



# CHAOS 2011

## 4<sup>th</sup> Chaotic Modeling and Simulation International Conference

May 31 - June 3, 2011 Agios Nikolaos, Crete Greece

[www.cmsim.org](http://www.cmsim.org)



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EECS Department, University of California, Berkeley, USA, Editor of the International Journal of Bifurcation and Chaos

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#### David Ruelle

Academie des Sciences de Paris, Honorary Professor at the Institut des Hautes Etudes Scientifiques of Bures-sur-Yvette, France

#### Ferdinand Verhulst

Mathematics Faculty, Utrecht, The Netherlands

### Conference Topics

1. Chaos and Nonlinear Dynamics
2. Stochastic Chaos
3. Chemical Chaos
4. Data Analysis and Chaos
5. Hydrodynamics, Turbulence and Plasmas
6. Optics and Chaos
7. Chaotic Oscillations and Circuits
8. Chaos in Climate Dynamics
9. Geophysical Flows
10. Biology and Chaos
11. Neurophysiology and Chaos
12. Hamiltonian Systems
13. Chaos in Astronomy and Astrophysics
14. Chaos and Solitons
15. Micro- and Nano- Electro-Mechanical Systems
16. Neural Networks
17. Chaos, Ecology and Economy



**Conference Location** : Agios Nikolaos, Crete Greece

Local Co-Organiser: **Yiannis Dimotikalis**  
Technological Educational Institute of Crete, Agios Nikolaos Branch

### International Scientific Committee

C. H. Skiadas (Technical University of Crete, Chania, Greece), Chair

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K. Hagan, University of Limerick, Ireland

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T. Kapitaniak (Technical University of Lodz, Lodz, Poland)

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V J Law (Dublin City University, Glasnevin, Dublin, Ireland)

V. Lucarini (University of Bologna, Italy)

J. A. T. Machado (ISEP-Institute of Engineering of Porto, Porto, Portugal)

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G. M. Mahmoud (Assiut University, Assiut, Egypt)

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A. S. Mikhailov (Fritz Haber Institute of Max Planck Society, Berlin, Germany)

E. R. Miranda (University of Plymouth, UK)

M. S. M. Noorani (University Kebangsaan Malaysia)

G. V. Orman (Transilvania University of Brasov, Romania)

S. Panchev (Bulgarian Academy of Sciences, Bulgaria)

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F. Pellicano (Universita di Modena e Reggio Emilia, Italy)

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A. Valyaev (Nuclear Safety Institute of RAS, Russia)

A. Vakakis (National Technical University of Athens, Greece)

J. P. van der Weele (University of Patras, Greece)

M. Wiercigroch (University of Aberdeen, Aberdeen, Scotland, UK)

M. V. Zakrzhevsky (Institute of Mechanics, Riga Technical University, Latvia)

### The Conference includes three types of presentations

Key Note Presentations on the main topics of the Conference selected by the Program Committee;

Contributed papers or posters proposed by authors;

Special Sessions or Workshops proposed from people working in a special topic of the chaotic field

*Every Special Session includes 4-6 presentations. Two or more special sessions form a Workshop*

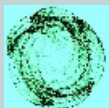
*The session organizer is responsible for the selection and the review process of the papers of his session.*

**A collection of the best papers presented in the three previous CHAOS Conferences are included in the following books published by World Scientific**

**1. Topics on Chaotic Systems: Selected Papers from the CHAOS2008 International Conference, C. H. Skiadas et al. Eds, World Scientific, 2009.**

**2. Chaotic Systems: Theory and Applications, C. H. Skiadas and I. Dimotikalis, Eds, World Scientific, 2010.**

**3. Chaos Theory: Modeling, Simulation and Applications: Selected Papers from the CHAOS2010 International Conference, C. H. Skiadas et al. Eds, World Scientific, forthcoming.**



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