



Rousse University

## Seventh Conference on Finite Difference Methods: Theory and Applications, June 11-16, 2018 Lozenetz, Bulgaria



**Organized by** Division of Numerical Analysis and Statistics, University of Rouse, Rouse, in cooperation with Department of *Parallel Algorithms*, Institute of Information and Communication Technologies , BAS, Sofia.

Dear Colleague,

Due to your recognized research and reputation in the area of numerical methods and applications, the Organizing Committee of the 7-th Conference on Finite Difference Methods: Theory and Applications, June 11-June 16, 2018 has the honor to invite you to present a talk included in the scientific program of FDM: T&A'2018.

We would also like to offer you the opportunity to organize a special session in the framework of FDM: T&A'2018.

### **The main tracks of the conference are planned to be:**

- Validation of finite difference methods for solving problems of mathematical physics;
- Combined finite difference and finite element methods;
- Iterative methods and parallel algorithms for solving grid equations;
- Finite difference methods for nonlinear problems;
- Inverse problems and problems of control;
- Finite difference methods in fluid and continuum mechanics;
- Numerical methods in stochastics;
- Applications of difference methods to engineering problems, biology, economics, etc.

### **Special sessions proposed up to now:**

(Please note, that the organizers invite participants in the special sessions)

*Novel methods in computational finance* by M. Ehrhardt, C. Mishra, S. Wang;

*Advanced numerical and applied studies of inverse problems* by S.I. Kabanikhin;

*Numerical methods for fractional-derivative problems and applications* by A. Alikhanov, R. Lazarov, M. Stynes;

*Markov models and their applications* by R. Georgieva, I.T. Dimov, A. Sipin, A. Zeifman;

*Meshfree Generalized Finite Difference Methods: From Theory to Applications* by I. Michel;

*Reliable difference methods for singularly perturbed problems* by G. Shishkin, L. Shishkina;

*Conservative Difference Schemes: Theory and Applications* by E.G. Nikonov;

*Numerical Methods for Solving the Equations of Hydrodynamics in the Study of Turbulent Flow*  
by A. Lipanov;

*Iterative schemes for solving nonlinear models* by M.P. Vassileva, A. Cordero, J.R. Torregrosa;

*Finite differences methods in life sciences* by G. Pena, J. A. Ferreira;

*Splitting methods for multicomponent and multiscale problems: theory and applications* by G. Geiser.

**Scientific Committee:** A. Alikhanov (Russia), C. Cuevas (Brazil), I. T. Dimov (Bulgaria), M. Ehrhardt (Germany), I. Farago (Hungary), M. J. Gander (Switzerland), R. Lazarov (USA), P. Matus (Belarus), Nefedov (Russia), V. Shidurov (Russia), G. Shishkin (Russia), M. Stynes (China), P. Vabishchevich (Russia), S. Wang (Australia), L. Zikatanov (USA)

**Plenary and Key Lecturers**, who already accepted invitation of the Org. Committee:  
S. Bordas (Luxembourg), B. Despres (France), I. T. Dimov (Bulgaria), M. Ehrhardt (Germany), I. Farago (Hungary), J. A. Ferreira (Portugal), M. J. Gander (Switzerland), J. Geiser (Germany), K. in'thout (Belgium), S. I. Kabanikhin (Russia), O. Lafitee (France), R. Lazarov (USA), C. P. Li (China), A. Lipanov (Russia), V. Shidurov (Russia), G. Shishkin (Russia), M. Stynes (China), P. Vabishchevich (Russia), M. Vohralik (France), S. Wang (Australia), H. C. Yee (USA), H. Yoshioka (Japan), S.-P. Zhu (Australia).

**Organizing Committee:** L. Vulkov (Chairman), I. Angelova, T. Chernogorova, S. Georgiev, Y. Dimitrov, M. Koleva, R. Valkov.

**The Programme** of the Conference includes plenary lectures (45m), invited lectures (45m), reports at sessions (20m), special sessions (20m), poster session..

**Papers for the Proceedings:** PROCEEDINGS (in a book form) of only refereed papers (up to 8 pages for contributed talks and up to 12 pages for key lectures) will be published in a book of Springer's Lecture Notes in Computer Science (see e.g., Lecture Notes in Computer Science, v.9045, 2015, Finite Difference methods, Theory and Applications: 6th International Conference, FDM 2014, Lozenetz, Bulgaria, June 18-23, 2014, Revised selected papers, Eds. Ivan Dimov; I. Faragó; Lubin Vulkov). Each paper publication must be covered by separate registration fee.

**Conference Location:** Hotel Ambelitz in the village Lozenetz on the southern seaside of Bulgaria.

**Conference Site:** <http://parallel.bas.bg/dpa/FDM2018/>

**Contact Address:**

**Chairman:** L. Vulkov,  
E-mail: [lvalkov@uni-ruse.bg](mailto:lvalkov@uni-ruse.bg)  
E-mail: [vulkov@ami.uni-ruse.bg](mailto:vulkov@ami.uni-ruse.bg)

Department of Applied Mathematics and Informatics,  
University of Rouse "A. Kanchev",  
Studentska str.8, 7017 Rouse, Bulgaria

**Conference Secretary:** Miglena Koleva  
E-mail: [mkoleva@uni-ruse.bg](mailto:mkoleva@uni-ruse.bg)

**Tel:** +359(0)82/888725  
**Fax:** +359(0)82/845708

**Conference Fee:** The conference fee covers a reception, an excursion, welcome party, conference dinner, a volume with the abstracts, the expenses for publishing of the submitted paper and some other materials. It is for:  
Non-students: 300 EURO; Students: 150 EURO; Accompanying person: 80 EURO.

**Deadlines:**

Deadline for registration: **15 February, 2018**

Deadline for proposal for organizing of special session: **30 October, 2017**

Deadline for abstract submissions: **15 January, 2018**

Notification of acceptance : **30 January, 2018**

Deadline for submissions of the full paper: **April 15, 2018**

Notification of acceptance of the full paper: **May10, 2018**

**Accommodation** will be arranged in Ambelitz Hotel ([www.ambelitz.com](http://www.ambelitz.com)).