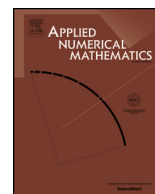


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# Applied Numerical Mathematics

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## Editorial

### Preface [Special issue: NumAn 2012]



#### Introduction

The “Fifth International Conference on Numerical Analysis (NumAn 2012) – *Recent Approaches to Numerical Analysis: Theory, Methods and Applications*” was held during September 5–8, 2012, in Ioannina, Greece. Information regarding this event can be found at the webpage<sup>1</sup> of the conference hosted at the University of Ioannina.

The beautiful city of Ioannina is the “birthplace” of the NumAn Conference Series since the First NumAn Conference was held there in 2005. The next two Conferences were held in 2007 and 2008 in Kalamata, Greece (see [3]<sup>2</sup> and [2]<sup>3</sup>), while the Fourth NumAn Conference was held in 2010 in Chania, Greece (see [1]<sup>4</sup>).

The NumAn 2012 Conference was honored to host four Plenary Speakers:

- (1) Efstratios Gallopoulos (University of Patras, Greece),
- (2) Emmanuil Georgoulis (University of Leicester, United Kingdom),
- (3) Stig Larsson (Chalmers University of Technology and University of Gothenburg, Sweden), and
- (4) Stefano Serra-Capizzano (University of Insubria–Como, Italy).

The aims of the Conference were:

- (1) to bring together and bequeath scientific activities, directions and pursuits of scientists in Greece and abroad on subjects that pertain to the Conference,
- (2) to foster an exchange of views and ideas,
- (3) to study the theoretical background required for methods, algorithms and techniques used in applications,
- (4) to search directions of theoretical results towards applications,
- (5) to highlight open problems and future directions of numerical analysis.

The members of the Conference Organizing Committee were: G.D. Akrivis, V.A. Dougalis, A. Hadjidimos, I.S. Kotsireas, C. Makridakis, D. Noutsos, Y.G. Saridakis and M.N. Vrahatis. The members of the Local Organizing Committee of the Conference were: G.D. Akrivis, D. Noutsos and P. Vassalos.

The approximately 60 participants came from 14 countries: Azerbaijan, Belgium, Canada, Cyprus, Greece, Iran, Italy, Japan, Nigeria, Serbia, Sweden, Turkey, United Kingdom and the United States.

At the conference were presented 4 plenary talks, 35 contributed talks and 2 posters. The issue at hand of Applied Numerical Mathematics contains papers selected after formal review from NumAn 2012 Conference.

#### Synopsis of the NumAn 2012 conference activities

Wednesday, September 5th, 2012

*Opening ceremony:* The president of the Organizing Committee of the Conference, Professor Georgios D. Akrivis of the University of Ioannina addressed the attendants and declared, on behalf of the Organizing Committee, the opening of the conference.

<sup>1</sup> <http://users.uoi.gr/numan2012/>.

<sup>2</sup> <http://www.math.upatras.gr/numan2007/>.

<sup>3</sup> <http://www.math.upatras.gr/numan2008/>.

<sup>4</sup> <http://numan2010.science.tuc.gr/>.

The keynote speaker and his lecture was as follows:

- Stig Larsson: *Numerical solution of stochastic evolution PDEs.*

On Wednesday's intermediate sessions, scientists from Belgium, Iran, Serbia, Turkey and Greece presented their work.

*Thursday, September 6th, 2012*

The keynote speakers and their corresponding lectures were as follows:

- (1) Stefano Serra-Capizzano: *Symbol approach (for structured matrices) in multigrid with applications in imaging.*
- (2) Efstratios Gallopoulos: *Matrix methods for some problems in data analysis.*

On Thursday's intermediate sessions, scientists from Cyprus and Greece presented their work.

*Friday, September 7th, 2012*

The keynote speaker and his lecture was as follows:

- Emmanuil Georgoulis: *Error control and adaptivity for advection-dominated problems.*

On Friday's intermediate sessions, scientists from Japan, Nigeria and Greece presented their work.

*Saturday, September 8th, 2012*

On Saturday's sessions, scientists from Azerbaijan, Nigeria and Greece presented their work.

The last session of the conference was a long Panel Discussion coordinated by Professor Efstratios Gallopoulos. All participants available that day attended and many of them spoke. The Panel signaled the end of the NumAn 2012. Warm thanks were extended from everyone present as the organizers promised to see that NumAn Conferences continue in the future.

## Acknowledgements

Besides the undersigned who acted as referees at various stages of the evaluation process the guest editors would like to mention the following colleagues whose help in the evaluation of the submitted manuscripts for publication in the present Special Issue was invaluable: Kuniyoshi Abe, Maria Adam, Georgios Akrivis, Anastasios Bezerianos, Matthias Bolten, Bruno Carpentieri, Antonios Charalambopoulos, Panagiotis Chatzipantelidis, Konstantinos Chrysafinos, Mark Daley, John A. Ekaterinaris, Daniel Elfverson, Salvatore Filippone, Sebastian Franz, Efstratios Gallopoulos, Emmanuil H. Georgoulis, Apostolos Hadjidimos, Theodoros Horikis, Bogdan Ene-Iordache, George Kastis, Theodoros Katsaounis, Natalia Kopteva, Julien Langou, Marc Moreno Maza, Yannis Papaharilaou, Dimitrios A. Pinotsis, Vassilis P. Plagianakos, Antoine Rousseau, Vanessa Styles, Edward Sykes, NungSing Sze, Paraskevas Vassalos and Georgios Zouraris.

We are extremely grateful as organizers and journal guest editors and extend our most sincere thanks to International Association for Mathematics and Computers in Simulation (IMACS) for sponsoring the NumAn 2012 conference through providing us the edition of a Special Issue of the IMACS journal "Applied Numerical Mathematics".

Last but not least, we would like to express our cordial thanks to Professor Robert Beauwens, Editor-in-Chief of Applied Numerical Mathematics (APNUM) Journal, who accepted our proposal to host in a Special Issue of the APNUM Journal selected papers presented at the NumAn 2012 Conference, as well as to Ms. France Pinon, Editorial Office Manager. Without their patience and continuous encouragement and assistance this Special Issue would not be possible. Many thanks go also to the Elsevier B.V. Publishers.

## References

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