





Special Issue Reprint

Mathematical and Computational Approaches in Applied Mechanics

www.mdpi.com/books/reprint/11939

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ISBN 978-3-7258-5851-4 (Hardback) ISBN 978-3-7258-5852-1 (PDF)



It is difficult to talk about mechanics without mentioning at least one contribution made by Prof. J.N. Reddy, who has embraced all aspects of applied mechanics, from continuums to engineering theories. He is best known for his research on the shear deformation theories of beams, plates, and shells (which bear his name—Reddy third-order theory) that have also been extended to layer-wise models (known as the Reddy layer-wise theory). He has not only worked on solid mechanics but also in other fields such as the flows of viscous fluids and non-Newtonian fluids. Most of his research was developed using the finite element method across several fields, which has since been incorporated into well-known and extremely powerful commercial codes. Prof. J.N. Reddy is a Distinguished Professor and a Regents' Professor and has been the inaugural holder of the Oscar S. Wyatt Endowed Chair in Mechanical Engineering at Texas A&M University since 1992. He is a highly cited researcher with a Google Scholar h-index of 124 and is the author of 25 textbooks and over 620 journal papers. He has delivered over 210 plenaries, keynote lectures, and general invited lectures at international conferences, and advised 60 postdoctoral fellows and research visitors, along with 128 graduate students.



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