICOVP-2015), 18-20 February 2015, Department of Mathematics-Kakatiya University, Warangal, India.
133. J. N. Reddy, "On Nonlocal and Strain Gradient Theories in Computational Structural Mechanics," **Keynote Lecture**, *Symposium: Computer-Aided Engineering and Multidisciplinary Design Optimization: Recent Advances, Technology, and Future*, The University of Michigan, April 17, 2015.
134. J. N. Reddy, "Advances in Finite Element Models of Engineering Science Problems," **Keynote Lecture**, *International Symposium on Engineering Science*, Engineering Science Program, National University of Singapore, 19-20 May 2015.
135. J. N. Reddy, "Modeling of functionally graded smart beams and plates with geometric nonlinearity and gradient elasticity effects" **Plenary Lecture**, *7th ECCOMAS Thematic Conference on Smart Structures and Materials,* University of the Azores, Ponta Delgada, Azores, Portugal, June 3-6, 2015.
136. J. N. Reddy, "A Robust Shell Element for Large Deformation Analysis of Composite and Functionally Graded Shells**," Opening Keynote Lecture,** *International Conference on Advances in Applied and Computational Mechanics*, Wyndham Grand Izmir Ozdilek, Izmir, Turkey, 5-7, 2015.
137. J. N. Reddy, "Large deformation analysis of laminated composite and functionally graded structures: recent developments," **Plenary Lecture**, *International Conference on Composite Science and Technology* (ICCST/10), 2-4 September 2015, Lisbon, Portugal.
138. J. N. Reddy, "Recent Developments in Shell Finite Elements with Applications to Laminated Composite and Functionally Graded Structures," Plenary Lecture, XXXVI Ibero-Latin American Congress of Computational Methods in Engineering (CILAMCE 2015 Conference), 22-25 November 2015, Pontifical Catholic University of Rio de Janeiro, Rio de Janeiro, BRAZIL.
139. J. N. Reddy, "Computational Mechanics: Past, Present, and Future," **Plenary Lecture**, *International Conference on Computer Aided Engineering*, 10-12 Dec 2015, GITAM University, Hyderabad, INDIA.
140. J. N. Reddy, A.R. Srinivasa, and P. Khodabakhshi, "On Recent Developments in Nonlocal and Strain Gradient Theories in Structural Mechanics," **Keynote Lecture,** East Asia-Pacific Conference on Structural Engineering and Construction (EASEC), 6-8 January 2016, Ho Chi Minh City, Vietnam.
141. J. N. Reddy, "The Finite Element Method: Past, Present, and Future," Plenary Lecture, *International Workshop on Computational Methods with applications to Oil and Gas (IWCMOG),* Texas A&M University at Qatar, 28-29 Feb 2016, Doha, Qatar.
142. J. N. Reddy, "On Non-Local and Non-Classical Continuum Mechanics Theories," *Simpson Distinguished Visiting Professor Lecture,* Northwestern University, 13 April 2016.
143. J. N. Reddy, "Recent Developments In Nonlinear Analysis Of Composite And FGM Structures," **Keynote Lecture**, *Innovation and Development of Structures & Structural Modal Properties Measurement and Applications 2016 (IDS&STRUMO2016),* Chongqing University, Chongqing, CHINA*,* 15-16 May 2016.
144. J. N. Reddy, "On Non-Local and Non-Classical Continuum Mechanics Theories and Applications," **Opening Keynote Lecture***, 11th HSTAM International Congress on Mechanics*, Athens, Greece, 27-30 May 2016.
145. J. N. Reddy, On Nonlocal and Strain Gradient Models in Structural Mechanics," Opening Plenary Lecture presented at the *10th International Conference on Advanced Computational Engineering and Experimenting* (ACE-X 2016), Split, Croatia, 3-6 July 2016.
146. J. N. Reddy, "Numerical simulations of engineering science problems using the finite element method," *Inaugural Alumni Talks*, Osmania University College of Engineering, Hyderabad, India, 28 July 2016.
147. J. N. Reddy, "On Non-Local and Strain Gradient Theories in Structural Mechanics: An Overview," *The Prager Medal Lecture*, Society of Engineering Science 53rd Annual Technical Meeting, 4-5 October 2016.
148. J. N. Reddy, "Computational Modeling and Simulations: Biological Cells, Composite Shells, and Fluid Flows," **Opening Plenary Lecture**, *International Conference on Advances in Materials and Manufacturing* (ICAMM-2016), 8-10 December, 2016, College of Engineering, Osmania University, Hyderabad, India.

149. J. N. Reddy, "Invent, Create, and Make: My Personal Retrospective," **Invited talk** at (student organized event) *TECHNEX17*, 24-27 February 2017, Indian Institute of Technology-BHU, Varanasi, India.
150. J. N. Reddy, "Journey through Mechanics Research and Education: A Personal Retrospective," *ICES/USACM Workshop on Advances in Computational Science and Engineering* (honoring 80th birthday of Prof. J. Tinsley Oden), University of Texas at Austin, 19-21 March 2017.
151. J. N. Reddy, "Mathematical Models and Numerical Simulations of Problems in Mechanics," **Plenary Lecture**, *8th Mechanical and Mechatronics International Engineering Congress and the 4th Materials, Energy and Environment Congress* -CIMM-2017, Universidades Nacional de Colombia, Medellin, Colombia, 25-28 March, 2017.
152. J. N. Reddy, "Numerical Simulations: Third Pillar of Scientific Discovery and Investigation," **Opening Plenary Lecture**, *XI Colombian Congress of Numerical Methods 2017,* the Industrial University of Santander, Colombia, 16 - 18 August 2017.
153. J. N. Reddy, "Recent Developments in Shell Finite Elements and Non-Local Theories for Composite Structures," **Keynote Lecture** presented at *XXIII AIMETA* (Association of Italian Mechanics, Theory and Applications), Grand Hotel, Salerno, Italy, 4-7 September 2017.
154. Miguel Gutierrez Rivera and J. N. Reddy, "Robust Shell Finite Elements Based on Seven- and Twelve-Parameter Shell Theories," **Keynote Lecture** presented at *EASEC15 Conference*, Xi'an, China, 12 October 2017.
155. J. N. Reddy, "On Non-Local and Non-Classical Continuum Mechanics Theories and Applications," **Opening Plenary Lecture**, *Annual Technical Meeting of the American Society of Composites*, Purdue University, W. Lafayette, October 23-25, 2017.
156. J. N. Reddy, "Computational Mechanics: the Third Pillar of Scientific Inquiry in Science and Engineering," **Keynote Lecture***, International Conference on Nonlinear Differential Equations- Theory, Modeling and Computations,* Research In statute, SRM University, Chennai, India, 8-9 December 2017.
157. J. N. Reddy, "An Overview of Non-Local and Non-Classical Continuum Mechanics Theories," **Opening Plenary Lecture**, *International Conference on Composite Materials an Structures* - ICCMS 2017, 27-29 Dec 2017, Indian Institute of Technology, Hyderabad, India.
158. J. N. Reddy, "Innovations in Shell Finite Elements and Non-Local Effects in Structures," **Opening Plenary Lecture** presented at *2nd International Conference on Innovations in Structural Engineering*, Osmania University College of Engineering, Hyderabad, India, 29-31 December 2017.
159. J. N. Reddy, "The finite element method: the third pillar of scientific discovery and investigation," **Plenary Lecture**, *MechanIST* (a student organized conference), Technical University of Lisbon, Portugal March 13-16, 2018.
160. J. N. Reddy, "A Journey Through Composite Materials and Structures: A Personal Retrospective," **Opening Plenary Lecture**, *First International Conference on Mechanics of Advanced Materials and Structures*, University of Torino, Torino, Italy, 18-20 June 2018.
161. J. N. Reddy, "On Stress and Strain Gradient and Micropolar Theories," **Plenary Lecture**, *12th International Conference on Advanced Computational Engineering and Experimenting* (ACE-X 2018), Amsterdam, The Netherlands, 1-4 July 2018.
162. J. N. Reddy, "Recent Developments in Shell Finite Elements and Non-Local Continuum Mechanics Theories," **Opening Plenary Lecture**, *11th South African Conference on Computational and Applied Mechanics* (SACAM), Faculty of Engineering and Technology, Vaal University of Technology, South Africa, 17-19 September 2018.
163. J. N. Reddy, "Journey through Mechanics Research: A Personal Retrospective," *City University Distinguished Lecture Series*, City University of Hong Kong, 12 October 2018.
164. J. N. Reddy, "High Performance Shell Finite Elements for Nonlinear Analysis of Composite Structures and Materials," **Keynote Lecture**, *High Performance Structures and Materials, Sustainability and Resilience of Civil Engineering Infrastructure*, Chongqing University, Chongqing, China, 20-21 October 2018.
165. J. N. Reddy, "On Seven- and Twelve-Parameter Shell Finite Elements and Non-Local Theories for Composite Structures," **Opening Keynote Speaker**, *XXXVIII South American Structural Engineering Congress*, Departmental Council of Lima of College of Engineers of Peru, Lima, 24-26 Oct., 2018.

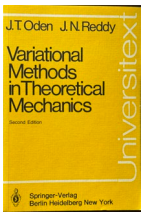
166. J. N. Reddy, "On Refined Robust (Locking-Free) Shell Finite Elements and Modified Couple Stress Theories for Beams and Plates," **Plenary Lecture**, *International Conference on Nonlinear Solid Mechanics* (ICoNSoM 2019), 16-19 June 2019, Roma, Italy.
167. J. N. Reddy, "Mechanics and Numerical Simulations: Pillars of Scientific Inquiry," **Invited Speaker**, *Workshop on Non-Classical Advanced Mechanics of Materials,* Indian Institute of Science, Bangalore, India, July 9-11, 2019.
168. J. N. Reddy, "On nonlocal stress and strain gradient theories with material and structural length scales," **Plenary Lecture**, *Second International Conference on Mechanics of Advanced Materials and Structures*, Nanjing University of Aeronautics & Astronautics, Nanjing, China, 19-22 October 2019.
169. J. N. Reddy, "Innovations in computational mechanics for structural design," **Keynote Lecture,** *International Conference on Sustainable Civil Engineering and Architecture* (ICSCEA) 2019, Ho Chi Minh City, Vietnam, 24-26 October 2019.
170. J. N. Reddy, "Nonlocal material and mechanics models for damage and fracture in solids," **Plenary Lecture,** *2nd International Conference on Materials and Manufacturing Engineering*, BITS Pilani Dubai Campus, Dubai, UAE, 20-22 November 2019.
171. J. N. Reddy, "Personal reflections of my research in structural mechanics: past, present, and future," **Opening Plenary Lecture,** *The Sixteenth East Asia-Pacific Conference on Structural Engineering & Construction*, School of Civil Engineering, The University of Queensland, Brisbane, Queensland, Australia, 4-7 December 2019.
172. J. N. Reddy, "Recent Advances in Mechanics of Materials and Structures: Mathematical Models and Computational Approaches," **Opening Plenary Lecture,** *3rd International Conference on Advances in Mechanical Engineering* (ICAME 2020), Department of Mechanical Engineering, SRMIST, Kattankulathur, Chennai, India, February 24-29, 2020.
173. J. N. Reddy, "Computational Structural Mechanics for the Future," **Opening Keynote Lecture,** *International Conference on Applications in Computational Engineering and Sciences* (IConACES), Vellore Institute of Technology, Chennai, India, 30-31 October 2020 (was also a Guest of Honor at the inaugural function of the conference).
174. J. N. Reddy, "On robust shell finite elements and nonlocal mechanics," **Opening Plenary Lecture**, *International Conference on Modern Mechanics and Applications* (ICOMMA), Ho Chi Minh City, Vietnam, 2-4 Dec 2020.
175. J. N. Reddy, "Recent developments in computational approaches to model laminated composite shells and damage and fracture in solids," **Webinar** presented in *Global Composites Experts Seminar Series,* Purdue Composites Design and Manufacturing HUB, Purdue University, West Lafayette, 11 Feb 2021.
176. J. N. Reddy, "Robust shell finite element and nonlocal mechanics for modeling of architected materials and structures," *Meck Talk'21*, **Opening Plenary Lecture** (webinar), IDMEC – Mechanical Engineering Institute, Technical University of Lisbon, Portugal, 7 April 2021.
177. J. N. Reddy, "My professional journey through mechanics research: a personal retrospective," **Opening Plenary Lecture,** *14th International Conference on Computational Engineering and Experimentation* (ACEX-2020), Malta, 5-9 July 2021.
178. J. N. Reddy, "On higher-order shell finite elements and a computational approach for fracture," **Opening Plenary Lecture**, the *12th International Conference on Computational Methods* (Virtual Conference), 4th-8th July 2021, Ho Chi Minh City, Vietnam.
179. J. N. Reddy (in collaboration with A.R. Srinivasa, P. Thamburaja, K. Sarah, and Ho Yong Shin), "GraFEA: a computational approach to fracture and damage in solids," **Opening Plenary Lecture**, the *Second International Conference on Sustainable Engineering and Architecture* (Virtual Conference), 30th October 2021, Ho Chi Minh City, Vietnam.
180. J. N. Reddy, "On robust shell finite elements and computational approaches for architected materials and fracture," **Keynote Lecture**, *Midwest Applied Materials Symposium*, South Dakota State University, Brookings, Nov. 12-13, 2021.
181. J. N. Reddy, "GraFEA: a computational approach for fracture insolids," Invited Talk, *Emergung Topics in Mechanics*, Conference in honor of Yonggang Huang, University of Houston, 22-25 March 2022.

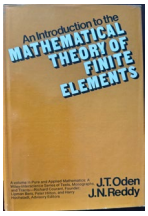
182. J. N. Reddy, "Mechanics of materials and structures: experiments and computations," **Keynote Lecture**, *International Symposium on Additive Manufacturing* (Birth centenary celebrations of the founder chairman, Dr. M. S. Ramaiah), Peenya, Bangalore, India, 30-31 May 2022.
183. J. N. Reddy, "My journey through mechanics education and research: a personal retrospective," Invited Lecture presented at the induction seremony organized by the Royal Spanish Academy of Engineering, 27 October 2022, Madrid, Spain.
184. H.Y. Shin, P. Thamburaja, A.R. Srinivasa, and J. N. Reddy, "Computational approaches for architected materials and fracture in solids," **Opening Plenary Lecture**, *XLIII Ibero-Latin American Congress of Computational Methods in Engineering* (CILAMCE 2022 Conference), Brazilian Association for Computational Methods in Engineering (ABMEC), 21-25 November 2022, Foz do Iguaçu, BRAZIL.
185. J. N. Reddy, "A Dual Mesh Control Domain Method: A Marriage of the Finite Element and Finite Volume Methods," **Opening Plenary Lecture** presented at the *8th International Congress on Computational Mechanics and Simulation* (ICCMS 2022), Indian Association for Computational Mechanics (IndACM), 9-11 Dec 2022, Indian Institute of Technology, Indore, India.
186. J. N. Reddy, "On a locking-free shell element and nonlocal approaches for modelling of architected materails," **G.I. Taylor Memorial Lecture**, presented at *67th Congress of the Indian Society of Theoretical and Applied Mechanics (ISTAM-2022)*, IIT Mandi, Mandi-175075, Himachal Pradesh, INDIA, 14–16 December 2022.
187. J. N. Reddy, "Dual Mesh Control Domain Method for the Solution of Differential Equations in Engineering and Applied Sciences," ***Institute Lecture*** presented at National Institute of Technology, Warangal, 19 Dec 2022.
188. J. N. Reddy, "My Journey Through Applied Mechanics Research: A Personal Retrospective," ***Distinguished Institute Lecture***, Indian Institute of Technology, Hyderabad, 20 December 2022.
189. J. N. Reddy, "A robust shell finite element and nonlocal approaches to study architected materials and fracture in solids," **Plenary Speaker**, *PMU Conference*, Saudi Arabia, March 2023.
190. J. N. Reddy, "Nonlocal approaches for architected structures and fracture in solids," **Plenary Lecture** at *The Third International Conference on Sustainable Civil Engineering and Architecture (ICSCEA 2023),* Da Nang, Vietnam, 21-22 July 2023.
191. J. N. Reddy and A.R. Srinivasa, "Locking-free shell finite element, nonlocal approaches for architected structures, and fracture in solids," **Plenary Lecture** at the *9th ECCOMAS Thematic Conference on the Mechanical Response of Composites (ECCOMAS Composites 2023)*, Trapani, Italy, 12-14 Sept 2023.
192. J. N. Reddy, "Computational mechanics: the third pillar of scientific investigation," **Invited Lecture** (on the occasion of receiving the **Leonado da Vinci Award**) presented at *EurASc Annual Symposium 2023*, Madrid, Spain, 24 October 2023.
193. Sachin Velayudhan, Prakash Thamburaja, Arun Srinivasa, and J. N. Reddy, "GraFEA: A Thermodynamically-consistent Computational Approach for Damage and Failure," **Semi-plenary Lecture** presented at the *9th European Congress on Computational Methods in Applied Sciences and Engineering*, Lisbon, PORTUGAL, 4 June 2024
194. J. N. Reddy and T. Heblekar, "The dual mesh control domain method: a marriage of the finite element and finite volume methods," **Plenary Lecture,** *ACEX2024*, Barcelona, Spain, 1-5 July 2024.
195. Sachin Velayudhan, Arun Srinivasa, and J. N. Reddy, "Fracture modeling of plate bending based on graph-based finite element analysis (GraFEA)," **Opening Keynote Lecture**, *6th Indian Conference on Applied Mechanics*, National Institute of Technology, Warangal, India, 12-14 July 2024.
196. J. N. Reddy, "Role of computational mechanics and recent advances," Invited Keynote lecture presented in the session titled *Professor JN Reddy's Contributions to Computational Mechanics - A Minisymposium on the Occasion of Prof. Reddy's 80th Birthday* at the 16th World Congress of Computational Mechanics, 21-26 July 2024, Vancouver, Canada.
197. J. N. Reddy and Tanmaye Heblekar, "The dual mesh control domain method: an alternative to the finite element and finite volume methods," **Plenary Lecture**, *30th International Conference on Computational & Experimental Engineering and Sciences (ICCES)*, 3-6 August 2024, Singapore.
198. Sachin Velayudhan, Arun Srinivasa, and J. N. Reddy, "A graph-based finite element approach to model fracture in bending of plates," **Invited Lecture** in the session on "Friction, Fracture, and Damage of Quasi-Brittle Solids and Weak Interfaces" at the *2024 Society of Engineering Science Annual Technical Meeting,* 20-23 August 2024, Westlake University, Hangzhou, China.

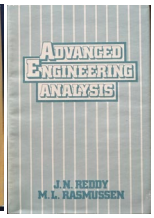
199. J. N. Reddy, Arun R. Srinivasa, and Alekhya Banki, "Modeling and analysis of the integrity of architected materials and structures," **Plenary Lecture**, *International Symposium on Structural Integrity* (ISSI2024), November 5-8, 2024, Dongguan, China.
200. J. N. Reddy, A. R. Srinivasa, Alekhya Banki, "Analysis of architected materials and structures," **Plenary Lecture**, *Nature Conference on Interdisciplinary Materials*, Wuhan University of Technology, Wuhan, China, 8-10 November 2024.
201. S. Velayudhan, A. R. Srinivasa, and J. N. Reddy, "Fracture modeling of plate bending using graph-based finite element analysis (GRAFEA)," **Keynote Lecture**, *18th East Asia - Pacific Conference on Structural Engineering and Construction (EASEC 18),* Chiang Mai, Thailand, 13-5 November 2024.
202. Sachin Velayudhan, Alekhya Banki, Arun Srinivasa, Prakash Thamburaja, and J.N. Reddy, "On nonlocal mechanics models for architected materials and fracture in solids," *Fourth International Conference on Mechanics of Advanced materials and Structures*, **Opening Plenary Lecture**, Ramaiah Institute of Technology, Bangalore, India, 11-13 December 2024.
203. J. N. Reddy, "A robust shell finite element with thickness stretch and a micromorphic plate model to study architected structures," **Opening Plenary Lecture**, *14th Structural Engineering Convention 2024 (SEC2024)*, 12-14th December 2024, Trichy, India.
204. Alekhya Banki, Sachin Velayudhan, and Arun Srinivasa, Prakash Thamburaja, and J.N. Reddy, "Nonlocal models to study fracture in architected structures and brittle solids," **Opening Plenary Lecture**, *3rd International Conference on Recent and Advanced Composite Materials (ICRACM 2025),* February 26-28, 2025, SRM Institute of Science and Technology, Kattankulathur, Tamil Nadu, India
205. Sachin Velayudhan, Arun Srinivasa, and J.N. Reddy, "Modeling of fracture in brittle and quasi-brittle materials using graph-based finite element approach," **Plenary Lecture**, *FraMCoS XII Conference (Fracture Mechanics of Concrete and Concrete Structures)*, the TU Wien (Vienna University of Technology) in Vienna, Austria, April 22-25, 2025.
206. Tanmaye Heblekar, J. N. Reddy, and Arun Srinivasa, "Dual mesh control domain method and its applications to solid mechanics and fluid dynamics," *International Conference on Theoretical and Applied Mechanics,* **Plenary Lecture**, Serbian Society for Mechanics, Niš, Serbia, June 18-20.
207. J. N. Reddy, "My professional journey through mechanics education and research: a personal retrospective," **Opening Plenary Lecture**, *The Fourth International Conference on Sustainable Civil Engineering and Architecture* (ICSCEA) 2025, Vietnam National University, Ho Chi Minh City, Vietnam, 11–13 July 2025. The conference commemorates the 80th birthday of Professor J.N. Reddy.
208. J. N. Reddy, "Mechanics of composite materials and structures: an overview of the developments," **Plenary Lecture**, 28th *International Conference on Composite Structures* (ICCS28) in Yinchuan, China, August 31st to September 3rd, 2025.
209. J. N. Reddy, "Computational mechanics: the third pillar of research and technology," *The Defense Symposium and Exhibition,* **Keynote speaker,** Kayseri, Turkey, 16-18 October 2025.
210. J. N. Reddy, "On nonlocal mechanics models for architected materials and fracture in solids," **Keynote Lecture**, the *27th Australasian Conference on the Mechanics of Structures and Materials (ACMSM27),* 25th to 28th of November 2025, jointly organized by The University of Melbourne and Swinburne University of Technology.

ARCHIVAL PUBLICATIONS

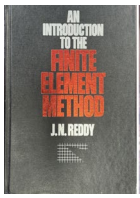
BOOKS (books with solution manuals are in boldface letters; those authored by alone are in red)

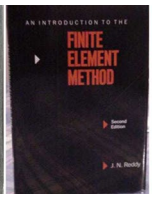


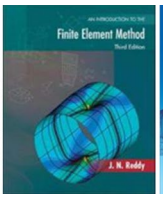


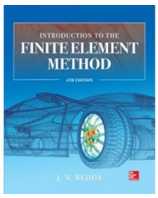


1. J. T. Oden and J. N. Reddy, *Variational Methods in Theoretical Mechanics*, Springer-Verlag, NY, 1976; **2nd ed.** 1982.
2. J. T. Oden and J. N. Reddy, *A Mathematical Theory of Finite Elements*, John Wiley & Sons, New York, 1976.
3. J. N. Reddy and M. L. Rasmussen, *Advanced Engineering Analysis*, John Wiley, New York, 1982; reprinted by Krieger, Melbourne, FL, 1990.

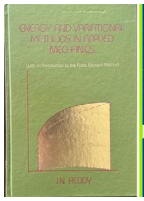


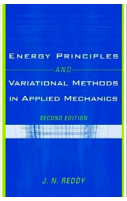


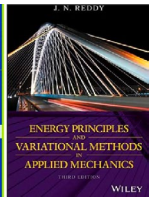




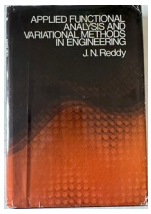
4. **J. N. Reddy**, ***An Introduction to the Finite Element Method***, McGraw-Hill, New York, 1984; 2nd ed., 1993; 3rd ed., 2006; 4th ed., 2019 (translated in to Chinese; fifth edition in preparation).



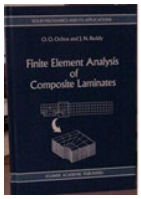


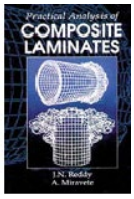


5. **J. N. Reddy**, ***Energy Principles and Variational Methods in Applied Mechanics***, John Wiley, NY, 1984; 2nd ed., 2002; 3rd ed. 2017.

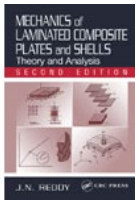


6. **J. N. Reddy**, *Applied Functional Analysis and Variational Methods in Engineering*, McGraw-Hill, NY, 1986; reprinted by Krieger, Melbourne, FL, 1991.

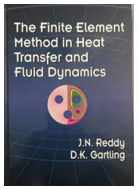


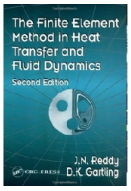


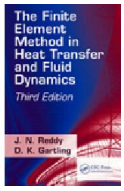
7. O. O. Ochoa and J. N. Reddy, *Finite Element Analysis of Composite Laminates*, Kluwer Academic Publishers, The Netherlands, 1992.
8. J. N. Reddy and A. Miravete, *Practical Analysis of Laminated Composite Structures*, CRC Press, FL, 1995.



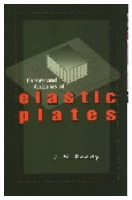
9. **J. N. Reddy**, *Mechanics of Laminated Composite Plates and Shells: Theory and Analysis*, CRC Press, Boca Raton, FL, 1996; 2nd ed., 2004.





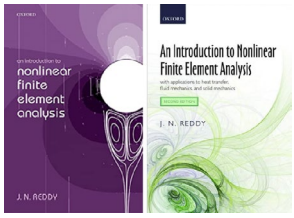


10. J. N. Reddy and D. K. Gartling, *The Finite Element Method in Heat Transfer and Fluid Dynamics*, CRC Press, FL, 1997; 2nd ed., 2001; 3rd ed., 2010.

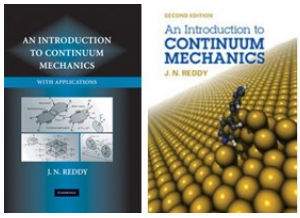


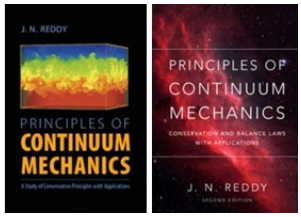
11. **J. N. Reddy**, ***Theory and Analysis of Elastic Plates and Shells***, Taylor & Francis, Philadelphia, PA,1999; 2nd ed., 2007.

12. C. M. Wang, J. N. Reddy, and K.H. Lee, *Shear Deformation Theories of Beams and Plates. Relationships with Classical Solution*, Elsevier, U.K., 2000.
13. C. M. Wang, C. Y. Wang, and J. N. Reddy, *Exact Solutions for Buckling of Structural Members,* CRC Press, Boca Raton, FL, 2005.

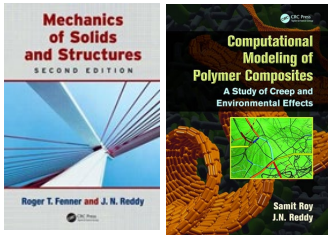


14. **J. N. Reddy**, ***An Introduction to Nonlinear Finite Element Analysis***, Oxford University Press, Oxford, U.K., 2004; 2nd ed., 2015.

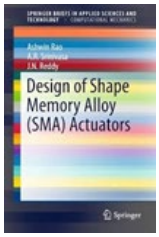




15. **J. N. Reddy**, ***An Introduction to Continuum Mechanics with Applications***, Cambridge University Press, New York, 2008; 2nd ed., 2013.
16. **J. N. Reddy**, ***Principles of Continuum Mechanics. A Study of Conservation Principles with Applications***, Cambridge University Press, New York, 2010; 2nd ed., 2018. **Translated into French** and published in 2015 by De Boeck Superieur.

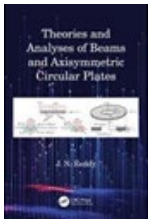


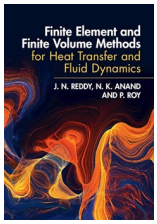
17. R. T. Fenner and J. N. Reddy, ***Mechanics of Solids and Structures***, 2nd ed., CRC Press, Boca Raton, Florida, 2012; 3rd ed, 2025 (Arun Srinivasa as the third author).
18. S. Roy and J. N. Reddy, *Computational Modelling of Polymer Composites, A Study of Creep and Environmental Effects,* CRC Press, Boca Raton, Florida, 2013.



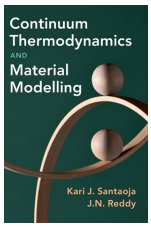
19. A. Rao, A. R. Srinivasa, and J. N. Reddy, *Design of Shape Memory Alloy (SMA) Actuators*, Springer Briefs in Applied Sciences, Springer-Verlag, Berlin, 2015.

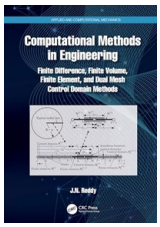
20. K. S. Surana and J. N. Reddy, *The Finite Element Method for Boundary Value Problems, Mathematics and Computations*, CRC Press, Boca Raton, Florida, 2017.
21. K. S. Surana and J. N. Reddy, *The Finite Element Method for Initial Value Problems, Mathematics and Computations*, CRC Press, Boca Raton, Florida, 2018.





22. **J. N. Reddy,** *Theories and Analyses of Beams and Axisymmetric Circular Plates*, CRC Press, Boca Raton, FL 2022.
23. J. N. Reddy, N.K. Anand, and P. Roy, ***The Finite Element and Finite Volume Methods for Heat Transfer and Fluid Dynamics,*** Cambridge University Press, New York, NY, 2023.





24. Kari Santaoja and J. N. Reddy, ***Continuum Thermodynamics and Material Modelling*,** Cambridge University Press, New York, NY, 2024.
25. **J. N. Reddy,** ***Computational Methods in Engineering: Finite Difference, Finite Volume, Finite Element, and Dual Mesh Control Domain Methods***, CRC Press, Boca Raton, FL, 2024.

MONOGRAPHS EDITED

1. J. N. Reddy, *Penalty Finite Element Methods in Mechanics*, AMD-Vol. 51, American Society of Mechanical Engineers, NY, 1982.
2. J. N. Reddy, C. S. Krishnamoorthy and K. N. Seetharamu, *Finite Element Analysis for Engineering Design*, Lecture Notes in Engineering, Vol. 37, Springer-Verlag, Berlin, 1988.
3. J. N. Reddy and J. L. Teply, *Mechanics of Composite Materials and Structures*, AMD-Vol. 100, ASME, New York (papers presented at the Third Joint ASCE/ASME Mechanics Conference), La Jolla, CA, July 9-12, 1989), 1989.
4. A. H. Nayfeh, D. T. Mook, and J. N. Reddy, *Nonlinear Vibrations, Stability and Dynamics of Structures and Mechanisms*, Pergamon Press, Oxford, 1990 (A special issue of the *J. Non-Linear Mechanics*, Vol. 25, No. 1, 1990).
5. A. V. Krishna Murty and J. N. Reddy, *Proceedings of the Indo-U.S. Workshop on Composites for Aerospace Applications*, Parts I and II, Indian Institute of Science, Bangalore, India, July 1990.
6. J. N. Reddy, L. Schwer and A. Mal, *Enhancing Analysis Techniques for Composite Materials*, NDE-Vol. 10, American Society of Mechanical Engineers, NY, 1991.
7. M. N. Dhaubhadel, J. N. Reddy, and M. S. Engelman, *Advances in Finite Element Analysis in Fluid Dynamics-1991*, FED-Vol. 123, American Society of Mechanical Engineers, NY, 1991.
8. J. N. Reddy and N. Chandra, *Advances in Finite Deformation Problems in Materials Processing and Structures*, AMD-Vol. 125, ASME, NY, 1991.
9. A. V. Krishna Murty and J. N. Reddy, *Composite Structures: Testing, Analysis, and Design*, Narosa, New Delhi, 1992.
10. K. L. Reifsnider and J. N. Reddy, *Local Mechanics Concepts for Composite Material Systems*, Proceedings of the IUTAM Symposium held in Blacksburg, Virginia, October 1991, Springer-Verlag, New York, 1992.
11. M. N. Dhaubhadel, J. N. Reddy, and M. S. Engelman, *Advances in Finite Element Analysis in Fluid Dynamics-1992*, FED-Vol. 137, ASME, New York, 1992.
12. J. N. Reddy, *Mechanics of Composite Materials* (Selected Works of Nicholas J. Pagano), Kluwer Academic Publishers, The Netherlands, 1994.
13. J. N. Reddy*, Proceedings of the Third U.S. National Congress on Computational Mechanics*, Department of Mechanical Engineering, Texas A&M University, College Station, 1995.
14. L. Demkowicz and J. N. Reddy, *Advances in Computational Mechanics*, Parts I and II (in Honor of J. Tinsley Oden on the Occasion of His 60th Birthday), Elsevier, Amsterdam, 1997.
15. J. N. Reddy, C. W. Bert, and I. Elishakoff, Special Issue of *Mechanics of Advanced Materials and Structures* (Dedicated to Y. Stavsky), edited by Vol. 11, Nos. 4-5, 2004.

16. J. N. Reddy, *Proceedings of the International Conference in Structural Stability and Dynamics*, 19-22 June 2005, Gaylord Palms Resort and Convention Center, Kissimmee, Florida; only electronic version is available.
17. J. N. Reddy and M.K. Shrimali, *Structural Stability and Dynamics*, Proceedings of the International Conference held during 4-6 January 2012 at Malavia National Institute of Technology, Jaipur, India, 2012; Excel India Publishers, New Delhi, India, 2012.
18. C. M. Wang, Y. B. Yang, and J. N. Reddy, *Proceedings of the IJSSD Symposium 2012 on Progress in Structural Stability and Dynamics*, 14-16 April 2012, Nanjing China, Southeast University Press, Nanjing, China, 2012.
19. K. M. Liew, L. W. Zhang, J. N. Reddy, and Shaofan Li (eds.), *Computational Methods for Engineering Science,* a special issue of the open access journal *Mathematical Problems in Engineering*, Volume 2015 (2015), Article ID 842103, http://dx.doi.org/10.1155/2015/842103
20. Ayech Benjeddou, Aurélio L. Araújo, Erasmo Carrera, J. N. Reddy, Antonio Torres Marques (Guest Eds.), *Smart Composites and Composite Structures In honour of the 70th anniversary of Professor Carlos Alberto Mota Soares,* a special issue of *Composite Structures*, Vol. 151, September 2016, doi:10.1016/j.compstruct.2016.04.049.
21. J. N. Reddy, C.M. Wang, V.H. Luong, and A.T. Le (eds), *ICSCEA 2019 Proceedings of the International Conference on Sustainable Civil Engineering and Architecture, Vols. 1 and 2,* Lecture Notes in Civil Engineering Vol. 80, Springer Nature, Singapore, 2020.
22. Chakraverty, S., Tornabene, F., and Reddy J. N. (eds), *Modeling and Computation in Vibration Problems*, *Volume 1: Numerical and semi-analytical methods*, IOP Publishing, Bristol, 2021, https://iopscience.iop.org/book/978-0-7503-3483-9.
23. Chakraverty, S., Tornabene, F., and Reddy J. N. (eds), *Modeling and Computation in Vibration Problems*, *Volume 2: Soft computing and uncertainty*, IOP Publishing, Bristol, 2021, https://iopscience.iop.org/book/978-0-7503-3487-7.
24. J. N. Reddy, C.M. Wang, V.H. Luong, and A.T. Le (eds), *ICSCEA 2021 Proceedings of the International Conference on Sustainable Civil Engineering and Architecture, Vols. 1 and 2,* Lecture Notes in Civil Engineering Vol. XX, Springer Nature, Singapore, 2022.
25. Krzysztof Kamil Zur, J. N. Reddy, Ali Farajpour, and Jinseok Kim (eds.), Special issue titled "Computational approaches to mechanical response analysis of structures at diverse scales," *Engineering Analysis with Boundary Elements*, Vo. 136, Nos. 1,2, 2022.

    https://doi.org/10.1016/j.enganabound.2021.12.014
26. J. N. Reddy, C.M. Wang, V.H. Luong, and A.T. Le (eds), *ICSCEA 2022 Proceedings of the International Conference on Sustainable Civil Engineering and Architecture, Vols. 1 and 2,* Lecture Notes in Civil Engineering Vol. XX, Springer Nature, Singapore, 2022.
27. Krzysztof Kamil Zur, Jinseok Kim, and J. N. Reddy (eds.), special issue titled "Analytical and Numerical Methods for Linear andNonlinear Analysis of Structures at Macro, Micro and Nano Scale," *Mathematics,* an Open Access Journal by MDPI, MDPI, St. Alban-Anlage 66, 4052 Basel, Switzerland, 2022.
28. J. N. Reddy, C.M. Wang, V.H. Luong, and A.T. Le (eds), *ICSCEA 2023 Proceedings of the International Conference on Sustainable Civil Engineering and Architecture*, *Vols. 1 and 2*, Lecture Notes in Civil Engineering Vol. 442, Springer Nature, Singapore, 2024.

BOOK CHAPTERS

1. J. N. Reddy, "On the Finite Element Method with Penalty for Incompressible Fluid Flow Problems," *The Mathematics of Finite Elements with Applications III*, J. R. Whiteman (ed.), Academic Press, London, pp. 227-285, 1979.
2. J. D. Warburton and J. N. Reddy, "A Comparative Study of Numerical Schemes for the Solution of Two-Dimensional Advection Flows," *Nonlinear Partial Differential Equations in Engineering and Applied Science*, R. L. Sternberg, et al. (eds.), Marcel Dekker, NY, pp. 187-212, 1980.

