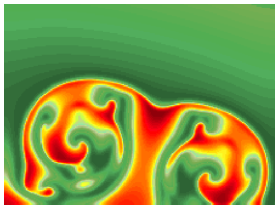

ICCSA 2009

The 3rd International Conference on
Complex Systems and Applications

Special session

Complexity in Soft and Condensed matter

Invited speaker: Hugues Chaté
(Groupe Théorie des Systèmes Complexes, DSM/IRAMIS/SPEC, CEA Saclay)

Complexity can be observed in many aspects of Soft and Condensed matter physics. Examples include turbulent flows in liquid, glassy dynamics, granular matter, complex fluids, damage and fracture of disordered materials, earthquakes, domain growth in ferroelectric or magnetic materials, superconductivity, dislocations in crystals, surface and interface dynamics in deposition problems, among other realisations.

Despite their diversity, these systems share similar features: the emergence of generic collective behaviours from the interaction between the elementary constituents that cannot be understood or predicted simply by some averaging over the behaviour of individual components.

Statistical physics represents the privileged tool of physicists to study these systems. However understanding this complex matter necessitates new theoretical developments since the systems under consideration are generally far from equilibrium and often involve various relaxation processes, sometimes dissipative and irreversible, ranging over several time and length scales.

This special session of the ICCSA is intended (i) to provide some examples of physical complex systems illustrating the diversity of this theme in Soft and condensed matter physics, (ii) to present the various recent theoretical progresses to describe them and (iii) to draw possible orientation for future research in this field. It will be the occasion to bring together physicists from various domains, both experimentalists and theoreticians working on complex systems as well as researchers from other fields interested by physical applications or concepts.

All theoretical, experimental and numerical contributions dealing with complex matter are welcomed in this session.

Contributions are expected in the form of a one-page abstract which must be prepared using the proposed template and sent to Arnaud Prigent before 10 May.

It is possible to submit an article which will be proposed for publication in a special issue of Journal of Nonlinear Systems and Applications.

The deadline for early-registration is 15 May.

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Additional information at: http://www-lih.univ-lehavre.fr/~bertelle/iccsa2009/iccsa2009.html.