



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.Dimov, A. Sipin, A. Zeifman ;

*Meshfree Generalized Finite Difference Methods: From Theory to Applications* by I. Michel ,J.Kuhnert, P.Suchde;

*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.Liparov;

*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.Geise,

Numerical methods for propagation processes by P. Csomós, I. Faragó.

**Scientific Committee:** A.Alikhanov(Russia), C.Cuevas(Brazil),I.Dimov (Bulgaria), M.Ehrhardt (Germany), I.Farago(Hungary), M.J.Gander(Switzerland), 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.Barbeiro(Portugal), S.Bordas(Luxembourg), J.Chaskalovic(France), B.Despres(France), I.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), N,Kopteva(Ireland), O.Lafitte(France), R.Lazarov(USA), CP.Li(China), A.Liparov(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.

Abstract up to 1 page LaTeX to be send to [lvalkov@uni-ruse.bg](mailto:lvalkov@uni-ruse.bg) and [mkoleva@uni-ruse.bg](mailto:mkoleva@uni-ruse.bg)

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

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

**Contact Address:**

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**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: **30 April, 2018**

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

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

Notification of acceptance : **20 April, 2018**

Deadline for submissions of the full paper:**30 April 15, 2018**

Notification of acceptance of the full paper: **May15, 2018**

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