3. R. Fernandes, J. Francis, and J. N. Reddy, "A Finite Element Approach to Combined Conductive and Radiative Heat Transfer in a Planar Medium," A. L. Crosbie (ed.), *Progress in Astronautics and Aeronautics*, Vol. 78, pp. 92-109, 1980.
4. J. N. Reddy, "Analysis of Layered Composite Plates Accounting for Large Deflections and Transverse Shear Strains," *Recent Advances in Nonlinear Computational Mechanics*, E. Hinton, D. R. J. Owen and C. Taylor (eds.), Pineridge Press, Swansea, pp. 155-202, 1982.
5. C. W. Bert and J. N. Reddy, "Mechanics of Bimodular Composite Structures," in *Mechanics of Composite Materials: Recent Advances,* Z. Hashin and C. T. Herakovich (eds.), Pergamon Press, pp. 323-337, 1983 (Proceedings of IUTAM Symposium held at Virginia Polytechnic Institute and State University, June 1982).
6. J. N. Reddy, "Penalty Function Methods in Conduction and Convection Heat Transfer," *Numerical Methods in Heat Transfer,* Vol. 2, R. W. Lewis, K. Morgan, and B. A. Schrefler (eds.), John Wiley, London, pp. 145-178, 1983.
7. J. N. Reddy, "On a Third-Order Shear Deformation Theory of Laminated Composite Plates," *Developments in Theoretical and Applied Mechanics*, Vol. XII, (selected papers from the proceedings of the Twelfth Southeastern Conference on Theoretical and Applied Mechanics, May 10-11, 1984), Auburn University, AL, pp. 397-420, 1985.
8. A. Grimaldi and J. N. Reddy, "On Delamination in Plates: A Unilateral Contact Approach," *Unilateral Problems in Structural Analysis*, G. Del Piero and F. Maceri (eds.), CISM Courses and Lectures No. 288, Springer-Verlag, NY, pp. 299-314, 1985.
9. J. N. Reddy, "On Mixed Finite-Element Formulations of a Higher-Order Theory of Composite Laminates," *Finite Element Methods for Plate and Shell Structures*, T. J. R. Hughes and E. Hinton (eds.), Pineridge Press, U.K., pp. 31-57, 1986.
10. J. N. Reddy, "The Penalty-Finite Element Method," *Finite Element Handbook*, H. Kardestuncer (ed.), McGraw-Hill, NY, p. 2.233, 1987.
11. J. N. Reddy, "Standard Results for Linear-Elliptic Boundary-Value Problems," *Finite Element Handbook*, H. Kardestuncer (ed.), McGraw-Hill, NY, p. 2.315, 1987.
12. J. N. Reddy, "Finite-Element Analysis of Adhesive Joints," *Adhesive Bonding*, (L. H. Lee, ed.), Ch. 21, pp. 359-394, Plenum Press, NY, 1991.
13. D. H. Pelletier, J. A. Schetz, and J. N. Reddy, "Recent Developments and Trends in Computational Natural Convection," *Annual Review of Numerical Fluid Mechanics and Heat Transfer*, Vol. 2, C. L. Tien and T. C. Chawla (eds.), Hemisphere, Washington, DC, pp. 39-85, 1989.
14. J. N. Reddy, "Mathematics," Chapter 2 of *Eshbach's Handbook of Engineering Fundamentals*, B. Tapley (ed.), 4th ed., John Wiley, New York, 1990.
15. *Chapter 1:* ``A Review of the Equations of Mechanics," pp. 1-15.
16. *Chapter 2:* ``Variational Formulations and Methods," pp. 16-39.
17. *Chapter 3:* "An Introduction to the Finite Element Method," pp. 41-69.
18. *Chapter 10:* "Two-Dimensional Theories of Plates," pp. 249-270.
19. *Chapter 14:* "Mechanics of Composite Structures," pp. 338-359.
20. *Chapter 15:* "Analysis of Laminated Composite Structures," pp. 361-423.
21. J. N. Reddy, *"*On the Generalization of Displacement-Based Laminate Theories," *Mechanics Pan-America 1989*, (selected and revised proceedings of the January 1989 Rio de Janeiro Pan-American Congress of Applied Mechanics), C. R. Steele, A. W. Leissa, and M. R. M. Crespo da Silva (eds.), ASME Press, NY, pp. S213-S222, 1989.
22. J. L. Teply and J. N. Reddy, *"*A Unified Formulation of Micromechanics Models of Fiber-Reinforced Composites," *Inelastic Deformation of Composite Materials* (IUTAM Symposium, Troy, NY, May 29-June 1, 1990), G. J. Dvorak (ed.), Springer-Verlag, NY, pp. 341-370, 1990.
23. D. H. Robbins and J. N. Reddy, *"*On the Modeling of Free-Edge Stress Fields and Delaminations in Thick Composite Laminates," *Composite Structures, Testing, Analysis, and Design*, J. N. Reddy and A. V. Krishna Murty (eds.), Narosa, New Delhi, pp. 33-74, 1992.

24. D. H. Robbins, Y. S. N. Reddy, and J. N. Reddy, "Analysis of Interlaminar Stresses and Failures Using a Layer-Wise Laminate Theory," *Local Mechanics Concepts for Composite Material Systems* (IUTAM Symposium, Blacksburg, VA, October 1991), J. N. Reddy and K. L. Reifsnider (eds.), Springer-Verlag, NY, pp. 307-339, 1992.
25. M. P. Reddy and J. N. Reddy, "Three-Dimensional Finite Element Analysis of Non-Newtonian Fluid Flows,", *Computational Fluid Dynamics Techniques*, W. G. Habashi and M. M. Hafez (eds.), Gordon and Breach, NY, pp. 437-485, 1995.
26. D.K. Gartling and J. N. Reddy, "Numerical Simulation of Flows of Non-Newtonian and Viscoelastic Fluids," *Computational Fluid Dynamics Review 1995*, M. Hafez and K. Oshima (eds.), John Wiley, NY, pp. 731-754, 1995.
27. C. M. Dakshina Moorthy and J. N. Reddy, "Modeling Delamination Using a Layerwise Element with Enhanced Strains," in *Damage Mechanics in Engineering Materials*, G. Z. Voyiadjis, J.-W.W. Ju, and J.-L. Chaboche (eds.), Elsevier, NY, 1998.
28. J. N. Reddy, "On Locking-Free Shear Deformable Beam Finite Elements," in *Advances in Computational Mechanics*, pp. 113-132, L. Demkowicz and J. N. Reddy (eds.), Elsevier, Amsterdam, 1997.
29. F. T. Kokkinos and J. N. Reddy, "A Hybrid BE/FE Method for the Analysis of Laminated Structures," Ch 7 in *Properties of Discontinuous Materials*, M. Bush (ed.), Elsevier, NY, 1998.
30. J. N. Reddy, "Theory and Analysis of Laminated Composite Plates," Chapter 1 in *Mechanics of Composite Materials*, C. A. Mota Soares, et al. (eds.), Kluwer , Netherlands, pp. 1-79, 1999.
31. J. N. Reddy, "On Shear Deformation Plate Solutions: Relationships to the Classical Solutions," in *Advances in the Mechanics of Plates and Shells*, D. Durban, D. Givoli, and J. G. Simmonds (eds.), Kluwer , The Netherlands, pp. 259-276, 2001.
32. J. N. Reddy, ``An Introduction to the Finite Element Method" in *Dynamics of Earth's Fluid System*, S. N. Rai, D. V. Ramana, and A. Magnik (eds.), Oxford & IBH Publishing Co., New Delhi, India, pp. 199-226, 2002.
33. J. N. Reddy, "Finite Element Models of Flows of Viscous Incompressible Fluids," in *Dynamics of Earth's Fluid System*, S. N. Rai, D. V. Ramana, and A. Magnik (eds.), Oxford & IBH Publishing Co., New Delhi, India, pp. 227-251, 2002.
34. J. N. Reddy and D. H. Robbins, Jr., "Computational Modelling of Damage and Failures in Composite Laminates," Chapter 13 in *Encyclopedia of Computational Mechanics*, *Vol. 2: Solids and Structures*, E. Stein, R. de Borst, and T. J. R. Hughes (eds.), John Wiley, Chichester, UK, pp. 431-460, 2004.
35. G. T. Lim, J. N. Reddy, and H. -J. Sue, "Finite Element Modeling for Scratch Damage of Polymers," *Stimuli-Responsive Polymeric Films and Coatings*, *ACS Book Series*, Vol. 912, pp. 166-180, 2005.
36. J. N. Reddy and R. A. Arciniega, "Mechanical and Thermal Buckling of Ceramic-Metal Plates," Chapter 6 in *Analysis and Design of Plated Structures*, *Statics*, N. E. Shanmugam and C. M. Wang (eds), Wood-Head Publishing, Oxford, UK, pp. 138-160, 2005.
37. J. N. Reddy and R. A. Arciniega, "Vibration of Functionally Graded Ceramic-Metal Plates," in *Analysis and Design of Plated Structures: Dynamics*, N. E. Shanmugam and C. M. Wang (eds), Wood-Head Publishing, Oxford, UK, pp. 293-321, 2007.
38. J. N. Reddy, V. U. Unnikrishnan, and G.U. Unnikrishnan, "Computational Homogenization of Polymeric Nanofiber Scaffolds and Biological Cells," in *Advances in Mathematical Modelling and Experimental Methods for Materials and Structures*: *The Jacob Aboudi' Volume* (*Solid Mechanics and Its Applications*), Rivka Gilat and Leslie Banks-Sills (eds), Springer-Verlag, Berlin, 2009.
39. V.U. Unnikrishnan, G.U. Unnikrishnan, and J. N. Reddy, "Multiscale Computational Analysis of Biomechanical Systems," in *IUTAM Symposium on Multi-Functional Material Structures and Systems* (Proc. of the IUTAM Symposium held at Indian Institute of Science, Bangalore, Dec 10-12, 2008), B. Dattaguru, S. Gopalakrishnan, and V .K . Aatre (eds), Springer-Verlag, Vol. 19, pp. 123-131, 2010.
40. J. N. Reddy, R. A. Arciniega, V. U. Unnikrishnan, and G.U. Unnikrishnan, "Numerical Modeling of Complex Structures: Shells and Biological Cells," in *Materials with Complex Behavior: Modelling, Simulation, Testing, and Applications*," A. Ochsner et al. (eds.), Springer-Verlag, Berlin, pp. 127-137, 2010.

41. J. N. Reddy, R. A. Arciniega, and F. Moleiro, "Finite Element Analysis of Composite Plates and Shells," in *Encyclopedia of Aerospace Engineering*, R. Blockley and W. Shyy (eds), John Wiley & Sons, Chichester, UK, pp. 1683-1702, 2010.
42. Wang, C.M., Zhang, Y.Y. and Reddy, J. N., "Modeling and Analysis of Carbon Nanotube Structures," *Encyclopedia of Nanoscience and Nanotechnology*, H.S. Nalwa (ed.), American Scientific Publishers, Vol. 16, pp. 257-280, 2011.
43. J. N. Reddy, "Numerical Methods, The Finite Element," Chapter in *Encyclopedia of Solid Earth Physics*, Vol. 2, Harsh K Gupta (ed.), Springer-Verlag, 2011.
44. J. N. Reddy and V. Unnikrishnan, "Developments in the Multiscale Analysis of Multifunctional Nanocomposite Materials," *Wiley Encyclopedia of Composites*, 2nd Ed., Luigi Nicolais and Assunta Borzacchiello (eds), John Wiley & Sons, Hoboken, New Jersey, 2012 (ISBN: 978-0-470-12828-2).
45. Sukanya Doshi, Amir Sohrabi, Anastasia Muliana, and JN Reddy, "Analyses of multifunctional layered composite beams," Chapter 7 of *Smart Composites: Mechanics and Design*, Rani Elhajjar, Valeria La Saponara, Anastasia Muliana (eds.), pp. 213-242, 2013, CRC Press, Boca Raton, FL (Print ISBN: 978-1-4398-9591-7).
46. F. Cheng, Özgu Özsoy, and J. N. Reddy, "Finite Element Modeling of Viscoelastic Behavior and Interface Damage in Adhesively Bonded Joints," Chapter 2 of *Advances in Modeling and Design of Adhesively Bonded Systems*, S. Kumar and S. K. Mittal (eds.), pp.23-45, 2013, John Wiley & Sons, published online: DOI: 10.1002/9781118753682.ch2, 19 JUL 2013.
47. J. N. Reddy and D. H. Robbins, Jr., "Computational Modelling of Damage and Failures in Composite Laminates," in *Encyclopedia of Computational Mechanics*, E. Stein, R. de Borst, and T. J. R. Hughes (eds.), John Wiley, Chichester, UK, 2017.
48. J. N. Reddy and A. Rajagopal (eds.), Special Issue of *Mechanics of Advanced Materials and Structures*, Vol. 26, No. 1, pp. 1-1, 2018.
49. Eugenio Ruocco and J. N. Reddy, "A Closed Form Solution for the Buckling Analysis of Orthotropic Reddy Plate and Prismatic Plate Structures," *Proceedings of AIMETA Conference 2019*, Antonio Carcaterra, Achille Paolone, and Giorgio Graziani (eds.), Lecture Notes in Mechanical Engineering, Springer-Verlag, pp. 1364-1375, 2020.
50. H. Guo, T. Yang, K.K. Żur, J. N. Reddy, A.J.M. Ferreira, "Effect of thermal environment on nonlinear flutter of laminated composite plates reinforced with graphene nanoplatelets," chapter in book, *Modeling and Computation in Vibration Problems, Volume 1: Numerical and semi-analytical methods*, edited by S. Chakraverty, F. Tornabene, and J. N. Reddy, IOP Publishing, Bristol, UK, 2021.
51. Krzysztof Kamil Żur, J. N. Reddy, Yaser Kiani, Special Issue on "Mechanics of Polymer Nanocomposite Materials and Structures," *Polymer Composites,* to appear.

JOURNAL PAPERS

1. J. T. Oden and J. N. Reddy, "Mixed Conjugate Finite Element Approximations of Linear Operators," *Journal of Structural Mechanics*, Vol. 1, No. 1, pp. 113-131, 1972.
2. J. T. Oden and J. N. Reddy, "Note on an Approximate Method for Computing Consistent Conjugate Stresses in Elastic Finite Elements," *International Journal for Numerical Methods in Engineering*, Vol. 6, No. 1, pp. 55-61, 1973.
3. J. T. Oden and J. N. Reddy, "Convergence of Mixed Finite Element Approximations of a Class of Linear Boundary Value Problems," *Journal of Structural Mechanics*, Vol. 2, No. 2, pp. 83-108, 1973.
4. J. T. Oden and J. N. Reddy, "On Dual-Complementary Variational Principles in Mathematical Physics," *International Journal of Engineering Science*, Vol. 12, No. 1, pp. 1-29, 1974.
5. J. T. Oden and J. N. Reddy, "Mixed Finite-Element Approximations of Linear Boundary Value Problems," *Quarterly of Applied Mathematics*, Vol. 33, No. 3, pp. 255-280, 1975.
6. J. N. Reddy, "A Note on Mixed Variational Principles for Initial Value Problems," *Quarterly Journal of Mechanics and Applied Mathematics*, Vol. 28, Part 1, pp. 123-132, February 1975.
7. J. T. Oden and J. N. Reddy, "Some Observations on Properties of Certain Mixed Finite Element Approximations," *International Journal for Numerical Methods in Engineering*, Vol. 9, No. 4, pp. 933-938, 1975.

8. J. T. Oden and J. N. Reddy, "On Mixed Finite Element Approximations," *SIAM Journal of Numerical Analysis*, Vol. 13, No. 3, pp. 393-404, 1976.
9. J. N. Reddy, "Modified Gurtin's Variational Principles in the Linear Dynamic Theory of Viscoelasticity," *International Journal of Solids and Structures*, Vol. 12, pp. 227-235, 1976.
10. J. N. Reddy, "Variational Principles for Linear Coupled Dynamic Theory of Thermoviscoelasticity," *International Journal of Engineering Science*, Vol. 14, pp. 605-616, 1976.
11. J. N. Reddy, "Finite Element Analysis of the Initial Stages of Hypervelocity Impact," *Computer Methods in Applied Mechanics and Engineering*, Vol. 9, pp. 47-63, 1976.
12. J. N. Reddy, "On Complementary Variational Principles for the Linear Theory of Plates," *Journal of Structural Mechanics*, Vol. 4, pp. 417-436, 1976.
13. J. N. Reddy, "Existence and Uniqueness of Solutions to a Stationary Finite Element Model of the Biharmonic Equation," *Computers and Mathematics with Applications*, Vol. 3, pp. 135-147, 1977.
14. J. N. Reddy and C. S. Tsay, "Stability and Vibration of Thin Rectangular Plates by Simplified Mixed Finite Elements," *Journal of Sound and Vibration*, Vol. 55, No. 2, pp. 289-302, 1977.
15. J. N. Reddy and V. D. Murty, "Finite Element Solution of Integral Equations Arising in Radiative Heat Transfer and Laminar Boundary-Layer Theory," *Numerical Heat Transfer*, Vol. 1, pp. 389-401, 1978.
16. C. S. Tsay and J. N. Reddy, "Bending, Stability and Free Vibration of Thin Orthotropic Plates by Simplified Mixed Finite Elements," *Journal of Sound and Vibration*, Vol. 59, No. 2, pp. 307-311, 1978.
17. J. N. Reddy, "On the Accuracy and Existence of Solutions to Primitive Variable Models of Viscous Incompressible Fluids," *International Journal of Engineering Science*, Vol. 16, No.12, pp. 921-929, 1978.
18. J. N. Reddy and R. Gera, "An Accurate Finite Difference Analysis of Bending of Thin Rectangular Elastic Plates," *Computers & Structures*, Vol. 10, pp. 431-438, 1979.
19. J. N. Reddy, "Finite Element Modeling of Structural Vibrations: A Review of Recent Advances," *The Shock and Vibration Digest*, Vol. 11, No. 1, pp. 25-39, January 1979.
20. J. N. Reddy, "Free Vibration of Antisymmetric, Angle-Ply Laminated Plates Including Transverse Shear Deformation by the Finite Element Method," *Journal of Sound and Vibration*, Vol. 66, No. 4, pp. 565-576, 1979.
21. A. K. Satake and J. N. Reddy, "A Numerical Method for Elastic-Plastic Torsion by Variational Inequality," *International Journal of Solids and Structures*, Vol. 16, No. 1, pp. 1-18, 1980.
22. R. G. Belie and J. N. Reddy, "Direct Prediction of Fracture for Two-Dimensional Plane Stress Structures," *Computers & Structures*, Vol. 11, pp. 49-53, 1980.
23. Y. K. Sasake and J. N. Reddy, "A Comparison of Stability and Accuracy of Some Numerical Models of Two-Dimensional Circulation," *International Journal for Numerical Methods in Engineering*, Vol. 16, pp. 149-170, 1980.
24. J. N. Reddy, "A Penalty Plate-Bending Element for the Analysis of Laminated Anisotropic Composite Plates," *International Journal for Numerical Methods in Engineering*, Vol. 15, No. 8, pp. 1187-1206, 1980.
25. J. N. Reddy and W. C. Chao, "Finite-Element Analysis of Laminated Bimodulus Composite-Material Plates," *Computers & Structures*, Vol. 12, pp. 245-251, 1980.
26. J. N. Reddy and A. Satake, "A Comparison of a Penalty Finite Element Model with the Stream Function-Vorticity Model of Natural Convection in Enclosures," *Journal of Heat Transfer*, Vol. 102, pp. 659-666, 1980.
27. J. N. Reddy and Y. S. Hsu, "Effects of Shear Deformation and Anisotropy on the Thermal Bending of Layered Composite Plates," *Journal of Thermal Stresses*, Vol. 3, pp. 475-493, 1980.
28. J. N. Reddy, C. W. Bert, Y. S. Hsu, and V. S. Reddy, "Thermal Bending of Thick Rectangular Plates of Bimodulus Material," *Journal of Mechanical Engineering Science* (Institution of Mechanical Engineers, London), Vol. 22, No. 6, pp. 297-304, 1980.
29. J. N. Reddy and I. R. Singh, "Large Deflections and Large-Amplitude Free Vibrations of Straight and Curved Beams," *International Journal for Numerical Methods in Engineering*, Vol. 17, pp. 829-852, 1981.

30. J. N. Reddy and W. C. Chao, "A Comparison of Closed-Form and Finite Element Solutions of Thick, Laminated, Anisotropic Rectangular Plates," *Nuclear Engineering and Design*, Vol. 64, pp. 153-167, 1981.
31. J. N. Reddy, C. L. Huang and I. R. Singh, "Large Deflection and Large Amplitude Vibrations of Axisymmetric Circular Plates," *International Journal for Numerical Methods in Engineering*, Vol. 17, pp. 527-541, 1981.
32. J. N. Reddy and C. L. Huang, "Nonlinear Axisymmetric Bending of Annular Plates with Varying Thickness," *International Journal of Solids and Structures*, Vol. 17, pp. 811-825, 1981.
33. C. W. Bert, J. N. Reddy, C. W. Chao, and V. S. Reddy, "Vibration of Thick Rectangular Plates of Bimodulus Composite Material," *Journal of Applied Mechanics*, Vol. 48, pp. 371-376, 1981.
34. J. N. Reddy and W. C. Chao, "Large-Deflection and Large-Amplitude Free Vibrations of Laminated Composite-Material Plates," *Computers & Structures*, Vol. 13, pp. 341-347, 1981.
35. C. W. Bert, J. N. Reddy, V. Sudhakar Reddy, and W. C. Chao, "Bending of Thick Rectangular Plates Laminated of Bimodulus Composite Material," *AIAA Journal*, Vol. 19, No. 10, pp. 1342-1349, 1981.
36. Y. S. Hsu, J. N. Reddy, and C. W. Bert, "Thermoelasticity of Circular Cylindrical Shells Laminated of Bimodulus Composite Materials," *Journal of Thermal Stresses*, Vol. 4, pp. 155-177, 1981.
37. J. N. Reddy and W. C. Chao, "Non-linear Bending of Thick, Rectangular, Laminated Composite Plates," *International Journal of Non-Linear Mechanics*, Vol. 16, No. 3/4, pp. 291-301, 1981.
38. J. N. Reddy and C. L. Huang, "Large Amplitude Free Vibrations of Annular Plates of Varying Thickness," *Journal of Sound and Vibration*, Vol. 79, No. 3, pp. 387-396, 1981.
39. J. N. Reddy, "Finite-Element Modeling of Composite Plates and Shells: A Review of Recent Advances," *The Shock and Vibration Digest*, Vol. 13, No. 12, pp. 3-14, 1981.
40. J. N. Reddy, R. J. Stein and J. S. Wickham, "Finite-Element Modeling of Folding and Faulting," *International Journal for Numerical and Analytical Methods in Geomechanics*, Vol. 6, pp. 425-440, 1982.
41. J. S. Wickham, G. S. Tapp, and J. N. Reddy, "Finite-Element Modeling of Fracture Density in Single Layer Folds," *International Journal for Numerical and Analytical Methods in Geomechanics*, Vol. 6, pp. 441-459, 1982.
42. J. N. Reddy, "On Penalty Function Methods in the Finite-Element Analysis of Fluid Flow," *International Journal for Numerical Methods in Fluids*, Vol. 2, pp. 151-171, 1982.
43. J. N. Reddy and W. C. Chao, "Nonlinear Oscillations of Laminated, Anisotropic Rectangular Plates," *Journal of Applied Mechanics*, Vol. 49, pp. 396-402, 1982.
44. J. N. Reddy, "Large Amplitude Flexural Vibration of Layered Composite Plates with Cutouts," *Journal of Sound and Vibration*, Vol. 83, pp. 1-10, 1982.
45. J. N. Reddy, "On the Solutions to Forced Motions of Rectangular Composite Plates," *Journal of Applied Mechanics*, Vol. 49, pp. 403-408, 1982.
46. J. N. Reddy and C. W. Bert, "On the Behavior of Plates Laminated of Bimodulus Composite Materials," *ZAMM*, Vol. 62, pp. 213-219, 1982.
47. J. N. Reddy, "Penalty-Finite-Element Analysis of 3-D Navier-Stokes Equations," *Computer Methods in Applied Mechanics and Engineering*, Vol. 35, pp. 87-106, 1982.
48. J. N. Reddy, "Transient Response of Laminated, Bimodular-Material, Composite Rectangular Plates," *Journal of Composite Materials,* Vol. 16, pp. 139-152, 1982.
49. J. N. Reddy, "Bending of Laminated Anisotropic Shells by a Shear Deformable Finite Element," *Fibre Science and Technology*, Vol. 17, No. 1, pp. 9-24, 1982.
50. J. N. Reddy, "Dynamic (Transient) Analysis of Layered Anisotropic Composite-Material Plates," *International Journal for Numerical Methods in Engineering*, Vol. 19, pp. 237-255, 1983.
51. J. N. Reddy and W. C. Chao, "Nonlinear bending of bimodular-material plates," *International Journal of Solids and Structures*, Vol. 19, No. 3, pp. 229-237, 1983.
52. J. N. Reddy, "Geometrically nonlinear transient analysis of laminated composite plates," *AIAA Journal*, Vol. 21, No. 4, pp. 621-629, 1983.

53. T. Kuppusamy and J. N. Reddy, "A three-dimensional nonlinear analysis of cross-ply rectangular composite plates," *Computers & 7 Structures*, Vol. 18, No. 2, pp. 263-272, 1984.

54. T. Kuppusamy, A. Nanda, and J. N. Reddy, "Materially nonlinear analysis of laminated composite plates," *Composite Structures*, Vol. 2, pp. 315-328, l984.

55. J. N. Reddy, "A note on symmetry considerations in the transient response of unsymmetrically laminated anisotropic plates," *International Journal for Numerical Methods in Engineering*, Vol. 20, pp. l75-l94, l984.

56. N. S. Putcha and J. N. Reddy, "A mixed shear flexible finite element for the analysis of laminated plates," *Computer Methods in Applied Mechanics and Engineering*, Vol. 44, pp. 213-227, 1984.

57. J. N. Reddy, "Exact solutions of moderately thick laminated shells," *Journal of Engineering Mechanics*, ASCE, Vol. ll0, No. 5, pp. 794-809, 1984.

58. J. N. Reddy, "A simple higher-order theory for laminated plates," *Journal of Applied Mechanics*, Vol. 5l, pp. 745-752, l984.

59. J. N. Reddy, "A refined nonlinear theory of plates with transverse shear deformation," *Int. J. Solids and Structures*, Vol. 20, No. 9/l0, pp. 88l-896, l984.

60. W. C. Chao and J. N. Reddy, "Analysis of laminated composite shells using a degenerated 3-d element," *International Journal for Numerical Methods in Engineering*, Vol. 20, pp. l99l-2007, l984.

61. J. N. Reddy and T. Kuppusamy, "Natural vibrations of laminated anisotropic plates using 3d-elasticity theory," *Journal of Sound and Vibration*, Vol. 94, No. l, pp. 63-69, l984.

62. J. N. Reddy and K. Chandrashekhara, "Nonlinear analysis of laminated shells including transverse shear strains," *AIAA Journal*, Vol. 23, No. 3, pp. 440-44l, l985.

63. J. N. Reddy and C. F. Liu, "A higher-order shear deformation theory of laminated elastic shells," *International Journal of Engineering Science*, Vol. 23, No. 3, pp. 319-330, 1985.

64. J. N. Reddy and N. D. Phan, "Stability and vibration of isotropic, orthotropic, and laminated plates according to a higher-order shear deformation theory," *Journal of Sound and Vibration*, Vol. 98, No. 2, pp. 157-170, 1985.

65. J. N. Reddy and K. Chandrashekhara, "Geometrically nonlinear transient analysis of laminated, doubly curved shells," *International Journal of Non-Linear Mechanics*, Vol. 20, No. 2, pp. 79-90, 1985.

66. J. N. Reddy, "A review of the literature on finite-element modeling of laminated composite plates," *The Shock and Vibration Digest*, Vol. 17, No. 4, pp. 3-8, 1985.

67. P. R. Heyliger and J. N. Reddy, "Reduction of free edge stress concentration in symmetric composite laminates," *Journal of Applied Mechanics*, Vol. 52, pp. 801-805, December 1985.

68. N. D. Phan and J. N. Reddy, "Analysis of Laminated Composite Plates Using a Higher-Order Shear Deformation Theory," *International Journal for Numerical Methods in Engineering*, Vol. 21, pp. 2201-2219, 1985.

69. J. N. Reddy, "On the Numerical Solution of Differential Equations by the Finite Element Method, Part I: An Introduction to the Finite Element Method (The Ritz Models)," *Indian Journal of Pure and Applied Mathematics*, Vol. 16, No. 11, pp. 1341-1376, November 1985.

70. J. N. Reddy, "On the Numerical Solution of Differential Equations by the Finite Element Method, Part II: Alternative Finite Element Formulations," *Indian Journal of Pure and Applied Mathematics*, Vol. 16, No. 12, pp. 1512-1528, December 1985.

71. N. S. Putcha and J. N. Reddy, "A Refined Mixed Shear Flexible Finite Element for the Nonlinear Analysis of Laminated Plates," *Computers & Structures*, Vol. 22, No. 4, pp. 529-538, 1986.

72. N. S. Putcha and J. N. Reddy, "Stability and Natural Vibration Analysis of Laminated Plates by Using a Mixed Element Based on a Refined Plate Theory," *Journal of Sound and Vibration*, Vol. 104, No. 2, pp. 285-300, 1986.

73. M. Dhaubhadel, D. Telionis, and J. N. Reddy, "Penalty Finite-Element Analysis of Coupled Fluid Flow and Heat Transfer for In-Line Bundle of Cylinders in Cross Flow," *International Journal of Non-Linear Mechanics*, Vol. 21, No. 5, pp. 361-373, 1986.

74. J. N. Reddy and D. Sandidge, "Mixed Finite Element Models for Laminated Composite Plates," *Journal of Engineering for Industry*, ASME, Vol. 109, pp. 39-45, 1987.
75. J. N. Reddy, "A Generalization of the Two-Dimensional Theories of Laminated Composite Plates," *Communication in Applied Numerical Methods*, Vol. 3, No. 3, pp. 173-180, 1987.
76. P. R. Heyliger and J. N. Reddy, "A Mixed Computational Algorithm for Plane Elastic Contact Problems-I. Formulation," *Computers & Structures*, Vol. 26, No. 4, pp. 621-634, 1987.
77. P. R. Heyliger and J. N. Reddy, "A Mixed Computational Algorithm for Plane Elastic Contact Problems-I. Numerical Examples," *Computers & Structures*, Vol. 26, No. 4, pp. 635-653, 1987.
78. J. N. Reddy and A. K. Pandey, "A First-Ply Failure Analysis of Composite Laminates," *Computers & Structures*, Vol. 25, No. 3, pp. 371-393, 1987.
79. J. N. Reddy, "A Small Strain and Moderate Rotation Theory of Laminated Anisotropic Plates," *Journal of Applied Mechanics*, Vol. 54, pp. 623-626, 1987.
80. J. N. Reddy, A. A. Khdeir, and L. Librescu, "Lévy Type Solutions for Symmetrically Laminated Rectangular Plates Using First-Order Shear Deformation Theory," *Journal of Applied Mechanics*, Vol. 54, No. 3, pp. 740-742, 1987.
81. M. D. Dhaubhadel, D. P. Telionis, and J. N. Reddy, "Finite Element Analysis of Fluid Flow and Heat Transfer for Staggered Bundle of Cylinders in Cross Flow," *Int. J. Numerical Methods in Fluids,* Vol. 7, pp. 1325-1342, 1987.
82. A. A. Khdeir, J. N. Reddy, and L. Librescu "Analytical Solution of a Refined Shear Deformation Theory for Rectangular Composite Plates," *International Journal of Solids and Structures*, Vol. 23, No. 10, pp. 1447-1463, 1987.
83. L. Librescu, A. A. Khdeir, and J. N. Reddy, "A Comprehensive Analysis of the State of Stress of Elastic Anisotropic Flat Plates Using Refined Theories," *Acta Mechanica*, Vol. 70, pp. 57-81, 1987.
84. P. R. Heyliger and J. N. Reddy, "A Mixed Updated Lagrangian Formulation for Plane Elastic Bodies," *Journal of Composites Technology & Research*, Vol. 9, No. 4, pp. 131-140, 1987.
85. J. N. Reddy and V. A. Padhye, "Penalty Finite Element Model for Axisymmetric Flows of Non-Newtonian Fluids," *Numerical Methods for Partial Differential Equations*, Vol. 4, pp. 33-56, 1988.
86. P. R. Heyliger and J. N. Reddy, "On a Mixed Finite Element Model for Large Deformation Analysis of Elastic Solids," *International Journal of Non-Linear Mechanics*, Vol. 23, No. 2, pp. 131-145, 1988.
87. S. Roy and J. N. Reddy, "Non-Linear Analysis of Adhesively Bonded Joints," *International Journal of Non-Linear Mechanics*, Vol. 23, No. 2, pp. 97-112, 1988.
88. C. L. Liao, S. P. Engelstad, and J. N. Reddy, "A Solid-Shell Transition Element for Geometrically Nonlinear Analysis of Laminated Composite Structures," *International Journal for Numerical Methods in Engineering*, Vol. 26, pp. 1843-1854, 1988.
89. S. Roy and J. N. Reddy, "Nonlinear Viscoelastic Analysis of Adhesively Bonded Joints," *Tire Science and Technology*, Vol. 16, No. 3, pp. 146-170, 1988.
90. S. Roy and J. N. Reddy, "A Finite Element Analysis of Adhesively Bonded Composite Joints with Moisture Diffusion and Delayed Failure," *Computers & Structures*, Vol. 29, No. 6, pp. 1011-1033, 1988.
91. R. Schmidt and J. N. Reddy, "A Refined Small Strain and Moderate Rotation Theory of Elastic Anisotropic Shells," *Journal of Applied Mechanics*, Vol. 55, pp. 611-617, 1988.
92. J. N. Reddy, "A Primer on the Finite Element Method," *The Engineering Science Perspective*, Vol. 6, pp. 21-31, 1987/1988.
93. P. R. Heyliger and J. N. Reddy, "A Higher-Order Beam Finite Element for Bending and Vibration Problems," *Journal of Sound and Vibration*, Vol. 126, No. 2, pp. 309-326, 1988.
94. S. Roy and J. N. Reddy, "Finite Element Models of Viscoelasticity and Diffusion in Adhesively Bonded Joints," *International Journal for Numerical Methods in Engineering*, Vol. 26, pp. 2531-2546, 1988.
95. A. A. Khdeir and J. N. Reddy, "Dynamic Response of Antisymmetric Angle-Ply Laminated Plates Subjected to Arbitrary Loading," *Journal of Sound and Vibration*, Vol. 126, No. 3, pp. 437-445, 1988.

96. E. Yogeswaren and J. N. Reddy, "A Study of Contact Stresses in Pin-Loaded Orthotropic Plates," *Computers & Structures*, Vol. 30, No. 5, pp. 1067-1077, 1988.
97. S. Roy, J. N. Reddy, D. R. Lefebvre, and D. A. Dillard "A Model for the Diffusion of Moisture in Adhesive Joints, Part III: Numerical Simulations," *Journal of Adhesion Science*, Vol. 27, pp. 41-62, 1989.
98. C. L. Liao and J. N. Reddy, "A Continuum-Based Stiffened Composite Shell Element for Geometrically Nonlinear Analysis," *AIAA Journal*, Vol. 27, No. 1, pp. 95-101, 1989.
99. A. A. Khdeir and J. N. Reddy, "Exact solutions for the Transient Response of Symmetric Cross-Ply Laminates Using a Higher-Order Plate Theory," *Composites Science and Technology*, Vol. 34, pp. 205-224, 1989.
100. L. Librescu and J. N. Reddy, "A Few Remarks Concerning Several Refined Theories of Anisotropic Composite Laminated Plates," *International Journal of Engineering Science*, Vol. 27, No. 5, pp. 515-527, 1989.
101. A. A. Khdeir and J. N. Reddy, "On the Forced Motions of Antisymmetric Cross-Ply Laminated Plates," *International Journal of Mechanical Sciences*, Vol. 31, No. 7, pp. 499-510, 1989.
102. J. N. Reddy and A. A. Khdeir, "Buckling and Vibration of Laminated Composite Plates Using Various Plate Theories," *AIAA J*., Vol. 27, No. 12, pp. 1808-1817, 1989.
103. J. N. Reddy, E. J. Barbero, J. L. Teply, "A Plate Bending Element Based on a Generalized Laminate Plate Theory," *International Journal for Numerical Methods in Engineering*, Vol. 28, pp. 2275-2292, 1989.
104. M. Iga and J. N. Reddy, "Penalty Finite Element Analysis of Free Surface Flows of Power-Law Fluids," *International Journal of Non-Linear Mechanics*, Vol. 24, No. 5, pp. 383-399, 1989.
105. A. A. Khdeir, J. N. Reddy, and D. Frederick, "A Study of Bending, Vibration and Buckling of Cross-Ply Circular Cylindrical Shells with Various Shell Theories," *International Journal of Engineering Science*, Vol. 27, No. 11, pp. 1337-1351, 1989.
106. J. N. Reddy, "On Refined Computational Models of Composite Laminates," *International Journal for Numerical Methods in Engineering*, Vol. 27, pp. 361-382, 1989.
107. J. N. Reddy and A. A. Khdeir, "Dynamic Response of Cross-Ply Laminated Shallow Shells According to a Refined Shear Deformation Theory," *Journal of the Acoustical Society of America*, Vol. 85, No. 6, pp. 2423-2431, 1989.
108. J. N. Reddy, "On the Generalization of Displacement-Based Laminate Theories," *Applied Mechanics Reviews*, Vol. 42, No. 11, pp. S213-S222, 1989.
109. M. P. Singh, A. A. Khdeir, G. O. Maldonado, and J. N. Reddy, "Random Response of Antisymmetric Angle-Ply Laminated Plates," *Structural Safety*, Vol. 6, pp. 115-127, 1989.
110. E. J. Barbero, J. L. Teply, and J. N. Reddy, "An Accurate Determination of Stresses in Thick Laminates Using a Generalized Plate Theory," *International Journal for Numerical Methods in Engineering*, Vol. 29, pp. 1-14, 1990.
111. E. J. Barbero, J. N. Reddy, and J. L. Teply, "General Two-Dimensional Theory of Laminated Cylindrical Shells," *AIAA Journal*, Vol. 28, No. 3, pp. 544-552, March 1990.
112. A. D. Gotsis, D. G. Baird, and J. N. Reddy, "Comparison of Experimental Data with the Numerical Simulation of Planar Entry Flow: Role of the Constitutive Equation," *International Journal for Numerical Methods in Fluids*, Vol. 10, pp. 373-400, 1990.
113. L. Librescu, A. A. Khdeir, and J. N. Reddy, "Further Results Concerning the Dynamic Response of Shear Deformable Elastic Orthotropic Plates," *ZAMM*, Vol. 70, No. 1, pp. 23-33, 1990.
114. C.L. Liao and J. N. Reddy, "Analysis of Anisotropic, Stiffened Composite Laminates Using a Continuum-Based Shell Element," *Computers & Structures*, Vol. 34, No. 6, pp. 805-815, 1990.
115. A. A. Khdeir and J. N. Reddy, "Influence of Edge Conditions on Modal Characteristics of Cross-Ply Laminated Shells," *Computers & Structures*, Vol. 34, No. 6, pp. 817-826, 1990.
116. J. N. Reddy, "A Review of Refined Theories of Laminated Composite Plates," *Shock and Vibration Digest*, Vol. 22, No. 7, pp. 3-17, July 1990.

