



HELLENIC - EUROPEAN RESEARCH ON COMPUTER MATHEMATICS AND ITS APPLICATIONS

9th Hellenic - European Conference on Computer Mathematics and its Applications

September 24-26, 2009, Athens University of Economics and Business, Athens, Hellas

HERCMA 2009



Invited Speakers

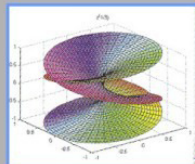
- Professor **K. AIHARA**, Department of Mathematical Informatics, Graduate School of Information Science & Technology, University of Tokyo, Japan
 Professor **Z. CHEN**, Institute of Computational Mathematics and Scientific/Engng Computing Academy of Mathematics and System Sciences, Chinese Academy of Sciences, Beijing, China
 Professor **F. DAREMA**, Directorate for CISE (Computer & Information Science & Engineering)- Next Generation Software Program, USA National Science Foundation (NSF), Arlington, Virginia, U.S.A.
 Professor **A. FOKAS**, Department of Applied Mathematics and Theoretical Physics (DAMTP), University of Cambridge, England - Academician, Academy of Athens, Greece
 Professor **A. KARAGEORGHIS**, Department of Mathematics and Statistics, University of Cyprus, Cyprus
 Professor **P. MIHAILESCU**, Mathematisches Institut, Georg-August University, Goettingen, Germany
 Professor **P. PHILLIPS**, KBS, University of Kent, Canterbury, England
 Professor **C. SCHUETTE**, Department of Mathematics and Computer Science, Mathematics Institute, Bio Computing Group, Free-University of Berlin, Berlin, Germany
 Professor **E.E. TYRTYSHNIKOV**, Institute of Numerical Mathematics (INM), Russian Academy of Sciences, Russia
 Professor **L. XANTHIS**, University of Westminster, England
 Professor **D. XIU**, Department of Mathematics, Purdue University, U.S.A.
 Professor **C. ZEREPPOS**, Academician, Academy of Athens - Department of Geology & GeoEnvironment, University of Athens - National Observatory of Athens, Greece

Organizing Committee

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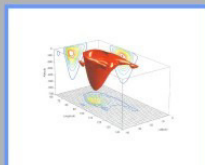
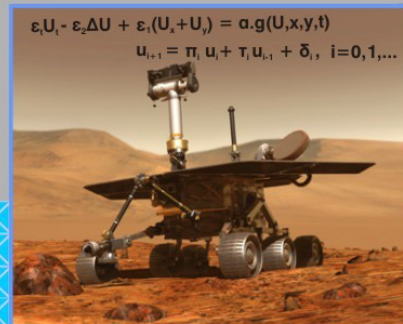
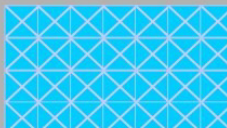
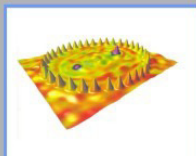
Co-operating Societies

- IMA** (Institute of Mathematics and its Applications), England
IMACS (Intern. Association for Maths and Computers in Simulation), U.S.A.



$$\varepsilon_1 U_x - \varepsilon_2 \Delta U + \varepsilon_3 (U_x + U_y) = \alpha g(U, x, y, t)$$

$$u_{i,j+1} = \pi_i u_{i,j} + \tau_j u_{i+1,j} + \delta_j, \quad i=0,1,\dots$$



**RESEARCH GROUP FOR
ADVANCED COMPUTATIONAL MATHEMATICS**

**DEPARTMENT OF INFORMATICS
ATHENS UNIVERSITY OF ECONOMICS AND BUSINESS**

***Session:* Computers, Communications & Control (C3) –Modern Applications**

Organizers: R. C. Papademetriou, Portsmouth University, UK (*Chairperson*)

A. Kevin Tang, Cornell University, USA

On Measuring Computer Systems Safety by Organizing and Analyzing Attacks Through Nessus Attack Scripting Language

I. Chalvatzis¹, D.A Karras², V. Zorkadis³, R.C Papademetriou¹

¹ University of Portsmouth, UK ² Chalkis Institute of Technology, Greece ³Data Protection Authority, Greece

Recent Advances in Technologies and Simulation Tools of Sensor Networks: A Layered Approach

A. Filippou¹, D.A. Karras², R.C. Papademetriou³

¹S. Papadimitriou-Hellas Ltd, Greece ²Chalkis Institute of Technology, Greece ³University of Portsmouth, UK

Ad-hoc sensor networks energy consumption: A review of the TORA protocol

V. Kanakaris, D. Ndzi and D. Azzi

University of Portsmouth, UK

A review of the energy constraints associated with Ad-Hoc Underwater Acoustic Sensor Networks (UW-ASNs)

K. Ovaliadis and N. Savage

University of Portsmouth, UK

A critical overview of computational management methodologies and systems towards definition of system level solutions to open problems

N. Rassias¹, D. A. Karras², R. C. Papademetriou¹

¹University of Portsmouth, UK ²Chalkis Institute of Technology, Greece