

Citation for Honorary Doctorate: Prof Alexander Smits

Alexander J. Smits is the Eugene Higgins Professor of Engineering at Princeton University, and the Chair of the Department of Mechanical and Aerospace Engineering. Professor Smits is regarded as one of the leading researchers in the field of Fluid Mechanics, and has pioneered the fields of high Reynolds number turbulence, and turbulence in supersonic and hypersonic flows. He has also made major contributions to the areas of bio-inspired propulsion and aquatic locomotion, low Reynolds number flows, and atmospheric transport phenomena encountered in stably-stratified boundary layers. He designed and constructed the world famous *Superpipe* and *HRTF* facilities at Princeton. These facilities, combined with the novel measurement techniques developed by Prof. Smits' group (such as the Nano-Scale Thermal Anemometry Probe -NSTAP), have revolutionized our understanding of high Reynolds wall turbulence.

Smits's contributions have been recognized by many professional and public organizations. Most notably, he received the Fluids Engineering Award from the American Society of Mechanical Engineers (ASME) in 2007, the Fluid Dynamics Award and the Pendray Aerospace Literature Award from the American Institute of Aeronautics and Astronautics (AIAA) in 2004 and 2007 respectively, and the Médaille de la Ville de Marseille, for cultural and scientific contributions to the city of Marseille, France in 2009. He is a Fellow of the American Physical Society (APS), the American Institute of Aeronautics and Astronautics, and the American Society of Mechanical Engineers. In 2008 he was a Miegunyah Distinguished Visiting Fellow at the University of Melbourne, and he is also a Professorial Fellow at Monash University. In 2011 he was elected as a Member of the U.S. National Academy of Engineering.

Smits has also generously contributed his service to various professional societies and activities. He was Chair of the Division of Fluid Dynamics of APS, 2007-2008, the Chair of the Aerospace Department Chairman's Association (ADCA), 2001-2002, and a member of the U.S. National Committee on Theoretical and Applied Mechanics, 1998-2003. He was the Editor-in-chief of the Journal of *Experimental and Thermal Fluid Science* from 1995 to 1999, an Associate Editor of *Physics of Fluids* from 2000 to 2003, and an Associate Editor of the *Journal of Fluid Mechanics* from 2002 to 2007. He currently serves as an Associate Editor of the *Journal of Turbulence*, and is on the Editorial Board of *The Proceedings of the Institution of Mechanical Engineers, Part P: Journal of Sports Engineering and Technology*.

Professor Smits graduated with a BE (Mech) 1970, and PhD 1975 from the University Melbourne, and also spent 4 years as a Research Fellow working in the Walter Bassett Aerodynamics Laboratory in the Department of Mechanical Engineering. Since moving to Princeton in 1981 he has maintained strong collaborative links with the University of Melbourne, and visits (on average) 4-8 weeks per year. Smits has been an Honorary Professorial Fellow at the University of Melbourne since 2009.