117. R. C. Averill and J. N. Reddy, "On the Behavior of Plate Elements Based on the First-Order Shear Deformation Theory," *Engineering Computations*, Vol. 7, No. 1, pp. 57-74, 1990.
118. E. J. Barbero and J. N. Reddy, "The Jacobian Derivative Method for Three-Dimensional Fracture Mechanics," *Communications in Applied Numerical Methods*, Vol. 6, No. 7, pp. 506-518, 1990.
119. J. Moorthy, J. N. Reddy, and R. H. Plaut, "Parametric Instability of Laminated Composite Plates with Transverse Shear Deformation," *International Journal of Solids and Structures*, Vol. 26, No. 7, pp. 801-811, 1990.
120. J. N. Reddy, "A General Non-Linear Third-Order Theory of Plates with Moderate Thickness," *International Journal of Non-Linear Mechanics*, Vol. 25, No. 6, pp. 677-686, 1990.
121. R. Bhumbla, J. B. Kosmatka, and J. N. Reddy, "Free Vibration Behavior of Spinning Shear Deformable Plates Composed of Composite Materials," *AIAA Journal*, Vol. 28, No. 11, pp. 1962-1970, 1990.
122. A. F. Palmerio, J. N. Reddy, and R. Schmidt, "On a Moderate Rotation Theory of Laminated Anisotropic Shells-Part 1. Theory," *International Journal of Non-Linear Mechanics*, Vol. 25, No. 6, pp. 687-700. 1990.
123. A. F. Palmerio, J. N. Reddy, and R. Schmidt, "On a Moderate Rotation Theory of Laminated Anisotropic Shells-Part 2. Finite-Element Analysis," *International Journal of Non-Linear Mechanics*, Vol. 25, No. 6, pp. 701-714, 1990.
124. E. J. Barbero and J. N. Reddy, "Nonlinear Analysis of Composite Laminates Using a Generalized Laminated Plate Theory," *AIAA Journal*, Vol. 28, No. 11, pp. 1987-1994, 1990.
125. J. L. Teply, E. J. Barbero, and J. N. Reddy, "Bending, Vibration and Stability of ARALL Laminates Using a Generalized Laminate Plate Theory," *International Journal of Solids and Structures*, Vol. 27, No. 5, pp. 585-599, 1990.
126. A. A. Khdeir, J. N. Reddy, and D. Frederick, "On the Transient Response of Cross-Ply Laminated Circular Cylindrical Shells," *International Journal of Impact Engineering*, Vol. 9, No. 4, pp. 475-484, 1990.
127. J. N. Reddy, "On Refined Theories of Composite Laminates," *Meccanica*, Vol. 25, No. 4, pp. 230-238, 1990.
128. A. Nosier and J. N. Reddy, "A Study of Non-Linear Dynamic Equations of Higher-Order Shear Deformation Plate Theories," *International Journal of Non-Linear Mechanics*, Vol. 26, No. 2, pp. 233-249, 1991.
129. R. T. Arenburg and J. N. Reddy, "Analysis of Metal-Matrix Composite Structures-I. Micromechanics Constitutive Theory," *Computers & Structures*, Vol. 40, No. 6, pp. 1357-1368, 1991.
130. R. T. Arenburg and J. N. Reddy, "Analysis of Metal-Matrix Composite Structures-II. Laminate Analysis," *Computers & Structures*, Vol. 40, No. 6, pp. 1369-1385, 1991.
131. D. H. Robbins and J. N. Reddy, "Analysis of Piezoelectrically Actuated Beams Using a Layer-Wise Displacement Theory," *Computers & Structures*, Vol. 41, No. 2, pp. 265-279, 1991.
132. J. N. Reddy and R. C. Averill, "Advances in the Modeling of Laminated Plates," *Computing Systems in Engineering*, Vol. 2, No. 5/6, pp. 541-555, 1991.
133. E. Sacco and J. N. Reddy, "Analysis of Thick Bimodular Composite Plates Using an Energy-Based Constitutive Model," *Computers & Structures*, Vol. 39, No. 1/2, pp. 149-154, 1991.
134. P. Wung and J. N. Reddy, "A Transverse Deformation Theory of Laminated Composite Plates," *Computers & Structures*, Vol. 41, pp. 821-833, 1991.
135. A. A. Khdeir and J. N. Reddy, "Analytical Solutions of Refined Plate Theories of Cross-Ply Composite Laminates," *Journal of Pressure Vessel Technology*, ASME, Vol. 113, No. 4, pp. 570-578, 1991.
136. A. A. Khdeir and J. N. Reddy, "Thermal Stresses and Deflections of Cross-Ply Laminated Plates using Refined Plate Theories," *Journal of Thermal Stresses*, Vol. 14, No. 4, pp. 419-438, 1991.
137. E. J. Barbero and J. N. Reddy, "Modeling of Delamination in Composite Laminates Using a Layer-Wise Plate Theory," *International Journal of Solids and Structures*, Vol. 28, No. 3, pp. 373-388, 1991.
138. E. Sacco and J. N. Reddy, "A Constitutive Model for Bimodular Materials with an Application to Plate Bending," *Journal of Applied Mechanics*, Vol. 59, pp. 220-221, 1992.
139. E. Sacco and J. N. Reddy, "On First- and Second-Order Moderate Rotation Theories of Laminated Plates," *International Journal for Numerical Methods in Engineering*, Vol. 33, No. 1, pp. 1-17, 1992.

140. A. A. Khdeir, M. D. Ragab, and J. N. Reddy, "Thermal Effects on the Response of Cross-Ply Laminated Shallow Shells," *International Journal of Solids and Structures*, Vol. 29, No. 5, pp. 653-667, 1992.
141. Q. Gu and J. N. Reddy, "Non-Linear Analysis of Free-Edge Effects in Composite Laminates Subjected to Axial Loads," *International Journal of Non-Linear Mechanics*, Vol. 27, No. 1, pp. 27-41, 1992.
142. M. P. Reddy and J. N. Reddy, "Finite-Element Analysis of Flows of Non-Newtonian Fluids in Three-Dimensional Enclosures," *International Journal of Non-Linear Mechanics*, Vol. 27, No. 1, pp. 9-26, 1992.
143. R. C. Averill and J. N. Reddy, "An Assessment of Four-Noded Plate Finite Elements Based on a Generalized Third-Order Theory," *International Journal for Numerical Methods in Engineering*, Vol. 33, pp. 1553-1572, 1992.
144. M. P. Reddy and J. N. Reddy, "Numerical Simulation of Forming Processes Using a Coupled Fluid Flow and Heat Transfer Model," *International Journal for Numerical Methods in Engineering*, Vol. 35, pp. 807-833, 1992.
145. M. Savoia and J. N. Reddy, "A Variational Approach to Three-Dimensional Elasticity Solutions of Laminated Composite Plates," *Journal of Applied Mechanics*, Vol. 59, No. 2, Part 2, pp. S166-S175, 1992.
146. A. Nosier and J. N. Reddy, "Vibration and Stability Analyses of Cross-Ply Laminated Circular Cylindrical Shells," *Journal of Sound and Vibration*, Vol. 157, No. 1, pp. 139-159, 1992.
147. Y. S. N. Reddy and J. N. Reddy, "Linear and Non-Linear Failure Analysis of Composite Laminates with Transverse Shear," *Composites Science and Technology*, Vol. 44, pp. 227-255, 1992.
148. S. P. Engelstad, J. N. Reddy, and N. F. Knight, Jr., "Postbuckling Response and Failure Prediction of Graphite-Epoxy Plates Loaded in Compression," *AIAA Journal*, Vol. 30, No. 8, pp. 2106-2113, 1992.
149. J. N. Reddy and M. Savoia, "The Layer-Wise Shell Theory for Postbuckling of Laminated Circular Cylindrical Shells," *AIAA Journal*, Vol. 30, No. 8, pp. 2148-2154, 1992.
150. M. P. Reddy, J. N. Reddy, and H. U. Akay, "Penalty Finite-Element Analysis of Incompressible Flows Using Element-by-Element Solution Algorithms," *Computer Methods in Applied Mechanics and Engineering*, Vol. 100, pp. 69-205, 1992.
151. A. Nosier and J. N. Reddy, "On Boundary Layer and Interior Equations for Higher-Order Theories of Plates," *ZAMM*, Vol. 72, No. 12, pp. 657-666, 1992.
152. D. H. Robbins, Jr. and J. N. Reddy, "Analysis of Composite Laminates Using Variable Kinematic Finite Elements," *RBCM-Journal of the Brazilian Society of Mechanical Sciences*, Vol. 14, No. 4, pp. 299-326, 1992.
153. A. Nosier and J. N. Reddy, "On Vibration and Buckling of Symmetric Laminated Plates According to Shear Deformation Theories. Parts I and II," *Acta Mechanica*, Vol. 94, Nos. 3-4, pp. 123-170, 1992.
154. D. H. Robbins, Jr. and J. N. Reddy, "Modeling of Thick Composites Using a Layer-Wise Laminate Theory," *International Journal for Numerical Methods in Engineering*, Vol. 36, pp. 655-677, 1993.
155. S. P. Engelstad and J. N. Reddy, "Probabilistic Nonlinear Finite Element Analysis of Composite Structures," *AIAA Journal*, Vol. 31, No. 2, pp. 362-369, 1993.
156. R C. Averill, G. P. Carman, J. N. Reddy, and K. L. Reifsnider, "Optimization of Fiber Coatings to Minimize Stress Concentrations in Composite Materials," *Journal of Composite Materials*, Vol. 27, No. 6, pp. 589-612, 1993.
157. D. H. Robbins, Jr. and J. N. Reddy, "The Effects of Kinematic Assumptions on Computed Strain Energy Release Rates for Delaminated Composite Plates," *Mathematical Modeling and Scientific Computing*, Vol. 1, Nos. 1-2, pp. 50-66, 1993.
158. Y. S. N. Reddy and J. N. Reddy, "Three-Dimensional Finite Element Progressive Failure Analysis of Composite Laminates Under Axial Extension," *ASTM Journal of Composites Technology and Research*, Vol. 15, No. 2, pp. 73-87, 1993.
159. J. N. Reddy, "Finite Element Analysis of Viscous Incompressible Flows Using Primitive Variables," *Computers & Structures*, Vol. 47, Nos. 4/5, pp. 857-870, 1993.
160. G. S. Reddy, W. J. Mascarenhas, and J. N. Reddy, "Numerical Simulation of Solidification of Molten Aluminum Alloys in Cylindrical Molds," *Metallurgical Transactions*, Vol. 24B, pp. 677-684, 1993.

161. A. Nosier, R. K. Kapania, and J. N. Reddy, "Free Vibration Analysis of Laminated Plates Using a Layerwise Theory," *AIAA J.,* Vol. 31, No. 12, pp. 2335-2346, 1993.
162. F. Fraternali and J. N. Reddy, "A Penalty Model for the Analysis of Laminated Composite Shells," *International Journal of Solids and Structures*, Vol. 30, No. 24, pp. 3337-3355, 1993.
163. M. P. Reddy, L. G. Reifschneider, J. N. Reddy, and H. U. Akay, "Accuracy and Convergence of Element-by-Element Iterative Solvers for Incompressible Fluid Flows Using Penalty Finite Element Model," *International Journal of Numerical Methods in Fluids*, Vol. 17, pp. 1019-1033, 1993.
164. B. V. K. Satya Sai, K. N. Seetharamu, Ashwatha Narayana, and J. N. Reddy, "Finite Element Analysis of the Effect of Radius Ratio on Natural Convection in an Annular Cavity," *International Journal of Numerical Methods for Heat & Fluid Flow*, Vol. 3, No.4, pp. 305-318, 1993.
165. J. N. Reddy and J. H. Starnes, Jr., "General Buckling of Stiffened Circular Cylindrical Shells According to a Layerwise Theory," *Computers & Structures*, Vol. 49, No. 4, pp. 605-616, 1993.
166. D. H. Robbins, Jr. and J. N. Reddy, "A Simultaneous Multiple Model Approach for the Analysis of Composite Laminates," *Journal of the Aeronautical Society of India*, Vol. 45, pp. 157-177, 1993.
167. A. V. Krishna Murty and J. N. Reddy, "Residual Compressive Strength of Laminates Containing Delaminations," *Journal of the Aeronautical Society of India*, Vol. 45, pp. 246-252, 1993.
168. J. N. Reddy, "An Evaluation of Equivalent-Single-Layer and Layerwise Theories of Composite Laminates," *Composite Structures*, Vol. 25, pp. 21-35, 1993.
169. A. Nosier, R. K. Kapania, and J. N. Reddy, "Low-Velocity Impact of Laminated Composites Using a Layerwise Theory," *Computational Mechanics*, Vol. 13, No. 5, pp. 360-379, 1994.
170. S. P. Engelstad and J. N. Reddy, "Probabilistic Methods for the Analysis of Metal-Matrix Composites," *Composites Science and Technology*, Vol. 50, pp. 91-107, 1994.
171. J. N. Reddy and D. H. Robbins, Jr., "Structural Theories and Computational Models for Composite Laminates," *Applied Mechanics Reviews*, Vol. 47, No. 6, Part 1, pp. 147-170, 1994.
172. F. T. Kokkinos and J. N. Reddy, "Non-Linear Analysis of Plane Elastic Bodies with Inclusions by BEM-FEM Approach," *Communications in Numerical Methods in Engineering*, Vol. 10, pp. 511-521, 1994.
173. A. A. Khdeir and J. N. Reddy, "Free Vibration of Cross-Ply Laminated Beams with Arbitrary Boundary Conditions," *International Journal of Engineering Science*, Vol. 32, No. 12, pp. 1971-1980, 1994.
174. J. N. Reddy, A. Nosier, and R. K. Kapania, "Forced Vibration and Low-Velocity Impact of Laminated Composite Plates," *Sadhana*, Vol. 19, Part 3, pp. 509-541, 1994.
175. M. Savoia and J. N. Reddy, "Post-Buckling Behavior of Stiffened Cross-Ply Cylindrical Shells," *Journal of Applied Mechanics*, Vol. 61, pp. 998-1000, 1994.
176. M. Savoia and J. N. Reddy, "Three-Dimensional Thermal Analysis of Laminated Composite Plates," *International Journal of Solids and Structures*, Vol. 32, No. 5, pp. 593-608, 1995; Authors' Closure appeared in Vol. 34, Nos. 35-36, pp. 4653-4654, 1997.
177. J. A. Mitchell and J. N. Reddy, "A Study of Embedded Piezoelectric Layers in Composite Cylinders," *Journal of Applied Mechanics*, Vol. 62, pp. 166-173, 1995.
178. C. M. Dakshina Moorthy, J. N. Reddy, and R. H. Plaut "Three-Dimensional Vibrations of Inflatable Dams," *Thin-Walled Structures*, Vol. 21, pp. 291-306, 1995.
179. J. A. Mitchell and J. N. Reddy, "A Refined Hybrid Plate Theory for Composite Laminates with Piezoelectric Laminae," *Journal of Solids and Structures*, Vol. 32, No. 16, pp. 2345-2367, 1995.
180. F. K. Kokkinos and J. N. Reddy, "BEM and Penalty FEM Models for Viscous Incompressible Fluids," *Computers and Structures*, Vol. 56, No. 5, pp. 849-859, 1995.
181. F. K. Kokkinos and J. N. Reddy, "A Layerwise Boundary Integral Equation Model for Layers and Layered Media," *Journal of Elasticity*, Vol. 38, pp. 221-259, 1995.
182. J. N. Reddy and J. A. Mitchell, "Refined Nonlinear Theories of Laminated Composite Structures with Piezoelectric Laminae," *Sadhana* (Journal of the Indian Academy of Sciences), Vol. 20, Parts 2-4, pp. 721-747, 1995.

183. Y. S. N. Reddy, C. M. D. Moorthy, and J. N. Reddy, "Non-linear Progressive Failure Analysis of Laminated Composite Plates," *Journal of Non-Linear Mechanics*, Vol. 30, No. 5, pp. 629-649, 1995.
184. D. H. Robbins, Jr. and J. N. Reddy, "Variable Kinematic Modeling of Laminated Composite Plates," *Int. J. Numer. Methods in Engineering,* Vol. 39, pp. 2283-2317, 1996.
185. R. Krishna Kumar and J. N. Reddy, "Stress Distributions during Fiber Pull Out," *Journal of Applied Mechanics,* Vol. 63, pp. 301-306, 1996.
186. M. P. Reddy and J. N. Reddy, "Multigrid Methods to Accelerate Convergence of Element-by-Element Solution Algorithms for Viscous Incompressible Flows," *Computational Methods in Applied Mechanics and Engineering*, Vol. 132, pp. 179-193, 1996.
187. D. H. Robbins, Jr. and J. N. Reddy, "An Efficient Computational Model for the Stress Analysis of Smart Plate Structures," *Smart Materials & Structures,* Vol. 5, pp. 353-360, 1996.
188. F. T. Kokkinos and J. N. Reddy, "Layerwise Fundamental Solutions and Three-Dimensional Model for Layered Media" *Journal of Applied Composite Materials*, Vol. 3, pp. 277-300, 1996.
189. P. Klosowski, R. Schmidt, and J. N. Reddy, "Nonlinear Transient Analysis of Composite Laminates Undergoing Moderate Rotations," *Journal of Applied Mathematics and Mechanics*, Vol. 76, pp. 369-372, 1996.
190. A. Khdeir and J. N. Reddy, "Buckling of Cross-Ply Laminated Beams with Arbitrary Boundary Conditions," *Composite Structures,* Vol. 37, No.1, pp. 1-3, 1997.
191. C.M. Wang and J. N. Reddy, "Buckling Load Relationship Between Reddy and Kirchhoff Plates of Polygonal Shape with Simply Supported Edges," *Mechanics Research Communications*, Vol. 24, No. 1, pp. 103-108, 1997.
192. J. N. Reddy, C.M. Wang, and K.Y. Lam, "Unified Finite Elements Based on the Classical and Shear Deformation Theories of Beams and Axisymmetric Circular Plates," *Commun. Numerical Methods in Engineering* Vol. 13, pp. 495-510, 1997.
193. C.M. Wang, J. N. Reddy, and K.H. Lee, "Relationship Between Bending Solutions of Classical and Shear Deformation Beam Theories," *International Journal of Solids & Structures*, Vol. 34, No. 26, pp. 3373-3384, 1997.
194. J. N. Reddy, "On Locking-Free Shear Deformable Beam Finite Elements," *Computer Methods in Applied Mechanics and Engineering*, Vol. 149, pp. 113-132, 1997.
195. J. N. Reddy and C.M. Wang, "Relationships Between Classical and Shear Deformation Theories of Axisymmetric Bending of Circular Plates," *AIAA Journal*, Vol. 35, No. 12, pp. 1862-1868, 1997.
196. I. Kreja and R. Schmidt, and J. N. Reddy, "Finite Elements Based on a First-Order Shear Deformation Moderate Rotation Shell Theory with Application to the Analysis of Composite Structures," *International Journal of Non-Linear Mechanics*, Vol. 32, No. 6, pp. 1123-1142, 1997.
197. A. Khdeir and J. N. Reddy, "An Exact Solution for the Bending of Thin and Thick Cross-Ply Laminated Beams," *Composite Structures*, Vol. 37, pp. 195-203, 1997.
198. D. C. Lagoudas, D. Moorthy, M. A., Qidwai, and J. N. Reddy, "Modeling of the Thermomechanical Response of Active Laminates with SMA Strips Using the Layerwise Finite Element Method," *Journal of Intelligent Material Systems and Structures*, Vol. 8, pp. 476-488, 1997.
199. A. Khdeir and J. N. Reddy, "Free and Forced Vibration of Cross-Ply Laminated Composite Shallow Arches," *Int. J. Solids & Structures*, Vol. 34, No.10, pp. 1217-1234, 1997.
200. K. Y. Lam, X. Q. Peng, G. R. Liu, and J. N. Reddy, "A Finite-Element Model for Piezoelectric Composite Laminates," *Smart Materials and Structures*, Vol. 6, No.5, pp. 583-591, 1997.
201. S. K. Kassegne and J. N. Reddy, "A Layerwise Shell Stiffener and Stand-Alone Curved Beam Element," *Asian Journal of Structural Engineering*, Vol. 2 Nos. 1 and 2, pp. 1-14, 1997.
202. Y. Y. Wang, K. Y. Lam, G. R. Liu, J. N. Reddy, and J. Tani "A Strip Finite Element Method for Bending Analysis of Orthotropic Plates," *JSME International Journal (A)*, Japan, Vol. 40, No.4, pp. 398-406, 1997.
203. G. Rengarajan, R. Krishna Kumar, and J. N. Reddy, "Numerical Modeling of Martensitic Phase Transformations in Shape Memory Alloys," *International Journal of Solids & Structures*, Vol. 35, No. 14, pp. 1489-1513, 1998.

204. T. Y. Ng, K. Y. Lam, and J. N. Reddy, "Parametric resonance of a rotating cylindrical shell subjected to periodic axial loads," *Journal of Sound & Vibration*, Vol. 214, No. 3, pp. 513-529, 1998.
205. G. N. Praveen and J. N. Reddy, "Nonlinear Transient Thermoelastic Analysis of Functionally Graded Ceramic-Metal Plates," *Journal of Solids and Structures,* Vol. 35, No. 33, pp. 4457-4476, 1998.
206. T. Y. Ng, K. Y. Lam, and J. N. Reddy, "Dynamic Stability of Cross-Ply Laminated Composite Cylindrical Shells," *Int. J. Mechanical Sciences*, Vol. 40, No. 8, pp. 805-823, 1998.
207. J. N. Reddy and C. M. Wang, "Deflection Relationships between Classical and Third-Order Plate Theories," *Acta Mechanica*, Vol. 130, No. 3-4, pp. 199-208, 1998.
208. G. N. Praveen and J. N. Reddy, "Transverse Matrix Cracks in Cross-Ply Laminates: Stress Transfer, Stiffness Reduction and Crack Opening Profiles," *Acta Mechanica,* Vol. 130, No. 3-4, pp. 227-248, 1998.
209. S. K. Kassegne and J. N. Reddy, "Local Behavior of Discretely Stiffened Composite Plates and Cylindrical Shells," *Composite Structures*, Vol. 41, pp. 13-26, 1998.
210. P. Bose and J. N. Reddy, "Analysis of Composite Plates Using Various Plate Theories, Part 1: Formulation and Analytical Results," *Structural Engineering and Mechanics*, Vol. 6, No. 6, pp. 583-612, 1998.
211. P. Bose and J. N. Reddy, "Analysis of Composite Plates Using Various Plate Theories, Part 2: Finite Element Model and Numerical Results" *Structural Engineering and Mechanics*, Vol. 6, No. 7, pp.727-746, 1998.
212. C. M. Dakshina Moorthy and J. N. Reddy, "Modeling of Laminates Using a Layerwise Element with Enhanced Strains," *Int. J. Numer. Meth. Engng.,* Vol. 43, pp. 755-779, 1998.
213. J. N. Reddy and C. D. Chin, "Thermomechanical Analysis of Functionally Graded Cylinders and Plates," *J. Thermal Stresses*, Vol. 26, No. 1, pp. 593-626, 1998.
214. J.A. Mitchell and J. N. Reddy, "A Multilevel Hierarchical Preconditioner for Thin Elastic Solids," *Int. Journal for Numerical Methods Engineering,* Vol. 43, pp. 1383-1400, 1998.
215. A. Rao and J. N. Reddy, "Computational Study of Shear-Induced Crystallization in Polymers," *Numerical Heat Transfer, Part A: Applications,* Vol. 34(4), pp.357-368, 1998.
216. J. N. Reddy, "On Laminated Composite Plates with Integrated Sensors and Actuators," *Engineering Structures*, Vol. 21, pp. 568-593, 1999.
217. S. W. Gong, K. Y. Lam and J. N. Reddy, "The Elastic Response of Functionally Graded Cylindrical Shells to Low Velocity Impact," *International Journal of Impact Engineering*, Vol. 22, No. 4, pp. 397-417, 1999.
218. A. A. Khdeir and J. N. Reddy, "Jordan Canonical Form Solution for Thermally Induced Deformations of Cross-Ply Laminated Composite Beams," *J. Thermal Stresses*, Vol. 22(3), pp. 331-346, 1999.
219. T. Y. Ng, K. Y. Lam, and J. N. Reddy, "Dynamic Stability of Cylindrical Panels with Transverse Shear Effects" *Int. J. Solids and Structures*, Vol. 36(23), pp. 3483-3496, 1999.
220. G. N. Praveen, C. D. Chin, and J. N. Reddy, "Thermoelastic Analysis of a Functionally Graded Ceramic-Metal Cylinder," *ASCE Journal of Engineering Mechanics*, Vol. 125, No. 11, pp. 1259-1267, 1999.
221. C. T. Loy, K. Y. Lam, and J. N. Reddy, "Vibration of Functionally Graded Cylindrical Shells," *Int. J. Mechanical Sciences*, Vol. 41(3), pp. 309-324, 1999.
222. J. A. Mitchell and J. N. Reddy, "A High Performance Iterative Solution Procedure for the Analysis of Structural Problems," *J. High Performance Computing*, Vol. 5, No. 1, pp. 3-13, 1999.
223. J. N. Reddy, "On the Dynamic Behavior of the Timoshenko Beam Finite Elements," *Sadhana* (Journal of the Indian Academy of Sciences), Vol. 24, Part 3, pp. 175-198, 1999.
224. A. A. Khdeir and J. N. Reddy, "Free Vibrations of Laminated Composite Plates Using Second-Order Shear Deformation Theory," *Computers & Structures*, Vol. 71(6), pp. 617-626, 1999.
225. C. M. Dakshina Moorthy and J. N. Reddy, "Recovery of Interlaminar Stresses and Strain Energy Release Rates in Composite Laminates," *Finite Elements in Analysis and Design*, Vol. 33, pp. 1-27, 1999.
226. J. N. Reddy, C. M. Wang, and S. Kitipornchai, "Axisymmetric Bending of Functionally Graded Circular and Annular Plates," *European Journal of Mechanics*, Vol. 18, pp. 185-199, 1999.
227. G. Shi, K. Y. Lam, S. T. E. Tay and J. N. Reddy, "Assumed Strain Quadrilateral C^0 Laminated Plate Element Based on Third-Order Shear Deformation Theory," *Structural Engineering Mechanics*, Vol. 8(6), pp. 623-637, 1999.

228. C.M. Wang, J. N. Reddy, and S. Kitipornchai, "Relationship between Vibration Frequencies of Reddy and Kirchhoff Polygonal Plates with Simply Supported Edges," *ASME Journal of Vibration and Acoustics*, Vol. 122 (1), pp. 77-81, 2000.

229. J. N. Reddy, "Analysis of Functionally Graded Plates," *Int. J. Numer. Meth. Engng.*, Vol. 47, pp. 663-684, 2000.

230. Q. Liu and K. Y. Lam and J. N. Reddy, "Substructure Simulation of Viscoelastic-Elastic Multibody Systems," *Journal of Vibration and Control*, Vol. 6, No. 2, pp. 163-188, 2000.

231. J. A. Mitchell and J. N. Reddy, "A Hierarchical Iterative Procedure for the Analysis of Composite Laminates," *Comput. Meth. Appl. Mech. Engng.,* Vol. 181, pp. 237-260, 2000.

232. J. N. Reddy and J. I. Barbosa, "On Vibration Suppression of Magnetostrictive Beams," *Smart Materials and Structures*, Vol. 9, pp. 49-58, 2000.

233. K. K. Ang, J. N. Reddy and C.M. Wang, "Displacement Control of Timoshenko Beams via Induced Strain Actuators," *Smart Materials and Structures,* Vol. 9, pp. 1-4, 2000.

234. J. N. Reddy, "On the Derivation of the Superconvergent Timoshenko Beam Finite Element," *Int. J. Comput. Civil and Struct. Engng*., Vol. 1, No. 2, pp. 71-84, 2000.

235. J. N. Reddy and C. M. Wang, "An Overview of the Relationships Between Solutions of the Classical and Shear Deformation Plate Theories," *Composites Science and Technology*, Vol. 60, pp. 2327-2335, 2000.

236. S. C. Pradhan, C.T. Loy, K. Y. Lam, and J. N. Reddy, "Vibration Characteristics of Functionally Graded Cylindrical Shells Under Various Boundary Conditions," *Applied Acoustics*, Vol. 61, pp. 111-129, 2000.

237. J. P. Pontaza and J. N. Reddy, "Numerical Simulation of Tubular Blown Film Processing," *Numerical Heat Transfer*, *Part A- Applications*, Vol. 37, pp. 227-247, 2000.

238. S. Mukherjee, J. N. Reddy and C. S. Krishnamoorthy, "Convergence Properties and Derivative Extraction of the Linear Independent Interpolation Shear Flexible Beam Element," *Int. J. Numer. Meth. Engng*., Vol. 190, pp. 3475-3500, 2001.

239. C. M. Wang, G. T. Lim, J. N. Reddy and K. H. Lee, "Relationships Between Bending Solutions of Reissner and Mindlin Plate Theories," *Engineering Structures*, Vol. 23, pp. 838-849, 2001.

240. J. N. Reddy and Z.-Q. Cheng, "Three-Dimensional Solution of Smart Functionally Graded Plates," *Journal of Applied Mechanics*, Vo. 68, pp. 234-241, March 2001.

241. J. N. Reddy and Z.-Q. Cheng, "Deformations of Piezothermoelastic Laminates with Internal Electrodes," *ZAMM,* Vol. 81, No. 5, pp. 347-359, 2001.

242. J.A. Mitchell and J. N. Reddy, "Study of Interlaminar Stresses in Composite Laminates Subjected to Torsional Loading," *AIAA J*., Vol. 39, No. 7, pp. 1374-1382, 2001.

243. G. Rengarajan and J. N. Reddy, "On the Inelastic Behavior of Crystalline Silicon at Elevated Temperatures," *Journal of the Mechanics and Physics of Solids*, Vol. 49, pp. 1665-1700, 2001.

244. S. C. Pradhan, T.Y. Ng, K.Y. Lam and J. N. Reddy, "Control of Laminated Composite Plates Using Magnetostrictive Layers," *Smart Materials and Structures*, Vol. 10, pp. 657-667, 2001.

245. J. N. Reddy and S. Krishnan, "Vibration Control of Laminated Plates Using Embedded Smart Layers," *Structural Engineering and Mechanics*, Vol. 12, No. 2, pp. 135-156, 2001.

246. A. Yavari and S. Sarkani and J. N. Reddy, ``General Solutions of Beams with Jump Discontinuities on Elastic Foundation, *Archive of Applied Mechanics*, Vol. 71, No. 9, pp. 625-639, 2001.

247. J. N. Reddy, C.M. Wang, G.T. Lim, and K.H. Ng "Bending Solutions of the Levinson Beams and Plates in Terms of the Classical Theories," *Int. J. Solids & Structures*, Vol. 38, pp. 4701-4720, 2001.

248. Y. Xiang and J. N. Reddy, ``Buckling and Vibration of Stepped, Symmetric Cross-Ply Laminated Rectangular Plates," *International Journal of Structural Stability and Dynamics*, Vol. 1, No. 3, pp. 385-408, 2001.

249. A. Yavari, S. Sarkani and J. N. Reddy, ``On Non-uniform Euler-Bernoulli and Timoshenko Beams with Jump Discontinuities: Application of Distribution Theory," *International Journal of Solids and Structures*, Vol. 38, pp. 8389-8406, 2001.

250. T.Y. Ng, K. Y. Lam, K. M. Liew and J. N. Reddy, ``Dynamic Stability Analysis of Functionally Graded Cylindrical Shells under Periodic Axial Loading," *International Journal of Solids and Structures*, Vol. 38, pp. 1295-1309, 2001.
251. J. N. Reddy and S. Mukherjee, "A Practical Hybrid Interior Error Estimator for Localized *h*-Adaptive FEA," *Engineering Computations*, Vol. 18, No. 5/6, pp. 480-515, 2001.
252. J. N. Reddy and Z.-Q. Cheng, "Three-Dimensional Thermomechanical Deformations of Functionally Graded Rectangular Plates," *European Journal of Mechanics, A/Solids,* Vol. 20, No. 5, pp.841-860, 2001.
253. Z.-Q. Cheng and J. N. Reddy, "Octet Formalism for Kirchhoff Anisotropic Plates," *Proceedings of the Royal Society*, *London, A*, Vol. 458, pp. 1499-1517, 2001.
254. K. S. Surana, S. R. Petti, A. R. Ahmadi and J. N. Reddy, "On *p*-Version Hierarchical Interpolation Functions for Higher-Order Continuity Finite Element Models," *International Journal of Computational Engineering Science*, Vol. 2, No. 4, pp. 653-673, 2001.
255. Z. –Q. Cheng and J. N. Reddy, "Membrane-Like Vibration of Simply Supported Spherical Shallow Shells of Polygonal Planform," *J. Sound & Vibration*, Vol. 249(1), pp. 189-195, 2002.
256. C. M. Wang, Y.C. Yang and J. N. Reddy, "Problems and Remedy for the Ritz Method in Determining Stress Resultants of Corner Supported Rectangular Plates," *Computers and Structures,* Vol. 80, pp. 145-154, 2002.
257. C. M. Wang, Y.C. Yang, J. N. Reddy, and V. Thevendran, "Improved Computation of Stress Resultants in the *p*-Ritz method," *Journal of Structural Mechanics, ASCE*, Vol. 128, No. 2, pp. 249—257, February 2002.
258. Z.-Q. Cheng and J. N. Reddy, "Asymptotic Theory for Laminated Piezoelectric Circular Cylindrical Shells," *AIAA Journal*, Vol. 40, No. 3, pp. 553-558, March 2002.
259. G. R. Liu, X. L. Chen and J. N. Reddy, ``Buckling of Symmetrically Laminated Composite Plates Using the Element-Free Galerkin Method," *International Journal of Structural Stability and Dynamics*, Vol. 2, No. 3, pp. 281-294, 2002.
260. K. M. Liew, Y. Q. Huang and J. N. Reddy, ``A Hybrid Moving Least Squares and Differential Quadrature (MLSDQ) Meshfree Method," *International Journal of Computational Engineering Science*, Vol. 3, No. 1, pp. 1-12, 2002.
261. J. N. Reddy and Z.-Q. Cheng, "Frequency Correspondence Between Membranes and Functionally Graded Spherical Shallow Shells of Polygonal Planform," *Int. J. of Mechanical Sciences*, Vol. 44, No. 5, pp. 967-985, 2002.
262. P. R. Gupta and J. N. Reddy, "Buckling and Vibration of Orthotropic Plates with an Internal Hinge," *International Journal of Structural Stability and Dynamics*, Vol. 2, No. 4, pp. 457-486, 2002.
263. K. M. Liew, T.Y. Ng, X. Zhao, G. P. Zou, and J. N. Reddy, "Harmonic Reproducing Kernel Particle Method for Free Vibration Analysis of Rotating Cylindrical Shells," *Computer Methods in Applied Mechanics and Engineering*, Vol. 191, No. 37-38, pp. 4141-4157, 2002.
264. K. S. Surana, A. R. Ahmadi and J. N. Reddy, "The *k*-Version of Finite Element Method for Self-Adjoint Operators in BVP," *International Journal of Computational Engineering Science*, Vol. 3, No. 2, pp. 155-218, 2002.
265. K. H. Ng, J. N. Reddy and C. M. Wang, "Bending of Sectorial Plates: Relationships with Classical Solutions," *Mechanics of Structures and Machines (*current title: *Mechanics Based Design of Structures and Machines),* Vol. 30, No. 4, pp. 579-612, 2002.
266. S. Marfia, E. Sacco, and J. N. Reddy**,** "Superelastic and Shape Memory Effects in Laminated Shape-Memory-Alloy Beams," *AIAA Journal*, Vol. 41, No. 1, pp. 100-109, January 2003.
267. K. M. Liew, Y. Q. Huang, and J. N. Reddy, "Moving Least Squares Differential Quadrature Method and Its Application to the Analysis of Shear Deformable Plates," *Int. Journal Numerical Methods in Engineering*, Vol. 56, No. 15, pp. 2331-2351, 2003.
268. K. M. Liew, Y. Q. Huang, and J. N. Reddy, "Vibration Analysis of Symmetrically Laminated Plates Based on FSDT Using the Moving Least Squares Differential Quadrature Method," *Computer Methods in Applied Mechanics and Engineering*, Vol. 192, No. 19, pp. 2203-2222, 2003.

269. Y. Xiang and J. N. Reddy, "Natural Vibration of Rectangular Plates with Internal Line Hinge Using the First Order Shear Deformation Plate Theory," *Journal of Sound and Vibration*, Vol. 263, pp. 285-297, 2003.
270. G. T. Lim and J. N. Reddy**,** "On Canonical Bending Relationships for Plates," *Int. J. Solids Structures*, Vol. 40, pp. 3039-3067, 2003.
271. Z.–Q. Cheng and J. N. Reddy, "In-plane Rotational and Thickness-Twist Vibrations of Polygonal Plates and Spherical Shallow Shells," *Journal of Sound & Vibration*, Vol. 263, pp. 443-450, 2003.
272. J. N. Reddy and Z.-Q. Cheng, "Frequency of Functionally Graded Plates with Three-Dimensional Asymptotic Approach," *Journal of Engineering Mechanics*, Vol. 129 (8), pp. 896-900, 2003.
273. J. P. Pontaza and J. N. Reddy, "Spectral/*hp* Least-Squares Finite Element Formulation for the Navier-Stokes Equations," *Journal of Computational Physics*, Vol. 190, No. 2, pp. 523-549, 2003.
274. Z.-Q. Cheng and J. N. Reddy**,** "An Asymptotic Theory for Vibrations of Inhomogeneous/Laminated Piezoelectric Plates," *IEEE Transactions on Ultrasound, Ferroelectrics and Frequency Control,* Vol. 50, No. 11, pp. 1563-1569, 2003.
275. K. M. Liew, J. Z. Zhang, T. Y. Ng and J. N. Reddy**,** "Dynamic Characteristics of Elastic Bonding in Composite Laminates: A Free Vibration Study," *Journal of Applied Mechanics*, Vol. 70, No. 6, pp. 860-870, Nov 2003.
276. K. S. Surana, A. R. Ahmadi and J. N. Reddy, ``The *k*-Version of Finite Element Method for Non-Self-Adjoint Operators in BVP," *International Journal of Computational Engineering Science*, Vol. 4, No. 4, pp. 737-812, 2003.
277. A. Chakraborty, S. Gopalakrishnan, and J. N. Reddy, "A New Beam Finite Element for the Analysis of Functionally Graded Materials," *International Journal of Mechanical Sciences*, Vol. 45, No. 3, pp. 519-539, 2003.
278. Z.-Q Cheng and J. N. Reddy, "Green's Functions for Infinite and Semi-Infinite Anisotropic Thin Plates," *Journal of Applied Mechanics*, Vol. 70, No. 2, pp. 260-267, 2003.
279. S. J. Lee, J. N. Reddy, and F. Rostam-Abadi, "Transient Analysis of Laminated Composite Plates with Embedded Smart Material Layers," *Finite Elements in Analysis and Design*., Vol. 40, Nos. 5-6, pp. 463-484, 2004.
280. J. P. Pontaza, D. Xu, J. N. Reddy, and K. S. Surana, "Least-squares finite element models of two-dimensional compressible flows," *Finite Elements in Analysis and Design*, Vol. 40, Nos. 5-6, pp. 629-644, 2004.
281. A. Laulusa and J. N. Reddy, "On Shear and Extensional Locking in Nonlinear Composite Beams," *Engineering Structures,* Vol. 26, No. 2, pp. 151-170, 2004.
282. S. C. Pradhan and J. N. Reddy, "Vibration Control of Composite Shells Using Embedded Actuating Layers," *Smart Materials and Structures*, Vol. 13, No. 5, pp. 1245-1257, Oct 2004.
283. K. S. Surana, A. R. Ahmadi and J. N. Reddy, `` The *k*-Version of Finite Element Method for Nonlinear Operators in BVP," *International Journal of Computational Engineering Science,* Vol. 5, No. 1, pp. 133-207, 2004.
284. Z.-Q. Cheng and J. N. Reddy, "Laminated Anisotropic Thin Plate with an Elliptic Inhomogeneity," *Mechanics of Materials*, Vol. 36, No. 7, pp. 647-657, 2004.
285. Z.-Q. Cheng and J. N. Reddy, "Green's Functions for Anisotropic Thin Plate with a Crack or Anticrack," *Int. J. Engineering Science*, Vol. 42, pp. 271-289, 2004.
286. R. Garcia Lage, C. M. Mota Soares, C. A. Mota Soares and J. N. Reddy, "Layerwise Partial Mixed Finite Element Analysis of Magneto-Electro-Elastic Plates," *Computers & Structures*, Vol. 82, pp. 1293-1301, 2004.
287. J. P. Pontaza and J. N. Reddy, "Space-Time Coupled Spectral/*hp* Least-Squares Finite Element Formulation for the Incompressible Navier-Stokes Equations," *Journal of Computational Physics*, Vol. 197, No. 2, pp. 418-459, 2004.
288. K. M. Liew, Y. Q. Huang, and J. N. Reddy, "Analysis of General Shaped Thin Plates by Moving Least Squares Differential Quadrature Method," *Finite Elements in Analysis and Design,* Vol. 40, pp. 1453-1474, 2004.
289. J. P. Pontaza and J. N. Reddy, "Mixed Plate Bending Elements Based on Least-Squares Formulation," *International Journal for Numerical Methods in Engineering,* Vol. 60, pp. 891-922, 2004.

