The Institute of Mathematical Sciences & Department of Mathematics
The Chinese University of Hong Kong

Joint Colloquium

15 November 2019 (Friday), 4:30 pm – 5:30 pm
at G03, Academic Building No. 1, CUHK

Understanding Microstructure in Single Crystals and Polycrystals

by

Professor Sir John Ball
Professor of Mathematics
Heriot-Watt University

The talk will discuss the description of microstructure in single crystals and polycrystals due to martensitic phase transformations, in which the underlying crystal lattice changes shape at some critical temperature, or applied loads. Among the issues addressed will be the description of interfaces, the use of generalized Hadamard jump conditions, and macroscopic deformations possible in any polycrystal.

_____

About the Speaker: Sir John Ball was Sedleian Professor of Natural Philosophy at the Mathematical Institute, University of Oxford during 1996-2018, and has been Professor of Mathematics at Heriot-Watt University since 2018. For his wide-ranging work in applied mathematics and contributions to the scientific community, he has won numerous prizes and honours. These include election as Fellow of the Royal Society of Edinburgh (1980), Fellow of the Royal Society (1989), an Associé Etranger of the Académie des Sciences (2000), foreign member of the Instituto Lombardo (2005), foreign member of the Norwegian Academy of Science and Letters (2007), and member of the Academia Europaea (2008). Other awards include the 1981 Whittaker Prize of the Edinburgh Mathematical Society, the 1990 Keith Prize of the Royal Society of Edinburgh, the 1995 Naylor Prize in Applied Mathematics of the London Mathematical Society, the 1999 Theodore Von Karman Prize of the Society of Industrial and Applied Mathematics, the 2003 David Crighton Medal of the London Mathematical Society, and the Royal Medal of the Royal Society of Edinburgh (2006). He was conferred the knighthood in 2006.

Professor Sir John Ball has served on numerous international boards and advisory committees, including President of the Edinburgh Mathematical Society from 1989–90, and President of the London Mathematical Society from 1996–1998. He is currently a member of the Executive Committee and Past-President of International Mathematical Union (IMU), and Chair of the Scientific Steering Committee of the Isaac Newton Institute.

For inquiries, please contact us by email or phone.
Department of Mathematics, CUHK: Email: dept@math.cuhk.edu.hk, Tel: 3943-7989
The Institute of Mathematical Sciences, CUHK: Email: ims@ims.cuhk.edu.hk, Tel: 3943-8038