

Timoshenko Medal



Sia Nemat-Nasser

*Distinguished Professor of Mechanics and Materials
The University of California, San Diego*

For fundamental theoretical and experimental contributions in: dynamic stability; deformation and failure modes of materials; nano-electro-chemo-mechanical characterization and modeling of ionic polymer metal composites; and composites with integrated tuned electromagnetic functionality, self-healing, and self-sensing.

Professor Sia Nemat-Nasser earned his B.S. in Engineering from Sacramento State University, followed by M.S in Civil Engineering and Ph.D. in Structural Engineering, both from the University of California, Berkeley, while serving as an assistant professor in Civil Engineering at Sacramento State University. Sia then undertook a post-doctoral assignment at Northwestern University, leading to his first appointment as Assistant Professor at the University of California, San Diego, followed by fifteen years at Northwestern University as Professor of Civil Engineering and Applied Mathematics. He went back in 1985 to the University of California, San Diego, where he is Distinguished Professor of Mechanics and Materials.

Dr. Nemat-Nasser is a leading mechanician, and has made seminal contributions to a broad range of topics. A partial list of the topics in which he has made significant discoveries includes: constitutive response and liquefaction in granular media; brittle crack growth and bifurcation in compressive loading; plasticity at large strains; elastic-plastic crack tip fields; failure of ductile metals under shock wave conditions; cracking though fiber-reinforced composites; overall properties of composites; and thermodynamics of deformation; ionic polymer metal composites; and metamaterials with novel electromagnetic properties. Among his large number of scholarly publications are *Plasticity: A Treatise on Finite Deformation of Heterogeneous Inelastic Materials*, and the monograph (with M. Hori) *Micromechanics: Overall Properties of Heterogeneous Materials*.

Dr. Nemat-Nasser chaired the Geomechanics Committee of the Applied Mechanics Division, 1981-85, chaired the Materials Division, 1997-98, was Group Representative of the Materials and Structures Technical Group in 1995. He is the founding editor and editor-in-chief of the international journal *Mechanics of Materials* and has edited the book series *Mechanics Today* and the book series *Mechanics of Elastic and Inelastic Solids*. He has served on the boards of several international journals, was President of the American Academy of Mechanics from 1996-97, and President of the Society of Engineering Science, 1979-80. The ASME Materials Division established the Sia Nemat-Nasser Early Career Medal in 2008.

He is an honorary member of ASME, and a member of the National Academy of Engineers. He has received a large number of awards, including the Prager Medal in Solid Mechanics from the Society of Engineering Science in 2002. From ASME, he has received the Nadai medal in 2002, the Best Paper of the Year Award in Adaptive Structures and Materials Systems in 2002, and the Robert Henry Thurston Lecture Award in 2006. He has also received the B.J. Lazan Award from the Society of Experimental Mechanics in 2007, and the Theodore von Karman Medal from the American Society of Civil Engineers in 2008. At UCSD, he has received the Faculty Research Lecture Award of science in 2005, and three times has been voted as the best teacher of the year by the graduating seniors.

The Timoshenko Medal was established in 1957 and is conferred in recognition of distinguished contributions to the field of applied mechanics. Instituted by the Applied Mechanics Division, it honors Stephen P. Timoshenko, world-renowned authority in the field, and it commemorates his contributions as author and teacher.