290. K. M. Liew, X. L. Chen, and J. N. Reddy, "Mesh-Free Radial Basis Function Method for Buckling Analysis of Non-uniformly Loaded Arbitrarily Shaped Shear Deformable Plates," *Computer Methods in Applied Mechanics and Engineering*, Vol. 193, Nos. 3-5, pp. 205-224, 2004.
291. M. C. Ray and J. N. Reddy, "Optimal Control of Thin Circular Cylindrical Laminated Composite Shells Using Active Constrained Layer Damping Treatment," *Smart Materials and Structures*, Vol. 13, pp. 64-72, 2004.
292. M. C. Ray and J. N. Reddy, "Effect of Delamination on the Active Constrained Layer Damping of Laminated Composite Beams," *AIAA Journal*, Vol. 42, No. 6, 1219-1226, 2004.
293. R. Garcia Lage, C. M. Mota Soares, C. A. Mota Soares and J. N. Reddy, "Modeling of Piezolaminated Plates using Layerwise Mixed Finite Elements," *Computers & Structures*, Vol. 82, Nos. 23-26, pp. 1849-1863, 2004.
294. J. E. Semedo Garção, C. M. Mota Soares, C. A. Mota Soares and J. N. Reddy, "Analysis of Laminated Adaptive Plate Structures Using Layerwise Finite Element Models," *Computers & Structures*, Vol. 82, Nos. 23-26, pp. 1939-1959, 2004.
295. R. Arciniega, P. B. Goncalves, and J. N. Reddy, "Buckling and Postbuckling of Laminated Cylindrical Shells Using the Third-Order Shear Deformation Theory," *International Journal of Structural Stability and Dynamics,* Vol. 4, No. 3, pp. 293-312, 2004.
296. R. Ranjan, J. Irudayaraj, J. N. Reddy, A. S. Mujumdar, "Finite Element Simulation and Validation of Stepwise Drying of Bananas," *Journal of Numerical Heat Transfer*, *Part A- Applications*, Vol. 45, No. 10, pp. 997-1012, Jun 2004.
297. J. N. Reddy and R. A. Arciniega, "Shear Deformation Plate and Shell Theories: Stavsky to Present," *Mechanics of Advanced Materials and Structures*, Vol. 11, No. 6, Part II, pp. 535-516, 2004.
298. P. Schembri, D. L. Crane and J. N. Reddy, "A Three-Dimensional Computational Procedure for Reproducing Meshless Methods and the Finite Element Method," *International Journal for Numerical Methods in Engineering*, Vol. 61 (6), pp. 896-927, 2004.
299. R. Garcia Lage, C. M. Mota Soares, C. A. Mota Soares and J. N. Reddy, "Analysis of Adaptive Plate Structures using Mixed Layerwise Finite Elements," *Composite Structures*, Vol. 66, Nos. 1-4, pp. 269-276, 2004.
300. M. Wong, G. T. Lim, A. Moyse, J. N. Reddy, and H.-J. Sue, "A New Test Methodology for Evaluating Scratch Resistance of Polymers," *Wear*, Vol. 256, No. 11-12, pp.1214-1227, Jun 2004.
301. S. J. Lee and J. N. Reddy, "Nonlinear Deflection Control of Laminated Plates Using the Shear Deformation Theory," *International Journal of Mechanics and Materials in Design*, Vol. 1, No. 1, pp. 33-61, 2004.
302. M. C. Ray and J. N. Reddy, "Performance of Piezoelectric Fiber Reinforced Composites for Active Structural-Acoustic Control of Laminated Plates," *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control*, Vol. 51, No. 11, pp. 1477-1490, 2004.
303. T. Y. Ng, T. Y. Jiang, H. Li, K. Y. Lam, and J. N. Reddy, "A Coupled Field Study on The Non-Linear Dynamic Characteristics of an Electrostatic Micropump," *Journal of Sound and Vibration*, Vol. 273, pp. 989-1006, Jun 2004.
304. S. J. Lee and J. N. Reddy, "Vibration Suppression of Laminated Shell Structures Investigated by Higher-Order Shear Deformation Theory," *Smart Materials and Structures*, Vol. 13, No. 5, pp. 1176-1194, Oct 2004.
305. W. Aliaga and J. N. Reddy, "Nonlinear Thermoelastic Response of Functionally Graded Plates Using the Third-Order Plate Theory," *International Journal of Computational Engineering Science*, Vol. 5, No. 4, pp. 753-780, 2004.
306. J. P. Pontaza and J. N. Reddy, "Least-Squares Finite Element Formulation for Shear- Deformable Shells," *Computer Methods in Applied Mechanics and Engineering*, Vol. 194 (21-24), pp. 2464-2493, 2005.
307. G. T. Lim, M. -H. Wong, J. N. Reddy, and H.-J. Sue, "An Integrated Approach towards the Study of Scratch Damage of Polymer," *Journal of Coatings Technology Research (JCT Research)*, Vol. 2, No. 5, pp. 361-369, 2005.
308. J. P. Pontaza and J. N. Reddy," Least-Squares Finite Element Formulation for One-Dimensional Reactive Transfer*," Journal of Quantitative Spectroscopy and Radiative Transfer*, Vol. 95, pp. 387-406, 2005.

309. S. J. Lee and J. N. Reddy, "Non-linear Response of Laminated Composite Plates Under Thermomechanical Loading," *International Journal of Non-Linear Mechanics*, Vol. 40 (7), pp. 971-985, 2005.
310. K. M. Liew, J. Ren, and J. N. Reddy, "Numerical Simulation of Thermomechanical Behaviors of Shape Memory Alloys via a Nonlinear Meshfree Galerkin Formulation," *International Journal for Numerical Methods in Engineering,* Vol. 63, No. 7, pp. 1014-1040, June 2005.
311. Z. Q. Cheng and J. N. Reddy, ``Structure and Properties of the Fundamental Elastic Plate Matrix," *ZAMM*, Vol. 85, No. 10, pp. 721-739, 2005.
312. M. C. Ray and J. N. Reddy, "Active control of laminated cylindrical shells using piezoelectric fiber reinforced composites," *Composites Science and Technology*, Vol. 65, pp. 1226-1236, 2005.
313. Y. Urthaler and J. N. Reddy, "A Corotational Finite Element Formulation for the Analysis of Planar Beams," *Communications in Numerical Methods in Engineering*, Vol. 21, No. 10, pp. 553-570, 2005.
314. D. H. Robbins, Jr., J. N. Reddy, and F. Rostam-Abadi, "An Efficient Continuum Damage Model and its Application to Shear Deformable Laminated Plates," *Mechanics of Advanced Materials and Structures*, Vol. 12, No. 6, pp. 391-412, 2005.
315. H. Santos, C. M. Mota Soares, C. A. Mota Soares, and J. N. Reddy, "A Semi-Analytical Finite Element Model for the Analysis of Laminated 3D Axisymmetric Shells: Bending, Free Vibration and Buckling," *Composite Structures*, Vol. 71, Nos. 3-4, pp. 273-281, Dec 2005.
316. R. A. Arciniega and J. N. Reddy, "A Consistent Third-Order Shell Theory with Application to Bending of Laminated Composite Cylindrical Shells," *AIAA Journal,* Vol. 43, No. 9, pp. 2024-2038, 2005.
317. V. U. Unnikrishnan and J. N. Reddy, "Characteristics of Silicon-Doped CNT-Reinforced Nanocomposites," *Int. Journal for Multiscale Computational Engineering*, Vol. 3, No. 4, pp. 437-450, 2005.
318. Z. Q. Cheng, J. N. Reddy, and Y. Xiang "Buckling of a Thin Circular Plate by In-Plane Gravity," *Journal of. Applied Mechanics*, Vol. 72, Issue. 2, pp.296-298, 2005.
319. J. P. Pontaza, H.C. Chen and J. N. Reddy, "A local-analytic-based discretization procedure for the numerical solution of incompressible flows," *International Journal for Numerical Methods in Fluids*, Vol. 49, No. 6, pp. 657-699, 2005.
320. D. H. Robbins, J. N. Reddy and F. Rostam-Abadi, "Layerwise modeling of progressive damage in fiber-reinforced composite laminates," *International Journal of Mechanics and Materials in Design*, Vol. 2, pp. 165-182, 2005.
321. Y. Y. Lee, H. Y. Sun, and J. N. Reddy, "Nonlinear Finite Element Modal Approach for the Large Amplitude Free Vibration of Symmetric and Unsymmetric Composite Plates," *International Journal for Numerical Methods in Engineering*, Vol. 65, pp. 45-61, 2006.
322. N. Murgude and J. N. Reddy, "Nonlinear Analysis of Microbeam under Electrostatic Loading," *Mechanics of Advanced Materials and Structures*, Vol. 13, No. 1, pp. 13-32, 2006.
323. J. P. Pontaza and J. N. Reddy, "Least-squares finite element formulations for viscous compressible and incompressible fluid flows," *Computer Methods in Applied Mechanics and Engineering*, vol. 195, 2454-2494, 2006.
324. K. S. Surana, R. K. Maduri, P. W. TenPas, J. N. Reddy, "Elastic Wave Propagation in Laminated Composites Using the Space-Time Least-Squares Formulation in *h,p,k* Framework," *Mechanics of Advanced Materials and Structures*, Vol. 13, No. 2, pp. 161-196, 2006.
325. K. S. Surana, A. Rajwani, and J. N. Reddy, "The k-Version Finite Element Method for Singular Boundary-Value Problems with Application to Linear Fracture Mechanics," *International Journal of Computational Methods in Engineering Science and Mechanics,* Vol. 7, No. 3, pp. 217-239, 2006.
326. M. McCutcheon, T. Creasy, and J. N. Reddy, "Damping Composite Materials by Machine Augmentation," *Journal of Sound and Vibration*, Vol. 294, Nos. 4-5, pp. 828-840, 2006.
327. C. W. Lim, Z. -Q. Cheng, and J. N. Reddy, "Natural Frequencies of Laminated Piezoelectric Plates Containing Internal Electrodes," *ZAMM*, Vol. 86, No. 5, pp. 410-420, 2006.
328. H. Santos, C. M. Mota Soares, C. A. Mota Soares, and J. N. Reddy, "A Finite Element Model for the Analysis of 3D Axisymmetric Laminated Shells with Piezoelectric Sensors and Actuators," *Composite Structures*, Vol. 75, No. 1-4, pp. 170-178, Sep 2006.

329. V. Prabhakar and J. N. Reddy, "Spectral/*hp* Penalty Least-Squares Finite Element Formulation for the Steady Incompressible Navier-Stokes Equations*," Journal of Computational Physics*, Vol. 215, No. 1, pp. 274-297, Jun 2006.
330. K. S. Surana, P. Gupta, P.W. Tenpas and J. N. Reddy, "h, p, k Least Squares Finite Element Processes for 1-D Helmholtz Equation," *International Journal for Computational Methods in Engineering Science and Mechanics*, Vol. 7, No. 4, pp.263-291, 2006.
331. K. S. Surana, A. Mohammed, J. N. Reddy, P. W. Tenpas, "k-Version of Finite Element Method in 2-D Polymer Flows: Oldroyd-B Constitutive Model ," *International Journal of Numerical Methods in Fluids*, Vol. 52, No. 2, pp. 119-162, Sep 2006.
332. S. J. Lee, J. N. Reddy, and F. Rostam-Abadi, "Nonlinear Finite Element Analysis of Laminated Composite Shells with Actuating Layers," *Finite Elements in Analysis and Design*, Vol. 43, No. 1, pp. 1-21, Nov 2006.
333. V. Prabhakar and J. N. Reddy, "Orthogonality of Modal Bases in *hp* Finite Element Models*," International Journal of Numerical Methods for Fluids*, Vol. 54, No. 11, pp. 1291-1312, 2007.
334. K. S. Surana, S. Allu, P. W. TenPas, and J. N. Reddy, "k-Version Finite Element Method in Gas Dynamics: Higher Order Global Differentiability Numerical Solutions," *International Journal for Numerical Methods in Engineering,* Vol. 69, No. 6, pp. 1109-1157, 2007.
335. R. A. Arciniega and J. N. Reddy, "Tensor-based Finite Element Formulation for Geometrically Nonlinear Analysis of Shell Structures," *Computer Methods in Applied Mechanics and Engineering,* Vol. 196, Nos. 4-6, pp. 1048-1073, 2007.
336. K. S. Surana, J. N. Reddy, and S. Allu, "The k-version of Finite Element Method for Initial Value Problems: Mathematical and Computational Framework," *Int. J. Comp. Meth. Engng. Sci. Mech*., Vol. 8, No. 3, pp. 123-136, 2007.
337. K. S. Surana, M. K. EngelKemier, J. N. Reddy and P.W. TenPas, "k-version Least Squares Finite Element Processes for 2-D Generalized Newtonian Fluid Flows," *Int. J. Comp. Meth.. Eng. Sci. and Mechanics*, Vol. 8, 243-261, 2007.
338. R. A. Arciniega and J. N. Reddy, "Large Deformation Analysis of Functionally Graded Shells," *International Journal of Solids and Structures,* Vol. 44, No. 6, pp. 2036-2052, 2007.
339. R. S. Karedla and J. N. Reddy, "Modeling of Crack Tip High Inertia Zone in Dynamic Brittle Fracture," *Engineering Fracture Mechanics,* Vol. 74(13), pp 2084-2098, 2007.
340. G.U. Unnikrishnan , V. U. Unnikrishnan, and J. N. Reddy, "Constitutive Material Modeling of Cell: A Micromechanics Approach," *Journal of Biomechanical Engineering – Transactions of ASME,* Vol. 129, No. 3, pp. 315-323, 2007.
341. H. Jiang, G. T. Lim, J. N. Reddy, and H. J. Sue, "Finite Element Method Parametric Study on Scratch Behavior of Polymers," *Journal of Polymer Science Part B-Polymer Physics*, Vol. 45, No. 12, pp. 1435-1447, Jun 2007.
342. K. S. Surana, P. Gupta, and J. N. Reddy, "Galerkin and Least-Squares Finite Element Processes for 2-D Helmholtz Equation in *h, p, k* Framework," *Int. J. Comp. Meth. Engng. Sci. Mech.,* Vol. 8, No. 5, pp. 341-361, 2007.
343. J. N. Reddy, "Nonlocal Theories for Bending, Buckling and Vibration of Beams," *International Journal of Engineering Science*, Vol. 45, pp. 288-307, 2007.
344. K. S. Surana, R. Kanthi Mahanthi, and J. N. Reddy, "Galerkin/Least-Squares Finite Element Processes for BVP in *h, p, k* Mathematical Framework," *Int. J. Computational Methods in Engineering Science and Mechanics*, Vol. 8, No. 6, pp. 439-462, 2007.
345. V. U. Unnikrishnan, G.U. Unnikrishnan, J. N. Reddy, and C. T. Lim, "Atomistic-Mesoscale Coupled Mechanical Analysis of Polymeric Nanofibers," *Journal of Materials Science,* Vol. 42, No. 21, pp. 8844-8852, 2007.
346. V. Prabhakar and J. N. Reddy, "A Stress-based Least-Squares Finite-element Model for Incompressible Navier-Stokes Equations," *International Journal for Numerical Methods in Fluids*, Vol. 54, No. 11, pp. 1369-1385, 2007.

347. P. Lu, P. Q. Zhang, H.P. Lee, C.M. Wang, and J. N. Reddy, "Nonlocal Elastic Plate Theories," *Proceedings of the Royal Society A – Mathematical Physical and Engineering Sciences*, London, Vol. 463, pp. 3225-3240, 2007.
348. J. Ju, B. D. Pickle, R. J. Morgan, and J. N. Reddy, "An Initial and Progressive Failure Analysis for Cryogenic Composite Fuel Tank Design," *Journal of Composite Materials*, Vol. 41, pp. 2545-2568, 2007.
349. V. Prabhakar, J. Pontaza, and J. N. Reddy, "A Collocation Penalty Least-squares Finite Element Formulation for Incompressible Flows," *Computer Methods in Applied Mechanics and Engineering*, Vol. 197, pp. 449-463, 2008.
350. F. Moleiro, C. M. Mota Soares, C. A. Mota Soares, J. N. Reddy, "Mixed Least –Squares Finite Element Model for the Static Analysis of Laminated Composite Plates," *Computers & Structures* , Vol. 86(9), pp 826-838, 2008.
351. K. S. Surana, L. R. Anthoni, S. Allu, and J. N. Reddy, "Strong and Weak Form of the Governing Differential Equations in Least Squares Finite Element Processes in h, p. k Framework," *Int. J. Computational Methods in Engineering Science and Mechanics*, Vol. 9, No. 1, pp. 1-24, 2008.
352. D. H. Robbins, Jr. and J. N. Reddy, "Adaptive Hierarchical Kinematics in Modeling Progressive Damage and Global Failure in Fiber-Reinforced Composite Laminates," *Journal of Composite Materials*, Vol. 42, No. 6, pp. 569-592, 2008.
353. H. Santos, C. M. Mota Soares, C.A. Mota Soares, J. N. Reddy, "A Finite Element Model for the Analysis of 3D Axisymmetric Laminated Shells with Piezoelectric Sensors and Actuators: Bending and Free Vibrations," *Computers & Structures*, Vol. 86 (9), pp 940-947, 2008.
354. Y. Urthaler and J. N. Reddy, "A Mixed Finite Element for the Nonlinear Bending Analysis of Laminated Composite Plates based on FSDT," *Mechanics of Advanced Materials and Structures*, Vol. 15, No. 5, pp. 335-354, 2008.
355. R. Gunes and J. N. Reddy, "Nonlinear Analysis of Functionally Graded Circular Plates Under Different Loads and Boundary Conditions," *International Journal of Structural Stability and Dynamics*, Vol. 8, No. 1, pp. 131-159, 2008.
356. J. N. Reddy and S. D. Pang, ``Nonlocal Continuum Theories of Beams for the Analysis of Carbon Nanotubes," *Applied Physics Letters*, Vol. 103, pp. 023511-1 to 023511-16, 2008.
357. K. S. Surana, S. Bhola, J. N. Reddy, and P. W. TenPas, "*k*-Version of finite element method in 2D-polymer flows: Upper convected Maxwell model," *Computers and Structures*, Vol. 86, Nos. 17-18, pp. 1782-1808, 2008.
358. V. U. Unnikrishnan, G.U. Unnikrishnan, and J. N. Reddy, "Multiscale Homogenization Based Analysis of Polymeric Nanofiber Scaffolds," *Mechanics of Advanced Materials and Structures*, Vol. 15, No. 8, pp. 558-566, 2008.
359. Rakesh Ranjan and J. N. Reddy, "Convective Heat Transfer in Porous Materials," *Encyclopedia of Agricultural, Food, and Biological Engineering*, April 2008.
360. V. Prabhakar and J. N. Reddy, "Spectral/*hp* Penalty Least-squares Finite Element Formulation for Unsteady Incompressible Flows," *International Journal of Numerical Methods for Fluids*, Vol. 58 (3), pp. 287-306, 2008.
361. V. U. Unnikrishnan, D. Banerjee, and J. N. Reddy, "Atomistic-Mesoscale Interfacial Resistance Based Thermal Analysis of Carbon Nanotube Systems," *International Journal of Thermal Sciences*, Vol. 47, No. 12, pp. 1602-1609, 2008.
362. K. S. Surana, S. Allu, J. N. Reddy and P. W. TenPas, "Least-Squares Finite Element Processes in h,p,k Mathematical and Computational Framework for a non-linear conservation law," *Int. J. Num. Methods in Fluids*, Vol. 57, No. 10, pp. 1545-1568, 2008.
363. H. Santos, C.M. Mota Soares, C.A. Mota Soares, J. N. Reddy, "A Semi-Analytical Finite Element Model for the Analysis of Cylindrical Shells Made of Functionally Graded Materials Under Thermal Shock," *Composite Structures*, Vol. 86, pp. 10-21, 2008 .

364. V. U. Unnikrishnan, J. N. Reddy, D. Banerjee, and F. Rostam-Abadi, "Thermal Characteristics of Defective Carbon Nanotube-Polymer Nanocomposites," *Interaction and Multiscale Mechanics, An International Journal*, Vol. 1, No. 4, pp. 397-410, 2008.
365. Z. S. Shao, K. K. Ang, J. N. Reddy, and T. J. Wang, "Nonaxisymmetric Thermomechanical Analysis of Functionally Graded Hollow Cylinders," *Journal of Thermal Stresses*, Vol. 31, pp. 515-536, 2008.
366. H.M. Ma, X.-L. Gao, and J. N. Reddy, "A Microstructure-Dependent Timoshenko Beam Model Based on a Modified Couple Stress Theory," *Journal of the Mechanics and Physics of Solids,* Vol. 56, pp. 3379-3391, 2008.
367. V. U. Unnikrishnan, Unnikrishnan, G.U., Reddy, J. N., and F. Rostam-Abadi "Spectral/*hp* based Asymptotic Expansion Homogenization of Heterogeneous Media: Analysis of Carbon Nanotube Nanostructures," *Computer and Experimental Simulations in Engineering and Science*, Issue 3, pp. 61-78, December 2008.
368. Sai Sudha Ramesh, C. M. Wang, J. N. Reddy, and K.K. Ang, "Computation of Stress Resultants in Plate Bending Problems using Higher-Order Triangular Elements," *Engineering Structures*, Vol. 30, pp. 2687–2706, 2008.
369. A. Ahmadi, K. S. Surana, R. K. Maduri, A. Romkes, and J. N. Reddy, "Higher Order Global Differentiability Local Approximations for 2-D Distorted Quadrilateral Elements," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 10, No. 1, pp. 1-19, 2009.
370. F. Moleiro, C.M. Mota Soares, C.A. Mota Soares and J. N. Reddy, "Mixed Least-Squares Finite Element Models for Static and Free Vibration Analysis of Laminated Composite Plates," *Computer Methods in Applied Mechanics and Engineering*, Vol. 198 (21-26), pp. 1848-1856, 2009.
371. R. Maduri, K. S. Surana, A. Romkes, and J. N. Reddy, "Higher Order Global Differentiability Local Approximations for 2-D Distorted Triangular Elements," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 10, No. 1, pp. 20-25, 2009.
372. K. S. Surana, K. M. Deshpande, A. Romkes, and J. N. Reddy, "Numerical Simulations of BVPs and IVPs in Fiber Spinning using Giesekus Constitutive Model in hpk Framework," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 10, No. 2, pp. 143-157, 2009.
373. M. Bayat, B. B. Sahari, M. Saleem, A. M. S. Hamouda, and J. N. Reddy, "Thermoelastic Analysis of Functionally Graded Rotating Disks with Temperature-Dependent Material Properties: Uniform and Variable Thickness," *International Journal of Mechanics and Materials in Design*, Vol. 5, No. 3, pp. 263-279, 2009.
374. S. Allu, K. S. Surana, A. Romkes, and J. N. Reddy, "Numerical Solutions of BVPs in 2-D Viscous Compressible Flows using hpk Framework," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 10(2), pp. 158-171, 2009.
375. K. S. Surana, K. M. Deshpande, A. Romkes, and J. N. Reddy, "Computations of Numerical Solutions in Polymer Flows Using Giesekus Constitutive Model in the hpk Framework with Variationally Consistent Integral Forms," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 10(5), pp. 317-344, 2009.
376. G.U. Unnikrishnan, V. U. Unnikrishnan, J. N. Reddy, "Tissue-fluid Interface Analysis using Biphasic Finite Element Method," *Computer Methods in Biomechanics and Biomedical Engineering*, Vol. 12, no. 2, pp. 165-172, 2009.
377. K. S. Surana, S. Allu, A. Romkes, and J. N. Reddy, "Evolution, Propagation, Reflection, and Interactions of 1D-Normal Shocks in Air and fc70 Using hpk Finite Element Computational Framework," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 10, No. 5, pp. 370-392, 2009.
378. D.D.T.K. Kulathunga, K.K. Ang, and J. N. Reddy, "Accurate Modeling of Buckling of Single- and Double-Walled Carbon Nanotubes based on Shell Theories," *Journal of Physics, Condensed Matter*, Vol. 21, No. 43, 435301 (8 pp), 2009.
379. D. Nunez, K. S. Surana, A. Romkes, and J. N. Reddy, "J-Integral for Mode I Linear Elastic Fracture Mechanics in h, p, k Mathematical and Computational Framework," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 10, No. 5, pp. 345-369, 2009.

380. Sai Sudha Ramesh, C. M. Wang, J. N. Reddy, and K.K. Ang, "A Higher-Order Plate Element for Accurate Prediction of Interlaminar Stresses in Laminated Composite Plates," *Composite Structures*, Vol. 91, No. 3, pp. 337-357, 2009.
381. J. N. Reddy and C. W. Wang, "Bending, Buckling, and Frequency Relationships between the Euler-Bernoulli and Timoshenko Non-Local Beam Theories," *Asian Journal of Civil Engineering* (*Building and Housing*), Vol. 10, No. 3, 2009.
382. H. Santos, C. M. Mota Soares, C. A. Mota Soares, and J. N. Reddy, "A Semi-Analytical Finite Element Model for the Analysis of Cylindrical Shells Made of Functionally Graded Materials," *Composite Structures*, Vol. 91, No. 4, 99. 427-432, 2009.
383. V. U. Unnikrishnan, G.U. Unnikrishnan, and J. N. Reddy, "Multiscale Nonlocal Thermo-Elastic Analysis of Graphene Nanoribbons," *Journal of Thermal Stresses*, Vol. 32, No. 10, pp. 1087-1100, 2009.
384. R. Aghababaei and J. N. Reddy, "Nonlocal Third-Order Shear Deformation Plate Theory with Application to Bending and Vibration of Plates," *Journal of Sound and Vibration*, Vol. 326, Nos. 1 and 2, pp. 277-289, 2009.
385. C. Maletta, A. Falvo, F. Furgiuele, and J. N. Reddy, "A Phenomenological Model for Superelasticity in NiTi Alloys," *Smart Materials and Structures*, Vol. 18, No. 2, Article number 025005, 2009.
386. Wook Jin Na and J. N. Reddy, "Delamination In Cross-Ply Laminated Beams Using the Layerwise Theory," *Asian Journal of Civil Engineering (Building and Housing),* Vol. 10, No. 4, pp. 451-480, 2009.
387. Rakesh Ranjan and J. N. Reddy, "*hp*-Spectral Finite Element Analysis of Shear Deformable Beams and Plates," *Journal of Solid Mechanics*, Vol. 1. No. 3, pp. 245-259, 2009.
388. J. N. Reddy, "Canonical Relationships between Bending Solutions of Classical and Shear Deformation Beam and Plate Theories," *Annals of Solid and Structural Mechanics*, Vol. 1, No.1, pp. 9-27, 2010 (DOI: 10.1007/s12356-009-0002-4).
389. L. M. S. Castro, A. J. M. Ferreira, S. Bertoluzza, R. C. Batra, and J. N. Reddy, "A wavelet collocation method for the static analysis of sandwich plates using a layerwise theory," *Composite Structures*, Vol. 92, pp. 1786-1792, 2010 (doi:10.1016/j.compstruct.2010.01.021).
390. M. Amabili and J. N. Reddy, "A new Non-linear Higher-order Shear Deformation Theory for Large-amplitude Vibrations of Laminated Doubly Curved Shells," *International Journal of Non-Linear Mechanics*, Vol. 45, No. 4, pp. 409-418, 2010.
391. Y. Y. Lee, X. Zhao, and J. N. Reddy, "Postbuckling analysis of functionally graded plates subject to compressive and thermal loads," *Computer Methods in Applied Mechanics and Engineering*, Vol. 199, 1645-1653, 2010.
392. Wooram Kim and J. N. Reddy, "Novel Finite Element Models for Nonlinear Analysis of Plates," *Latin American Journal of Solids and Structures*, Vol. 7, No.2, pp. 201-226, 2010.
393. Ameeta Raut and J. N. Reddy, "Evaluation of Least-Squares Finite Element Models of Beams," *Asian Journal of Civil Engineering (Building and Housing),* Vol. 11, No. 1, 2010.
394. Feifei Cheng, G.U. Unnikrishnan, and J. N. Reddy "Micro-Constituent Based Viscoelastic Finite Element Analysis of Biological Cell," *International Journal of Applied Mechanics*, Vol. 2, No. 2, pp. 229-249, 2010.
395. Nellie Rajarova and J. N. Reddy, "Least-squares finite element models of the Poisson equation in two dimensions," *Computer and Experimental Simulations in Engineering and Science*, Issue 7, pp. 48-61, 2010.
396. C. M. Wang, Y. Y. Zhang, Y. Xiang, and J. N. Reddy, "Recent studies on buckling of carbon nanotubes," *Applied Mechanics Reviews*, vol. 63, 030804-1 to 030804-18, May 2010.
397. Wook Jin Na and J. N. Reddy, "Multiscale analysis of transverse cracking in cross-ply laminated beams using the layerwise theory," *Journal of Solid Mechanics*, Vol. 2, No. 1, pp. 1-18, 2010.
398. Douglas P. Wickert, Robert A. Canfield, and J. N. Reddy, "Least-squares continuous sensitivity shape optimization for structural elasticity applications," *AIAA Journal*, Vol. 48, No. 12, pp. 2752-2762, December 2010.
399. K. S. Surana, Y. Ma, A. Romkes, and J. N. Reddy, "Development of mathematical models and computational framework for multi-physics interaction processes," *Mechanics of Advanced Materials and Structures*, Vol. 17, No. 7, pp. 488-508, 2010.

400. K. S. Surana, Y. Ma, A. Romkes, and J. N. Reddy, "The rate constitutive equations and their validity for progressively increasing deformation," *Mechanics of Advanced Materials and Structures*, Vol. 17, No. 7, pp. 509-533, 2010.
401. G.S. Payette and J. N. Reddy, "Nonlinear quasi-static finite element formulations for viscoelastic Euler-Bernoulli and Timoshenko beams," *International Journal for Numerical Methods in Biomedical Engineering*, Vol. 26, No. 12, pp. 1736-1755, 2010.
402. H.M. Ma, X.-L. Gao, and J. N. Reddy, "A non-classical Reddy-Levinson beam model based on a modified couple stress theory," *International Journal for Multiscale Computational Engineering*, Vol. 8, No. 2, pp. 167-180, 2010.
403. D.D.T.K. Kulathunga, K.K. Ang, and J. N. Reddy, "Molecular dynamics analysis of buckling of defective carbon nanotubes," *Journal of Physics: Condensed Matter*, Vol. 22, No. 34, 345301, 2010.
404. F. Moleiro, C.M. Mota Soares, C.A. Mota Soares, J. N. Reddy, "Layerwise mixed least-squares finite element models for static and free vibration analysis of multilayered composite plates," *Composite Structures*, Vol. 92, No. 9, pp. 2328-2338, 2010.
405. J. N. Reddy, "Nonlocal nonlinear formulations for bending of classical and shear deformation theories of beams and plates," *International Journal of Engineering Science*, Vol. 48, No. 11, pp. 1507-1518, 2010.
406. K. S. Surana, J. N. Reddy, and A. Romkes, "*h, p, k* Mathematical and computational finite element framework with variationally consistent integral forms for boundary value and initial value problems," *Acta Mechanica Solida Sinica*, Vol. 23(special issue), pp. 12-25, December 2010.
407. J. N. Reddy, G.U. Unnikrishnan, and V. U. Unnikrishnan, "Multiscale modelling of biological systems," *Acta Mechanica Solida Sinica*, Vol. 23 (special issue), pp. 26-32, December 2010.
408. J.V. Araujo dos Santos and J. N. Reddy, "A Model for Free Vibration Analysis of Timoshenko Beams with Couple Stress," *Acta Mechanica Solida Sinica*, Vol. 23 (special issue), pp. 240-248, December 2010.
409. V.U. Unnikrishnan, G.U. Unnikrishnan, and J. N. Reddy, "Thermo-mechanical Analysis of Nano-Graphene Systems," *Acta Mechanica Solida Sinica*, Vol. 23(special issue), pp. 303-306, December 2010.
410. K. S. Surana, Y. T. Ma, J. N. Reddy, and A. Romkes, "Development of mathematical models for multi-physics interaction processes," *Acta Mechanica Solida Sinica*, Vol. 23(special issue), pp. 307-311, December 2010.
411. G.U. Unnikrishnan, V. U. Unnikrishnan, Reddy, J. N., and Lim, C.T., "Review on the constitutive models of tumor tissue for computational analysis," *Applied Mechanics Reviews*, Vol. 63, No. 4, 2010.
412. Wooram Kim and J. N. Reddy, "A comparative study of least-squares and the weak-form Galerkin finite element models for the nonlinear analysis of Timoshenko beams," *Journal of Solid Mechanics*, Vol. 2, No.2, pp. 101-114, 2010.
413. R. Ranjan and J. N. Reddy, "hp-spectral method based analysis of updated Lagrangian formulations for modelling large deformations of structures," *International Journal: Computer and Experimental Simulations in Engineering and Science*, Vol. 1, No. 6, pp. 76-91, 2010 (a figure from the figure was selected as the cover for the issue).
414. R. Ranjan and J. N. Reddy, "Convective heat transfer: porous materials," *Encyclopedia of Agricultural and Biological Engineering* (EAFE), Part2, October 2010.
415. C. M. C. Roque, A. J. M. Ferreira, A. M. A. Neves, C. M. Mota Soares, J. N. Reddy, and R. M. N. Jorge, "Transient analysis of composite plates by radial basis functions in a pseudospectral framework," *Computers and Structures*, Vol. 29, pp. 161-169, 2011.
416. V. U. Unnikrishnan, G.U. Unnikrishnan, and J. N. Reddy, "Multiscale analysis of carbon nanotube-reinforced nanofiber scaffolds," *Composite Structures*, Vol. 93, No. 2, pp. 1008--1014, 2011.
417. R. Gunes, M. Aydin, M. K. Apalak, and J. N. Reddy, "The elasto-plastic impact analysis of functionally graded circular plates under low-velocities," *Composite Structures*, Vol. 93, No. 2, pp. 860-869, 2011.
418. R. Aghababaei, S. P. Joshi, and J. N. Reddy, "Nonlocal continuum crystal plasticity with internal residual stresses," *Journal of the Mechanics and Physics of Solids*, Vol. 59, pp. 713-731, 2011.
419. G. S. Payette and J. N. Reddy, "On the roles of minimization and linearization in least squares finite element models of nonlinear boundary-value problems," *Journal of Computational Physics*, Vol. 230, No. 9, pp. 3589-3613, 2011.

420. A. J. M. Ferreira, C. M. C. Roque, A. M. A. Neves, R. M. N. Jorge, C. M. Mota Soares, and J. N. Reddy, "Buckling analysis of isotropic and laminated plates by radial basis functions according to a higher-order shear deformation theory," *Thin-Walled Structures*, Vol. 49, No. 7, pp. 804-811, 2011 (DOI:10.1016/j.tws.2011.02.005).
421. Yiping Liu and J. N. Reddy, "A non-local curved beam model based on a modified couple stress theory," *International Journal of Structural Stability and Dynamics*, Vol. 11, No. 3, pp. 495-512, 2011 (DOI: 10.1142/S0219455411004233).
422. K. S. Surana, L. Euler, J. N. Reddy, and A. Romkes, "Methods of approximation in *hpk* framework for ODEs in time resulting from decoupling of space and time in IVPs," *American Journal of Computational Mathematics*, Vol. 1, No. 2, pp. 83-103, June 2011 (published Online doi:10.4236/ajcm.2011.12009; http://www.scirp.org/journal/ajcm).
423. C. M. C. Roque, A. J. M. Ferreira, and J. N. Reddy, "Analysis of Timoshenko nanobeams with a nonlocal formulation and meshless method," *International Journal of Engineering Science*, Vol. 49, pp. 976-984, 2011.
424. F. Moleiro, C. M. Mota Soares, C. A. Mota Soares, J. N. Reddy, "A layerwise mixed least-squares finite element model for static analysis of multilayered composite plates," *Computers and Structures*, Vol. 89, pp. 1730-1742, 2011.
425. J. N. Reddy, "Microstructure-dependent couple stress theories of functionally graded beams," *Journal of the Mechanics and Physics of Solids*, Vol. 59, pp. 2382-2399, 2011.
426. J. N. Reddy, "A general nonlinear third-order theory of functionally graded plates," *International Journal of Aerospace and Lightweight Structures*, Vol. 1, No. 1, pp. 1—21, 2011.
427. Wooram Kim and J. N. Reddy, "Nonconventional finite element models for nonlinear analysis of beams," *International Journal of Computational Methods*, Vol. 8, No. 3, pp. 349-368, 2011.
428. M. K. Apalak, R. Gunes, M. Aydin, and J. N. Reddy, "Impact performance of Al/SiC functionally graded circular plates," *International Journal of Materials and Product Technology*, Vol. 42, Nos. 1-2, pp. 56-65, 2011.
429. V. P. Vallala, J. N. Reddy, and K. S. Surana, "Alternative least-squares finite element models of Navier-Stokes equations for power-law fluids," *Engineering Computations International Journal for Computer-Aided Engineering and Software*, Vol. 28 No. 7, pp. 828-852, 2011 (DOI: 10.1108/02644401111178785). Selected as a **Highly Commended paper** at the Literati Network Awards for Excellence 2012.
430. H. M. Ma, X.-L. Gao, and J. N. Reddy, "A Non-classical Mindlin plate model based on a modified couple stress theory," *Acta Mechanica*, Vol. 220, pp. 217-235, 2011 (DOI 10.1007/s00707-011-0480-4).
431. C. M. C. Roque, A. J. M. Ferreira, A. M. A. Neves, C. M. Mota Soares, J. N. Reddy, and R. M. N. Jorge, "Transient analysis of composite and sandwich plates by radial basis functions," *Journal of Sandwich Structures and Materials*, Vol. 13, No. 6, pp.681-704, 2011.
432. C. K. Hui, Y. Y. Lee, J. N. Reddy, "Approximate elliptical integral solution for the large amplitude free vibration of a rectangular single mode plate backed by a multi-acoustic mode cavity," *Thin-Walled Structures*, Vol. 49, No. 9, pp. 1191-1194, 2011.
433. A. J. M. Ferreira, L. M. Castro, C. M. C. Roque, J. N. Reddy, S. Bertoluzza, "Buckling analysis of laminated plates by wavelets," *Computers & Structures*, Vol. 89, Nos. 7–8, pp. 626-630, 2011.
434. J. N. Reddy, S. Doshi, and A. Muliana, ``Theoretical formulations for finite element models of functionally graded beams with piezoelectric layers," *Journal of Solid Mechanics*, Vol. 3, No. 4, pp. 332-345, 2011.
435. S. Mitra, L. V. Hai, K. K. Ang, J. N. Reddy, and B.C. Khoo, "A 3-D fully coupled analysis of nonlinear sloshing and ship motion," *Ocean Engineering*, Vol. 39, pp. 1-13, 2012 (doi:10.1016/j.oceaneng.2011.09.015).
436. J. N. Reddy and J. Kim, "A nonlinear modified couple stress-based third-order theory of functionally graded plates," *Composite Structures*, Vol. 94, pp. 1128-1143, 2012.
437. V. U. Unnikrishnan, G.U. Unnikrishnan, and J. N. Reddy, "Finite element model for nutrient distribution analysis of a hollow fiber membrane bioreactor," *International Journal for Numerical Methods in Biomedical Engineering,* Vol. 28, No. 2, pp. 229-238, 2012.

