

INTERSYMP 2018
30th International Conference on
Systems Research, Informatics and Cybernetics
to be held at Ludwig-Markgraf-Gymnasium,
Hardstrasse 2, Baden-Baden, Germany
July 30-August 3, 2018

CALL FOR PAPERS

SYMPOSIUM ON

ANTICIPATIVE MODELS IN PHYSICS,
RELATIVISTIC QUANTUM MECHANICS,
BIOLOGY AND INFORMATICS

Organized and Chaired by Prof. Dr Ir Daniel M. DUBOIS

The Paper Submission Guidelines, the Copyright Transfer Form and the Conference Registration Form are available at the Home page of the International Institute for Advanced Studies (IIAS) at: <http://www.iias.edu>

SYMPOSIUM PRESENTATION

Potential authors may submit paper dealing with a research in their field of expertise. Conceptual, logical, mathematical models may be proposed. Models with reversible time, retardation and anticipation can be developed with partial differential equations and functional differential equations. Recursive, incursive and hyperincursive discrete equations can be presented for simulating these models with algorithms.

In Physics, the requirement of time-reversal symmetry, in general, is difficult to conjugate with the principle of causality. Maxwell's equations for electromagnetic waves have two retarded (delayed) and anticipated (advanced) solutions. For examples, there are the Liénard-Wiechert theory of retarded and advanced electromagnetic potentials, and the Wheeler-Feynman absorber theory of advanced and retarded electric fields. Also in general relativity, there is the Shapiro gravitational time delay effect.

In biology, there are retarded and anticipated electrical potentials in the neural brain and nervous system of the body. Economical systems also deal with retarded and anticipated decision making.

In informatics, the programs of the computing machines are retarded and anticipated sets of instructions.

LIST OF TOPICS

Physics, arrow of time, causality, anticipation, retardation, advanced and retarded potentials, quantum mechanics, thermodynamics, quantum teleportation, quantum entanglement, nuclear physics, gravitation, black hole, galaxy rotation problem, special and general relativity.

Mathematical physics, harmonic oscillator, electromagnetism, Maxwell equations, Schrödinger quantum equation, Klein-Gordon field equation, Dirac relativistic quantum equation. Computational recursive, incursive and hyperincursive discrete physics.

Biology, computational neuroscience, computational theory of mind, anticipation and retardation in cognition and decision making, mind-body problem, consciousness, free will, language, learning and memory, living systems, economy, social networks, transhumanism.

Informatics, computing systems, recursive, incursive and hyperincursive discrete algorithms, information theory, anticipation and retardation in Artificial Intelligence, Artificial Life, humanoid robots, social networks, engineering, control and automation.

Invitation to authors to submit an abstract and a full paper

An extended abstract of 200 words as a maximum must be submitted for initial evaluation.

Author of accepted abstract will be encouraged to submit full paper of 5 single-spaces typed pages prepared according to the “Instruction to Authors” posted at the IAS website: <http://www.ias.edu>

All submitted paper will be peer reviewed and accepted on the basis of their quality and relevance for the disciplines addressed.

The accepted paper of registered authors will be scheduled for presentation and published in a Conference Proceedings volume.

A strict adherence to Registration Procedure and Instructions to Authors is required for publication of your paper as detailed at the Conference Website: <http://www.ias.edu>

Submission of abstract and full paper

Abstracts, as well as the full papers, must be submitted electronically by email as attachment in Word format to:

Prof. Dr Ir Daniel M. Dubois, Director, Centre for Hyperincursion and Anticipation in Ordered Systems (CHAOS), Symposium Chairman,

Email: daniel.dubois@uliege.be

URL: <http://www.sia.hec.ulg.ac.be>

and

Prof. George E. Lasker, Conference Chairman, InterSymp 2018

President, International Institute for Advanced Studies (IIAS)

Email: lasker@uwindsor.ca

Deadlines for submission of abstract and full paper:

Abstract submission: March 30, 2018

Notification of acceptance: April 9, 2018

Final paper due: May 9, 2018