



1st Conference of Computational
Interdisciplinary Sciences (CCIS)

August 23-27, 2010, Brazil



CCIS 2010 - Invited Talks – Program Schedule

Monday 23

9:15-10:00

Collective Spatial Action Models as a Foundation for Assessing Human-Environment Interactions

Gilberto Camara

Imaging Processing Division, Instituto Nacional de Pesquisas Espaciais, Brazil

10:00-10:35

e-Science - Leveraging Scientific Discovery through research in Computer Science

Claudia B. Medeiros

Institute of Computing, Universidade de Campinas, Brazil

11:00-11:35

Computational Challenges in Space and Meteorological Sciences

Haroldo F. Campos Velho

Lab for Computing and Applied Mathematics, Instituto Nacional de Pesquisas Espaciais, Brazil

13:45-14:30

Stochastic Simulation for Bayesian Inference: Computational Methods and Applications

Hedibert F. Lopez

Department of Econometrics and Statistics, University of Chicago, USA

14:30-15:05

Computational Aspects in the Simulation of Rarefied Gas Flows

Liliane B. Barichello

Institute of Mathematics, Universidade Federal do Rio Grande do Sul, Brazil

15:30-16:05

Search Problems in Quantum Computation

Renato Portugal

Laboratório Nacional de Computação Científica, Brazil

16:05-16:40

Citizen Science: Meaning and Computational Aspects

Rafael Santos

Lab for Computing and Applied Mathematics, Instituto Nacional de Pesquisas Espaciais, Brazil

Keynote Invited: 40 min. + 5 min. (questions)

Invited: 30 min. + 5 min. (questions)

Tuesday 24

8:45-9:30

Computing Simple Dynamics for Complex Systems

Raymond Kapral

Department of Chemistry, University of Toronto, Canada

9:30-10:05

Computing Diffusion Processes

Fernando A Oliveira

Institute of Physics, Universidade de Brasília, Brazil

10:05-10:40

Computational Simulation of MHD Dynamo

Erico L. Rempel

Department of Mathematics, Instituto Tecnológico de Aeronáutica, Brazil

11:00-11:35

A Complex Network Approach for Phylogenetic Analysis

Suani Pinho

Department of Physics, Universidade Federal da Bahia, Brazil

13:45-14:30

Modeling, Simulating and Calibrating Genetic Regulatory Networks

Rui Dilão

NonLinear Dynamics Group, Instituto Superior Técnico (IST), Portugal

Keynote Invited: 40 min. + 5 min. (questions)

Invited: 30 min. + 5 min. (questions)

Wenesday 25

8:45-9:30

Optimization with Extremal Dynamics

Stefan Boettcher

Department of Physics, Emory University, USA

9:30-10:05

Chaotic Criptography: a nouvel computation approach

Alexandre S. Martinez

Department of Physics and Mathematics, Universidade de São Paulo, Brazil

10:05-10:40

Block Preconditioners for Parabolic Optimal Control Problems

Christian Schaerer

Computer Science Graduate Department, Polytechnic, National University of Asuncion-UNA, Paraguay

11:00-11:35

Computational Issues in Astrophysics, Cosmology and Astrobiology

Cesar A Caretta

Department of Astronomy, Universidade de Guanajuato, Mexico

11:35-12:10

Computing Maps of Cosmic Microwave Background Radiation

Alexandre Wuensche

Astrophysics Division, Instituto Nacional de Pesquisas Espaciais, Brazil

12:10-12:45

Data Science in Space Physics: From Space Weather to Cosmology

Reinaldo R. Rosa

Lab for Computing and Applied Mathematics, Instituto Nacional de Pesquisas Espaciais, Brazil

14:00-14:45

Intelligent Sensor Systems

Kiril Alexiev

Institute for Parallel Processing, Bulgarian Academy of Sciences, Bulgaria

Thursday 26

8:45-9:30

Computational Challenges in Molecular Dynamics

Mikko Karttunen

Department of Applied Mathematics, The University of Western Ontario, Canada

9:30-10:05

Computing Turbulent Processes in Physics and Biology

Joern Davidsen

Department of Physics and Astronomy, University of Calgary, Canada

10:05-10:40

Supercomputing for Engineering Problems

Alvaro Coutinho

COPPE, Universidade Federal do Rio de Janeiro, Brazil

11:00-11:35

Controlling Complexity

Elbert Macau

Lab for Computing and Applied Mathematics, Instituto Nacional de Pesquisas Espaciais, Brazil

14:00-14:45

Computational Challenges in Regenerative Medicine

Ornella Parolini

Centro di Ricerca E. Menni (CREM), Fondazione Poliambulanza – Istituto Ospedaliero, Italy

Friday 27

8:45-9:30

Computational Analysis and Modelling of Reaction-Diffusion Patterns

Marcus V.B. Hauser

Institute for Experimental Physics, Otto-von-Guericke-Universität Magdeburg, Germany

9:30-10:05

A Splitting Scheme for Solving Reaction-Diffusion Equations

José Pontes

COPPE, Universidade Federal do Rio de Janeiro, Brazil

10:05-10:40

Numerical Simulation of Flow In Porous Media

Murilo P. de Almeida

Department of Physics, Universidade Federal do Ceará, Brazil

11:00-11:35

A MAP_MRF Approach for Multispectral Image Classification

Nelson D.A. Mascarenhas

Department of Computation, Universidade Federal de São Carlos, Brazil

CCIS 2010 - Tutorials – Program Schedule

Monday 23

Lecture 1

16:45-18:00

*T1 – Monte Carlo Method (Room I)
Professor Hedibert Lopes*

*T2- Parallel Computing (Room II)
Professor Kiril Alexiev*

*T3- Neural Networks (Room III)
Professor José D. Simões da Silva*

Tuesday 24

Lecture 2

16:40-17:55

*T1 – Monte Carlo Method (Room I)
Professor Hedibert Lopes*

*T2- Parallel Computing (Room II)
Professor Kiril Alexiev*

*T3- Neural Networks (Room III)
Professor José D. Simões da Silva*

Thursday 26
Lecture 1
17:05-18:20

T4 – Fuzzy Logic (Room I)
Professor Sandra Sandri

T5 – Software Engineering (Room II)
Professor Nilson Sant'Anna

T6 – Computational Biology (Room III)
Professor Rui Dilão

Friday 27
Lecture 2
14:50-16:05

T4 – Fuzzy Logic (Room I)
Professor Sandra Sandri

T5 – Software Engineering (Room II)
Professor Nilson Sant'Anna

T6 – Computational Biology (Room III)
Professor Rui Dilão