438. R. Ranjan and J. N. Reddy, "On multigrid methods for the solution of least-squares finite element models of viscous flows," *International Journal of Computational Fluid Dynamics*, Vol 26(1), pp. 45-65, 2012.
439. Md. Ishaquddin, P. Raveendranath, and J. N. Reddy, "Flexure and torsion locking phenomena in out-of-plane deformation of Timoshenko curved beam element," *Finite Elements in Analysis and Design*, Vol. 51, pp. 22-30, 2012.
440. J. N. Reddy and Archana Arbind, "Bending relationships between the modified couple stress-based functionally graded Timoshenko beams and homogeneous Bernoulli-Euler beams" *Annals of Solid and Structural Mechanics,* Vol. 3, No. 1, pp. 15-26, 2012.
441. K. S. Surana, D. Nunez, J. N. Reddy, and A. Romkes, "Rate constitutive theory for ordered thermoelastic solids," *Annals of Solid and Structural Mechanics,* Vol. 3, No. 1, pp. 27-54, 2012.
442. F. Moleiro, C. M. Mota Soares, C. A. Mota Soares, and J. N. Reddy, "Assessment of a layerwise mixed least-squares model for analysis of multilayered piezoelectric composite plates," *Computers and Structures*, Vol. 108-109, pp. 14-30, 2012.
443. V. P. Vallala, G.S. Payette, and J. N. Reddy, "Spectral/hp finite element formulation for viscoelastic beams based on an higher-order beam theory," *International Journal of Applied Mechanics*, Vol. 4, No. 1, pp. 1--28, 2012.
444. G. S. Payette, K. B. Nakshatrala, and J. N. Reddy, "On the performance of high-order finite elements with respect to maximum principles and the nonnegative constraint for diffusion-type equations," *International Journal for Numerical Methods in Engineering*, Vol. 91, pp. 742-771, 2012.
445. J. N. Reddy and Jessica Berry, "Modified couple stress theory of axisymmetric bending of functionally graded circular plates," *Composites Structures*, Vol. 94, pp. 3664-3668, 2012.
446. V. Vallala, A. Ruimi, and J. N. Reddy, "Nonlinear viscoelastic analysis of orthotropic beams using a general third-order theory," *Composite Structures*, Vol. 94, pp. 3759-3768, 2012.
447. V. U. Unnikrishnan, G.U. Unnikrishnan, and J. N. Reddy, "Biomechanics of breast tumor: effect of collagen and tissue density," *International Journal of Mechanics & Materials in Design*, Vol. 8, pp. 257-267, 2012.
448. J. V. Araujo dos Santos and J. N. Reddy, "Vibration of Timoshenko beams using non-classical elasticity theories," *Shock and Vibration*, Vol. 19, No. 3, pp. 251-256, 2012.
449. Andre Laulusa and J. N. Reddy, "A critical evaluation of various nonlinear beam finite elements," *International Journal of Computational Methods*, Vol. 9, No. 4, pp. 2012.
450. V. U. Unnikrishnan and J. N. Reddy, "Multiscale analysis of the core nanotube in a nano-composite system," *Finite Elements in Analysis and Design*, Vol. 49, No. 1, pp. 13-18, 2012.
451. Cesar Y. Kiyono, Emilio C. N. Silva, and J. N. Reddy, "Design of laminated piezocomposite shell transducers with arbitrary fiber orientation using topology optimization approach," *International Journal for Numerical Methods in Engineering*, Vol. 90, No. 12, pp. 1452–1484, 2012.
452. J. V. Araujo dos Santos and J. N. Reddy, "Free Vibration and Buckling Analysis of Beams with a Modified Couple-Stress Theory," *International Journal of Applied Mechanics* (IJAM-D-11-00100), Vol. 4, No. 3, pp. 1250056-1 (28 pages), 2012.
453. G. S. Payette and J. N. Reddy "A nonlinear finite element framework for viscoelastic beams based on the high-order Reddy beam theory," *Journal of Engineering Materials and Technology*, Vol. 135, No. 1, pp. 011005-1 to 011005-11, 2013.
454. Jian-Feng Wen, Shan-Tung Tu, Xin-Lin Gao, J. N. Reddy, "Simulations of creep crack growth in 316 stainless steel using a novel creep-damage model," *Engineering Fracture Mechanics*, Vol. 98, pp. 169-184, 2013.
455. J. N. Reddy and Patrick Mahaffey, "Generalized beam theories accounting for von Kármán nonlinear strains with application to buckling and post-buckling," *Journal of Coupled Systems and Multiscale Dynamics*, Vol. 1, No.1, pp. 120-134, 2013.
456. P. Ghosh, J. N. Reddy, and A. R. Srinivasa, "Development and implementation of a beam theory model for shape memory polymers," *International Journal of Solids and Structures*, Vol. 50, Nos. 3-4, pp. 595-608, Feb 2013.

457. Anuj Chaudhry, Ginu Unnikrishnan, J. N. Reddy, Thomas A. Krouskop, Raffaella Righetti, "Effect of permeability on the performance of elastographic imaging techniques," *IEEE Transactions on Medical Imaging,* Vol. 32, No. 2, pp. 189-199, Feb 2013.
458. C. M. C. Roque, D. S. Fidalgo, A. J. M. Ferreira, and J. N. Reddy, "A study of a microstructure-dependent composite laminated Timoshenko beam using a modified couple stress theory and a meshless method," *Composite Structures,* Vol. 96, pp. 532-537, Feb 2013.
459. Md. Ishaquddin, P. Raveendranath, and J. N. Reddy, "Coupled polynomial field approach for elimination of flexure and torsion locking phenomena in the Timoshenko and Euler–Bernoulli curved beam elements," *Finite Elements in Analysis and Design*, Vol. 65, pp. 17-31, Mar 2013.
460. A. Srinivasa and J. N. Reddy, "A model for a constrained, finitely deforming, elastic solid with rotation gradient dependent strain energy, and its specialization to von Karman plates and beams," *Journal of Physics and Mechanics of Solids*, Vol. 61, No. 3, pp. 873–885, Mar 2013.
461. M. Şimşek and J. N. Reddy, "Bending and vibration of functionally graded microbeams using a new higher order beam theory and the modified couple stress theory," *International Journal of Engineering Science*, Vol. 64, pp. 37-53, Mar 2013.
462. B. Mirzavand, M. R. Eslami, and J. N. Reddy, "Dynamic thermal postbuckling analysis of shear deformable piezoelectric-FGM cylindrical shells," *Journal of Thermal Stresses*, Vol. 36, No. 3, pp. 189-206, Mar 2013.
463. Archana Arbind and J. N. Reddy, "Nonlinear analysis of functionally graded microstructure-dependent beams," *Composite Structures*, Vol. 98, pp. 272-281, Apr 2013.
464. M.C. Ray and J. N. Reddy, "Active damping of laminated cylindrical shells conveying fluid using 1-3 piezoelectric composites," *Composite Structures*, Vol. 98, pp. 261-271, Apr 2013.
465. C.M.C. Roque, A.J.M. Ferreira, and J. N. Reddy, "Analysis of Mindlin micro plates with a modified couple stress theory and a meshless method," *Applied Mathematical Modelling*, Vol. 37, pp. 4626–4633, 2013.
466. K. S. Surana, Y. Mendoza, and J. N. Reddy, "Constitutive theories for thermoelastic solids in Lagrangian description using Gibbs potential," *Acta Meccanica*, Vol. 224, No. 5, pp. 1019-1044, May 2013.
467. V. U. Unnikrishnan, G.U. Unnikrishnan, J. N. Reddy, and F. Rostam-Abadi, "Multiscale analysis of impact mitigation in soft tissues using nanotube reinforced composites," *International Journal of Mechanics and Materials in Design*, Vol. 9, No. 2, pp. 181-189, Jun 2013.
468. M. Şimşek and J. N. Reddy, "A unified higher order beam theory for buckling of a functionally graded microbeam embedded in elastic medium using modified couple stress theory," *Composite Structures*, Vol. 101, pp. 47-58, Jul 2013.
469. Jinseok Kim and J. N. Reddy, "Analytical solutions for bending, vibration, and buckling of FGM plates using a couple stress-based third-order theory," *Composite Structures*, Vol. 103, pp. 86–98, Sep 2013.
470. K. S. Surana, D. Nunez, J. N. Reddy, and A. Romkes, "Rate constitutive theories for ordered thermofluids," *Continuum Mechanics and Thermodynamics* (CMAT-D-11-00041), Vol. 25, No. 5, pp. 625-662, Sep 2013.
471. Francesco Tornabene and J. N. Reddy, "FGM and laminated doubly-curved and degenerate shells resting on nonlinear elastic foundations: a GDQ solution for static analysis with a posteriori stress and strain recovery," Special issue on "High Performance Advanced Composites," *Journal of the Indian Institute of Science*, Vol. 93, No. 4, pp. 635-688, Oct-Dec 2013.
472. X.-L. Gao, J. X. Huang, and J. N. Reddy, "A non-classical third-order shear deformation plate model based on a modified couple stress theory," *Acta Meccanica*, Vol. 224, No. 11, pp. 2699-2718, Nov 2013.
473. K. S. Surana, T. Moody, and J. N. Reddy, "Ordered rate constitutive theories in Lagrangian description for thermoviscoelastic solids without memory," *Acta Meccanica*, Vol. 224, No. 11, pp. 2785-2816, 2013.
474. Jayavel Arumugam, A. R. Srinivasa, and J. N. Reddy, "A thermodynamic model for ionic polymer-metal composites and finite volume-finite element solution," *Composite Structures,* Vol. 106, pp. 461-469, Dec 2013.
475. M. Komijani, J. N. Reddy, M. R. Eslami, and M. Bateni, "An analytical approach for thermal stability analysis of two-layer Timoshenko beams," *International Journal of Structural Stability and Dynamics*, Vol. 13, No. 8, pp. 1350036-1 to 1350036-14, Dec 2013.

476. J. N. Reddy, V.U. Unnikrishnan, and G.U. Unnikrishnan, "Recent advances in the analysis of nanotube reinforced polymeric biomaterials," *Journal of the Mechanical Behavior of Materials,* Vol. 22 (5-6), pp. 137-148, 2013.
477. K. S. Surana, D. Nunez, and J. N. Reddy, "Giesekus constitutive model for thermoviscoelastic fluids based on ordered rate constitutive theories," *Journal of Research Updates in Polymer Science*, Vol. 2, No. 4, pp. 232-250, 201
478. Archana Arbind, J. N. Reddy, and A. Srinivasa, "Modified couple stress-based third-order theory for nonlinear analysis of functionally graded beams," *Latin American Journal of Solids and Structures,* Vol 11, No 3, pp. 459-487, 2014.
479. K. S. Surana, M. Powell, and J. N. Reddy, "A simple mixture theory for *n* Newtonian and generalized Newtonian constituents," *Continuum Mechanics and Thermodynamics*, Vol. 26 (1), pp. 33-65, Jan 2014.
480. F. Moleiro, C.M. Mota Soares, C.A. Mota Soares, and J. N. Reddy, "Benchmark exact solutions for the static analysis of multilayered piezoelectric composite plates using PVDF," *Composite Structures*, Vol. 107, pp. 389-395, Jan 2014.
481. J.-F. Wen, S.-T. Tu, X.-L. Gao, and J. N. Reddy, "New model for creep damage analysis and its application to creep crack growth simulations," *Materials Science and Technology,* Vol. 30, No.1, pp. 32-37, Jan 2014.
482. B. G. Sinir, B. B. Özhan, and J. N. Reddy, "Buckling configurations and dynamic response of buckled Euler-Bernoulli beams with non-classical supports," *Latin American Journal of Solid Mechanics*, Vol. 11, No. 14, pp. 2516-2536, 2014.
483. V.P. Vallala, R. Sadr, and J. N. Reddy, "Higher order spectral/hp finite element models of the Navier-Stokes equations," *International Journal of Computational Fluid Dynamics*, Vol. 28, Nos. 1-2, pp. 16-30, Jan 2014.
484. Francesco Tornabene, Nicholas Fantuzzi, Erasmo Viola, and J. N. Reddy, "Winkler-pasternak foundation effect on the static and dynamic analyses of laminated doubly-curved and degenerate shells and panels," *Composites, Part B: Engineering*, Vol. 57, pp. 269-296, Feb 2014.
485. M. Komijani, J. N. Reddy, and R. Eslami, "Nonlinear analysis of microstructure-dependent functionally graded piezoelectric material actuators," *Journal of Mechanics and Physics of Solids*, Vol. 63, pp. 214-227, Feb 2014.
486. Mohammad Ebrahim Torki, Mohammad Taghi Kazemi, J. N. Reddy, Hassan Haddadpoud, and Saeid Mahmoudkhani, "Dynamic stability of functionally graded cantilever cylindrical shells under distributed axial follower forces," *Journal of Sound and Vibration*, Vol. 333, pp. 801-817, Feb 2014.
487. R. Gunes, Murat Aydin, M. K. Apalak, and J. N. Reddy, "Experimental and numerical investigations of low velocity impact on functionally graded circular plates," *Composites Part B*, Vol. 59, pp. 21-32, Mar 2014.
488. K. S. Surana, D. Nunez, J. N. Reddy, and A. Romkes, "Rate constitutive theories for ordered thermoviscoelastic fluids: polymers," *Continuum Mechanics and Thermodynamics*, Vol. 26, No. 2, pp. 143-181, Mar 2014.
489. F. Cheng, Liangfa Hu, J. N. Reddy, I. Karaman, E. Hoffman, and M. Radovicb, "Temperature-dependent thermal properties of a shape memory alloy/MAX phase composite: Experiments and modeling," *Acta Materialia*, Vol. 68, pp. 267–278, Apr 2014.
490. Jani Romanoff and J. N. Reddy, "Experimental validation of the modified couple stress Timoshenko beam theory for web-core sandwich panels," *Composite Structures*, Vol. 111, pp. 130-137, May 2014.
491. M. Komijani, S.E. Esfahani, J. N. Reddy, Yiping Liu, and M.R. Eslami, "Nonlinear thermal stability and vibration of pre/post-buckled temperature- and microstructure-dependent functionally graded beams resting on elastic foundation," *Composite Structures*, Vol. 112, pp. 292-307, Jun 2014.
492. K. S. Surana, K.P.J. Reddy, A. D. Joy, and J. N. Reddy, "Riemann shock tube: 1D normal shocks in air; simulations and experiments," *International Journal of Computational Fluid Dynamics,* Vol. 28 (6-10), pp. 251-271, 2014.
493. H. Soltani, G. S. Payette and J. N. Reddy, "Vibration of elastic beams in presence of an inviscid fluid medium," *International Journal of Structural Stability and Dynamics*, Vol. 14, No. 6, 1450022-1 to 1450022-29 (29 pages), Aug 2014.
494. Wooram Kim, Sang-Shin Park, and J. N. Reddy, "A cross weighted-residual time integration scheme for structural dynamics," *International Journal of Structural Stability and Dynamics*, Vol. 14, No. 6, 1450023-1 to 1450023-20 (20 pages), Aug 2014.

495. G.S. Payette and J. N. Reddy, "A seven-parameter spectral/hp finite element formulation for isotropic, laminated composite and functionally graded shell structures," *Computer Methods in Applied Mechanics and Engineering*, Vol. 278, pp. 664-704, Aug 2014.
496. L.L. Ke, Y.S. Wang, and J. N. Reddy, "Thermo-electro-mechanical vibration of size-dependent piezoelectric cylindrical nanoshells under various boundary conditions," *Composite Structures*, Vol. 116, pp. 626-636, Sep-Oct 2014.
497. Ehsan Taati, Masoud Molaei Najafabadi, and J. N. Reddy, "Size-dependent generalized thermoelasticity model for Timoshenko micro-beams based on strain gradient and non-Fourier heat conduction theories," *Composite Structures*, Vol. 116, pp. 595-611, Oct 2014.
498. Noël Challamel, Zhen Zhang, C. M. Wang, J. N. Reddy, Q. Wang, Thomas Michelitsch, and Bernard Collet, "On nonconservativeness of Eringen's nonlocal elasticity in beam mechanics: correction from a discrete-based approach," *Archives of Applied Mechanics,* Vol. 84, Nos. 9-11, pp. 1275–1292, Oct 2014.
499. Sravani Nuti, Annie Ruimi, J. N. Reddy, "Modeling the dynamics deformation of filaments for medical applications," *International Journal of Non-Linear Mechanics*, Vol. 66, pp. 139–148, Nov 2014.
500. J. N. Reddy and A. R. Srinivasa, "Non-linear theories of beams and plates accounting for moderate rotations and material length scales," *International Journal of Non-Linear Mechanics*, Vol. 66, pp. 43–53, Nov 2014.
501. M. Komijani, J. N. Reddy, and A. Ferreira, "Nonlinear stability and vibration of pre/post-buckled FGPM actuators," *Meccanica*, Vol. 49 (11), pp. 2729-2745, Nov 2014.
502. Bo Liu, Yufeng Xing, and J. N. Reddy, "Exact compact characteristic equations and new results for free vibrations of orthotropic rectangular Mindlin plates," *Composite Structures,* Vol. 118, pp. 316-321, Dec 2014.
503. J. N. Reddy and S. El-Borgi, "Eringen's nonlocal theories of beams accounting for moderate rotations," *International Journal of Engineering Science*, Vol. 82, pp. 159-177, 2014.
504. Feifei Cheng, Sun-Myung Kim, J. N. Reddy, and Rashid K. Abu Al-Rub, "Modeling of elastoplastic behavior of stainless-steel/bronze interpenetrating phase composites with damage evolution," *International Journal of Plasticity*, Vol. 61, pp. 94-111, Oct 2014.
505. K. S. Surana, B. Blackwell, M. Powell, and J. N. Reddy, "Mathematical models for fluid-solid interaction and their numerical solutions," *Journal of Fluids and Structures*, Vol. 50, pp. 184-216, Oct 2014.
506. J. N. Reddy, Sami El-Borgi, and Jani Romanoff, "Non-linear analysis of functionally graded microbeams using Eringen's nonlocal differential model," *International Journal of Non-Linear Mechanics*, Vol. 67, pp. 308–318, Dec 2014.
507. F. Moleiro, C.M. Mota Soares, C.A. Mota Soares, and J. N. Reddy, "Layerwise mixed models for analysis of multilayered piezoelectric composite plates using least-squares formulation," *Composite Structures*, Vol. 119, pp. 134-149, Jan 2015.
508. K. S. Surana, T. Moody, and J. N. Reddy, "Ordered rate constitutive theories in Lagrangian description for thermoviscoelastic solids with memory," *Acta Mechanica*, DOI 10.1007/s00707-014-1173-6, Vol. 226, pp. 157-178, 2015.
509. K. S. Surana, T. Moody, and J. N. Reddy, "Rate constitutive theories of order zero in Lagrangian description for thermoelastic solids," *Mechanics of Advanced Materials and Structures*, Vol. 22 (6), pp. 440-450, 2015.
510. K. S. Surana, Aaron Joy, Luis A Quiros, and J.N Reddy, "Mathematical models and numerical solutions of liquid-solid and solid-liquid phase change," *Journal of Thermal Engineering*, Vol. 1, No. 2, pp. 61-98, 2015.
511. Fehmi Najar, Sami El-Borgi, J. N. Reddy, and Kais Mrabet, "Nonlinear nonlocal analysis of electrostatic nanoactuators," *Composite Structures*, Vol. 120, pp. 117-128, 2015.
512. K. S. Surana, J. N. Reddy, and D. Nunez, "Ordered rate constitutive theories for thermoviscoelastic solids without memory in Lagrangian description using Gibbs potential," *Continuum Mechanics and Thermodynamics*, Vol. 27, No. 3, pp. 409-431, 2015.
513. C.W. Lim, G. Zhang, and J. N. Reddy, "A higher-order nonlocal elasticity and strain gradient theory and its applications in wave propagation," *Journal of the Mechanics and Physics of Solids*, Vol. 78, pp. 298-313, 2015.

514. S. M. Mousavi, J. Paavola, and J. N. Reddy, "Variational approach to dynamic analysis of third-order shear deformable plates within gradient elasticity," *Meccanica*, Vol. 50, No. 6, pp. 1537-1550, 2015.
515. Helnaz Soltani and J. N. Reddy, "Free vibration analysis of elastic plates in contact with an inviscid fluid medium," *International Journal of Applied Mechanics*, Vol. 7, No. 3, 1550041, 2015.
516. Feifei Cheng, Sun-Myung Kim, and J. N. Reddy, "Computational modeling of the plastic-damage behavior of porous MAX phase with aligned ellipsoid-like pores under uniaxial compression," *International Journal of Solids and Structures*, Vol. 63, pp. 121-138, Jun 2015.
517. Jinseok Kim and J. N. Reddy, "A general third-order theory of functionally graded plates with modified couple stress effect and the von Karman nonlinearity: theory and finite element analysis," *Acta Mechanica*, Vol. 226 (9), pp. 2973-2998, Sep 2015.
518. Parisa Khodabakhshi and J. N. Reddy, "A Unified Integro-Differential Nonlocal Model," *International Journal of Engineering Science*, Vol. 95, pp. 60-75, Oct 2015.
519. K. S. Surana, J. N. Reddy, D. Nunez, and M. Powell, "A Polar Continuum Theory for Solid Continua," *International J. of Engg. Research & Indu. Appls*. (IJERIA), Vol. 8, No. II pp. 77-106, May, 2015.
520. K. S. Surana, J. N. Reddy, and M. Powell, "A Polar Continuum Theory for Fluent Continua," *International J. of Engg. Research & Indu. Appls*. (IJERIA), Vol. 8, No. II pp. 107-146, May, 2015.
521. K. S. Surana, Aaron D. Joy, and Luis A. Quiros, and J. N Reddy, "Mathematical Models and Numerical Solutions of Liquid-Solid and Solid-Liquid Phase Change," *Journal of Thermal Engineering*, Vol. 1, No. 2, pp. 61-98, 2015.
522. J. N. Reddy and A.R. Srinivasa, "On the Force-Displacement Characteristics of Finite Elements for Plane Elasticity and Related Problems," *Finite Elements in Analysis and Design*, Vol. 104, pp. 35-40, Oct 2015.
523. Md. M. Rahaman, S.P. Deepu, D. Roy, and J. N. Reddy, "A Micropolar Cohesive Damage Model for Delamination of Composites," *Composite Structures*, Vol. 131, pp. 425-432, Nov 2015.
524. K. S. Surana, M. Powell, and J. N Reddy, "Constitutive Theories for Internal Polar Thermoelastic Solid Continua," *Journal of Pure and Applied Mathematics: Advances and Applications*, Vol. 14, No. 2, pp. 89-150, 2015.
525. Mesut Şimşek, M. Aydın, H.H. Yurtçu, and J. N. Reddy, "Size-Dependent vibration of a microplate under the action of a moving load based on the modified couple stress theory," *Acta Mechanica*, Vol. 226, pp. 3807—3822, 2015.
526. K. S. Surana, M. Powell, and J. N. Reddy, "Ordered Rate Constitutive Theories for Internal Polar Thermofluids," *International Journal of Mathematical Sciences and Engineering Applications*, Vol. 9, No. III, pp. 51-116, 2015.
527. P. Kasirajan, Amritham Rajagopal, and J. N. Reddy, "Surface and nonlocal effects for nonlinear analysis of Timoshenko beams," *International Journal of Non-Linear Mechanics*, Vol. 76, pp. 100-111, Nov 2015.
528. K. S. Surana, J. N. Reddy, and D. Nunez, "Ordered rate constitutive theories for thermoviscoelastic solids with memory in Lagrangian description using Gibbs potential," *Continuum Mechanics and Thermodynamics,* Vol. 27, No. 6, pp. 1019-1038, Nov 2015.
529. Kiran C. Sahu, Jukka Tuhkuri, and J. N. Reddy, "Active attenuation of sound transmission through a soft-core sandwich panel into an acoustic enclosure using volume velocity cancellation", *Proceedings of the Institution of Mechanical Engineers Part C-Journal Of Mechanical Engineering Science*, Vol. 229, No. 17, pp. 3096-3112, Dec 2015.
530. Sami El-Borgi, Ralston Fernandes, and J. N. Reddy, "Non-local free and forced vibrations of graded nanobeams resting on a non-linear elastic foundation," *International Journal of Non-Linear Mechanics*, Vol. 77, pp. 348-363, Dec 2015.
531. Kiran C. Sahu, Jukka Tuhkuri, and J. N. Reddy, "Active Structural Acoustic Control of a Softcore Sandwich Panel Using Multiple Piezoelectric Actuators and Reddy's Higher Order Theory," *Journal of Low Frequency Noise Vibration and Active Control,* Vol. 34, No. 4, pp. 385-411, Dec 2015.
532. K. S. Surana, J. Knight, and J. N. Reddy, "Nonlinear Waves in Solid Continua with Finite Deformation," *American Journal of Computational Mathematics*, Vol. 5, pp. 345-386, 2015.

533. K. S. Surana, M. Powell, And J. N. Reddy, "Constitutive Theories For Internal Polar Thermoelastic Solid Continua," *Journal of Pure and Applied Mathematics: Advances and Applications*, Vol. 14, No. 2, pp. 89–150, 2015.
534. K. Surana, Michael J. Powell, J. N. Reddy, "A more complete thermodynamic framework for fluent continua," *Journal of Thermal Engineering,* Vol. 1, No. 1, pp. 1-16, 2015.
535. K. Surana, Michael J. Powell, J. N. Reddy, "A more complete thermodynamic framework for solid continua," *Journal of Thermal Engineering,* Vol. 1, Special Issue 3, No. 6, pp. 446–459, May 2015.
536. Kiran Sahu, Jukka Tuhkuri, and J. N. Reddy, "Active piezoelectric-structure acoustic control of a soft-core sandwich panel using volume velocity and a weighted sum of spatial gradient control metrics," *Journal of Vibration and Control*, Nov 2015.
537. L.W. Zhang, K.M. Liew, and J. N. Reddy, "Postbuckling of carbon nanotube reinforced functionally graded plates with edges elastically restrained against translation and rotation under axial compression," *Computer Methods in Applied Mechanics and Engineering*, Vol. 298, pp. 1-28, Jan 2016.
538. B. Umesh, A. Rajagopal, and J. N. Reddy, "Adaptive isogeometric analysis based on a combined *r-h* strategy," *International Journal for Computational Methods in Engineering Science & Mechanics*, Vol. 17, No. 2, pp. 73-92, 2016.
539. Jose Fernandez-Saez, R. Zaera, J.A. Loya, and J. N. Reddy, "Bending of Euler-Bernoulli Beams using Eringen's Integral Formulation: A Paradox Resolved," *International Journal of Engineering Science*, Vol. 99, pp. 107-116, Feb 2016.
540. Md. Ishaquddin, P. Raveendranath, and J. N. Reddy, "Efficient coupled polynomial interpolation scheme for out-of-plane free vibration analysis of curved beams," *Finite Elements in Analysis and Design*, Vol. 110, pp. 58-66, Mar 2016.
541. Archana Arbind and J. N. Reddy, "Transient analysis of Cosserat rod with inextensibility and unshearability constraints using the least-squares finite element model," *International Journal of Non-Linear Mechanics*, Vol. 79, pp. 38-47, Mar 2016.
542. J. N. Reddy, Jani Romanoff, and Jose Antonio Loya, "Nonlinear finite element analysis of functionally graded circular plates with modified couple stress theory," *European Journal of Mechanics - A/Solids*, Vol. 56, pp. 92–104, Mar-Apr 2016.
543. J. N. Reddy and K. S. Surana, "k-version of FEM and unconditionally stable computational processes," *IACM Expressions* (Bulletin for The International Association for Computational Mechanics), No. 38, pp. 6-13, 2016.
544. C.Y. Kiyono, E.C.N. Silva, and J. N. Reddy, "Optimal design of laminated piezocomposite energy harvesting devices considering stress constraints," *International Journal for Numerical Methods in Engineering*, Vol. 105, pp. 883-914, Mar 2016.
545. L.W. Zhang, K.M. Liew, J. N. Reddy, "Postbuckling behavior of bi-axially compressed arbitrarily straight-sided quadrilateral functionally graded material plates," *Computer Methods in Applied Mechanics and Engineering*, Vol. 300, pp. 593-610, Mar 2016.
546. P. Raghu, P. Kasirajan, A. Rajagopal, and J. N. Reddy, "Nonlocal third-order shear deformation theory for analysis of laminated plates considering surface stress effects," *Composite Structures,* Vol. 139, pp. 13-29, Apr 2016.
547. M.E. Torki and J. N. Reddy, "Buckling of functionally-graded beams with partially delaminated piezoelectric layers," *International Journal of Structural Stability and Dynamics*, Vol. 16, No. 3, 1450104 (25 pages), Apr 2016.
548. Shubhankar Roy Chowdhury, Pranesh Roy, Debasish Roy, and J. N. Reddy, "A peridynamic theory for linear elastic shells," *International Journal of Solids and Structures,* Vol. 84, pp. 110-132, May 2016.
549. Anssi T. Karttunen, Jani Romanoff, and J. N. Reddy, "Exact microstructure-dependent Timoshenko beam element," *International Journal of Mechanical Sciences*, Vol. 111, pp. 35-42, Jun 2016.
550. Saikat Sarkar and J. N. Reddy, "Exploring the source of non-locality in the Euler-Bernoulli and Timoshenko beam models," *International Journal of Engineering Science*, Vol. 104, pp. 110-115, Jul 2016.
551. Miguel E. Gutierrez Rivera, J. N. Reddy, and Marco Amabili, "A new twelve-parameter spectral/hp shell finite element for large deformation analysis of composite shells," *Composite Structures*, Vol. 151, pp. 183-196, Sep 2016.

552. L.W. Zhang, K.M. Liew, and J. N. Reddy, "Postbuckling analysis of bi-axially compressed laminated nanocomposite plates using the first-order shear deformation theory," *Composite Structures*, Vol. 152, pp. 418-431, Sep 2016.
553. M.A. Eltaher, S. El-Borgi, and J. N. Reddy, "Nonlinear analysis of size-dependent and material-dependent nonlocal CNTs," *Composite Structures*, Vol. 153, pp 902-913, 2016.
554. L.W. Zhang, K.M. Liew, and J. N. Reddy, "Geometrically nonlinear analysis of arbitrarily straight-sided quadrilateral FGM plates," *Composite Structures*, Vol. 154, pp. 443-452, Oct. 2016.
555. Kari Santaoja and J. N. Reddy, "Material model for creep-assisted microcracking applied to S2 sea ice," *Journal of Applied Mechanics*, Vol. 83, No. 11, Nov. 2016.
556. Shubhankar Roy Chowdhury, Debasish Roy, J. N. Reddy, and Arun Srinivasa, "Fluctuation relation based continuum model for thermoviscoplasticity in metals," *Journal of the Mechanics and Physics of Solids*, Vol. 96, 353-368, Nov 2016.
557. Jani Romanoff, J. N. Reddy, and Jasmin Jelovica, "Using non-local Timoshenko beam theories for prediction of micro- and macro-structural responses," *Computers and Structures*, Vol. 156, pp. 410-420, Nov 2016.
558. C.Y. Kiyono, S.L. Vatanabe, E.C.N. Silva, and J. N. Reddy, "New multi-*p*-norm formulation approach for stress-based topology optimization design," *Composite Structures,* Vol. 156, pp. 10-19, Nov 2016.
559. Namhee Kim and J. N. Reddy, "A spectral/hp least-squares finite element analysis of the Carreau-Yasuda fluids," *International Journal for Numerical Methods in Fluids*, Vol. 82 No. 9, pp. 541-566, Nov 2016.
560. Noël Challamel, J. N. Reddy, and C. M. Wang, "Eringen's stress gradient model for bending of nonlocal beams," *Journal of Engineering Mechanics, ASCE*, Vol. 142, No. 12, article number 04016095 (9 pages), Dec 2016.
561. Parisa Khodabakhshi, J. N. Reddy, and Arun Srinivasa, "GraFEA: A graph based finite element approach for study of damage and fracture in brittle materials," *Meccanica* (50th Anniversary Volume), Vol. 51, No. 12, 3129-3147, Dec 2016.
562. Mahmoud Mousavi, J. N. Reddy, and Jani Romanoff, "Analysis of anisotropic gradient elastic shear deformable plates," *Acta Meccanica*, Vol. 227, No. 12, pp. 3639-3656, Dec 2016.
563. Miguel E Gutierrez Rivera and J. N. Reddy, "Stress analysis of functionally graded shells using a 7-parameter shell element," *Mechanics Research Communications*, Vol. 78, Part B, pp. 60-70, Dec 2016.
564. Ginu U. Unnikrishnan, Vinu U. Unnikrishnan, and J. N. Reddy, "Contribution of material properties of cellular components on the viscoelastic, stress-relaxation response of a cell during AFM indentation," *International Journal of Computational Methods in Engineering Science and Mechanics*, Vol. 17, No. 3, pp. 137-142, 2016.
565. N. S. Al-Maskari, D. A. McAdams, and J. N. Reddy, "Modeling of a biological material nacre: waviness stiffness model," *Journal of Material Science and Engineering: C*, Vol. 70, 772–776, Jan 2017.
566. Saikat Sarkar, Mohsen Nowruzpour, J. N. Reddy, and Arun Srinivasa, "A discrete lagrangian based direct approach to macroscopic modelling," *Journal of Mechanics and Physics of Solids*, Vol. 98, pp. 172-180, Jan 2017.
567. Anssi T. Karttunen, J. N. Reddy, and Jani Romanoff, "Closed-form solution for circular microstructure-dependent Mindlin plates," *Acta Mechanica,* Vol. 228, No. 1, pp. 323-331 Jan 2017.
568. Parisa Khodabakhshi and J. N. Reddy, "A unified beam theory with strain gradient effect and the von kármán nonlinearity," *ZAMM, Z. Angew. Math. Mech.,* Vol. 97, No. 1, pp. 70-91, Jan 2017.
569. Jinseok Kim and J. N. Reddy, "Modeling of functionally graded smart plates with gradient elasticity effects," *Mechanics of Advanced Materials and Structures*, Vol. 24, No. 5, pp. 437-447, 2017.
570. Francesco Tornabene, Nicholas Fantuzzi, Michele Bacciocchi, and J. N. Reddy, "An equivalent layer-wise approach for the free vibration analysis of thick and thin laminated and sandwich shells," *Applied Sciences*, Vol. 7, No. 17, Jan 2017.
571. Shubhankar Roy Chowdhury, Gurudas Kar, Debasish Roy, and J. N. Reddy, "Two-temperature thermodynamics for metal viscoplasticity: continuum modelling and numerical experiments," *Journal of Applied Mechanics*, Vol. 84, No. 1, 011002, Jan. 2017.
572. J. Chang, K.B. Nakshatrala, and J. N. Reddy, "Modification to Darcy-Forchheimer model due to pressure-dependent viscosity: consequences and numerical solutions," *Journal of Porous Media*, Vol. 20, No. 3, pp. 263-285, 2017.

573. C.Y. Kiyono, E.C.N. Silva, and J. N. Reddy, "A novel fiber optimization method based on normal distribution function with continuously varying fiber path," *Composite Structures*, Vol. 160, pp. 503-515, Jan 2017-
574. Anssi T. Karttunen, Raimo von Hertzen, J. N. Reddy, and Jani Romanoff, "Bridging plate theories and elasticity solutions," *International Journal of Solids and Structures*, Vol. 106, pp. 251-263, Feb 2017.
575. Shubhankar Roy Chowdhury, Debasish Roy, and J. N. Reddy, "Relating entropy flux with heat flux in two-temperature thermodynamic model for metal thermoviscoplasticity," *Journal of Applied Mechanics*, Vol. 84, No. 2, article no. 021007, Feb. 2017.
576. Francesco Tornabene, Nicholas Fantuzzi, Michele Bacciocchi, Erasmo Viola, and J. N. Reddy, "A Numerical Investigation on the Natural Frequencies of FGM Sandwich Shells with Variable Thickness by the Local Generalized Differential Quadrature Method," *Applied Sciences*, Vol. 7, article no. 131, Feb 2017.
577. Cuiyun Liu, Bo Liu, Yufeng Xing, J. N. Reddy, A. M. A. Neves, and A. J. M. Ferreira, "In-plane vibration analysis of plates in curvilinear domains by a differential quadrature hierarchical finite element method," *Meccanica*, Vo. 52, No. 4-5, pp. 1017-1033, Mar 2017.
578. Wooram Kim and J. N. Reddy, "An improved time integration algorithm: A collocation time finite element approach," *International Journal of Structural Stability and Dynamics*, Vol. 17, No. 2, Article Number: 1750024, Mar 2017.
579. K. S. Surana, A.D. Joy, and J. N. Reddy, "Non-classical continuum theory for solids incorporating internal rotations and rotations of Cosserat theories," *Continuum Mechanics and Thermodynamics*, Vol. 29, No. 2, pp. 665-698, 2017.
580. Anuj Chaudhry, Namhee Kim, Ginu Unnikrishnan, J. N. Reddy, and Raffaella Righetti "Effect of interstitial fluid pressure on ultrasound axial strain and axial shear strain elastography," *Ultrasonic Imaging*, Vol. 39, No. 2, pp. 137-146, Mar 2017.
581. R. Fernandes, S. El-Borgi, S.M. Mousavi, J. N. Reddy, and A. Mechmoumb, "Nonlinear size-dependent longitudinal vibration of carbon nanotubes embedded in an elastic medium," *Physica E: Low-Dimensional Systems & Nanostructures,* Vol. 88, pp. 18-25, Apr 2017.
582. Bruno R. Goncalves, Anssi T. Karttunen, Jani Romanoff, and J. N. Reddy, "Buckling and free vibration of shear-flexible sandwich beams using a couple-stress-based finite element," *Composite Structures,* Vol. 165, pp. 233-241, Apr 2017.
583. Anssi T. Karttunen, Raimo von Hertzen, J. N. Reddy, and Jani Romanoff, "Exact elasticity-based finite element for circular plates," *Computers and Structures,* Vol. 182, pp. 219-226, Apr 2017.
584. Arun Srinivasa and J. N. Reddy, "An overview of theories of continuum mechanics with nonlocal elastic response and a general framework for conservative and dissipative systems," *Applied Mechanics Reviews*, Vol. 69, No. 3, Article 030802 (18 pages) , May 2017.
585. Wooram Kim and J. N. Reddy, "A New Family of Higher-Order Time Integration Algorithms for the Analysis of Structural Dynamics," *Journal of Applied Mechanics*, Vol. 84, 071008-1 to 071008-17, July 2017.
586. Wooram Kim and J. N. Reddy, "Effective higher-order time integration algorithms for the analysis of linear structural dynamics," *Journal of Applied Mechanics*, Vol. 84, 071009-1 to 071009-13, July 2017.
587. K. S. Surana, A.D. Joy, S.R. Kedari, D. Nunez, J. N. Reddy, and S. Wongwises, "A nonlinear constitutive theory for deviatoric cauchy stress tensor for incompressible viscous fluids," *Journal of Thermal Engineering*, Vol. 3, No. 3, pp. 1221-1240, 2017.
588. Kiran Sahu, Jukka Tuhkuri, and J. N. Reddy, "Active piezoelectric-structure acoustic control of a soft-core sandwich panel using volume velocity and a weighted sum of spatial gradient control metric," *Journal of Vibration and Control*, Vol. 23, No. 15, pp. 2391-2400, Aug. 2017.
589. S. Tang, A. Chaudhry, N. Kim, J. N. Reddy, and R. Righetti, "Effect of bone-soft tissue friction on ultrasound axial shear strain elastography," *Physics in Medicine and Biology*, Vol. 62, No. 15, p. 6074. 2017.
590. Archana Arbind, J. N. Reddy, and A.R. Srinivasa, "Nonlinear analysis of beams with rotation gradient dependent potential energy for constrained micro-rotation," *European Journal of Mechanics A-Solids,* Vol. 65, pp. 178-194, Sept. 2017.
591. Mohamed Trabelssi, Sami El-Borgi, Liao-liang Ke, J. N. Reddy, "Nonlocal free vibration of graded nanobeams resting on a nonlinear elastic foundation using DQM and LaDQM," *Composite Structures*, Vol. 176, pp. 736-747, Sept. 2017.

