

Dr Abhijit Dasgupta



Professor of Mechanical Engineering, University of Maryland, College Park, MD, USA.

Scientific Research

The main focus of Professor Dasgupta scientific research is related to the mechanics of engineered, heterogeneous, active materials, with special emphasis on the micromechanics of constitutive and damage behaviour. His research contributions include solution techniques for coupled boundary value problems in multifunctional particulate and laminated composites, micromechanics approaches for constitutive properties of advanced 3-D composites, dynamic behaviour and failure of thick composites, micromechanics of fatigue damage in viscoplastic eutectic-alloy composites and in short-fiber polymeric composites, and self-health monitoring in “smart” systems. Professor Dasgupta applies these principles for developing effective virtual qualification tools, for optimizing manufacturing process windows, for real-time health monitoring and for devising quantitative accelerated testing strategies used in qualification and quality assurance of complex electronic, electromechanical and structural systems.

Scientific Publications

He has published over 150 journal articles and conference papers on these topics, presented over 20 short workshops nationally and internationally, served on the editorial boards of three different international journals, organized several national and international conferences, and received six awards for his contributions in materials engineering research and education.

Scientific and Professional Membership

Associate Editor, *ASME Journal of Electronic Packaging*, 93-96; Member, Editorial Board, *International Journal for Intelligent Material Systems and Structures*, 1994-97

Honours and Awards

Villanova University's Carl Humphrey Memorial Award, 2002