



John Ball is Sedleian Professor of Natural Philosophy at the University of Oxford and a Fellow of the Queen's College. He was President of the International Mathematical Union from 2003-06. His research interests include elasticity, the mathematics of solid and liquid crystals, the calculus of variations, and infinite-dimensional dynamical systems. He is a foreign member of the French Academy of Sciences and the Norwegian Academy of Science and Letters, and is a fellow of the Royal Societies of London and Edinburgh, and of the American Mathematical Society, among many other honors and prizes.

**4:00 P.M.
Monday,
March 17, 2014**

**Ballroom A,
University Club**
at the University of Pittsburgh

**Free and Open
to the Public**

UNIVERSITY OF PITTSBURGH
The DIETRICH School of
Arts & Sciences

The University of Pittsburgh
Department of Mathematics

Presents

The Edmund R. Michalik
Distinguished Lecture in the
Mathematical Sciences

Sir John Ball

Sedleian Professor of Natural Philosophy,
Oxford University

*Defects in Materials and
their Mathematical
Description*

Abstract: Cracks, cavities, dislocations, phase boundaries and disclinations are all examples of material defects. In some mathematical models they may be described by singularities in solutions, whereas in others they may be represented differently. The lecture will describe some examples in which the understanding of such defects raises interesting mathematical, scientific and philosophical issues.

**Reception Immediately
Following the Lecture**

This public lecture is part of an annual series in honor of Professor Edmund R. Michalik, established through a gift from the Michalik family.

For further information, email: math@pitt.edu
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or visit <http://www.mathematics.pitt.edu>