592. Francesco Tornabene, Nicholas Fantuzzi, Michele Bacciocchi, and J. N. Reddy, "A posteriori stress and strain recovery procedure for the static analysis of laminated shells resting on nonlinear elastic foundation," *Composites, Part B*, Vol. 126, 162-191, Oct. 2017.
593. M. M. Rahaman, B. Dhas, D. Roy, and J. N. Reddy, "A dynamic flow rule for viscoplasticity in polycrystalline solids under high strain rates," *International Journal of Non-Linear Mechanics*, Vol. 95, pp. 10-18, 2017.
594. S. Thai, T. Huu-Tai, Thuc P.Vo, and J. N.Reddy "Post-buckling of functionally graded microplates under mechanical and thermal loads using isogeomertic analysis," *Enginering Structures*, Vol. 150, pp. 905-917, 2017.
595. K. S. Surana, A.D. Joy, and J. N. Reddy, "Non-classical continuum theory for fluids incorporating internal and Cosserat rotation rates," *Continuum Mechanics and Thermodynamics,* Vol. 29, No. 6, pp. 1249-1289, 2017.
596. Pranesh Roy, Anil Pathrikar, S. P. Deepu, D. Roy, and J. N. Reddy, "Phase field based peridynamics damage model for delamination of composite structures," *Composite Structures*, Vol. 180, pp. 972-993, 2017.
597. Kemal Arslan, Recep Gunes, M. Kemal Apalak, J. N. Reddy, "Experimental tests and numerical modeling of ballistic impact on honeycomb sandwich structures reinforced by functionally graded plates," *Journal of Composite Materials,* Vol. 51, No. 29, pp. 4009-4028, March 2017.
598. M. M. Rahaman, P. Roy, D. Roy, and J. N. Reddy, "A peridynamic model for plasticity: Micro-inertia based flow rule, entropy equivalence and localization residuals," *Computer Methods in Applied Mechanics and Engineering*, Vol. 327, pp. 369-391, 2017.
599. K. S. Surana, A.D. Joy, S.R. Kedari, J. N. Reddy, and A. S. Dalkilic, "A nonlinear constitutive theory for heat conduction in Lagrangian description based on integrity," *Journal of Thermal Engineering*, Vol. 3, No. 6, pp. 1615-1631, 2017.
600. S.A.M. Ghannadpour, Payam Kiani, and J. N. Reddy, "Pseudo spectral method in nonlinear analysis of relatively thick imperfect laminated plates under end-shortening strain," *Composite Structures*, Vol. 182, pp. 694-710, 2017.
601. F. Moleiro, A.L. Araújo, and J. N. Reddy, "Benchmark exact free vibration solutions for multilayered piezoelectric composite plates," *Composite Structures*, Vol. 182, pp. 598-605, 2017.
602. Miguel E Gutierrez Rivera and J. N. Reddy, "Nonlinear transient and thermal analysis of functionally graded shells using a seven-parameter shell finite element," *Journal of Modeling in Mechanics and Materials*, Vo. 1, No. 2, Sep. 2017.
603. Recep Gunes, Kemal Arslan, M Kemal Apalak, and JN Reddy, "Ballistic performance of honeycomb sandwich structures reinforced by functionally graded face plates," *Journal of Sandwich Structures and Materials*, Vol. 21 (1), pp. 211-229, Jan 2019.
604. Archana Arbind and J. N. Reddy, "A general higher order one-dimensional theory for analysis of solid body in cylindrical co-ordinate system and it's nonlinear finite element model for large deformation," *Computer Methods in Applied Mechanics and Engineering*, Vol. 328, pp.99-121, 2018.
605. B. Dhas, M.M. Rahaman, K. Akella, D. Roy, J. N. Reddy, "A phase-field damage model for orthotropic materials and delamination in composites," *Journal of Applied Mechanics*, Vol. 85, No. 1, pp. 4038506-1 to 4038506-11, 2018.
606. Jayavel Arumugam and J. N. Reddy, "Nonlinear Analysis of Ionic Polymer-Metal Composite Beams Using the von Karman Strains," *International Journal of Non-Linear Mechanics,* Vol. 98, pp. 64-74, 2018.
607. Md. T. Islam, Anuj Chaudhry, Ginu Unnikrishnan, J. N. Reddy, and Raffaella Righetti, "An analytical poroelastic model for ultrasound elastography imaging of tumors more permeable than surrounding tissues," *Physics in Medicine and Biology*, Vol. 63, No. 2, article 20170674, Jan 2018.
608. Md. M. Rahaman, B. Dhas, D. Roy, and J. N. Reddy, "Variational formulation for dissipative continua and incremental J-integral," *Proc. Royal Society A*, Vol. 474, 20170674, 2018.
609. P. Kasirajan, Amirtham Rajagopal, and J. N. Reddy, "Nonlocal nonlinear bending and free vibration analysis of a rotating laminated nano cantilever beam," *Mechanics of Advanced Materials and Structures*, Vol. 25, No. 5, pp. 439-450, 2018.
610. Archana Arbind, J. N. Reddy, and A.R. Srinivasa, "Nonlinear analysis of plates with rotation gradient dependent potential energy for constrained micro-rotation," ASCE *Journal of Engineering Mechanics,* Vol. 144, No. 2, pp. 04017180-1 to 04017180-21, 2018.
611. Anssi Karttunen, J. N. Reddy, and J. Romanoff, "Micropolar modelling approach for periodic sandwich beams," *Composite Structures*, Vol. 185, pp. 656-664, Feb 2018.

612. K. S. Surana, A.D. Joy, and J. N. Reddy, "Ordered rate constitutive theories for non-classical thermoviscoelastic fluids incorporating internal and Cosserat rotation rates," *International Journal of Applied Mechanics*, Vol. 10, No. 2, 1850012 (29 pages) 2018.
613. P. Raghu, A. Rajagopal, and J. N. Reddy, "Nonlocal nonlinear finite element analysis of composite plates using TSDT," *Composite Structures*, Vol. 185, pp. 38-50, Feb 2018.
614. S. El-Borgi, P. Rajendran, M.I. Friswell, M. Trabelssi, and J. N. Reddy, "Torsional vibration of size-dependent viscoelastic rods using nonlocal strain and velocity gradient theory," *Composite Structures*, Vol. 186, pp. 274-292, Feb 2018.
615. K. S. Surana, A.D. Joy, and J. N. Reddy, "Restrictions on the material coefficients in the constitutive theories for non-classical viscous fluent continua," *Applied Mathematics*, Vol. 9, 44-85, 2018.
616. R. A. Salas, F. J. Ramırez, W. Montealegre-Rubio, E.C.N. Silva, and J. N. Reddy, "A Topology optimization formulation for transient design of multi-entry laminated piezocomposite energy harvesting devices coupled with electrical circuit," *International Journal for Numerical Methods in Engineering*, Vol. 113, No. 8, pp. 1370-1410, Feb 2018.
617. Z. Wang, A.R. Srinivasa, K.R. Rajagopal, and J. N. Reddy, "Simulation of inextensible elastic-plastic beams based on an implicit rate type model," *International Journal of Non-Linear Mechanics*, Vol. 99, pp. 165-172, Mar 2018.
618. S.R. Chowdhury, G. Kar, D. Roy, and J. N. Reddy, "Metal viscoplasticity with two-temperature thermodynamics and two dislocation densities," *Continuum Mechanics and Thermodynamics*, Vol. 30, No. 2, pp. 397-420, Mar 2018.
619. Anssi Karttunen, Raimo von Hertzen, J. N. Reddy, and Jani Romanoff, "Shear deformable plate elements based on exact elasticity solution," *Computers and Structures*, Vol. 200, pp. 21-31, Apr 2018.
620. R.A. Salas, F. Ramirez-Gil, W. Montealegre-Rubio, E.C.N. Silva, and J. N. Reddy, "Optimized dynamic design of laminated piezocomposite multi-entry actuators considering fiber orientation" *Computer Methods in Applied Mechanics and Engineering*, Vol. 335, pp. 223-254, 2018.
621. K. Olesen, B. Gervang, J. N. Reddy, and M. Gerritsma, "A Higher Order Equilibrium Finite Element Method," *International Journal for Numerical Methods in Engineering*, Vol. 114, N0. 12, pp. 1262-1290, February 2018.
622. K. S. Surana, S. W. Long, and J. N. Reddy, "Necessity of law of balance/equilibrium of moment of moments in non-classical continuum theories for fluent continua," *Acta Meccanica*, Vol. 229, pp. 2801–2833, 2018.
623. L.H. Ma, L.-L. Ke, J. N. Reddy, J. Yang, S. Kitipornchai, and, Y.S. Wang, "Wave propagation characteristics in magneto-electro-elastic nanoshells using nonlocal strain gradient theory," *Composite Structures*, Vol. 199, pp. 10-23, 2018.
624. K. S. Surana, R. Shanbhag, and J. N. Reddy, "Necessity of balance of moments of moments balance law in non-classical continuum theories for solid continua," *Meccanica*, Vol. 53, Nos. 11-12, pp. 2939–2972, Sep. 2018.
625. K. S. Surana, A.D. Joy, and J. N. Reddy, "Ordered rate constitutive theories for thermoviscoelastic solids without memory incorporating internal and Cosserat rotations" *Acta Mechanica*, Vol. 229, pp. 3189-3213, 2018.
626. Tan Ngoc Than Cao, J. N. Reddy, Kok Keng Ang, Van Hai Luong, Minh Thi Tran, and Jian Dai, "Dynamic analysis of three-dimensional high-speed train-track model using moving element method," *Advances in Structural Engineering*, Vol. 21, No. 6, pp. 862-876, 2018.
627. S. Srividhya, P. Raghu, A. Rajagopal, and J. N. Reddy, "Nonlocal nonlinear analysis of functionally graded plates using third-order shear deformation theory," *International Journal of Engineering Science*, Vol. 125, pp. 1-22, 2018.
628. Namhee Kim and J. N. Reddy, "Least-squares finite element analysis of flow of a generalized newtonian fluid past a circular cylinder," *Mechanics of Advanced Materials and Structures,* Vol. 25, No. 14, pp.1186-1196, 2018.
629. Archana Arbind, A.R. Srinivasa, and J. N. Reddy, "A higher-order theory for open and closed curved rods and tubes using a novel curvilinear cylindrical coordinate system," *Journal of Applied Mechanics*, Vol. 85, No. 9, 091006 (11 pages), Sep. 2018.
630. Archana Arbind and J. N. Reddy, "A one-dimensional model of 3-D structure for large deformation: a general higher-order rod theory," *Acta Mechanica*, Vol. 229, 1803–1831, Oct. 2018.

631. Famida Fallaha, Ehsan Taati, Mohsen Asghari, and J. N. Reddy, "Standard and boundary layer perturbation approaches to predict nonlinear axisymmetric behavior of cylindrical shells," *Composite Structures*, Vo. 204, pp. 855-881, 2018.
632. Songyuan Tang, Eric P. Sabonghy, Anuj Chaudhry, Peer Shafeeq Shajudeen, Md. T. Islam, Namhee Kim, Fernando J. Cabrera, J. N. Reddy, Ennio Tasciotti, and Raffaella Righetti "A model-based approach to investigate the effect of a long bone fracture on ultrasound strain elastography," *IEEE Transactions on Medical Imaging*, DOI: 10.1109/TMI.2018.2849996, 2018.
633. Md. T. Islam, A. Chaudhry, G. Unnikrishnan, J. N. Reddy, and R. Righetti, "An analytical model of tumors with higher permeability than surrounding tissues for ultrasound elastography imaging," *Journal of Engineering and Science in Medical Diagnostics and Therapy*, Vol. 1, No. 3, p. 031006, 2018.
634. S. Srividhya, K. Basant,· R. K. Gupta, A. Rajagopal, and·J. N. Reddy, "Influence of the homogenization scheme on the bending response of functionally graded plates," *Acta Mechanica*, Vol. 229, pp. 4071-4089, Oct. 2018.
635. K. S. Surana, D. Mysore, and J. N. Reddy, "Ordered rate constitutive theories for non-classical thermoviscoelastic solids with dissipation and memory incorporating internal rotations," *Polytechnica*, https://doi.org/10.1007/s41050-018-0004-2.
636. Tan Ngoc Than Cao, Van Hai Luong, J. N. Reddy, Kok Keng Ang, Minh Thi Tran, and Jian Dai, "Static and dynamic analyses of mindlin plates resting on viscoelastic foundation by using moving element method," *International Journal of Structural Dynmics and Stability*, Vol. 18, No. 11, 1850131 (20 pages), Nov. 2018.
637. Mohsen Nowruzpour and J. N. Reddy "Unification of local and nonlocal models within a stable integral formulation for analysis of defects," *International Journal of Engineering Science*, Vol. 132, pp. 45-59, Nov 2018.
638. Md. T. Islam, J. N. Reddy, Raffaella Righetti, "A model-based approach to investigate the effect of elevated interstitial fluid pressure on strain elastography" *Physics in Medicine and Biology,* Vol. 63, paper 215011, Nov. 2018.
639. M. A. Khan, S. Kumar, and J. N. Reddy, "Material-tailored adhesively bonded multilayers: A theoretical analysis," *International Journal of Mechanical Sciences*, Vol. 148, November 2018, pp. 246-262, Nov. 2018.
640. K. S. Surana, D. Mysore, and J. N. Reddy, "Non-classical continuum theories for solid and fluent continua and some applications," *International Journal of Smart and Nano Materials,* Vol. 10, No. 1, pp. 28-89, 2018.
641. S. Tang, A. Chaudhry, Peer Shafeeq Shajudeen, Md Tauhidul Islam, N. Kim, Fernando J. Cabrera, J. N. Reddy, Ennio Tasciotti, and Raffaella Righetti, "A model-based approach to investigate the effect of a long bone fracture on ultrasound strain elastography," *IEEE Transactions on Medical Imaging,* Vol. 37, No. 12, pp. 2704-2717, Dec 2018.
642. K. S. Surana, D. Nunez, A. D. Joy, and J. N. Reddy, "Alternate forms of thermodynamic laws for thermoelastic solids and the constitutive theories," *Mechanics of Advanced Materials and Structures*, Vol. 25 (15-16), pp. 1297-1312, 2018.
643. Rakesh Ranjan and J. N. Reddy, "Non uniform rational bspline (nurbs) based non-linear analysis of straight beams with mixed formulations," *Journal of Solid Mechanics*, Vol. 10, No. 1, pp. 38-56, 2018.
644. Md. T. Islam, J. N. Reddy, and R. Righetti, "A model-based approach to investigate the effect of elevated interstitial fluid pressure on elastography", *Physics in Medicine & Biology*, Vol. 63, No. 21, 215011, Oct. 2018.
645. Anssi Karttunen, J. N. Reddy, and J. Romanoff, "Two-scale constitutive modeling of a lattice core sandwich beam," *Composites B-Engineering*, Vol. 160, pp. 66-75, 2019.
646. K. S. Surana, A. D. Joy, and J. N. Reddy, "Ordered rate constitutive theories for non-classical thermoviscoelastic solids with memory incorporating internal and Cosserat rotations," *Continuum Mechanics and Thermodynamics*, Vol. 31, No. 2, pp. 427-455, 2019.
647. F. Moleiro, V.M. Franco Correia, A.L. Araújo, C.M. Mota Soares, A.J.M. Ferreira, and J. N. Reddy, "Deformations and stresses of multilayered plates with embedded functionally graded material layers using a layerwise mixed model," *Composites Part B: Engineering*, Vol. 156, pp. 274-291, 2019.
648. Mohsen Nowruzpour, Saikat Sarkar, J. N. Reddy, and Debasish Roy, "A derivative-free upscaled theory for analysis of defects," *Journal of Mechanics and Physics of Solids*, Vol. 122, pp. 489-501, Jan 2019.

649. Recep Gunes, Kemal Arslan, M. Kemal Apalaki, J. N. Reddy, "Ballistic performance of honeycomb sandwich structures reinforced by functionally graded face plates," *Journal of Sandwich Structures and Materials*, Vol. 21 (1), pp. 211-229, Jan 2019.
650. Arash Sabz, J. N. Reddy, Pengcheng Jiao, and Amir H. Alavi, "Structural damage detection using rate of total energy," *Measurement*, Vol. 133, pp. 91-98, 2019.
651. H.S. Shen, Y. Xiang, and J. N. Reddy, "Thermal postbuckling behavior of FG-GRC laminated cylindrical panels with temperature-dependent properties," *Composite Structures*, Vol. 211, pp. 433-442, 2019.
652. Praneeth Nampally, Anssi Karttunen, and J. N. Reddy, "Nonlinear finite element analysis of lattice core sandwich beams," *European Journal of Mechanics, A/Solids*, Vol. 74, pp. 431-439, 2019.
653. M. Amabili, I. D. Breslavsky, and J. N. Reddy, "Nonlinear higher-order shell theory for incompressible biological hyperelastic materials," *Computer Methods in Applied Mechanics and Engineering,* Vol. 346, pp. 841-861, April 2019.
654. Jinseok Kim, Krzysztof Kamil Żur, and J. N. Reddy, "Bending, free vibration, and buckling of modified couples stress-based functionally graded porous micro-plates," *Composite Structures,* Vol. 209, pp. 879-888, 2019.
655. F. Moleiro, V.M. Franco Correia, A.J.M. Ferreira, and J. N. Reddy, "Fully coupled thermo-mechanical analysis of multilayered plates with embedded FGM skins or core layers using a layerwise mixed model," *Composite Structures,* Vol. 210, pp. 971-996, 2019.
656. Francesco Tornabene, Michele Bacciocchi, Nicholas Fantuzzi, and J. N. Reddy, "Multiscale approach for three-phase CNT/polymer/fiber laminated nanocomposite structures," *Polymer Composites*, Vol. 40, No. S1, pp. E102-E126, January 2019 (**top downloaded paper**).
657. Mariana Moretti, Emilio Silva, and J. N. Reddy, "Topology Optimization of Flextensional Piezoelectric Actuators with Active Control Law," *Smart Materials and Structures*, Vol. 28, No. 3, article 035015, Mar 2019.
658. Shubhankar Roy Chowdhury, Pranesh Roy, Debasish Roy, and J. N. Reddy, "A modified peridynamics correspondence principle: removal of zero-energy deformation and other implications," *Computer Methods in Engineering and Applied Mechanics*, Vol. 346, pp. 530-549, April 2019.
659. Mohammad Arefi, Elyas Mohammad-Rezaei Bidgoli, Rossana Dimitri, Francesco Tornabene, and J. N. Reddy, "Size-dependent vibration of functionally graded polymer composite curved nanobeams reinforced with graphene nanoplatelets," *Applied Sciences-Basel*, Vol. 9, No. 8, article 1580, 2019.
660. N. S. Al-Maskari, D. A. McAdams, and J. N. Reddy, "Modeling of a biological material nacre: waviness toughness model," *Mechanics of Advanced Materials and Structures*, Vol. 26, No. 9, 789–795, May 2019.
661. Namhee Kim and J. N. Reddy, "3-D least-squares finite element analysis of flows of generalized Newtonian fluids," *Journal of non-Newtonian Fluid Mechanics*, Vol. 266, pp. 143-159, 2019.
662. Muhammad, C.W. Lim, and J. N. Reddy, "Built-up structural steel sections as seismic metamaterial for surface wave attenuation with low frequency wide bandgap in layered soil medium," *Engineering Structures*, Vol. 188, 440-451, 2019.
663. Md. T. Islam, J. N. Reddy, and R. Righetti, "An analytical poroelastic model of a non-homogeneous medium under creep compression for ultrasound poroelastography applications - Part I," *Journal of Biomechanical Engineering*, Vol. 141, No. 6, 060902, 2019.
664. Md. T. Islam, J. N. Reddy, and R. Righetti, "An analytical poroelastic model of a non-homogeneous medium under creep compression for ultrasound poroelastography applications - Part II," *Journal of Biomechanical Engineering*, Vol. 141, No. 6, 060903, 2019.
665. Archana Arbind, J. N. Reddy, and Arun R. Srinivasa, "A nonlinear 1-D finite element analysis of rods/tubes made of incompressible neo-Hookean materials using higher-order theory," *International Journal of Solids and Structures,* Vol. 166, pp. 1-21, 2019.
666. Recep Ekici, Vahdet Mesut Abaci, and J. N. Reddy, "3D Micro-structural modeling of vibration characteristics of smart particle-reinforced metal-matrix composite beams," *International Journal of Structural Stability and Dynamics,* Vol. 19, No. 7, 1950078, 2019.
667. E. Ruocco and J. N. Reddy, "Shortening effect on buckling behavior of Reddy plates and prismatic plate structures," *International Journal of Struvctural Stability and Dynamics,* Vol. 19, No. 4, pp. 195008, 2019.
668. K. S. Surana, A. D. Joy, and J. N. Reddy, "A finite deformation, finite strain nonclassical internal polar continuum theory for solids," *Mechanics of Advanced Materials and Structures*, Vol. 26, No. 5, pp. 381-393, 2019.

669. J. N. Reddy, "A dual mesh finite domain method for the numerical solution of differential equations," *International Journal for Computational Methods in Engineering Science and Mechanics,* Vol. 20, No. 3, pp. 212-228, 2019.
670. E. Ruocco and J. N. Reddy, "A closed-form solution for buckling analysis of orthotropic Reddy plates and prismatic plates structures", *Composites B*, Vol. 169, pp. 258-273, 2019.
671. P. Aurojyoti, P. Raghu, A. Rajagopal, and J. N. Reddy, "An *n*-sided polygonal finite element for nonlocal nonlinear analysis of plates and laminates," *International Journal for Numerical Methods in Engineering*, Vol. 120, No. 9, pp. 1071-1107, 2019.
672. Prakash Thamburaja, K. Sarah, A.R. Srinivasa, and J. N. Reddy, "Fracture of viscoelastic materials: FEM implementation of a non-local & rate form-based finite-deformation constitutive theory," *Computer Methods in Applied Mechanics and Engineering*, Vol. 354, pp. 871-903, 2019.
673. K. S. Surana, D. Mysore, and J. N. Reddy, "Thermodynamic consistency of beam theories in the context of classical and nonclassical continuum mechanics and a thermodynamically consistent new formulation," *Continuum Mechanics and Thermodynamics*, Vol. 31, No. 5, pp. 1283-1312, 2019.
674. Pranesh Roy, Debasish Roy, and J. N. Reddy, "A conformal gauge theory of solids: insights into a class of electromechanical and magnetomechanical phenomena," *Journal of the Mechanics and Physics of Solids*, Vol. 130, pp. 35-55, 2019.
675. Juhyeong Lee, Charles Pittman, Jr., Thomas Lacy, Jr., and J. N. Reddy, "Numerical estimations of lightning-induced mechanical damage in carbon/epoxy composites using shock wave overpressure and equivalent air blast overpressure," *Composite Structures,* Vol. 224, 111039, 2019.
676. Anssi Karttunen, J. N. Reddy, and Jani Romanoff, "Two-scale micropolar plate model for web-core sandwich panels," *International Journal of Solids and Structures,* Vol. 170, pp. 82-94, 2019.
677. Parisa Khodabakhshi, J. N. Reddy, and A.R. Srinivasa, "A nonlocal fracture criterion and its effect on mesh dependency of GraFEA," *Acta Mechanica*, Vol. 230, pp. 3593–3612, 2019.
678. Faissal Chegdani, Mohamed El Mansori, Satish T.S. Bukkapatnam and J. N. Reddy, "Micromechanical modeling of the machining behavior of natural fiber reinforced polymer composites," *The International Journal of Advanced Manufacturing Technology*, Vol. 105, pp. 1549–1561, Sep. 2019.
679. K. Shiva, P. Raghu, A. Rajagopal, J N Reddy, "Nonlocal buckling analysis of laminated composite plates considering surface stress effects," *Composite Structures*, Vol. 226, UNSP111216, 2019.
680. Shubhankar Roy Chowdhury and J. N. Reddy, "Geometrically exact micropolar Timoshenko beam and its application in modelling sandwich beams made of architected lattice core," *Composite Structures*, Vol. 226, 111228, 2019.
681. Thai Binh Nguyen, J. N. Reddy, Jaroon Rungamornrat, Jintara Lawongkerd, Teerapong Senjuntichai, and Van Hai Luong, "Nonlinear analysis for bending, buckling and post-buckling of nano-beams with nonlocal and surface energy effects," *International Journal of Structural Stability and Dynamics,* Vol. 19, No. 11, 1950130, 2019.
682. Mehmet Dorduncu, M. Kemal Apalak, and J. N. Reddy, "Stress wave propagation in a functionally graded adhesive layer between two identical cylinders," *The Journal of Adhesion,* Vol. 95, Nos. 13-14, pp. 1146-1181, 2019.
683. Filipa Moleiro, Erasmo Carrera, Guohong Li, Maria Cinefra, and J. N. Reddy, "Hygro-thermo-mechanical modelling of multilayered plates: hybrid composite laminates, fibre metal laminates and sandwich plates," *Composites, Part B,* Vol. 177, 107388, 2019.
684. M. Dorduncu, M. K. Apalak, and J. N. Reddy, "Stress wave propagation in a through-thickness functionally graded adhesive layer," *Journal of Adhesion Science and Technology*, Vol. 33, No. 21, pp. 2329-2355, 2019.
685. B. Umesh, A. Rajagopal, and J. N. Reddy, "One dimensional nonlocal integro-differential model gradient elasticity model: approximate solutions and size effects," *Mechanics of Advanced Materials and Structures*, Vol. 26, No. 3, pp. 260-273, 2019.
686. Priyank Upadhyaya, S Kumar, J. N. Reddy, and Thomas Lacy, Jr, "Multiscale modeling of strength and failure behavior of carbon nanostructure reinforced adhesive in bonded structures," *European Journal of Mechanics, A/Solids*, Vol. 80, 103932 , Dec 2019.
687. Mehmet Dorduncu, Mustafa Kemal Apalak, and J. N. Reddy, "Stress wave propagation in adhesively bonded functionally graded cylinders: an improved model," *Journal of Adhesion Science and Technology,* Vol. 33, No. 2, pp. 156–186, 2019.

688. Namhee Kim and J. N. Reddy, "Least-squares finite element analysis of three-dimensional natural convection of generalized Newtonian fluids," *International Journal of NumericaL Methods in Fluids*, Vol. 266, pp. 143-159, 2020.
689. André Luis Ferreira da Silva, Ruben Andres Salas, Emilio C.M. Silva, and J. N. Reddy, "Topology optimization of fiber orientation in hyperelastic composite materials," *Composite Structures,* Vol. 231, 111488, 2020.
690. J. N. Reddy, "Stephen P. Timoshenko Medal Acceptance Speech Presented at the ASME Applied Mechanics Division Banquet, IMECE'19, Salt Lake City, UT, Nov. 12, 2019." Guest Editorial appeared in *Journal of Applied Mechanics*, Vol. 87, article 020301 (4 pages), February 2020.
691. F. Moleiro, E. Correra, A.J.M. Ferreira, and J. N. Reddy, "Hygro-thermo-mechanical modelling and analysis of multilayered plates with embedded functionally graded material layers," *Composite Structures,* Vol. 233, 111442, 2020.
692. Weijian Zhou, Bin Wu, Zhenyu Chen, Weiqiu Chen, C.W. Lim, and J. N. Reddy, "Actively controllable topological phase transition in homogeneous piezoelectric rod system," *Journal of the Mechanics and Physics of Solids*, Vol. 137, 103824, 2020.
693. Hamid Daghigh, Vahid Daghigh, Abbas Sadeghzadeh Milani, Dwayne Tannant, Thomas, Lacy, Jr., and JN Reddy, "Nonlocal bending and buckling of agglomerated CNT-reinforced composite nanoplates," *Composites Part B: Engineering,* Vol. 183, 107716, Feb 2020.
694. H.-S. Shen, Chong Li, and J. N. Reddy, "Large amplitude vibration of FG-CNTRC laminated cylindrical shells with negative Poisson's ratio," *Computer Methods in Applied Mechanics and Engineering*, Vol. 360, 112727, 2020.
695. Miguel Gutierrez Rivera, J. N. Reddy, and Marco Amabili, "A continuum eight-parameter shell finite element for large deformation analysis," *Mechanics of Advanced Materials and Structures,* Vol. 27, No. 7, pp. 551-560, 2020.
696. Jia-Yu Ye, Lu-Wen Zhang, and J. N. Reddy, "Large strained fracture of nearly incompressible hyperelastic materials: Enhanced assumed strain methods and energy decomposition," *Journal of the Mechanics and Physics of Solids,* Vol. 139, 103939, 2020.
697. Marco Amabili and J. N. Reddy, "The nonlinear, third-order thickness and shear deformation theory for statics and dynamics of laminated composite shells," *Composite Structures*, Vol. 244, 112265, 2020.
698. P. Kasirajan, S. Bhattacharya, A. Rajagopal, and J. N. Reddy, "Phase field modeling of fracture in quasi-brittle materials using natural neighbor Galerkin method," *Computer Methods in Applied Mechanics and Engineering*, Vol. 366, 113019, 2020.
699. Muhammad, C. W. Lim, J. N. Reddy, E. Carrera, Xinsheng Xu and Zhenhuan Zhou, "Surface elastic waves whispering gallery modes based subwavelength tunable waveguide and cavity modes of the phononic crystals," *Mechanics of Advanced Materials and Structures,* Vol. 27, No. 13, pp. 1053-1064, 2020.
700. P. Shajudeen, S. Tang, A. Chaudhry, Namhee Kim, J. N. Reddy, E. Tasciotti, and Raffaella Righetti, "Modeling and analysis of ultrasound elastographic axial strains in aiding spine fracture localization," *IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control,* Vo. 67, No. 5, pp. 898-909. May 2020.
701. P. Raghu, A. Rajagopal, and J. N. Reddy, "Nonlocal transient dynamic analysis of laminated composite plates," *Mechanics of Advanced Materials and Structures,* Vol. 27, No. 13, pp. 1076-1084, 2020.
702. E. Ruocco and J. N. Reddy, "Buckling analysis of elastic–plastic nanoplates resting on a Winkler–Pasternak foundation based on nonlocal third-order plate theory," *International Journal of Non-Linear Mechanics*, Vol. 121, article 103453, 2020.
703. Wooram Kim and J. N. Reddy, "Novel explicit time integration schemes for efficient transient analyses of structural problems," *International Journal of Mechanical Sciences,* Vol. 172, 105429, April 2020.
704. K. Sarah, P. Thamburaja, A. Srinivasa, and J. N. Reddy, "Numerical simulations of damage and fracture in viscoelastic solids using a nonlocal fracture criterion," *Mechanics of Advanced Materials and Structures,* Vol. 27, No. 13, pp. 1085-1097, 2020.
705. F. Moleiro, J.F.A. Madeira, E. Carrera, and J. N. Reddy, "Design optimization of functionally graded plates under thermo-mechanical loadings to minimize stress, deformation and mass," *Composite Structures*, Vol. 245, article 112360, 2020.
706. J. N. Reddy, Xuan Vu Nguyen, Tan Ngoc Than Cao, Qui X. Lieu, and Van Hai Luong, "An integrated moving element method (IMEM) for hydroelastic analysis of infinite floating Kirchhoff-Love plates under moving loads in a shallow water environment," *Thin-Walled Structures*, Vol. 155, article 106934, 2020.

707. J. N. Reddy and Praneeth Nampally, "A dual mesh finite domain method for the analysis of functionally graded beams," *Composite Structures*, Vol. 251, article 112648, 2020.
708. Recep Gunes, Mevlut Hakan, M. Kemal Apalak, and J. N. Reddy, "Numerical investigation on normal and oblique ballistic impact behavior of functionally graded plates," *Mechanics of Advanced Materials and Structures*, Vol. 28, No. 20, pp. 2114-2130, 2021.
709. Anssi T. Karttunen and J. N. Reddy, "Hierarchy of beam models for lattice core sandwich structures," *International Journal of Solids and Structures*, Vol. 204, pp. 172-186, 2020.
710. F. Moleiro, C.M. Mota Soares, E. Carrera, and J. N. Reddy, "Evaluation of exact electro-elastic static and free vibration solutions of multilayered plates for benchmarking: piezoelectric composite laminates and soft core sandwich plates," *Composites Part C: Open Access,* Vol. 2, article 100038, 2020.
711. J. N. Reddy, Praneeth Nampally, and A.R. Srinivasa, "Nonlinear analysis of functionally graded beams using the dual mesh finite domain method and the finite element method," *International Journal of Non-Linear Mechanics*, Vol. 127, 103575, Dec 2020.
712. Praneeth Nampally and J. N. Reddy, "Geometrically nonlinear Euler-Bernoulli and Timoshenko micropolar beam theories," *Acta Mechanica*, Vol. 231, pp. 4217–4242, 2020.
713. M. Di Paola, J. N. Reddy, and E. Ruocco, "On the application of fractional calculus for the formulation of viscoelastic Reddy beam," *Meccanica*, Vol. 55, pp. 1365–1378, May 2020.
714. J. N. Reddy and A.R. Srinivasa, "Misattributions and misnomers in mechanics: why they matter in the search for insight and precision of thought," *Vietnam Journal of Mechanics*, Vol. 42, No. 3, pp. 283-291, 2020.
715. Gurudas Kar, Debasish Roy, and J. N. Reddy, "Thermoviscoplasticity in BCC metals: a two-temperature model with grain boundary evolution," *ASME Journal of Applied Mechanics*, Vol. 87, No. 11, 111004 (10 pages), 2020.
716. Hassen M. Ouakad, Ali Valipour, Krzysztof Kamil Żur, Hamid M. Sedighi, and J. N. Reddy, "On the nonlinear vibration and static deflection problems of actuated hybrid nanotubes based on the stress-driven nonlocal integral elasticity," *Mechanics of Materials*, Vol. 148, 103532 (15 pages), 2020.
717. Carlos Valencia Murillo, Miguel Gutierrez Rivera, and J. N. Reddy, "Linear vibration analysis of shells using a seven-parameter spectral/hp finite element model," *Applied Sciences-BASEL,* Vol. 15, No. 10, Article 5102, 2020.
718. J. N. Reddy, Namhee Kim, and Matthew Martinez, "A dual mesh control domain method for the solution of nonlinear poisson's equation and the Navier-Stokes equations for incompressible fluids," *Physics of Fluids*, Vol. 32, 093608, published online, Sept. 2020.
719. Jani Romanoff, Jasmin Jelovica, J. N. Reddy, and Heikki Remes, "Post-buckling of webcore sandwich plates based on classical continuum mechanics: success and needs for nonclassical formulations," *Meccanica*, appeared online, June 2020.
720. Rosanna Dimitri, Francesco Tornabene, and J. N. Reddy, "Numerical study of the mixed-mode behavior of generally-shaped composite interfaces," *Composite Structures*, Vol. 237, article 111935, 2020.
721. Wooram Kim and J. N. Reddy, "A comparative study of implicit and explicit composite time integration schemes," *International Journal of Structural Stability and Dynamics*, Vol. 20, No. 13, article 2041003, Dec 2020.
722. J. N. Reddy, Xuan Vu Nguyen, Tan Ngoc Than Cao, Xuan Qui Lieu, and Van Hai Luong, "A comparative study on the hydroelastic behavior of floating plates imposed by various types of boundary conditions," *International Journal of Offshore and Polar Engineering,* Vol. 30 , No. 4, pp. 471-477 , Dec 2020.
723. Praneeth Nampally and J. N. Reddy, "Bending analysis of functionally graded axisymmetric circular plates using the dual mesh finite domain method," *Latin American Journal of Solid Mechanics*, Vol. 17, No. 7, 2020.
724. E. Ruocco, J. N. Reddy, and C.M. Wang, "An enhanced Hencky bar-chain model for bending, buckling and vibration analyses of Reddy beams," *Engineering Structures*, Vol. 221, article 111056, 2020.
725. Piotr Jankowski, Krzysztof Kamil Żur, Jinseok Kim, and J. N. Reddy, "On the bifurcation buckling and vibration of porous nanobeams," *Composite Structures*, Vol. 250, article112632, 2020 .
726. Weijian Zhou, Zhenyu Chen, Yingjie Chen, Weiqiu Chen, C.W. Lim, and J. N. Reddy, "Mathematical modelling of phononic nanoplate and its size-dependent dispersion and topological properties," *Applied Mathematical Modelling*, Vol. 88, pp. 774-790, 2020.

727. Hassen M. Ouakad, Ali Valipour, Krzysztof Kamil Żur, Hamid M. Sedighi, J. N. Reddy, "On the nonlinear vibration and static deflection problems of actuated hybrid nanotubes based on the stress-driven nonlocal integral elasticity," *Mechanics of Materials*, Vol. 148, article 103532, 2020.
728. Muhammad, C.W. Lim, J. N. Reddy, E. Carrera, Xinsheng Xu, and Zhenhuan Zhou, "Surface elastic waves whispering gallery modes based subwavelength tunable waveguide and cavity modes of the phononic crystals," *Mechanics of Advanced Materials and Structures*, Vol. 27, No. 13, pp. 1053-1064, 2020.
729. N. S. Al-Maskari, D. A. McAdams, and J. N. Reddy, "Modeling of a biological material nacre: Multiobjective optimization model," *Mechanics of Advanced Materials and Structures,* Vo. 28, No. 4, pp. 430-439, 2021.
730. P. Raghu, A. Rajagopal, S. K. Jalan, and J. N. Reddy, "Modeling of brittle fracture in thick plates subjected to transient dynamic loads using a hybrid phase field model," *Meccanica*, Vol. 56, No. 6, pp. 1269-1286, 2021.
731. J. N. Reddy, Praneeth Nampally, and Nam Phan, "Dual mesh control domain analysis of functionally graded circular plates accounting for moderate rotations," *Composite Structures*, Vol. 257, article 113153, 2021.
732. Hulun Guo, Tianzhi Yang, Krzysztof Kamil Żur, and J. N. Reddy, "On the flutter of matrix cracked laminated composite plates reinforced with graphene nanoplatelets," *Thin-Walled Structures*, Vol. 158, article 107161, 2021.
733. Hui-Shen Shen, J. N. Reddy, and Yin Yu, "Postbuckling of doubly curved FG-GRC laminated panels subjected to lateral pressure in thermal environments," *Mechanics of Advanced Materials and Structures,* Vol. 28, No. 3, 260–270, 2021.
734. J. N. Reddy and Matthew Martinez, "A dual mesh control domain method for steady-state convection--diffusion problems," *Computers and Fluids*, Vol. 214, article 104760 (14 pages), 2021.
735. Hui-Shen Shen, Y. Xiang, and J. N. Reddy, "Assessment of the effect of negative Poisson's ratio on the thermal postbuckling of temperature dependent FG-GRMMC laminated cylindrical shells," *Computer Methods in Engineering and Applied Mechanics*, Vol. 376, article 113664, 2021.
736. A. Arbind, J. N. Reddy, and A.R. Srinivasa, "A general higher-order shell theory for compressible isotropic hyperelastic materials using orthonormal moving frame," *International Journal for Numerical Methods in Engineering*, Vol. 122, No. 1, pp. 235-269, 2021.
737. Tan Ngoc Than Cao, JN Reddy, Qui X Lieu, Xuan Vu Nguyen, and Van Hai Luong, "A multi-layer moving plate method for dynamic analysis of viscoelastically connected double-plate systems subjected to moving loads," *Advances in Structural Engineering*, Vol. 24, No. 9, pp. 1798–1813, 2021.
738. A. Farajpour, K.K. Żur, J. Kim, J. N. Reddy, "Nonlinear frequency behaviour of magneto electro-mechanical mass nanosensors using vibrating MEE nanoplates with multiple nanoparticles," *Composite Structures*, Vol. 260, Article Number 113458, March 2021.
739. A.R. Srinivasa, Ho Yong Shin, Prakash Thamburaja, J. N. Reddy, "Multiple cracking model in a 3D GraFEA framework," *Continuum Mechanics and Thermodynamics,* Vol. 33, pp. 1409–1428, March 2021.
740. J. N. Reddy, Matthew Martinez, and Praneeth Nampally, "A novel numerical method for the solution of nonlinear equations with applications to heat transfer," *International Journal of Numerical Methods in Heat and Fluid Flow*, appeared online, DOI 10.1108/HFF-07-2020-0397.
741. Isaac Elishakoff and J. N. Reddy, "Quadratic equations without a quadratic formula," *For the Learning of Mathematics* (an international journal of mathematics education), Vol. 41, No. 2, pp. 39-41, 2021.
742. S. Karthik, A. Rajagopal, and J. N. Reddy, "Nonlocal phase field approach for modeling damage in brittle materials," *Mechanics of Materials*, Vol. 157, Article Number 103797, June 2021.
743. Eugenio Ruocco, J. N. Reddy, and E. Sacco, "Analytical solution for a 5-parameter beam displacement model," *International Journal of Mechanical Sciences*, Vol. 201, Article Number 106496, July 2021.
744. Piotr Jankowski, Krzysztof Kamil Żur, Jinseok Kim, C.W. Lim, and J. N. Reddy, "On the piezoelectric effect on stability of symmetric FGM porous nanobeams," *Compsite Structures*, Vol. 267, Article Number 113880, July 2021.
745. Francesco Tornabene, Matteo Viscoti, Rossana Dimitri, and J. N. Reddy, "Higher order theories for the vibration study of doubly-curved anisotropic shells with a variable thickness and isogeometric mapped geometry," *Compsoite Structures,* Vol. 267, Article Number 113829, July 2021.
746. J. N. Reddy, Eugenio Rocco, Jose A. Loya, and Ana M.A. Neves, "Theories and analyses of functionally graded beams," special issue titled *Numerical Analysis of FGM and Laminated Structures (*Ana M.A. Neves, ed.)*, Applied Sciences*, Vol. 11, 7159, 2021 (24 pages).

