

10th International Conference of Numerical Analysis and Applied Mathematics (ICNAAM)

2012 Interdisciplinary Symposium on Complex Systems

September 19-24, 2012, Kypriotis Hotels and Conference Center, Kos island, Greece

<https://sites.google.com/site/complexsystems2012/>

Theme of this year: **Complexity and Computation in Nature**

Organizers:

Ali Sanayei, *CSS; APS*

Hector Zenil, *Univ. of Sheffield; Wolfram Research*

Program Committee:

Andy Adamtzy, *Univ. of the West of England*

Jan Baetens, *Ghent Univ.*

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Karoline Wiesner, *Univ. of Bristol*

Paul Williams, *Univ. of Reading*

Ivan Zelinka, *Tomas Bata Univ.; Univ. of Ostrava*

Hector Zenil, *Univ. of Sheffield; Wolfram Research*

The main aim of the Interdisciplinary Symposium on Complex Systems is to bring together researchers working on complex systems. We invite scientists, researchers, engineers, and students to submit papers based on the main theme or attend.

Main Topics

- Modeling complex systems
- Complex and adaptive dynamical systems
- Evolution of complexity
- Self-organized systems
- Complexity measurement
- Complexity and information theory
- Random (Boolean) networks
- Synchronization and information in dynamical networks
- Complex dynamics in biological systems
- Natural selection and Darwinian dynamics
- Determinism behind thermodynamics and cryodynamics
- Molecular dynamics simulations
- Complex adaptive human systems
- Chaotic dynamical systems
- Chaos control
- Quantum dynamics
- Quantum chaos
- Cellular automata
- Controlling complexity
- Cybernetics
- Cosmology

Panel Discussion

During the symposium we will have a panel discussion (a round table) and discuss the most important open problems from some expert scientists. In addition, every participant would have this opportunity to have free discussions on problems.

Important Dates

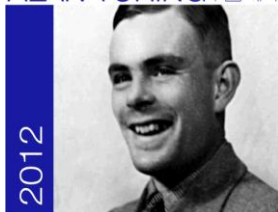
- Submission of 4-page Extended Abstracts: **June 1, 2012**
- Notification of Acceptance: **June 25, 2012**
- Early Registration: **April 15, 2012**
- Normal Registration: **June 15, 2012**
- Late Registration: **July 31, 2012**

Publications

- **Extended Abstracts:** American Institute of Physics (AIP) Conference Proceedings
- **Selected Full Papers:** Edited Book entitled "Emergence, Complexity and Computation in Nature" by Springer & International Journal of Unconventional Computing (IJUC)



ALAN TURING YEAR



2012

