

# Summer School in Complexity Science

**Emergent phenomena via separation of scales in time and space.**

**When:** 8–17 July 2007.

**Where:** Wye College, Kent, United Kingdom.

**Organisers:** Henrik Jeldtoft Jensen, Kim Christensen, Adrian Sutton and Martin Howard  
Imperial College London.

**Theme:** The overall theme of the summer school in complexity science is the dynamics of complex systems, with an emphasis on emergent phenomena such as spatio-temporal patterns. The summer school focuses on the introduction and application of the basic concepts and tools for studying complexity via lectures and problem-solving classes during the first five days (9–13 July) followed by a day of project work (14 July), project work presentation and assessment. The last two days (16–17 July) will focus on contemporary research areas with invited seminar speakers. In addition, contemporary review lectures by distinguished key-speakers are scheduled in the evenings.

**Lecturers, seminar speakers and evening speakers:**

**Kim Christensen** (Imperial College London)  
**Nasr Ghoniem** (University of California, USA)  
**Martin Howard** (Imperial College London)  
**Heinrich Jaeger** (The University of Chicago, USA)  
**Henrik Jeldtoft Jensen** (Imperial College London)  
**Alan McKane** (University of Manchester)  
**Mark Miodownik** (King's College London)  
**Didier Sornette** (University of California, USA)  
**Adrian Sutton** (Imperial College London)

**Sergio Ciliberto** (Ecole Normale Supérieure, France)  
**Stephan Harding** (Schumacher College)  
**Lucas Introna** (Lancaster University Management)  
**Bjørn Jamtveit** (University of Oslo, Norway)  
**Peter King** (Imperial College London)  
**José Fernando Mendes** (Univ. of Aveiro, Portugal)  
**Paolo Sibani** (University of Southern Denmark)  
**Michael Stumpf** (Imperial College London)  
**Geoffrey West** (Santa Fe Institute, USA)

**Detailed schedule:** Please visit the course web-page <http://www.imperial.ac.uk/complexityscience/>

**Aims:** The main aims of the summer school in complexity science are

- to train postgraduate students and researchers within various fields of research in complexity science
- to provide a stimulating introduction to and understanding of the basic quantitative mathematical concepts and tools of complexity science
- via guided problem-solving classes, to supply the attendees with first hand experience on applying the quantitative mathematical concepts and tools of complexity science introduced in the lectures
- to apply the basic quantitative mathematical concepts and tools of complexity science to a diversity of contemporary research areas
- to provide a forum where the attendees will meet leading complexity scientists from around the world
- to inspire and encourage the attendees to interact and create networks of interdisciplinary contacts that will benefit them in their future research.

**Objectives:** After attending the summer school in complexity science, the attendees should

- be aware of a panoply of basic concepts and tools of complexity science
- be able to recognise where to apply the basic concepts and tools of complexity science
- be able to recognise how to apply the basic concepts and tools of complexity science
- have created a network of interdisciplinary contacts they can build upon in their future research

**Potential attendees:** Postgraduate students and researchers worldwide within various fields of science (biology, geophysics, materials science, mathematics, physics just to name a few), who are interested in the area of complexity. There will be an upper limit of 50 attendees for the summer school.

**Cost:** There is no fee for attending the summer school. The cost of subsistence and accommodation is £810.

**Funding:** There is some funding available for travel, subsistence and accommodation for European nationalities.

**How to apply:** Please send your Curriculum Vitae, a statement of interest (limited to 250 words) expressing the added value for you of attending the summer school and two letters of reference as soon as possible to:

**Mr Kalra Taylor, Central Office Administrator, Department of Mathematics, Imperial College London, Huxley Building, 180 Queen's Gate, London SW7 2RH, UK, E-mail: [k.taylor@imperial.ac.uk](mailto:k.taylor@imperial.ac.uk). Telephone : +44-20-7594 8483, Fax: +44-20-7594 8517. Closing date 30 March 2007.**

**Sponsor:** Engineering and Physical Sciences Research Council (EPSRC), UK.