747. Dhaladhuli Pranavi, A. Rajagopal, and J. N. Reddy, "Interaction of anisotropic crack phase field with interface cohesive zone model for fiber reinforced composites," *Composite Structures*, Vol. 270, Aerticle Number 114038, 2021.
748. P. Thamburaja, K. Sarah, A. Srinivasa, and J. N. Reddy, "Fracture modeling of plain concrete using nonlocal fracture mechanics and a graph-based computational framework," *Proceedings of the Royal Society A*, Vol. 477, No. 2252, 2021.
749. Wooram Kim and J. N. Reddy, "A novel family of two-stage implicit time integration schemes for structural dynamics," *International Journal of Computational Methods,* Vol. 18, No. 8, Article 2150021, 2021.
750. Sevan Goenezen, Maulik C. Kotecha, J. N. Reddy, "Identification of the 3D crystallographic orientation using 2D deformations," *The Journal of Strain Analysis for Engineering Design,* pp. 1-14, 2021.
751. Christopher J. Yassopoulos, Carl Leake, J. N. Reddy, and Daniele Mortari, "Analysis of Timoshenko–Ehrenfest beam problems using the Theory of Functional Connections," *Engineering Analysis with Boundary Elements*, Vol. 132, pp. 271-280, 2021.
752. Sanhita Das, Shubham Sharma, Ananth Ramaswamy, Debasish Roy, and J. N. Reddy, "A geometrically inspired model for brittle damage in compressible elastomers," *ASME Journal of Applied Mechanics*, Vol. 88, article 081002 (12 pages), 2021.
753. Isaac Elishakoff, Jonathan Padilla, Youkendy Mera, and J. N. Reddy, "Seventh-order polynomial constituting the exact buckling mode of a functionally graded column," *AIAA Journal*, Vol. 59, No. 11, pp. 4318-4325, 2021.
754. Marco Amato, Isaac Elishakoff, and J. N. Reddy, "Flutter of a multi-component beam in a supersonic flow," *AIAA Journal*, Vol. 59, No. 11, pp. 4342-4353, 2021.
755. Eugenio Ruocco and J. N. Reddy, "A discrete differential geometry-based approach to buckling and vibration analyses of inhomogeneous Reddy plates," *Applied Mathematical Modelling*, Vol. 100, pp. 342-364, 2021.
756. Hulun Guo, Xu Ouyang, Tianzhi Yang, Krzysztof Kamil Zur, and J. N. Reddy, "On the dynamics of rotating cracked functionally graded blades reinforced with graphene nanoplatelets," *Engineering Structures*, Vol. 249, Article Number 113286, 2021.
757. Marco Amabili and J. N. Reddy, "Nonlinear mechanics of sandwich plates: layerwise third-order thickness and shear deformation theory," *Composite Structures*, Vol. 278, Article Number 114693, 2021.
758. Praneeth Nampally, Eugenio Ruocco, and J. N. Reddy, "Bending analysis of functionally graded rectangular plates using the dual mesh control domain method," *Computational Methods in Engineering Science and Mechanics*, Vol. 22, No. 5, pp. 425-437, 2021.
759. J. N. Reddy, Eugenio Rocco, Jose A. Loya, and Ana M.A. Neves, "Theories and analyses of functionally graded circular plates," *Composites Part C: Open Access,* Vol. 5, Article 100166, 2021.
760. Isaac Elishakoff, Jonathan Padilla, Youkendy Mera, and J. N. Reddy, "Seventh order polynomial constituting the exact buckling mode of a functionally graded column," *AIAA Journal*, Vol. 59, No. 11, November 2021.
761. Kurt Soncco, Karl Nils Betancourt, Roman Arciniega, and JN Reddy, "Postbuckling analysis of nonlocal functionally graded beams," *Latin American Journal of Solids and Structures*, Vol. 18 (07), 2021.
762. Christopher J. Yassopoulos, Carl Leake, J. N. Reddy, and Daniele Mortari, "Analysis of Timoshenko-Ehrenfest beam problems using the Theory of Functional Connections," *Engineering Analysis with Boundary Elements*, Vol. 132, pp. 271-280, 2021.
763. D. Pranavi, A. Rajagopal and J. N. Reddy, "Interaction between interfacial damage and crack propagation in quasi-brittle materials," *Mechanics of Advanced Materials and Structures,* Vo. 29, N0. 22, pp. 3187-3208, 2021.
764. Mohsen Nowruzpour, J. N. Reddy, and Majid Akbarzadeh Khorshidi, "Tridynamic model of the beam with transverse shear deformation," *Computer Methods in Applied Mechanics and Engineering*, Vol. 388, Article Number 114257, 2022.
765. S. Ali Faghidian, Krzysztof Kamil Zur, and J. N. Reddy, "A mixed variational framework for higher-order unified gradient elasticity," *International Journal of Engineering Science*, Vol. 170, Article Number 103603, 2022.
766. S. Ali Faghidian, Krzysztof Kamil Zur, J. N. Reddy, and A.J.M. Ferreira, "On the wave dispersion in functionally graded porous Timoshenko-Ehrenfest nanobeams based on the higher-order nonlocal gradient elasticity," *Composite Structures*, Vol. 279, Article Number 114819, 2022.

767. D.K. Korupolu, P.R. Budarapu, V.R. Vusa, M.K. Pandit, and J. N. Reddy, "Impact analysis of hierarchical honeycomb core sandwich structures," *Composite Structures*, Vol. 280, Article Number 114827, 2022.
768. Zhujiang Wang, Arun Srinivasa, J. N. Reddy, and Adam Dubrowski, "Topology optimization of lightweight structures with application to bone scaffolds and 3D printed shoes for diabetics," *Journal of Applied Mechanics*, Vol. 89, No. 4, 10 pages, April 2022.
769. Isaac Elishakoff, Yuchen Li, Noel Challemel, and J. N. Reddy, "Simplified Timoshenko-Ehrenfest beam equation to analyze metamaterials," *Journal of Applied Physics*, Vol. 131, No. 10, 2022, article 104902,
770. A. R. Srinivasa, J. N. Reddy, and Nam Phan, "A Discrete Nonlocal Damage Mechanics Approach," *Mechanics of Advanced Materials and Structures*, Vol. 29, No. 13, pp. 1813-1820, 2022.
771. H. Y. Shin, P. Thamburaja, A. Srinivasa, and J. N. Reddy, "On simulating impact in high strength concrete using GraFEA," *Extreme Mechanics Letters*, Vol. 52, article 101618, 2022.
772. Jiabin Sun, Zhenhuan Zhou, Xueqing Cao, Qifeng Zhang, Wei Sun, Zhenzhen Tong, Xinsheng Xu, C.W. Lim, and J. N. Reddy, "Pattern transformation induced waisted post-buckling of perforated cylindrical shells," *Journal of the Mechanics and Physics of Solids*, Vol. 164, article 104915, 2022.
773. E. Ruocco and J. N. Reddy, "A new nonlinear 5-parameter beam model accounting for the Poisson effect," *International Journal of Non-Linear Mechanics*, Vol. 142, article 103996, 2022.
774. Matthew Fisseler, A.R. Srinivasa, and J. N. Reddy, "A combined principal component analysis and energy minimization-based approach to model deformation of web core beams," *Acta Mechanica*, Vol. 233, pp. 921–942, 2022.
775. Rogers JA, Bass N, Mead P, Mote A, Lukasik G, Intardonato M, Harrison H, Leaverton JD, Kota KR, Wilkerson J, Reddy JN, Kulatilaka W, Lacy Jr TE, "The Texas A&M University Hypervelocity Impact Laboratory: A Modern Aeroballistic Range Facility," *Review of Scientific Instruments,* Vol. 93(8), article 085106, 2022.
776. Marzia Sara Vaccaro, Raffaele Barretta, Francesco Marotti de Sciarra, and J. N. Reddy, "Nonlocal integral elasticity for third-order small-scale beams," Acta Mechanica, Vol. 233, pp. 2393-2403, 2022.
777. Kemal Arslan, Recep Güneş, M. Kemal Apalak, and J. N. Reddy, "Evaluation of geometrically nonlinear and elastoplastic behavior of functionally graded plates under mechanical loading-unloading," *Mechanics of Advanced Materials and Structures*, Vol. 29, No. 11, pp. 1587-1600, 2022.
778. C. Gomez, A. Guardia, J. L. Mantari, A. Coronado, and J. N. Reddy, "A modified approach to the MSE paradigm powered by AI algorithms from a review focus on polymer matrix composites," *Mechanics of Advanced Materials and Structures*, Vol. 29, No. 21, pp. 3076-3096, 2022.
779. Bensingh Dhas, Jamun Kumar N., Debasish Roy, and J. N. Reddy, "A mixed variational principle in nonlinear elasticity using Cartan's moving frame and implementation with finite element exterior calculus," *Computer Methods in Applied Mechanics and Engineering,* Vol. 393, article 114756, 2022.
780. Z. Wang, A.R. Srinivasa, J. N. Reddy, and Adam Dubrowski, "PIMesh: An automatic point cloud and unstructured mesh generation algorithm for meshless methods and finite element analysis," *International Journal for Numerical Methods in Biomedical Engineering*, Vol. 38, No. 8, e3615, August 2022.
781. H.Y. Shin, C. Lawrence, K.R. Kota, P. Thamburaja, A. Srinivasa, T.E. Lacy Jr., and J. N. Reddy, "Experimental, theoretical and numerical studies on plain concrete fracture in the low-strain rate regime-a state-of-the-art review," *Mechanics of Advanced Materials and Structures*, Vol. 29, No. 28, 7115-7159, 2022.
782. Jamun Kumar N, Bensingh Dhas, Arun R Srinivasa, J N Reddy, and Debasish Roy, "A novel four-field mixed FE approximation for Kirchhoff rods using Cartan's moving frames," *Computer Methods in Applied Mechanics and Engineering,* Vol. 402, article 115094, 2022.
783. Surya Shekar K. Reddy, Rajagopal Amirtham, and J. N. Reddy, "Modeling fracture in brittle materials with inertia effects using the phase field method," *Mechanics of Advanced Materials and Structures*, Vol. 30, No. 1, pp. 144-159, 2023.
784. Christopher J. Yassopoulos, J. N. Reddy, and Daniele Mortari, "Analysis of Nonlinear Timoshenko–Ehrenfest Beam Problems with von Kármán Nonlinearity using the Theory of Functional Connections," *Mathematics and Computers in Simulation,* Vol 205, pp. 709-744, March 2023.
785. H. Y. Shin, Prakash Thamburaja, Arun Srinivasa, and J. N. Reddy, "Modeling impact fracture in a quasi-brittle solid using a three-dimensional non-local graph-based finite element analysis: theory, finite element simulations and experimental verification," *Journal of the Mechanics and Physics of Solids*, 170, p.105097, 2023.

786. Reza Alebrahim, Prakash Thamburaja, Arun Srinivasa, and J. N. Reddy, "A robust Moore-Penrose pseudoinverse-based static finite-element solver for simulating non-local fracture in solids," *Computer Methods in Applied Mechanics and Engineering*, Vol. 403, article 115727, 2023.
787. Isaac Elishakoff, Chotpong Chotpatthamanon, and J. N. Reddy, "Buckling of a column made of the functionally graded material with high-order polynomial mode shape," *Mathematics and Mechanics of Solids*, Vol. 38, No. 8, pp. 1745-1759, 2023.
788. S. Kumar, M.A. Khan, Brian L. Wardle, and J. N. Reddy, "Pullout characteristics of functionally graded and degraded adhesive anchors," *European Journal of Mechanics / A Solids*, Vol. 99, article 104950, 2023.
789. E. Ruocco and J. N. Reddy, "Analytical solutions of Reddy, Timoshenko and Bernoulli beam models: a comparative analysis," *European Journal of Mechanics: A/Solids*, Vol. 99, article 104953, 2023.
790. E. Ruocco and J. N. Reddy, "A closed-form solution for accurate stress analysis of functionally graded Reddy beams," *Composite Structures*, Vol. 307, 116676, 1 March 2023.
791. Mukul Saxena, Saikat Sarkar, and J. N. Reddy, "Modelling architected beam using a non-local derivative-free shear deformable beam theory," *Acta Mechanica*, Vol. 234, pp. 3979-4000, 2023.
792. M. M. Shahzamanian, R. Banerjee, Narendra B. Dahotre, Arun R. Srinivasa, and J. N. Reddy, "Analysis of stress shielding reduction in bone fracture fixation implants using functionally graded materials," *Composite Structures*, Vol. 321, article 117262, 2023.
793. M. Kemal Apalak and J. N. Reddy, "Thermal stress formation in a functionally graded Al_2O_3-adhesive single lap joint subjected to a uniform temperature field," *Mathematical and Computational Applications* (special issue titled "Mathematical and Computational Approaches in Applied Mechanics: A Themed Issue Dedicated to Professor J. N. Reddy"), Vol. 28, No. 4, 2023, 82. DOI:10.3390/mca28040082.
794. Mevlut Hakan, Recep Gunes, M. Kemal Apalak, and J. N. Reddy, "Normal and oblique ballistic impact damage behaviour of functionally graded plates: Experimental and numerical," *International Journal of Impact Engineering*, Vol. 181, article number 104756, 2023.
795. Z. Jiao, T. Heblekar, G. Wang, R. Xu, W. Chen, and J. N. Reddy, "Analysis of Plane Elasticity Problems using the Dual Mesh Control Domain Method," *Computer Methods in Applied Mechanics and Engineering*, Vol. 416, article 116342, 2023.
796. Mukul Saxena, Saikat Sarkar, and J. N. Reddy, "Modelling architected plate using a non-local derivative-free shear deformable plate theory," *Mechanica*, Vol. 58, pp. 1671-1692, 2023.
797. H.Y. Shin, P. Thamburaja, A.R. Srinivasa, and J.N. Reddy, "Modeling impact fracture in a quasi-brittle solids using a 3D nonlocal graph-based finite element analysis: Theory, finite element simulations, and experimental verification," *Journal of the Mechanics and Physics of Solids*, Vol. 170, article number 105097, 2023.
798. Dominic Jarecki, Bensingh Dhas, Arun Srinivasa, and J. N. Reddy, "A small-deformation rate-independent continuous-flow model for elasto-plastic frames allowing rapid fatigue predictions in metallic structures," *International Journal of Structural Stability and Dynamics* (special issue on Structural Engineering dedicated to the 70th Birthday of Professor Y.B. Yang) Vol. 23, No. 16n18, 2340039, 2023.
799. D. Pranavi, A. Rajagopal, and J. N. Reddy, "Phase field modeling of anisotropic fracture," *Continuum Mechanics and Thermodynamics*, Vol. 36, pp. 1267—1282, 2024.
800. Z. Jiao, G. Wang, R. Xu, W. Chen, and J. N. Reddy, "Free vibration and buckling analysis of functionally graded beams using the DMCDM," *Composite Structures*, Vol. 332, 15 March 2024, 117905.
801. D. Pranavi, A. Rajagopal, and J. N. Reddy, "A note on the applicability of Eringen's nonlocal model to functionally graded materials," *Mechanics of Advanced Materials and Structures,* Vol. 31, No. 10, pp. 2091-2093, 2024 (DOI: 10.1080/15376494.2022.2150340).
802. C. Lawrence, P. Thamburaja, A. Srinivasa, T.E. Lacy Jr., and J. N. Reddy, "Determination of microcrack free surface area creation and failure in quasi-brittle solids using 2D GraFEA simulations," *Mechanics of Materials*, Vol. 191, April 2024, 104946.
803. Raghu Pisca, Sami El-Borgi, Muhammad Nafees, Amirtham Rajagopal, and J. N. Reddy, "A thermodynamically consistent phase field model for brittle fracture in graded coatings under thermo-mechanical loading," *Theoretical and Applied Fracture Mechanics,* Vol. 131, June 2024, 104414.
804. S. Mrunmayee, A. Rajagopal, Rakesh Kumar, Basant Kumar, and J. N. Reddy, "Phase field approach, delamination migration, mixed mode fracture, composite laminates, finite element analysis, diffused crack," *Composite Structures*, Volume 337, 1 June 2024, 118074.

805. Tanmaye Heblekar, J. N. Reddy, and Arun Srinivasa, "Analysis of nonlinear problems using the dual mesh control domain method with arbitrary meshes," *Computer Methods in Applied Mechanics and Engineering*, Vol. 427, 1 July 2024, 117044.
806. Jamun Kumar N., J. N. Reddy, Arun R. Srinivasa, and Debasish Roy, "A new mixed variational approach for Kirchhoff shells and discretization with finite element exterior calculus," *Computer Methods in Applied Mechanics and Engineering*, Vol. 432, Part A, 1 December 2024, 117351.
807. Z. Jiang, Tanmaye Heblekar, Guannan Wang, Rongqiang Xu, and J. N. Reddy, "Static, free vibration and buckling analysis of functionally graded plates using the dual mesh control domain method," *Computers and Structures*, Vol. 305, Dec 2024 DOI10.1016/j.compstruc.2024.107575.
808. Mehmet Alp Dogmaz, Ibrahim Şafak, Sibel Gunes, and J. N. Reddy, "An investigation of the thermal performance of functionally graded annular fins on a horizontal cylinder under natural convection," *Experimental Heat Transfer,* appeared online, Sep 2024, //doi.org/10.1080/08916152.2024.2396337.
809. M. A. C. Rodrigues, L. F. Martha, J. N. Reddy, and E. Ruocco, "An Improved Formulation and Analysis of Reddy Beam Model for Framed Structures," *The Latin American Journal of Solids and Structures*, Vol. 21, No. 5, 2024 (appeared online).
810. Nöel Challamel, Sami El Borgi, Mohamed Trabelssi, and J. N. Reddy, "Free vibration response of micromorphic Timoshenko beams," *Journal of Sound and Vibration*, Vol. 591, November 2024, DOI10.1016/j.jsv.2024.118602.
811. Zishun Liu, et al., "A three-field coupled numerical framework for transient deformation of thermo-sensitive hydrogel," *International Journal for Numerical Methods in Engineering*, Vol. 125, No. 18, Sept 2024, DOI10.1002/nme.7550.
812. Areias, P., Srinivasa, A. R., Moleiro, F., and Reddy, J. N., "Finite strain analysis with the dual mesh control domain method," Vol. 126, No. 1, 2025 (DOI10.1002/nme.7654).
813. Nöel Challamel, Sami El Borgi, Mohamed Trabelssi, and J. N. Reddy, "Bending of micromorphic Timoshenko columns," *European Journal of Mechanics - A/Solids*, Vol. 111, May–June 2025, 105537.
814. Nöel Challamel, C. M. Wang C.M., J. N. Reddy, and S. A. Faghidian, "Equivalence between micromorphic, nonlocal gradient and two-phase nonlocal beam theories," *Acta Mechanica*, accepted for publication, 2024.
815. Abdullah Müsevitoğlu, Atilla Özütok, and J. N. Reddy, "Static Analysis of Functionally Graded and Laminated Composite Beams using Various Higher-Order Shear Deformation Theories: A Study with Mixed Finite Element Models," *European Journal of Mechanics/Solids,* Vol. 111, article 105596, 2025.
816. Abdullah Müsevitoğlu, Atilla Özütok, and J. N. Reddy, "Static Analysis of FGM Plates using a General Higher-Order Shear Deformation Theory," *Composite Structures,* accepted for publication.
817. Tanmaye Y. Heblekar and J. N. Reddy, "An Improved Dual Mesh Control Domain Formulation for the Unsteady Flow of Viscous Incompressible Fluids," *Physics of Fluids*, accepted for publication.

Manuscripts in Review

818. Sachin Venezuelan, Arun R. Srinivasa, Prakash Thamburaja, and J. N. Reddy, "Modeling of fracture in plates using a Graph-Based Finite Element Analysis (GraFEA), *Journal of the Mechanics and Physics of Solids*, in review.
819. R. Alebrahim, P. Thamburaja, A. Srinivasa, and J.N. Reddy, "A pseudoinverse-based three-dimensional finite-element solver constructed using LU decomposition for fracture simulations," *Finite Elements in Analysis and Design*, in review.
820. Suhas A. Kowshik, Andrew Fisseler, Arun Srinivasa, and J. N. Reddy, "A Physics Informed Gaussian Process Models for Real-time Simulation of Tire Terrain Interactions for off- road conditions," *Journal of Terramechanics*, in review.
821. S. El-Borgi, M. Trabelssi, N. Challamel, and J.N. Reddy, "Static bending of micromorphic Timoshenko beams," in review.
822. Alekhya Banki, Arun R. Srinivasa, and J.N. Reddy, "On brittle fracture analysis of architected materials using a structural-level frame model," in review.
823. Vardhil Mehta, Arun R. Srinivasa, and J.N. Reddy, "Variational asymptotic approach to developing homogenized micropolar models for architected materials," in review.

POST-DOCTORAL FELLOWS AND GRADUATE STUDENTS

POST-DOCTORAL FELLOWS and VISTING RESEARCHERS ADVISED

1. Elio Socco, Visiting Researcher, University of Rome II, Rome, Italy (1985,1988).
2. Fraternali, Visiting Researcher, University of Salermo, Salermo, Italy (1987).
3. Marco Savoia, Vising Researcher, University of Bologna,Bologna, Italy (1990, 1993).
4. Anil Tayal, Visiting Professor, University of Delhi, New Delhi, India (1990).
5. G.S. Reddy, Post-Doctoral Reseacher, National Defense Metallurgical Laboratory, Hyderabad, India (1990).
6. K. Krishna Kumar, Visiting Professor, Indian Institute of Technology, Madras (February-December, 1994).
7. A.F. Palmerio, Visiting Professor, Brazilian Air Force, Brazil (Spring 1994).
8. Emilio Larrodè, Visiting Professor, University of Zaragoza, Zaragoza, Spain (Spring 1997).
9. Kohji Suzuki, Visiting Researcher, Department of Engineering, University of Tokto, Tokyo, Japan (June 1998-May 1999).
10. Joaquim Barbosa, Visiting Professor, Instituto de Engenharia Mecânica (Institute of Mechanical Engineering) Technical University of Lisbon, Lisbon, PORTUGAL (Spring 1999).
11. Zhen-Qiang Cheng, Post-Doctoral Fellow, University of Science and Technology of China, China (March 1999- March 2004).
12. Siddhartha Mukherjee, Post-Doctoral Fellow, Indian Institute of Technology, Madras, India (June 1999-August 2001).
13. Eugènio S. Garcão, Visiting Research Student, Instituto de Engenharia Mecânica (Institute of Mechanical Engineering) Technical University of Lisbon, Lisbon, PORTUGAL (January - July 2000).
14. Filipa Moleiro, Visiting Research Student, Instituto de Engenharia Mecânica (Institute of Mechanical Engineering) Technical University of Lisbon, Lisbon, PORTUGAL (January - July 2000).
15. Elio Sacco, Visiting Professor, Department of Mechanics, Structures and Environment, University of Cassino, Cassino, Italy (July-August 2001).
16. Manas Chandra Ray, Visiting Professor, Department of Mechanical Engineering, Indian Institute of Technology, Kharagpur, INDIA (May - July 2002 and Sept. 2003-May 2004).
17. Juan P. Pontaza, Post-Doctoral Fellow, Department of Mechanical Engineering, Texas A&M University (January 2003-2006).
18. Roman A. Arciniega, Post-Doctoral Fellow, Department of Mechanical Engineering, Texas A&M University (January 2005-2006).
19. Recep Günes, Visiting Professor, Department of Mechanical Engineering, Erciyes University, Kayseri Turkey (Sep 2007-Aug 2008).
20. G. Venkateshwara Rao, Visiting Professor, School of Mechanical Engineering, Sreenidhi Institute of Science & Technology, Hyderabad, India (March – May 2009).
21. Vinu U. Unnikrishnan, Post-Doctoral Fellow, Department of Mechanical Engineering, Texas A&M University (August 2007-2012).
22. Henrique Santos, Visiting Research Student, Instituto de Engenharia Mecânica (Institute of Mechanical Engineering) Technical University of Lisbon, Lisbon, PORTUGAL (January - July 2005).
23. Ginu U. Unnikrishnan, Post-Doctoral Fellow, Department of Mechanical Engineering, Texas A&M University (May 2008-2010).
24. Roman Arciniega, Post-Doctoral Fellow, Department of Mechanical Engineering, Texas A&M University (August 2008-2009).
25. Jose Viriato Santo, Visiting Researcher, Technical University of Lisbon, Portugal (Mar-Aug 2009).
26. Yiping Liu, Department of Mechanics, South China University of Technology, Guanzhou, China (Sep. 2008-August 2010).
27. Anirudh Shukla, Visiting Research Student, Department of Aerospace Engineering, Technical University of Delft, The Netherlands (Sep-Dec 2011).
28. Jianfeng Wen, Visiting Researcher, School of Mechanical and Power Engineering, East China University of Science and Technology (ECUST), Shanghai, China (September 1, 2011 to August 31, 2012.
29. Manas Chandra Ray, Vsiting Professor, Department of Mechanical Engineering, Indian Institute of Technology, Kharagpur, India (July-Aug, 2012).

30. Recep Ekici, Visiting Professor, Department of Mechanical Engineering, Erciyes University, Kayseri, Turkey (Sep 2012-May 2013).
31. Mustafa Yildirim, Visiting Professor, Department of Mechanical Engineering, Erciyes University, Kayseri, Turkey (Oct 2012-May 2013).
32. Ginu U. Unnikrishnan, Post-Doctoral Fellow, Department of Mechanical Engineering, Boston University (Jan-August 2013).
33. Bozkurt Burak Özhan, Visiting Professor, Department of Mechanical Engineering, Celal Bayar University, Manisa, Turkey 45140 (Jul 2013-Oct 2013).
34. Gultekin Sinir, Visiting Professor, Department of Civil Engineering, Celal Bayar University, Manisa, Turkey 45143 (12 Aug 2013- 11 Aug 2014).
35. Jani Romanoff, Visiting Professor, Department of Solid Mechanics, Aalto University, P.O. Box 15300, 00076 Aalto, Finland (Sep 2013-Dec 2013).
36. Kari Santaoja, Visiting Professor, Department of Applied Mechanics, Aalto University, P.O. Box 14300 FI-00076, Finland (2 Jan – 15 Feb., 2015).
37. Saikat Sarkar, Post-Doctoral Fellow, Department of Civil Engineering, Indian Institute of Science, Bangalore, India (15 April 2015 – 14 Mar 2017).
38. Bozkurt Burak Özhan, Visiting Professor, Department of Mechanical Engineering, Celal Bayar University, Manisa, Turkey 45140 (June 2015-June 2016).
39. Jani Romanoff, Visiting Professor, Department of Solid Mechanics, Aalto University, P.O. Box 15300, 00076 Aalto, Finland (Sep 2015-Oct 2015).
40. Bruno Reinaldo Goncalves, Visiting Research Student, Department of Applied Mechanics, Aalto University, Aalto Finland (Sep-Oct, 2015)
41. Anssi Karttunen, Visiting Research Student, Department of Solid Mechanics, Aalto University, P.O. Box 15300, 00076 Aalto, Finland (Jan 2016-July 2016).
42. Bruno Reinaldo Goncalves, Visiting Research Student, Department of Applied Mechanics, Aalto University, Aalto Finland (Jun-July, 2016)
43. Michele Bacciocchi, Visiting Researcher, School of Engineering and Architecture, University of Bologna, 40136 Bologna, Italy (1 Sep 2016-28 Feb 2017).
44. Huijuan Guo, Visiting Researcher, Department of Engineering Mechanics in Tsinghua University, Beijing, China (1 Oct. 2016-30 Sep. 2017).
45. Andreas Echtermeyer, Visiting Professor, Department of Mechanical and Industrial Engineering, Norwegian University of Science and Technology, Trondheim, Norway, Aug. 2016-Sept. 2017.
46. Anssi Karttunen, Post-Doctoral Fellow, Department of Solid Mechanics, Aalto University, P.O. Box 15300, 00076 Aalto, Finland (Sept 2017-Aug 2019).
47. Zhujiang (Jason) Wang, Post-Doctoral Fellow, Texas A&M University, College Station (Sept. 2016-Aug. 2018).
48. Archana Arbind, Post-Doctoral Fellow, Texas A&M University, College Station (Sept. 2017-Aug. 2020).
49. Abhay Bambole, Visiting Professor, Department of Structural Engineering, Veermata Jijabai Technological Institute (VJTI), Matunga, Mumbai, India (Nov. 2017-Jan. 2018).
50. Shubhankar Roy Chaudhuri, Post-doctoral Fellow, Department of Civil Engineering, Indian Institute of Science, Bangalore, India (Aug. 2018-Aug. 2019).
51. Shigang Ai, Visiting Researcher, Department of Engineering Mechanics, School of Civil Engineering, Beijing Jiaotong University, Beijing, China (Nov. 2018-Oct. 2019).
52. Hong Zhang, Visiting Researcher, School of Civil Engineering and Transportation, South China University of Technology (SCUT), Guangzhou, China (Jan. 2019-Jan 2020).
53. Cristian Gómez Lázaro, Visiting Research Student, Mechanical Engineering, Universidad Nacional de Ingeniería, Lima, Perú, Information Technologies and Communications Center (CTIC), 1-31 August 2019.
54. Prakash Thamburaja, Visiting Professor, UKM (Universiti Kebangsaan Malaysia), Bangi 43600, Malaysia, 1 Sept. 2019-Aug. 31, 2021.
55. Praneeth Nampally, Post-Doctoral Fellow, Texas A&M University, College Station (Sept. -Nov. 2020).
56. Bensingh Dhas Pancras, post-doctoral fellow, Department of Civil Engineering, Indian Institute of Science, Bangalore, India, 2021-2022.
57. Mehdi Mehdi Shahzamanian, Post-doctoral Fellow, Center for Agile and Adaptive Additive Manufacturing, University of North Texas, Denton, Texas, 2022-2023.

58. Mancini Federica, Visiting Research Student, Department of Solid Mechanics, Aalto University, Finland, Feb-May 2023.
59. Jamun Kumar N, Visiting Research Student, Department of Civil Engineering, Indian Institute of Science, Bangalore, India, March-August 2023.
60. Prakash Thamburaja, Visiting Professor, UKM (Universiti Kebangsaan Malaysia), Bangi 43600, Malaysia, 1 Sept. - 30 Oct. 2023.
61. Mehdi M. Shahzamanian, post-doctoral researcher, University of North Texasa/Texas A&M University, College Station (June 2023-Aug. 2024).
62. Pratyush Kumar, post-doctoral researcher, University of North Texasa/Texas A&M University, College Station (August 2024-Aug. 2025).
63. Mustafa Kemal Apalak, Visiting Professor, Department of Mechanical Engineering, Erciyes University, Kayseri, Turkey (Oct 2024-May 2025).

DOCTORAL STUDENTS ADVISED (an asterisk indicates that the person is employed by an academic institution)

1. Robert Belie, "Fracture Prediction in Plane Elasto-Plastic Problems by the Finite Element Method," School of Aerospace, Mechanical, and Nuclear Engineering, University of Oklahoma, Norman, OK, 1978.
2. John D. Warburton, "The Use of the Finite Element Method in Meteorological Modeling,"(co-advised by S. Sasaki) Department of Meterology, University of Oklahoma, Norman, OK, 1979.
3. Akio Satake, "Numerical Analysis of Certain Constrained Optimization Problems in Nonlinear Mechanics," (co-advised by S. Sasaki) School of Aerospace, Mechanical and Nuclear Engineering, University of Oklahoma, Norman, OK, 1980.
4. Wei-Chang Chao, "Geometrically Nonlinear Analysis of Layered Composite Plates and Shells," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1983.
5. N.S. Putcha, "A Mixed Shear Flexible Finite Element for Geometrically Nonlinear Analysis of Laminated Plates," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, l984.
6. **K. Chandrashekhara***, "Geometric and Material Nonlinear Analysis of Laminated Composite Plates and Shells," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1985.
7. **C.F. Liu***, "Geometrically Nonlinear Analysis of Composite Laminates Using a Refined Shear Deformation Shell Theory," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, 1985.
8. **Paul R. Heyliger***, "A Mixed Computational Algorithm Based on Updated Lagrangian Formulation for Plane Elastic Contact Problems," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, June 1986.
9. **Ahmed A. Khdeir***, "Analytical Solutions for the Statics and Dynamics of Rectangular Laminated Composite Plates Using Shear Deformation Theories," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, October 1986.
10. David Rourk, "Geometric and Material Nonlinear Effects in Elastic-Plastic and Failure Analyses of Anisotropic Laminated Structures," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, December, 1986.
11. **C.L. Liao***, "An Incremental Total Lagrangian Formulation for General Shell-Type Structures," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, June 1987.
12. Ajay K. Pandey, "A Nonlinear Computational Model for the Strength and Failure of Composite Plates and Shells," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, June 1987.
13. **Samit Roy***, "A Finite Element Analysis of Adhesively Bonded Joints Including Geometric Nonlinearity, Non-Linear Viscoelasticity, Moisture Diffusion and Failure," Department of Engineering

Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, November 1987.

14. **Ariovaldo F. Palmerio***, "On a Moderate Rotation Theory for Anisotropic Shells," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, September 1988.
15. Robert T. Arenburg, "Analysis of Metal Matrix Composite Structures Using a Micromechanical Constitutive Theory," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, Virginia, December 1988.
16. Pey M. Wung, "Large Deformation Analysis of Laminated Composite Structures by a Continuum-Based Shell Element with Transverse Deformation," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, June 1989.
17. **Ever J. Barbero***, "On a Generalized Laminate Theory with Application to Bending, Vibration, and Delamination Buckling in Composite Laminates," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, September 1989.
18. **Ashgar Nosier***, "A Study of Damped and Undamped Vibration and Stability Problems of Laminated Plates and Shells According to Various Shear Deformation Theories," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, Dec. 1990.
19. Mahendar P. Reddy, "Numerical Simulation of Three-Dimensional Casting, Extrusion, and Forming Processes," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, Dec. 1990.
20. Stephen P. Engelstad, "Nonlinear Probabilistic Finite Element Modelling of Composite Shells," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, Dec. 1990.
21. **Ronald C. Averill***, "Nonlinear Analysis of Laminated Composite Shells Using a Micromechanics-Based Progressive Damage Model," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, Blacksburg, VA, June 1992.
22. Y.S.N. Reddy, "Numerical Simulation of Damage and Progressive Failures in Composite Laminates Using the Layerwise Plate Theory," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, August 1992.
23. **S.K. Kassegne***, "Layerwise Theory for Discretely Stiffened Laminated Cylindrical Shells," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, December 1992.
24. Ching Yi Tsai, "Modeling of Chemical Vapor Infiltration Process," (co-advisor with S. Desu), Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, June 1993.
25. **Robert M. Fithen***, "Adaptive Finite Element Simulation of Incompressible Viscous Flow," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, August 1993.
26. Donald H. Robbins, Jr., "Hierarchical Modeling of Laminated Composite Plates Using Variable Kinematic Finite Elements and Mesh Superposition," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, November 1993.
27. **F. T. Kokkinos***, "Three-Dimensional Layerwise Modeling of Layered Media with Boundary Integral Equations," Department of Engineering Science and Mechanics, Virginia Polytechnic Institute and State University, December 1995.
28. C. M. Dakshina Moorthy, "Modeling Laminates Using a Layerwise Finite Element with Enhanced Strains for Interlaminar Stress Recovery and Delamination Characteristics," Department of Mechanical Engineering, Texas A&M University, April 1997.
29. John A. Mitchell, "A High Performance Iterative Solution Procedure for Solving Problems in Structural Mechanics Using the Finite Element Method," Department of Mechanical Engineering, Texas A&M University, May 1997.
30. Hussein Allaboun, "Growth and Coalescence of Bubbles During Late Stages of Polymer Foaming Processes," (co-advised with W. Flumerfelt) Department of Chemical Engineering, Texas A&M University, April 1998.
31. Govind Rengarajan, "On the Inelastic Behavior of Crystalline Solids," Department of Mechanical Engineering, Texas A&M University, September 1998.

32. Achuth Rao, "Study of Molecular Orientation and Phase Transition in Polymers During the Film Blowing Process," Department of Mechanical Engineering, Texas A&M University, September 1998.
33. Grama N. Praveen, "Modeling Inelasticity in Materials with Application to Superplasticity," Department of Mechanical Engineering, Texas A&M University, February 1999.
34. Philip Schembri, "A 3D Meshless Computational Procedure for Nonlinear Analysis of Structures," Department of Mechanical Engineering, Texas A&M University, September 2002.
35. Juan P. Pontaza, "Least-Squares Variational Principles and the Finite Element Method: Theory, Formulations, and Models for Solids and Fluid Mechanics" Department of Mechanical Engineering, Texas A&M University, December 2003.
36. Seung Joon Lee, "Nonlinear Analysis of Composite Laminated Plate and Shell Structures with Smart Material Laminae," Department of Civil Engineering, Texas A&M University, January 2004.
37. Ravisankar S. Mayavaram, "Modeling and Simulation of Film Blowing Process," Department of Mechanical Engineering, Texas A&M University, November 2004.
38. Goy Teck Lim, "Scratch Behavior of Polymers," Department of Mechanical Engineering, Texas A&M University, June 2005.
39. **Roman A. Arciniega*,** "On Tensor-Based Finite Elements Model for the Analysis of Shell Structures," Department of Mechanical Engineering, Texas A&M University, October 2005.
40. Ravi S. Karedla, "Modeling of Crack Tip High Inertia Zone in Dynamic Brittle Fracture," Department of Mechanical Engineering, Texas A&M University, May 2006.
41. Wilson Aliaga, "Analysis of Smart Functionally Graded Plates," Department of Mechanical Engineering, Texas A&M University, May 2006.
42. Vivek Prabhakar, "Least Squares Based Finite Element Formulations and Their Applications in Fluid Mechanics," Department of Mechanical Engineering, Texas A&M University, December 2006.
43. Yetzirah Urthaler, "On Simple and Accurate Finite Element Models for Nonlinear Bending Analysis of Beams and Plates," Department of Mechanical Engineering, Texas A&M University, December 2006.
44. **Vinu U. Unnikrishnan***, "Multiscale Analysis of Nanocomposite and Nanofibrous Structures," Department of Civil Engineering, Texas A&M University, August 2007.
45. Wook Jin Na, "Damage Analysis of Laminated Composite Beams under Bending Loads using the Layerwise Theory," Department of Mechanical Engineering, Texas A&M University, November 2007.
46. Ginu Unnikrishnan, "Computational Modelling of Biological Cells and Soft Tissues," Department of Mechanical Engineering, Texas A&M University, May 2008.
47. **James Steuber***, "A Model for Nonlinear Electrokinetics in Electric Field Guided Assembly of Colloids, " Department of Mechanical Engineering, Texas A&M University, October 2009.
48. Rakesh Ranjan, "*hp*-Spectral Element Methods in Structural Mechanics and Computational Fluid Dynamics," Department of Mechanical Engineering, Texas A&M University, November 2009.
49. Greg Payette, "Spectral/*hp* Finite Element Models for Fluids and Structures," Department of Mechanical Engineering, Texas A&M University, Spring 2012.
50. Pritha Ghosh, "Model Development and Simulation of the Response of Shape Memory Polymers," Department of Mechanical Engineering, Texas A&M University, College Station, August 2012 (co-advised with Arun Srinivasa).
51. Venkat V. Vallala, "Higher-Order Spectral/hp Finite Element Technology for Structures and Fluid Flows," Department of Mechanical Engineering, Texas A&M University, College Station, August 2013.
52. Feifei Cheng, "Multi-scale Computational Modeling of Multiphase Composites with Damage," Department of Mechanical Engineering, Texas A&M University, College Station, December 2013.
53. Ashwin Rao, "Structural Thermomechanical Models for Shape Memory Alloy (SMA) Components," Department of Mechanical Engineering, Texas A&M University, College Station, May 2014 (co-advised with Arun Srinivasa).
54. Ozgu Ozsoy, "Investigation of Interfaces under Mechanical and Thermal Loading Using a Cohesive Zone Model," Department of Mechanical Engineering, Texas A&M University, College Station, May 2014.
55. Arash Sabz, "Nondestructive Level III Damage Evaluation and System Identification in Structures Based on the Rate of Total Energy," Department of Civil Engineering, Texas A&M University, April 2015.
56. Helnaz Soltani, "Fluid-Structure Interaction with Application to Structural Vibration and Blood Flow in Arteries," Department of Mechanical Engineering, Texas A&M University, May 2015.

