

Theme Lecture 12

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Theme Lecture Title
Fluid Transport in Extensively Fractured
Rocks



A.P.S. Selvadurai is currently *William Scott Professor* and *James McGill Professor* in the Department of Civil Engineering and Applied Mechanics, McGill University, Montréal, Canada. He obtained his PhD degree in Theoretical Mechanics from the University of Nottingham, under the tutelage of the world-renowned continuum mechanist, the late A.J.M. Spencer FRS, and the first ever DSc in Theoretical Mechanics for research into *Mathematical Modelling of Problems in Geomechanics and Elastomechanics*.

He was Head of the Department of Civil Engineering at Carleton University from 1982 to 1991 and Chair of the Department of Civil Engineering and Applied Mechanics, at McGill till 1997. He has held visiting appointments at Universities in the UK, France, Germany, Australia, Brazil, Belgium, New Zealand, Hong Kong and Japan. In 1998, Dr. Selvadurai received the *Humboldt Senior Scientist Award* (Humboldt Foundation of Germany). In 2000, he became the first civil engineer to be awarded the *Killam Research Fellowship* (Canada Council for the Arts), in recognition his outstanding research record. In 2001 he was awarded the Inaugural *John Booker Medal* (International Association for Computer Methods and Advances in Geomechanics). In 2003 he received the prestigious *Max Planck Research Prize* in the Engineering Sciences, awarded by the Max Planck Foundation, Germany. In 2007, he received *The Killam Prize for Engineering*, awarded by the Canada Council for the Arts and the *CANCAM Gold Medal*, awarded by the Central Committee for Canadian Congresses of Applied Mechanics, for his sustained contributions to the discipline. In 2008, he received the *IACMAG Medal* for Outstanding Accomplishments in Theoretical, Computational and Experimental Geomechanics and in 2010 he received the *ALERT Medal* awarded by Alliance of Laboratories in Europe for Research and Technology. In 2012, he was awarded the degree of *Docteur Honoris Causa* by the Institut Polytechnique de Grenoble, France. In 2013, he was awarded *The Eric Reissner Medal* of the International Conference on Computational and Experimental Engineering and Sciences and *The Maurice A. Biot Medal* of the American Society of Civil Engineers Engineering Mechanics Institute.

He has published extensively in archival journals (289 Papers) computational geomechanics and experimental mechanics. He is the author or co-author of texts devoted to *Elastic Analysis of Soil-Foundation Interaction* (Elsevier, 1979), *Elasticity and Geomechanics* (with R.O. Davis) (Cambridge Univ Press, 1996), *Partial Differential Equations in Mechanics Vols. 1&2* (Springer-Verlag, 2000); *Plasticity and Geomechanics* (with R.O. Davis) (Cambridge Univ Press, 2002), *Transport in Porous Media* (with Y. Ichikawa) (Springer-Verlag, 2012) and *Thermo-Poroelasticity and Geomechanics* (with A.P. Suvorov) (Cambridge Univ Press, 2016). He serves on the Editorial Boards of nine leading International Journals devoted to *Geomechanics*, *Applied Mechanics*, *Computational Mechanics* and *Engineering Mathematics*. He is a Fellow *the Royal Society of Canada*, *The Canadian Academy of Engineering*, *The Engineering Institute of Canada*, *The American Academy of Mechanics*, *The Canadian Society for Civil Engineering* and *The Institute for Mathematics Applications and its Applications (UK)*. He is a Chartered Engineer as well as a Chartered Mathematician.