



ME Seminar



A new simple continuous yielding model for elasto plastic materials –Application to Fatigue

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ABSTRACT

In this talk, we will describe a mechanics based phenomenological approach to fatigue life predictions based on a "continuous yield model" which shows remarkable promise in modeling fatigue loading even under complex spectrum loading based on limited testing. In the process, we will also discuss the history of plasticity models, its essential features and how going back to the basics enables us to describe microplasticity and fatigue loading also. This is work in progress with my colleague Dr. Prakash Thamburaja from UKM Malaysia.

ABOUT THE SPEAKER

Dr. Srinivasa is the Holdredge/Paul Professor of Mechanical Engineering at Texas A&M University. He obtained his B.Tech from IIT Madras and his PhD from the University of California at Berkeley, and has been at Texas A&M University at the College Station campus since 1997. He is an expert in the area of inelasticity and damage of materials, as well as in chemorheology and has a wide-ranging interest in various aspects of the mechanics of persistent structural changes. He has published over 150 archival journal papers and two books, as well as several scholarly works on engineering education. He is a fellow of the American Society of Mechanical Engineers (ASME) and the Society of Engineering Science (SES) and is the recipient of the Ben Sparks Medal from the ASME for his contribution to technology in education, The Archie Higdon Distinguished Educator Award from the American Society of Engineering Education (ASEE) and the Worcester-Read Warner medal from the American Society of Mechanical Engineers (ASME) for his contributions to the permanent literature in engineering.



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