

Intensive School on Complex Fluids: modelling, theory and numeric

29/06/09

"Intensive School on Complex Fluids: modeling, theory and numerics."

(Thematic Period: Mathematical Modeling Summer at IMUS)

<http://personal.us.es/angeles/PWebJornadas/indexCF.htm>

IMUS : Instituto de Matematicas de la Universidad de Sevilla,

Sevilla, Spain, 29 June- 03 July 2009.

SCOPE:

The purpose of this intensive school on Complex Fluids is to bring together applied mathematicians and experts from other fields of science working in recent trends in the modelling, theoretical analysis and numerical simulation of complex fluids or micro-macro models. Within this emergent topic, special focus will be given to liquid crystal and diffuse interface phase-field models.

An international team of experts will present in a series of five courses, different aspects on modelling, mathematical and numerical analysis of complex fluids or micro-macro models (liquid crystals, solidification, mixtures, etc).

We would like to encourage young researchers to promote this topic between researchers at early stage in their training. With this aim, scholarships (covering lodging and/or inscription fees) are planned for a number of about 20 young researchers with a recent PhD or a PhD close to completion. They should already have skills in mathematical modeling, to be improved and complemented in some topics (e.g. continuous systems, mathematical or numerical analysis).

This school will take place at the University of Seville (Faculty of Mathematics) on 29th June – 03rd July 2009. It will be structured in 5 courses (of 5 hours each one) in 5 working days. Participants will also have the opportunity to present their work in two formats, either with short communications or in a posters session.

SPEAKERS and COURSES:

Maria-Carme CALDERER, IMA, University of Minnesota (USA),

"Liquid Crystal: interplay among mathematics and physics"

Chun LIU, Penn State University, Pennsylvania (USA),

" Energetic variational principle and complex fluids "

Nader MASMOUDI, Courant Institute New York (USA),

" Mathematical analysis of micro-macro models "

Andreas PROHL, Universitat Tübingen (Germany).

" Numerical analysis of liquid crystals "

Noel J.WALKINGTON, Carnegie Mellon University, Pittsburg (USA).

" Discontinuous Galerkin schemes and interface problems " Enlace:

<http://personal.us.es/angeles/PWebJornadas/indexCF.htm>