

2007 Conference Papers

1. van Kan, J.A. (2007). Invited Oral presentation: "Proton Beam Writing: a Platform Technology for 3D nanopatterning," *18th International Conference on Ion Beam Analysis*, Hyderabad, India.
2. Wang, C.M., Zhang, Y.Y. and Kitipornchai, S. (2007). "Vibration of initially stressed micro and nano-beams," *Proceedings of the 15th Annual International Conference on Composites/Nano Engineering*, Edited by David Hui, Haikou, Hainan Island, China, 15-21 July 2007.
3. Wang, C.M., Yao, Z.J., Hee, A.M. and Tan, W.L. (2007). "Optimal layout of gill cells for very large floating structures," *Proceedings of the 2nd International Maritime-Port Technology and Development Conference*, 26-28 September 2007, Maritime and Port Authority, Singapore, pp. 333-339.
4. Luong, V.H., Ang, K.K. and Wang, C.M. (2007). "Interaction between sloshing liquid, container and moving ship," *Proceedings of the 2nd International Maritime-Port Technology and Development Conference*, 26-28 September 2007, Maritime and Port Authority, Singapore, pp. 306-312.
5. Wang, C.D., Tay, Z.Y., Wang, C.M., Shah, K.W. and Song, T.C. (2007). "Wave induced deflections and stress-resultants of two-floating fuel storage system," *Proceedings of the 2nd International Maritime-Port Technology and Development Conference*, 26-28 September 2007, Maritime and Port Authority, Singapore, pp. 386-393.
6. Prof Reddy (26-28 September 2007). "Tensor-Based Shell Element And Modeling Of Biological Cells," **Plenary Lecture**, the *International Conference on Recent Developments in Structural Engineering (RDSE-2007)*, Manipal Institute of Technology, Manipal, India.
7. Prof Reddy (29 August 2007). "Least Squares Finite Element Models of Bars, Beams, Plates and Shells," lecture presented in the *Pre-International Conference Workshop on Advanced Finite Element Method and Computational Techniques (ASFCT-2007)*, Manipal Institute of Technology, Manipal, India.
8. Prof Reddy (29 August 2007). "A General Introduction to the Finite Element Method," lecture presented in the *Pre-International Conference Workshop on Advanced Finite Element Method and Computational Techniques (ASFCT-2007)*, Manipal Institute of Technology, Manipal, India.
9. Prof Reddy (22-26 July 2007). "Higher Order Global Differentiability Local Approximations for Triangular Elements," (with R. Maduri and K. S. Surana) 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.
10. Prof Reddy (22-26 July 2007). "A New Computational Framework for Numerical Solutions of Polymer Flows for High Deborah Numbers," (with S. Allu and K. S. Surana) 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.
11. Prof Reddy (22-26 July 2007). "*h, p, k* Computational Framework for Solid Continuum using Eulerian Description," (with S. Basaran, A. Romkes and K. S. Surana) 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.
12. Prof Reddy (22-26 July 2007). "A Mathematical Model and Computational Approach for Fluid- Solid Interaction," (with A. Dumbre, R. Romkes, and K. S. Surana) 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.

13. Prof Reddy (22-26 July 2007). "Computations of Viscous Compressible Flows in h, p, k Framework," (with S. Allu and K. S. Surana) 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.
14. Prof Reddy (22-26 July 2007). "A Priori Error Estimation for hpk FE Analyses," (with A. Romkes, Tyler Stone, and K. S. Surana) 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.
15. Prof Reddy (22-26 July 2007). "Multiscale Damage Analysis of Beam Bending Using Layerwise Theory" (with Wook in Na) in the session *Computational Solid Mechanics: Recent Advances* at the **9th US National Congress on Computational Mechanics**, San Francisco, CA, July 22-26, 2007.
16. Prof Reddy (22-26 July 2007). "Thermomechanical Modeling of Functionally Graded Shells," (with R. A. Arciniega) in the session *Computational Solid Mechanics: Recent Advances* at the **9th US National Congress on Computational Mechanics**, San Francisco, CA, July 22-26, 2007.
17. Prof Reddy (22-26 July 2007). "A New Mathematical and Computational Framework for BVP and IVP," Key Note Lecture (with K. S. Surana and A. Romkes) 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.
18. Prof Reddy (June 25-July 6, 2007). "Continuum Modelling of the Cell," invited lecture (with G. U. Unnikrishnan) presented at 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) National University of Singapore.
19. Prof Reddy (1-6 July 2007). "Role of Engineering Science in Education with Special Focus on Modelling of Nanosystems," invited lecture presented in *Teaching Nanoscience and Nanoengineering* at **International Conference on Materials for Advanced Technologies 2007**, Suntec Singapore International Convention and Exhibition Centre, Singapore.
20. Prof Reddy (June 14, 2007). "Engineering Science: Educating Engineer-Scientists," an invited lecture presented on the occasion of the appointment of Consultant Professor at South China University of Technology, Guangzhou.
21. Prof Reddy (June 13, 2007). "Locking-Free Nonlinear Shell Finite Element," Seminar
22. Prof Reddy (June 11-14, 2007). "Nonlinear Analysis of Composite and FGM Shells using Tensor-Based Finite Elements," (with R. A. Arciniega) *The Fifth International Conference on Nonlinear Mechanics (ICNM-V)*, June 11-14, 2007, Shanghai University, Shanghai, China.
23. Prof Reddy (June 3-7, 2007). "Mechanical Analysis of Polymeric Nanofibers Using Multiscale Methods," (with Vinu U. Unnikrishnan, Ginu Unnikrishnan, and C.T. Lim), paper presented in Mechanics of Nano-, Bio- and Cellular Materials McMat 2007, ASME Applied Mechanics and Materials Conference, University of Texas at Austin, Austin, Texas.
24. Prof Reddy (June 3-7, 2007). "Coupled Blood Arterial Wall Analysis Using Fluid Biphasic Interface Models" (with Ginu Unnikrishnan and Vinu U Unnikrishnan), A Keynote Lecture presented in Mechanics of Nano-, Bio- and Cellular Materials session at McMat 2007, ASME Applied Mechanics and Materials Conference, University of Texas at Austin, Austin, Texas.

25. Prof Reddy (June 3-7, 2007). "Least-squares Based Finite Element Formulations for Newtonian and non-Newtonian Fluid Flows," (with V. Prabhakar) paper presented in Computational Methodologies for Navier-Stokes and Turbulence session, at McMat 2007, ASME Applied Mechanics and Materials Conference, University of Texas at Austin, Austin, Texas.
26. Prof Reddy (May 9-13, 2007). "The Finite Element Method in Structures and Beyond," SPDC ASME USB (Student Professional Development Conference), University of Simon Bolivar, Caracas, Venezuela.
27. Prof Reddy (March 9, 2007). "On the k-Version Least-Squares Finite Element Models of Problems in Mechanics," Graduate Aeronautics Engineering Seminar, California Institute of Technology, Pasadena, CA.
28. Prabhakar V, Reddy JN, (2007). "Least-squares based Finite Element Formulations for Newtonian and Non-newtonian Fluid Flow, ASME Applied Mechanics and Material Conference 2007, Austin.