

Distinguished Lecture jointly organised by  
HKIAS and Department of Mathematics

# Liquid Crystals from a Mathematical Perspective

**Professor Sir John Ball**

Senior Fellow,

Hong Kong Institute for Advanced Study

Professor, Heriot-Watt University

Date: 24 April 2023 (Monday)  
Time: 4pm-5pm  
Venue: HKIAS Lecture Theatre,  
LG/F, Academic Exchange Building,  
City University of Hong Kong



**Abstract:** Crystals are materials whose properties are intermediate between normal fluids and solid crystal, and have widespread use as the working substance for computer, TV and watch displays. The lecture will give an introduction to these materials and what mathematics can say about them, and in particular discuss how different theories of liquid crystals describe orientational defects in different ways.

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*Professor Sir John Ball is a leading expert in the fields of nonlinear partial differential equations, calculus of variations, and mathematical theory of nonlinear elasticity, microstructures, and liquid crystals. Prof. Ball has been awarded numerous distinctions for his outstanding research achievements. He is a Fellow of the Royal Society, a Fellow of the Royal Society of Edinburgh, a Member of the French Academy of Sciences, a Foreign Member of the Norwegian Academy of Science and Letters, a Member of the Academia Europaea, and a Fellow of the American Mathematical Society.*

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~ All are Welcome ~

Light refreshment will be provided from 3:30pm-4pm.

\*Non-CityU members who would like to attend the lecture,  
please contact Mr Andy Leung at [andyleung5@cityu.edu.hk](mailto:andyleung5@cityu.edu.hk)  
for registration and campus access.

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