



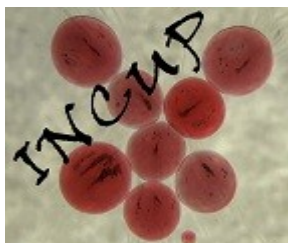
Salon de l'Argentine

Friday, August 12 afternoon



Program

Time



INCUP – *Information Coding in Unconventional Computing Substrates*

- Jerzy Gorecki
- Andy Adamatzky

A conventional computing medium is a cleverly prepared semiconductor structure, where two different potential levels represent the logical TRUE and FALSE states. As it is well known, this approach is highly successful and modern society cannot exist without silicon-based computers. An unconventional computer, whether physical, chemical or a living substrate, solves problems in a natural way, i.e. as the result of the time evolution that proceeds according to the laws of physics. Information coding is the translation of system state into a string belonging to a formal language. We know many types of computing medium like self-assembling nano-particles, chemical far-from-equilibrium systems, interacting microfluids or living organisms. The application of a photosensitive Belousov-Zhabotinsky reaction for direct image processing is a beautiful example. INCUP aims to bring together physicists, mathematicians, chemists, biologists and engineers to discuss what the optimal representation of information for unconventional computing could be.

13:30-17:30

Open coffee break
14:30-16:30 [Lobby
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- 13.40 Peter Dittrich, Friedrich Schiller University Jena
TBA
- 14.10 Ivan Erofeev, Moscow Institute of Physics and Technology
Digital photo-control of the network of live excitable cells
joint work with N. Magome and K. Agladze,
Institute for Integrated Cell-Material Sciences, Kyoto University
- 14.40 Julian Holley, University of the West of England
Pathways to learning and adaptation in networks of BZ encapsulated vesicles
- 15.10 Coffee break and posters
- 15.40 Gerd Gruenert, Friedrich Schiller University Jena
Architectural properties of bioreactor embedded chemical droplet computers
- 16.00 Jan Szymanski, Institute of Physical Chemistry, Polish Academy of Sciences
Chemical pulses in biomimetic droplets
- 16.20 Konrad Gizynski, Institute of Physical Chemistry, Polish Academy of Sciences
Optical control of BZ droplet dynamics
- 16.30 Jerzy Gorecki, Institute of Physical Chemistry, Polish Academy of Sciences
Computer modeling of interacting BZ droplets
joint work with Joanna Natalia Gorecka,
Institute of Physics, Polish Academy of Sciences
- 17.00 Open discussion