57. **Wooram Kim*,** "Improved Time Integration Algorithms for the Analysis of Structural Dynamics," Department of Mechanical Engineering, Texas A&M University, May 2016.
58. **Miguel Gutierrez Rivera***, "A Comparison Between 7- and 12-Parameter Shell Finite Elements for Large Deformation Analysis," Department of Mechanical Engineering, Texas A&M University, Dec 2016.
59. Michael Powell, "Internal Polar Continuum Theories for Solid and Fluent Continua," Department of Civil Engineering, Texas A&M University, Dec 2016.
60. **Nasra Al Maskari*,** "Bioinspired Material Design: Modeling and Optimization of Nacre-like Materials," Department of Mechanical Engineering, Texas A&M University, Dec 2016 (co-advised with Dan McAdams).
61. **Jinseok Kim***, ``A Non-local Third-order Theory of Functionally Graded Plates under Electromechanical Coupling Effect," Department of Mechanical Engineering, Texas A&M University, May 2017.
62. **Archana Arbind***, "Finite Element Analysis of Structures Using a General Higher-Order Plate and One-Dimensional Theories for Classical and Cosserat ContinuumHaving Constrained Microrotation," Mechanical Engineering, Texas A&M University, May 2017.
63. **Parisa Khodabakhshi***, "A Non-Local Approach for Damage Prediction in Structures" Civil Engineering, Texas A&M University, December 2019.
64. **Namhee Kim***, "Spectral/HP Least-Squares Finite Element Analysis Of Isothermal And Non-Isothermal Flows Of Generalized Newtonian Fluids," Mechanical Engineering, Texas A&M University, May 2019.
65. Seyed Mohsen Nowruzpour Mehrian, "A Discrete Lagrangian Based Direct Approach to Macroscopic Modelling," Mechanical Engineering, Texas A&M University, May 2020.
66. Shahla Zamani Mehrian, "Framework for Modeling Large Deformations and Stress Wave Mechanics in Soft Biological Tissue," Mechanical Engineering, Texas A&M University, Spring 2021 (co-advised with Alan Freed).
67. Praneeth Nampally, "Nonlinear Micropolar Beam and Plate Theories with Applications to Lattice Core Sandwich Structures and Dual Mesh Control Domain Method for Structural Elements," Mechanical Engineering, Texas A&M University, Spring 2021.
68. Matthew Martinez, "The Dual Mesh Control Domain Method for Linear and Nonlinear Convection–Diffusion Equations in Two Dimensions," Mechanical Engineering, Texas A&M University, Spring 2022.
69. Ho Yong Shin, "Impact analysis on heterogeneous material with three dimensional GraFEA Method," Mechanical Engineering, Texas A&M University, Spring 2022.
70. **Mutaz Ahmad Muhammad*,** "Biomechanical Models for Predicting Behavior and Stresses of Growing Tumors," (co-advised by Raffaella Righetti) Civil and Environmental Engineering, Texas A&M University, August 2023.
71. Dominic Jarecki, "Modeling of localized and structural fatigue damage under complex multiaxial loading," (co-advisor with Arun R. Srinivasa), Department of Mechnaical Engineering, August 2023.

DOCTORAL STUDENTS CO-ADVISED (informally) OUTSIDE THE USA

72. **J. Eugénio Semendo Garção***, "Modeling of Adaptive Structures" (co-advised with Drs. C. A. Mota Soares and C. M. Mota Soares), Universidade Técnica de Lisboa Instituto Superior Técnico (Technical University of Lisbon), October 2004.
73. Henrique Santos, "A Semi-Analytical Finite Element for Analysis of Shells of Revolution" (co-advised with Drs. C.A. Mota Soares and C.M. Mota Soares), Universidade Técnica de Lisboa Instituto Superior Técnico (Technical University of Lisbon), Portugal, October 2008.
74. **Filipa Andreia de Matos Moleiro***, "Mixed Least-Squares Finite Element Models for Analysis of Multilayered Composite Plates" (co-advised with Drs. C. A. Mota Soares and C. M. Mota Soares), Universidade Técnica de Lisboa Instituto Superior Técnico (Technical University of Lisbon), Portugal, February 2009.
75. **Ramin Aghababaei***, "Modeling Slip Gradients and Internal Stresses in Crystalline Microstructures with Distributed Defects," (co-advised with Shailendra Joshi), National University of Singapore, August 2012.

76. Abhilash Nair, "Discrete Micromechanics of Random Fibrous Architectures," (co-advised with Shailendra Joshi), National University of Singapore, December 2012.
77. Seyed Hamid Reza Mirkhani, "Crystal Plasticity Modeling and Simulation of Nanotwinned Metals" (co-advised with Shailendra Joshi), National University of Singapore, Spring 2013.
78. **Kiran Chandra Sahu***, "Active Control of Sound Transmission through Sandwich Panels" (co-advised with Dr. Tuhkuri Jukka), Aalto University, Aalto, Finland, to be completed in December 2015.

M.S. STUDENTS ADVISED

1. C. S. Tsay, "Bending, Stability, and Vibration of Thin Rectangular Plates by Stationary Finite Element Models" University of Oklahoma, Norman, OK, 1977.
2. V. D. Murty, "Solution of Integral Equations by the Finite Element Method," University of Oklahoma, Norman, OK, 1977.
3. R. Gera, "An Accurate Finite-Difference Analysis of Bending of Thin Rectangular Elastic Plates," University of Oklahoma, Norman, OK, 1977.
4. I. R. Singh, "Large Deflection and Large Amplitude Free Vibrations of Beams and Circular Plates by the Finite Element Method," University of Oklahoma, Norman, OK, 1978.
5. F. Irani, "Higher Order Conventional and Mixed Finite Elements Including Shear Deformation and Rotatory Inertia for Dynamic Analysis of Beams," University of Oklahoma, Norman, OK, 1978.
6. D. R. Mamidi, "A Penalty Finite-Element Model for the Numerical Solution of Free Convection Heat Transfer in Rectangular Enclosures," University of Oklahoma, Norman, OK, 1979.
7. Y. S. Hsu, "Thermal Stress Analysis of Composite Plates and Shells by the Finite Element Method," University of Oklahoma, Norman, OK, 1980.
8. C. L. Huang, "Large Deflection Bending and Vibrations of Thick Annular Plates with Variable Thickness," University of Oklahoma, Norman, OK, 1980.
9. W. C. Chao, "Finite-Element Analysis of Laminated Composite (Ordinary and Bimodular-Material) Plates," University of Oklahoma, Norman, OK, 1980.
10. J. D. Mook, "Large Deflection Transient Response of Layered Composite Plates," Virginia Polytechnic Institute and State University, Blacksburg, VA, 1982.
11. N. D. Phan, "Exact and Finite-Element Analysis of Laminated Plates Using a Higher-Order Theory," Virginia Polytechnic Institute and State University, Blacksburg, VA, l984.
12. V. A. Padhye, "A Penalty-Finite Element Model for Axisymmetric Flows of Viscoelastic Fluids," by Virginia Polytechnic Institute and State University, Blacksburg, VA, November 1986.
13. Q. Gu, "Nonlinear Analysis of Free-Edge Effects in Symmetric Laminates Under Axial Loading," Virginia Polytechnic Institute and State University, February 1987.
14. Ravinder Bhumbla, "A Study of Vibrations in Rotating Laminated Composite Plates Accounting for Shear Deformation and Rotary Inertia," Virginia Polytechnic Institute and State University, Blacksburg, VA, April 1989.
15. Didier Turlier, "Numerical Stress Intensity Factor Determination of Notched Laminated Specimens," (co-advised with Don H. Morris), Virginia Polytechnic Institute and State University, Blacksburg, VA, April 1989
16. Jayashree Moorthy, "Dynamic Stability of Composite Laminated Plates," Virginia Polytechnic Institute and State University, Blacksburg, VA, June 1989.
17. M. P. Reddy, "Finite Element Analysis of Coupled Heat Transfer and Fluid Flow of Non-Newtonian, Incompressible Fluids in Three-Dimensional Enclosures," Virginia Polytechnic Institute and State University, June 1989.
18. R. C. Averill, "On the Behavior of Shear Deformable Plate Elements," Virginia Polytechnic Institute and State University, August 1989.
19. John A. Mitchell, "The Effects of Embedded Piezoelectric Layers in Composite Cylinders and Applications," Virginia Polytechnic Institute and State University, July 1992.
20. "Stiffness Reduction and Stress Transfer in Composite Laminates with Transverse Matrix Cracks," by G. N. Praveen, Texas A&M University, September 1994.
21. P. Bose, "A Critical Evaluation of Various Higher-Order Plate Theories," Virginia Polytechnic Institute and State University, December 1995.

22. C.-D. Chin, "A Parametric Study of Thermomechanical Behavior of Functionally Gradient Materials," Texas A&M University, October 1996.
23. Sivasubramaniam Krishnan, "Vibration Suppression of Laminated Composite Plates Using Embedded Smart Material Layers," Texas A&M University, July 2000.
24. Nikhil C. Murgude, "Geometric Nonlinear Analysis of Microbeams Under Electrostatic Loading," Texas A&M University, December 2001.
25. Praveen Gupta, "Buckling and Vibration of Orthotropic Plates with an Internal Hinge," Texas A&M University, December 2001.
26. Raghavendra K. Shenoy, "Analysis of Three-Dimensional Frames Using Shear-Locking-Free Beam Elements Based on the Third-Order Shear Deformation Theory," Texas A&M University, December 2001.
27. Nauman M. Sheikh, "The Formulation and Computer Implementation of Element-Free Galerkin Method for Euler-Bernoulli Beam Theory," Texas A&M University, December 2001.
28. Rahul Joshi, "An Implementation of the Extended Finite Element Method (XFEM) for a Linear Elastic Domain with Fracture," (co-advised with T. Strouboulis), Texas A&M University, May 2004.
29. David Matthew McCutcheon, "Machine Augmented Composite Materials for Damping Purposes," (co-advised by Terry Creasy), Texas A&M University, December 2004.
30. Brent D. Pickle, "Evaluation of Stress in BMI-Carbon Fiber Laminate to Determine the Onset of Microcracking," (co-advised with Roger Morgan), December 2004.
31. Anmol Agrawal, "Hingeless Flow Control over an Airfoil via Distributed Actuation," (co-advised by Othon Rediniotis), Texas A&M University, August 2005.
32. Gregory P. Payette, "Mathematical Modeling of Evaporative Cooling of Moisture Bearing Epoxy Composite Plates," (co-advised with Roger Morgan), Texas A&M University, March 2006.
33. Ryan Petrus, "Dynamics Analysis of Fluid Conveying Pipes," Texas A&M University, May 2006.
34. Wooram Kim, "Unconventional Finite Element Models for Nonlinear Analysis of Beams and Plates," May 22, 2007.
35. Britt Pratt, "Least Squares Finite Element and Meshless Methods in Heat Transfer," Texas A&M University, March 2008.
36. Feifei Cheng, "A Study on Continuum-Based Computational Models of Living Cell," Texas A&M University, Oct. 2008.
37. Venkat Vallala, "Alternative Least-Squares Finite Element Models of Navier-Stokes Equations for Power-Law Fluids," Texas A&M University, May 2009.
38. Ameeta Raut, "Linear and Nonlinear Finite Element Analysis of Beams Using Least-Squares Finite Element Model," Texas A&M University, May 2009.
39. Nellie Rajarova, "An Assessment of Alternative Finite Element Models Problems in Heat Transfer and Fluid Mechanics," Texas A&M University, May 2009.
40. Dhatri Gaddamanugu, "Finite Element Modeling and Molecular Dynamic Simulation of Carbon Nanotubes/Polymer Composites," Texas A&M University, May 2009.
41. Jayavel Arumugam, "Ionic Polymer-Metal Composite Beams, Thermodynamical Modeling and Simulation,"(co-advised with Arun Srinivasa), Texas A&M University, August 2012.
42. Archana Arbind, "Nonlinear Analysis of Conventional and Microstructure Dependent Functionally Graded Beam under Thermo-Mechanical Loads," Texas A&M University, August 2012.
43. Sukanya Doshi, "Study of Thermo-mechanical Coupling in Functionally Graded Metal-Ceramic Composites," (co-advised with Anastasia Muliana), Texas A&M University, Dec 2012.
44. Patrick Mahaffey, "Bending, Vibration and Buckling Response of Modified Euler-Bernoulli and Timoshenko Beam Theories Accounting for the von Kármán Geometric Nonlinearity," Texas A&M University, August 2013.
45. Sandeep Pidaparti, "A Computational Study on the Leakage of Supercritical Carbon Dioxide Through Labyrinth Seals," (co-advised with Dr. Devesh Ranjan), Texas A&M University, Dec 2013.
46. Sravani Nuti, "Dynamic Simulations of Elastic Rods for Medical Applications," (co-advised with Dr. Annie Ruimi, TAMU-Q), Texas A&M University, Dec. 2014. Received the *2014-2015 Outstanding Engineering Master's Graduate Student Award* from College of Engineering at TAMU, November 2014.
47. Matthew Fisseler, "A combined principal component analysis and energy minimization based approach to model deformation of web core beams," (co-advised with Dr. Arun Srinivasa), Texas A&M University, Aug 2021.

48. Carson Lawrence, "Determination of microcrack surface area caused by fracture in quasi-brittle solids using GraFEA simulations," (co-advised with Dr. Thomas Lacy, Jr.), Texas A&M University, Aug 2023.
49. Christopher Yassopoulos, "Analysis of linear and nonlinear Timoshenko-Ehrenfest beams and linear first order shear deformation theory plates with the theory of functional connections," Texas A&M University, October 2023.
50. Andrew Fisseler, "An augmented machine learning approach for real-time terramechanics modeling," Mechanical Engineering, Texas A&M University, (co-advised with A.R. Srinivasa) fall 2024.

SPECIAL STUDENTS ADVISED

1. Steven Ulrick, Jr., "Finite Element Analysis Validation Techniques," (MS No-Thesis Option Project Report), Texas A&M University, College Station, April 1995.
2. Robert Pandorf, "Construction and Finite Element Analysis of Laminated Plate Structures," (Konstruktiver Entwurf), Texas A&M University, December 1995.
3. Payal Pawliwal, "Finite Element Analysis of Functionally Graded Beams Using the Third Order Shear Deformation Theory," (MS Non-Thesis Option Project Report), Texas A&M University, College Station, May 2004.
4. Ruchir Patwa, "Analysis of Single-Walled Carbon Nanotubes Using Structural Mechanics Approach," (MS Non-Thesis Option Project Report), Texas A&M University, College Station, May 2004.
5. Karthik Aruru, "Exact Solutions for Bucking of Timoshenko Columns" (MS Non-Thesis Option Project Report) Texas A&M University, College Station, October 2004.
6. Promit Chakroborty, "Non-Local (Eringen) Models of Timoshenko Beams," a project of an undergraduate intern from Indian Institute of Technology, Kanpur, May –July 2019.

GRADUATE STUDENTS CURRENTLY ADVISED
Dissertations in Progress (Titles are tentative):

1. Tanmaye Heblekar, "Dual mesh control domain method: applications to nonlinear strucrual mechanics," Mechanical Engineering, Texas A&M University, Spring 2026.
2. William Furr, TBD, Mechanical Engineering, Texas A&M University, Summer 2026.
3. Vardhil Mehta, "Generative design of architected materials," Mechanical Engineering, Texas A&M University, Fall 2025 (co-advised with A.R. Srinivasa).
4. Alekhya Banki, "Nonlocal modelling of cellular, web core, and architected materials and structures," Mechanical Engineering, Texas A&M University, Fall 2025 (co-advised with A.R. Srinivasa).
5. Sachin Velayudhan, "Nonlocal fracture model for heterogeneous materials," Mechanical Engineering, Texas A&M University, spring 2025 (co-advised with A.R. Srinivasa).
6. Suhas Adishesha Kowshik, "Dual mesh control domain analysis of plates and shells," Mechanical Engineering, Texas A&M University, spring 2026 (co-advised with A.R. Srinivasa).
7. Mehmet Alp Doğmaz, TBD, Mechanical Engineering, Texas A&M University, Spring 2026.
8. Nafees Muhammad, TBD, Mechanical Engineering, Texas A&M University, Spring 2027(helped by Dr. Sami El Borgi).
9. Atharva Kulkarni, "Higher order beam, plate, and shell elements for structural dyanmics," Spring 2026 (co-advised with A.R. Srinivasa).
10. Sreenu Hari, "A physics-based machine learning approach for predicting failure in airframe structural components," Spring 2026 (co-advised with A.R. Srinivasa).
11. Rahaf Homssi, TBD, Mechanical Engineering, Texas A&M University, Summer 2026 (co-advised with Dr. Vanessa Restrepo Perez).
12. Gabrielle Nichols, TBD Mechanical Engineering, Texas A&M University, Summer 2028 (co-advised with A.R. Srinivasa).

PROFESSIONAL AFFLIATIONS

Current Professional Society Memberships

- Aeronautical Society of India, ASI (**Fellow**)
- American Academy of Mechanics, AAM (**Fellow**)
- American Institute of Aeronautics and Astronautics, AIAA (**Fellow**)
- American Society of Composites, ASC (**Fellow**)
- American Society of Civil Engineers, ASCE (**Fellow**)
- American Society of Mechanical Engineers, ASME (**Life Fellow, Honorary Member**)
- International Association for Computational Mechanics, IACM (**Fellow**)
- The Society of Engineering Science, SES (**Lifetime Member**)
- US Association for Computational Mechanics, USACM (**Fellow**)
- International Association for Computational Mechanics, IACM (**Fellow & member, General Council**)

Current Academic Associations

- Member, International Advisory Board, SRM University of Science and Technology, Tamilnadu, India
- Member, Executive Advisory Board, Gokul Education Foundation, Bangalore, India

SHORTCOURSES TAUGHT

1. "Advances in Computational Fluid Dynamics," The University of Tennessee Space Institute, Tullahoma, TN, December 1982 (with K. C. Reddy).
2. "Finite Element Methods in Fluid Mechanics," Purdue University at Indianapolis, March 15-18, 1983 (with A. Ecer, H. Akay, and W.G. Habashi).
3. "Finite Element Methods in Fluid Mechanics and Heat Transfer," Purdue University at Indianapolis, March 12-16, 1984 (with A. Ecer, H. Akay, and W.G. Habashi).
4. "Finite Element Methods in Fluid Mechanics and Heat Transfer," Purdue University at Indianapolis, March 11-15, 1985 (with A. Ecer, H. Akay, and W.G. Habashi).
5. "Finite Element Methods in Fluid Mechanics and Heat Transfer," Purdue University at Indianapolis, March 10-14, 1986 (with A. Ecer, H. Akay, and W.G. Habashi).
6. "Finite Element Methods in Fluid Mechanics and Heat Transfer," Purdue University at Indianapolis, March 9-13, 1987 (with A. Ecer, H. Akay, and W.G. Habashi).
7. "An Introduction to the Finite Element Method," NASA Marshall Space Center, Huntsville, Alabama, June 1987 (with K. C. Reddy).
8. "Finite Element Calculation Methods and Their Application to Turbomachinery Flows," von Kármán Institute for Fluid Dynamics, Belgium, May 11-15, 1987 (with W. G. Habashi).
9. "Analysis of Laminated Composite Structures," The University of Tennessee Space Institute, Tullahoma, TN, October 24-28, 1988.
10. "Finite Element Method in Computational Fluid Dynamics and Heat Transfer," Purdue University at Indianapolis, March 7-11, 1988 (with A. Ecer, H. Akay, and W.G. Habashi).
11. "Introduction to the Finite Element Method," (EG-5520), 3M Company, Minneapolis, MN, May 8-10, 1989.
12. "Advanced Concepts in the Finite Element Method," (EG-5521) 3M Company, St. Paul, MN, May 11-12, 1989.
13. "Finite Element Method in Computational Fluid Dynamics and Heat Transfer," Purdue University at Indianapolis, May 15-19, 1989 (with A. Ecer, H. Akay, and W.G. Habashi).
14. "Introduction to the Finite Element Method," 3M Company, St. Paul, MN, Nov. 20-22, 1989.
15. "The Finite Element Method in Engineering Science," Brakes India Ltd., Padi, Madras, India, December 18-21, 1989.
16. "Introduction to the Finite Element Method," 3M Company, St. Paul, MN, March 12-15, 1990.
17. "Finite Element Method in Computational Fluid Dynamics and Heat Transfer," Purdue University at Indianapolis, May 6-11, 1990 (with A. Ecer, H. Akay, and W.G. Habashi)
18. "An Advanced Course on the Finite Element Method," Michelin Americas Research and Development Corporation, Greenville, SC, Sept. 17-21, 1990.

19. "The Finite Element Method in Engineering Science," Holiday Inn, Cleveland, OH, July 15-19, 1991.
20. "An Introduction to the Finite Element Method," U. S. Army Waterways Engineering Experiment Station, Vicksburg, Mississippi, May 11-15, 1992.
21. "The Finite Element Method in Computational Fluid Mechanics and Heat Transfer," Concordia University, Montreal, Canada, May 18-22, 1992 (with W. G. Habashi).
22. "The Finite Element Method in Engineering Science," Indian Institute of Science, Bangalore, India, November 20-25, 1992.
23. "The Finite Element Method in Computational Fluid Mechanics and Heat Transfer," Singer Island, Florida, October 11-15, 1993.
24. "The Finite Element Method in Computational Fluid Mechanics and Heat Transfer," Purdue University at Indianapolis, September 11-16, 1994 (with A. Ecer, H. Akay, and W.G. Habashi).
25. "Analysis of Laminated Composite Plates," NATO Sponsored short course presented at Middle East technical University, Ankara, Turkey, December 3-9, 1994.
26. "Finite Element Modeling of Smart Structures," at *1995 North American Conference on Smart Structures and Materials*, San Diego, February 25, 1995 (with Vasu V. Varadan).
27. "Mechanics of Composite Materials and Structures," Defense Science Organization, Ministry of Defense, Singapore, May 6-9, 1996.
28. "Refined Theories and Finite Element Models of Laminated Plates," Centre for Computational Mechanics, National University of Singapore, Singapore, December 6, 1996.
29. "Applications of the Finite Element Techniques in Fluid Mechanics and Heat Transfer," Bhabha Atomic Research Centre, Trombay, Mumbai, India, Dec. 16-20, 1996.
30. "Mechanics of Laminated Composite Plates: Theory and Analysis," University of Queensland, Brisbane, Australia, June 17-18, 1997.
31. "Theory and Analysis of Laminated Composite Plates," University Putra Malaysia (UPM), Serdang, Selangor, Malaysia, June 21, 1997.
32. "The Finite Element Method in Engineering Science" National Aerospace Laboratory, Bangalore, India, July 22-25, 1998.
33. "Mechanics of Composite Materials and Structures," Defence Evaluation and Research Agency (DERA), Rosyth Royal Dockyard, Dunfermline, Scotland, UK, Sep 6-11, 1998.
34. "Nonlinear Finite Element Analysis of Structural Dynamics," Defence Evaluation and Research Agency (DERA), Rosyth Royal Dockyard, Dunfermline, Scotland, UK, August 22-25, 1999.
35. ``Engineering Design & Practice Using FEM," The City University of Hong Kong, Hong Kong, June 14-19, 2001.
36. ``Mechanics of Composite Materials and Structures," *US-Brazil Workshop on Advanced Materials*, Rio de Janeiro, Brazil, June 9-10, 2004.
37. ``On *k*-Version of the Finite Element Method," Short course presented at the Wright-Patterson Air Force Base, OH, August 13-15, 2004.
38. "Analysis of Composite Materials and Structures," Short course presented at the National University of Singapore, August 24-25, 2004.
39. "Structural Analysis and Failure Assessment of Composite Materials," Short course presented (with R. Talreja and Kristofer Gamstedt) at the Royal Institute of Technology, (KTH), Stockholm, Sweden, October 5-8, 2004.
40. "Mechanics of Laminated Composite Materials and Structures," Short course presented at the University Putra Malaysia (UPM), Kuala Lampur, Malaysia, December 20, 2004.
41. "Linear and Nonlinear Finite Element Analysis," Short Course presented at the *US-Africa Workshop on Mechanics and Materials,* University of Cape Town, South Africa, Jan 28, 2005.
42. "An Introduction to the Finite Element and Finite Difference Methods with Applications to Heat Transfer and Fluid Flow," National Geographical Research Institute (NGRI), Hyderabad, India, May 16-19, 2005.
43. "Least-squares Finite Element Formulations for Viscous Incompressible and Compressible Flows," *Workshop on Computational Methods in Structural Mechanics and Fluid Flows* (COSMECFLOWS), Osmania University, Hyderabad, India, December 5, 2005.
44. "Mechanical Engineering Design," a course in Mechanical Engineering at University of Calabria, Italy, March 13-17, 2006.

45. "Nonlinear Finite Element Analysis," a short course presented at Green Park Hotel, Chennai (organized by SAE India), December 14-16, 2006.
46. "Laminated Composite Structures," a course in Mechanical Engineering at University of Calabria, Cosenza, Italy, May 21-23, 2007.
47. "Mechanics of Laminated Composite Materials and Structures," a course in DIMNP at University of Pisa, Italy, May 16-20, 2007.
48. "The Finite Element Method: Theory and Applications," a two-day course presented at the Air Force Research Laboratory (AFRL), Wright-Patterson Air Force Base, Dayton, Ohio, May 30-31, 2007.
49. "A General Introduction to the Finite Element Method," Lectures presented in the *Pre-International Conference Workshop on Advanced Finite Element Method and Computational Techniques* (ASFCT-2007), Manipal Institute of Technology, Manipal, India, August 29, 2007.
50. "Nonlinear Finite Element Analysis," A pre-conference course held at the *International Conference on Computer Aided Engineering,* Chennai, India, December 10-12, 2007.
51. "How to Teach a Course on the Finite Element Method," two-day course taught at RMK College of Engineering, Kavaraipettai, INDIA, December 13-14, 2007.
52. "Advanced Finite Element Analysis," a four-day course held at Gayatri Vidya Parishad College of Engineering, Visakhapatnam (AP), India, December 20-24, 2007.
53. "Nonlinear Finite Element Analysis," a four-day short course presented at Cranes Software, Bangalore, India, January 7-10, 2008.
54. "An Introduction to the Finite Element Method," a one-day course presented at the Padre Conceição College of Engineering, Agnel Ashram, Agnel Ganv, Goa, India, January 13, 2008.
55. "Nonlinear Finite Element Analysis with Applications," Bhabha Atomic Research Centre, Bombay, India, January 14-16, 2008.
56. "Mechanics of Composite Materials," a course in Mechanical Engineering at University of Calabria, Italy, March 10-11, 2008.
57. "The Finite Element Method with Applications to Solid and Structural Mechanics," Bombay, India, August 19-22, 2008.
58. "The Finite Element Method with Applications to Solid and Structural Mechanics," Chennai, India, August 26-29, 2008.
59. "The Finite Element Method with Applications to Solid and Structural Mechanics," Singapore, September 1-3, 2008.
60. "Finite Element Analysis with Applications to Solid and Structural Mechanics," Kuala Lumpur, Malaysia, October 23-25, 2008.
61. "Linear and Nonlinear Finite Element Analysis with Applications to Solid and Structural Mechanics," Bhabha Atomic Research Centre (BARC), Bombay, India, Dec 4-9, 2008.
62. "Linear and Nonlinear Finite Element Analysis with Applications to Solid and Structural Mechanics," Vikram Sarabhai Space Center (VSSC), India, Dec 29-31, 2008.
63. "Linear and Nonlinear Finite Element Analysis with Applications to Solid and Structural Mechanics," Defense Research and Development Laboratory (DRDL), Hyderabad, India, Jan 5-7, 2009.
64. "Finite Element Analysis with Applications to Solid and Structural Mechanics," Mumbai, INDIA, May 6-9, 2009.
65. "An Introduction to the Finite Element Method," Bharat Heavy Electrical Limited, Bangalore, India, May 11-14, 2009.
66. "Buckling of Laminated Composite Plates: Theories and Analyses," Department of Applied Mechanics, Finnish Graduate School of Engineering Mechanics, Helsinki University of Technology, Helsinki, Finland, June 8-12, 2009.
67. "A Short Course on the Finite Element Method," Dept. of Mechanical Engineering, Universidad de los Andes, Bogota, Colombia, August 8-11, 2009.
68. "A Short Course on The Finite Element Method," South China University of Technology, Wuhan, Guangzhou, China, Dec. 2-8, 2009.
69. "The Finite Element Method – An Advanced Course", Ritz-Carlton Hotel, Kuala Lumpur, Malaysia, 8-10 February 2010.

70. "The Finite Element Method – Application to Composite Materials", Saint James & Albany Hotel-SPA, Paris, France, 11-13 October 2010.
71. "The Finite Element Method: with a Focus on Nonlinear Solid Mechanics", Novotel Sao aulo Morumbi, Sao Paulo, Brazil, 1-3 December 2010.
72. "The Finite Element Method – An Introduction", South China University of Technology, Wuhan, Guangzhou, China, 16-17 December 2010.
73. "The Finite Element Method (with applications to heat transfer, fluid mechanics, and solid mechanics)", SRM University, Kattankulathur, Chennai, India, 22-24 December 2010.
74. "Analysis of Composite Materials and Structures," Preconference Short course at *International Conference on Composites for 21st Century: Current & Future Trends,* J. N. Tata Auditorium, Indian Institute of Science, Bangalore, INDIA, 4 January, 2011.
75. "Theory and Analysis of Laminated Composite Structures," a preconference course presented during the *16th International Conference on Composite Structures* (ICCS/16), University of Porto, Porto, Portugal, 26-27 June 2011.
76. "The Finite Element Method with Applications to Solids and Fluids," University of Puerto Rico, Mayaguez, PR 00681-9045, March 22-23, 2012; organized by the Department of Mechanical Engineering Department.
77. "Theory and Analysis of Laminated Composite and Functionally Graded Structures," 16-17 June 2012, Torino, Italy.
78. "Theory and Analysis of Laminated Composite Structures," 17-18 October 2012, University of Macau, Macau, China.
79. "The Finite Element Method - An Introduction", 19-21 October 2012, South China University of Technology, Wuhan, Guangzhou, China,
80. "The Finite Element Method (with applications to heat transfer, fluid mechanics, and solid mechanics)," 3-5 December, 2012; Sultan Qaboos University, Muscat, Sultanate of Oman.
81. "The Finite Element Method (with applications to heat transfer and fluid, solid, and biomechanics) 12-15 December 2012, SRM University, Kattankulathur, Chennai, India.
82. "Finite Element Method with Applications to Solid Mechanics, Heat Transfer and Fluid Mechanics," 19-21 December 2012, Indian Institute of Technology, Hyderabad, INDIA.
83. "Finite Element Method (with applications to heat transfer, fluid mechanics, and solid mechanics)," 3-5 March 2013, University of Guanajuato, Salamanca, Mexico.
84. "Finite Element Method with applications to Heat Transfer and Solid and Fluid Mechanics," 21-23 March 2013, National Institute of Technology, Tiruchirappalli, India.
85. "Recent Developments in Beam and Plate Theories (with focus on FGM, nonlocal elasticity, and microstructural length scale effects)," 10 June 2013, Celal Bayar University, Manisa, Turkey.
86. "Recent Developments in Theory and Analysis of Laminated Composite and Functionally Graded Beams, Plates, and Shells (with focus on nonlocal elasticity, modified couple stress theories, and peridynamics)," 15-16 June 2013, a preconference course presented during the *ICCS17-17th International Conference on Composite Structures*, Porto, Portugal, June 17-21, 2013.
87. "Advanced Finite Element Analysis," 16-18 December 2013, Computer Aided Engineering Laboratory, Department of Mechanical Engineering, Indian Institute of Technology-Madras, Chennai, India.
88. "An Introduction to the Finite Element Method, "A one-day course presented at the Padre Conceição College of Engineering, Agnel Ashram, Agnel Ganv, Goa, India, January 10, 2014.
89. "Nonlinear Finite Element Analysis (Solid Mechanics, Fluid Mechanics, and Heat Transfer)" 16-18 December 2013, Computer Aided Engineering Laboratory, Department of Mechanical Engineering, Indian Institute of Technology-Madras, Chennai, India.
90. "Theory and Analysis of Laminated Composite and Functionally Graded Beams and Plates," Beihang University, Beijing, China, 5-8 May 2014.
91. "Recent Developments in Beam and Plate Theories with focus on FGM and nonlocal elasticity," 4 Jan 2014, Malaviya National Institute of Technology, Jaipur, India.
92. "The Finite Element Method," 10 January 2014, Padre Conceiçao College of Engineering, Verna-Goa, INDIA. 10 January, 2014

93. "Recent Developments in Theory and Analysis of Laminated Composite and FGM Beams, Plates, and Shells (with focus on nonlocal and modified couple stress theories)," 7-8 June 2014, Hilton Garden Inn Stony Brook Hotel, Stony Brook, New York.
94. *"On* Nonlinear Finite Element Analysis (*Solid Mechanics, Fluid Mechanics and Heat Transfer*)", 16-19 December 2014, Indian Institute of Technology, Hyderabad, India.
95. "The Finite Element Method in Structural Mechanics," 21-22 May 2015, National University of Singapore, Singapore.
96. "Recent Developments in Theory and Analysis of Laminated Composite and FGM Beams, Plates, and Shells (with focus on nonlocal and strain gradient theories)," 13-14 June 2015, Epic Sana Hotel, Lisbon, Portugal.
97. "Nonlinear Finite Element Analysis with applications to *Solid and Structural Mechanics*", 28-29 July 2015, Munich, Germany.
98. "Nonlinear Finite Element Analysis," 3-4 August 2015, Wyndham Grand Hotel, Izmir, Turkey.
99. "Advanced Finite Element Analysis," 7-9 December 2015, GITAM University, Hyderabad, India.
100. "Mechanics of Composite Materials and Structures (covers laminated composite plates and shells and nonlocal mechanics)," SRM University, Chennai, India, 21-22 Dec 2015.
101. "A Course on Linear and Nonlinear Finite Element Analysis," Indian Institute of Technology, Gandhinagar, Gujrat, INDIA, June 12-19, 2016.
102. "The Finite Element Method, Theory and Programming," Indian Institute of Technology, Hyderabad, July 14-24, 2016, *MHRDScheme: Global Initiative on Academic Network* (GIAN) course.
103. "The Finite Element Method Applied to Heat Transfer, Fluid Dynamics, and Mechanics of Composite Structures," JNTUH College of Engineering, Kukatpally, Hyderabad, July 25 – 5 August, 2016, *MHRDScheme: Global Initiative on Academic Network* (GIAN) course.
104. "Finite Element Method (FEM 2016)," Department of Mechanical Engineering, SRM University, Chennai, India, 6-12 Dec. 2016.
105. "Applied Continuum Mechanics," National Institute of Engineering, Goa, 15-24 December 2016, MHRDScheme: Global Initiative on Academic Network (GIAN) course.
106. "Advances in Structural Mechanics: Theory and Design of Plate and Shell Structures," Veermata Jijabai Technological Institute (VJIT), Mutunga, Mumbai, India, 20-25 Feb 2017, *MHRDScheme: Global Initiative on Academic Network* (GIAN) course.
107. "The Finite Element Method with Applications in Structural Mechanics," 6 and 7 July 2017, Monash University, Melbourne, Australia.
108. "The Finite Element Method with Applications in Structural Mechanics," 10 and 11 July 2017, University of Queensland, Brisbane, Australia.
109. "The Finite Element Method with Applications in Structural Mechanics," 13 and 14 July 2017, University of New South Wales, Sydney, Australia.
110. "Teaching the Finite Element Method to Students," A one-day course presented to the teachers of FEM courses, School of Mechanical Engineering, SRM University, Chennai, India, 11 December 2017.
111. "Applied Continuum Mechanics," A five-day course presented to the graduate students and faculty, School of Mechanical Engineering, Universidad Industrial de Santander, Bucaramanga, Colombia, 16-20 July 2018.
112. "Non-Local Theories: Mathematical Models and Computational Approaches- How to deal with problems where classical continuum mechanics breaks down," 23-26 June 2019, Aalto University (Espoo, Finland, (with Anssi Karttunen and Jani Romanoff).
113. "The Finite Element Method," Department of Structural Engineering, Veermata Jijabai Technological Institute, Mumbai, India, 12-13 July 2019.
114. "Nonlocal Mechanics Approaches for Modelling Localized Deformations," Indian Institute of Technology, Hyderabad, India, 19-21 February 2020 (with A. Rajagopal and Arun Srinivasa).
115. "Composite Structures and the the Finite Element Method," A two-day pre-conference course presented at the *3rd International Conference on Advances in Mechanical Engineering* (ICAME

2020), Department of Mechanical Engineering, SRMIST, Kattankulathur, Chennai, India, February 24-25, 2020.

116. "Shear Deformation Theories of Beams and Plates," A two-day course presented in International Summer School on *Mechanics of Composite Materials,* Center for Composite Materials and Structures, Harbin Institute of Technology, China, 3-4 August 2020.
117. "Theory and Analysis of Laminated Composite and Functionally Graded Structures," A four-day online course presented at Ramaiah University of Applied Sciences, Bangalore, India, 8-11 September 2020.
118. "The Finite Element Method," a five-day online course presented online for the researchers of NASA (Glenn), 7-11 December 2020.
119. "Finite Element Analysis of Beams, Trusses and Frames," online Lectures delivered as a part of a regular course in College of Civil Engineering and Architecture, Zhejiang University, Zijingang Campus, Hangzhou, P. R. China, May-June, 2021.
120. "Finite Element Analysis of Beams, Trusses and Frames," online Lectures delivered as a part of a regular course in College of Civil Engineering and Architecture, Zhejiang University, Zijingang Campus, Hangzhou, P. R. China, May-June, 2022.
121. "Fundamentals of the Finite Element Method, with applications to structural mechanics," a short course presented to the undergraduate students of the SAE Team in the Department of Mechanical Engineering at Texas A&M University, College Station, 17-19 August 2022.
122. "Shear Deformation Theories of Functionally Graded Beams and Plates," online lectures delivered to students and faculty of the School of Civil Engineering and Transportation, South University of Science and Technology, Guanzhou, China, 15 April, 12 May, and 15 June, 2022.
123. "The Linear the Finite Element Method," Ramaiah University of Applied Sciences (RUAS), Bangalore, India, 2-4 January 2023.
124. "The Linear Finite Element Method for the teachers of the FEM," Faculty of Engineering and Technology, Ramaiah University of Applied Sciences (RUAS), 5-7 January 2023.
125. "The Linear Finite Element Method," Mechanical Engineering Program, Texas A&M University at Qatar, 14-16 March 2023.
126. "Linear and Nonlinear Finite Element Analysis with Programming," Department of Civil Engineering, BITS Pilani, Hyderabad Campus, India, 3-6 July 2023.
127. "Theory and Analysis of Laminated Composite and Functionally Graded Structures," Aalto University, School of Engineering, Finland, 5-8 September 2023.
128. "Theory and Analyses of Laminated Composite Structures," Ramaiah Institute of Technology, Banaglore, INDIA, 3-5 December 2023.
129. "Continuum Mechanics with Applications," Ramaiah Institute of Technology, Banaglore, INDIA, 10-11 July 2024.
130. "Finite element analysis: nonlinear dynamic response and soil-structure interaction," Indian Institute of Science, Bangalore, 15-19 July 2024.
131. "Introduction to Nonlinear Structural Dyanmics," One-day course as a part of the *ILEE Summer School 2024*, International Joint Research Laboratory of Structural Engineering (ILEE), Tongji University, Shanghai, China, 15-27 July 2024.