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UCSB Professor Receives ASME's Highest Applied Mechanics Honor

Robert McMeeking, professor of mechanical engineering and also of materials at UC Santa Barbara, has received the Timoshenko Medal from the American Society of Mechanical Engineers. It is the highest applied mechanics honor the society bestows.

McMeeking was recognized for his "pioneering contributions to broad areas of applied mechanics including nonlinear fracture mechanics, transformation toughening, mechanics of composites, powder consolidation, and ferroelectric fracture and constitutive modeling." The medal is awarded annually as a result of the recommendations from the international community of applied mechanicians.

"I could not be happier for Professor McMeeking on his selection as this year's recipient of the internationally coveted Timoshenko Medal," said UCSB Chancellor and fellow engineer Henry T. Yang. "It is an honor to work with such a world-class colleague, and his highly regarded research in applied mechanics is deserving of this distinguished award."

Closely related to mechanical engineering and materials, applied mechanics examines the behaviors of physical bodies and their interactions with the forces of their environment. Applied mechanicians study phenomena such as how a bridge fails, how gases behave under pressure and how elastic materials deform.

“I am very pleased and honored to be awarded the 2014 Timoshenko Medal, as it is one of the top honors in applied mechanics and mechanical engineering,” said McMeeking. “(Stephen) Timoshenko was a leader in the development of the subject of applied mechanics, and was a pioneer in the application of mechanics to engineering. It is extremely gratifying to have one’s name associated with such a giant in the field of applied mechanics. Also, I would like to thank my mentors, my colleagues and my post-docs and students who all helped make it possible for me to do the work that has been recognized by my receipt of the Timoshenko Medal.”

The UCSB Tony Evans Professor of Structural Materials and a professor of mechanical engineering, McMeeking has spent almost four decades as an academic, researching and teaching at Stanford University and at the University of Illinois at Urbana-Champaign before joining the UCSB faculty in 1985. From 1992 to 1995, he was chair of what was then the UCSB Department of Mechanical and Environmental Engineering. He served in that same position from 1999 to 2003.

In addition to his faculty positions at UCSB, McMeeking holds or has held other academic appointments, including visiting fellow and visiting professor at Cambridge University; visiting scholar at Pembroke College; Sixth Century Professor of Engineering Materials at Aberdeen University in Scotland; visiting professor of Materials at Saarland University in Germany; and various lectureships.

An expert in solid mechanics, materials and structures, McMeeking has conducted research ranging from mechanics of materials to multifunctional materials and structures to thermal barrier coatings to blast- and fragment-resistant structures to biomechanics and cell mechanics. He has published more than 200 papers and is a fellow of the ASME and of the American Academy of Mechanics. He also was elected to the U.S. National Academy of Engineering in 2005, the U.K. Royal Academy of Engineering in 2012 and the Royal Society of Edinburgh in 2014. He has been recognized by the Institute of Scientific Information as a Highly Cited Researcher in the fields of materials science and engineering and was twice awarded the Alexander von Humboldt Research Award — once in 2004 and again in 2013. He served as editor-in-chief for the ASME Journal of Applied Mechanics from 2002 to 2012.

The Timoshenko Medal is the second major award McMeeking has received in 2014. He was awarded the Prager Medal earlier in the year by the Society of Engineering Science. The medal is named for William Prager, who was also a Timoshenko

medalist as well as one of McMeeking’s former professors. In addition to receiving a $2,500 honorarium, a bronze medal embossed with Timoshenko’s likeness and a certificate, McMeeking will deliver a speech at ASME’s winter meeting. He is the 60th recipient of the Timoshenko Medal.

About UC Santa Barbara

The University of California, Santa Barbara is a leading research institution that also provides a comprehensive liberal arts learning experience. Our academic community of faculty, students, and staff is characterized by a culture of interdisciplinary collaboration that is responsive to the needs of our multicultural and global society. All of this takes place within a living and learning environment like no other, as we draw inspiration from the beauty and resources of our extraordinary location at the edge of the Pacific Ocean.