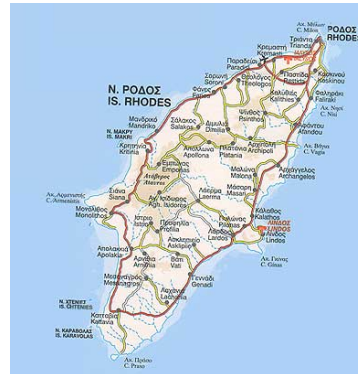


Advertisement for a mathbio session in
ICNAAM (<http://www.icnaam.org/>)
**13th International Conference of Numerical Analysis
and Applied Mathematics**



Rhodes, Greece, September 23-29 2015

Mathematical models and methods to investigate heterogeneity in cell and cell population biology

Mathbio session during ICNAAM 2015 (Rhodes, Greece, Sep. 23-29)
(#70) proposed by Jean Clairambault, INRIA & LJLL, UPMC, Paris

This session will investigate hot topics related to mathematical representations of cell and cell population dynamics in biology and medicine, in particular with applications to cancer. Methods in mathematical modelling and analysis, and in statistical inference using single-cell and cell population data, should contribute to focus this session on heterogeneity in cell populations.

- - Intracellular protein dynamics and gene regulatory networks: ODEs, PDEs, DDEs
- - Representation of cell population dynamics using agent-based models (ABMs) and/or PDEs
- - Hybrid models and multiscale models to integrate single-cell dynamics into cell population behaviour
- - Structured cell population dynamics and asymptotic evolution w.r.t. relevant traits
- - Heterogeneity in cancer cell populations: origin, evolution, phylogeny and methods of reconstruction
- - Drug resistance as an evolutionary phenotype: predicting and overcoming it in therapeutics
- - Theoretical therapeutic optimisation of combined drug treatments in cancer

Constraints

- No funding available: you have to find it by yourself
- Upload of a 4-page paper is mandatory (deadline...)
- Conference fees exist (regular / student): see the website, but accommodation in the conference hotel is absolutely not mandatory

Publications

We are proud to announce that the Proceedings of ICNAAM 2015 will be published in the very famous [AIP \(American Institute of Physics\) Conference Proceedings](#).

The journals in which selected Proceedings of ICNAAM 2015 will be published are:

1. Journal of Numerical Analysis, Industrial and Applied Mathematics (JNAIAM) <http://www.jnaiam.org>
2. Mathematical Methods in the Applied Sciences (Wiley & Sons)
3. Journal of Statistical Theory and Practice
4. Applied Mathematics & Information Sciences (AMIS)

For Publication you must contact via email Professor Dr. Theodore E. Simos at:

tsimos.conf@gmail.com or tsimos.conf09@gmail.com

The conference organizers invite colleagues to submit proposals for Sessions, or Workshops and Minisymposia.

Each session should have at least 6 presentations and each Workshop or Minisymposium at least 12 presentations.

The Session, Workshop or Minisymposium organizers will be responsible for advertising their session, reviewing and selecting the papers.

Session organizers will have one presentation free. The Workshop or Minisymposium organizers will have free registration, accommodation and two presentations. Papers accepted for Sessions, Workshops or Minisymposia will be published in the Proceedings of ICNAAM 2015.

After the Conference papers presented at the Sessions, Workshops or Minisymposia will be considered for publication in the journals mentioned above.

Rodos Palace Hotel, Rhodes

ICNAAM 2015

INVITED SPEAKERS

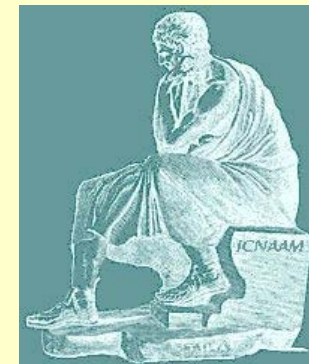
| | |
|-----------|------------------------|
| Prof. Dr. | Raffaele D'Ambrosio, |
| Prof. Dr. | Peter Deuflhard, |
| Prof. Dr. | Wayne Enright, |
| Prof. Dr. | Ludwig Gauckler, |
| Prof. Dr. | C. W. Gear (Bill), |
| Prof. Dr. | Klaus Guerlebeck, |
| Prof. Dr. | Nicola Guglielmi, |
| Prof. Dr. | Ernst Hairer, |
| Prof. Dr. | Felice Iavernaro, |
| Prof. Dr. | Zdzislaw Jackiewicz, |
| Prof. Dr. | David I. Ketcheson, |
| Prof. Dr. | Maria Lopez Fernandez, |
| Prof. Dr. | William F. Mitchell, |
| Prof. Dr. | Yaroslav D. Sergeev, |
| Prof. Dr. | You-He Zhou |

Honoring Bob Skeel on the occasion
of his career on
Numerical Analysis and Applied Mathematics



13th INTERNATIONAL CONFERENCE OF NUMERICAL ANALYSIS AND APPLIED MATHEMATICS 2015 (ICNAAM 2015)

23-29 September 2015,
Rhodes, Greece



www.icnaam.org
www.icnaam.com
www.icnaam.net

Dates of Importance

| | |
|---|---------------------------------------|
| Proceedings paper (3-4 pages) submission deadline | 20 July 2015 |
| Notification of acceptance / referees' amendments | 29 July 2015 |
| Submission of the source files of the camera ready short papers to AIP Conference Proceedings | 1 August 2015 |
| Conference | 23-29 September 2015 |
| Submission of the full papers for publication in conference syndicated journals | September 30, 2015 - January 31, 2016 |

Contact Details

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Fax : 0035 726 555 296

E-mail : tsimos.conf@gmail.com or
tsimos.conf09@gmail.com

Aims and Scope

The aim of the International Conference of Numerical Analysis and Applied Mathematics (ICNAAM 2015) is to bring together leading scientists of the international Numerical & Applied Mathematics community and to attract original research papers of very high quality. The topics to be covered include (but are not limited to): All the research areas of Numerical Analysis and Computational Mathematics and all the research areas of Applied Mathematics

Topics

All the research areas of Numerical Analysis and Computational Mathematics:

(Numerical ODEs, Numerical PDEs (inc. BVPs), Scientific Computing and Algorithms, Stochastic Differential Equations, Approximation, Numerical Linear Algebra, Numerical Integral Equations, Error Analysis and Interval Analysis, Difference Equations and Recurrence Relations, Numerical problems in Dynamical Systems, Applications to the Sciences (Computational Physics, Computational Statistics, Computational Chemistry, Computational Engineering etc.), Differential Algebraic Equations, Numerical methods in Fourier analysis etc)

All the research areas of Applied and Industrial Mathematics:

(Mathematical Physics, Mathematical Chemistry, Mathematical Biology and Mathematical Medicine, Optimization and Operational Research, Theoretical Mechanics, Discrete Applied Mathematics, Statistics, Probability, Dynamical Systems, Algorithms, Experimental Mathematics, Theoretical Computer Science, Applied Analysis, Mathematical Modeling (including but not limited to mathematical modeling of engineering and environmental processes, manufacturing, and industrial systems, heat transfer, fluid mechanics, CFD, and transport phenomena; solid mechanics and mechanics of metals; electromagnets and MHD; reliability modeling and system optimization; decision sciences in an industrial and manufacturing context; civil engineering systems and structures; mineral and energy resources; relevant software engineering issues associated with CAD and CAE; and materials and metallurgical engineering, mathematical modeling of social, behavioral and other sciences), Decomposition and Reconstruction Algorithms, Subdivision Algorithms, Continuous and Discrete Wavelet Transform, Time-frequency Localization, Phase-Space Analysis, Subband Coding, Image Compression, Real-Time Filtering, Radar and Sonar Applications, Transient Analysis, Medical Imaging, Multigrid Methods, Frames, Bifurcation and Singularity Theory, Deterministic Chaos and Fractals, Soliton and Coherent Phenomena, Formation of Pattern, Evolution, Complexity Theory and Neural Networks, Analytical Approaches and Simulations for more Accurate Descriptions, Predictions, Experimental Observations and Applications of Nonlinear Phenomena in Science and Engineering, Theoretical and Applied aspects of Computational Geometry, Control Theory and Automation, Fuzzy Sets and Systems and Fuzzy Logic, Applied Algebra, Quality Theory of Differential Equations, Neural Networks , etc.)

Scientific Committee

Chairman

Prof. T. E. Simos
Academician, President of the European Society of Computational Methods in Sciences, Engineering and Technology (ESCMSET),

Vice Chairmen

Prof. Ch. Tsitouras,
Department of Applied Sciences,
Technological Educational Institute of
Chalkis, Greece

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Prof. Peter Børstad, Norway
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Prof. Ch. Tsitouras, Greece
Prof. G. Alistair Watson, UK
Dr. Dia Zeidan, Jordan