

Provided for non-commercial research and educational use. Not for reproduction, distribution or commercial use.
--

PLISKA

STUDIA MATHEMATICA
BULGARICA

ПЛИСКА

БЪЛГАРСКИ
МАТЕМАТИЧЕСКИ
СТУДИИ

The attached copy is furnished for non-commercial research and education use only.

Authors are permitted to post this version of the article to their personal websites or institutional repositories and to share with other researchers in the form of electronic reprints.

Other uses, including reproduction and distribution, or selling or licensing copies, or posting to third party websites are prohibited.

For further information on
Pliska Studia Mathematica Bulgarica
visit the website of the journal <http://www.math.bas.bg/~pliska/>
or contact: Editorial Office
Pliska Studia Mathematica Bulgarica
Institute of Mathematics and Informatics
Bulgarian Academy of Sciences
Telephone: (+359-2)9792818, FAX: (+359-2)971-36-49
e-mail: pliska@math.bas.bg

PREFACE

International conference on New Trends of the Applications of Differential Equations in Sciences(NTADES'2014) was organized by the Department of Differential Equations and Mathematical Physics at Institute of Mathematics and Informatics, Bulgarian Academy of Sciences(www.math.bas.bg/ntades)from 1st to 5th July, 2014 . It was dedicated to 145 anniversary of the Bulgarian Academy of Sciences.

Differential equations have a lot of applications in different scientific fields. This conference was devoted to such applications. A number of phenomena in nature (physics, chemistry, biology) and in society (economics) result in problems leading to study of linear and nonlinear differential equations. During the conference invited and contributed papers were presented. Main topics were: Mathematical Physics; Mathematical Finance; Mathematical Biology; Nonlinear waves; Mechanics; Neuroscience.

The conference provided a wide range of problems concerning recent achievements in the fields of theoretical and applied mathematics. The main goal was to present new ideas and research for scientists, who develop and study differential equations, and researchers, who apply them for solving real life problems. The conference promoted basic research in mathematics leading to new methods and techniques useful for applications of differential equations. This scientific forum was a media for the exchange of information and ideas between mathematicians and other technical and scientific personnel.

More than 40 participants from universities and institutes of different countries - Italy, Japan, Brazil, Macedonia, Russia, Germany, China, participated in NTADES'2014. They represented most of the strongest research groups in the field of differential equations and applied mathematics. We are very glad to report that young researchers, Post Docs and Ph.D.students took part during NTADES'2014.

I would like to thank to Dr. Roumyana Yordanova and Dr. Borislav Yordanov for their help with preparing this volume with the Proceedings of NTADES2014.

Angela Slavova
Chair of the Program Committee

NTADES 2014

Program Committee

Prof. Angela Slavova- BAS (Chair)
Dr. Roumyana Yordanova - BAS (Secretary)
Acad. Petar Popivanov - BAS
Prof. Tsviatko Rangelov - BAS
Prof. Emil Manoah - BAS
Prof. Todor Gramchev - BAS and University of Cagliari (Italy)
Prof. Vladimir Georgiev - BAS and University of Pisa (Italy)
Prof. Pietro Zecca - Univeristy of Florence (Italy)
Prof. Valeri Obuhovskii - University of Voronezh (Russia)

Organizing Committee

Prof. Nikolaj Kutev - BAS
Prof. Georgi Chobanov - BAS
Dr. Georgi Boyadzhiev - BAS
Dr. Borislav Yordanov - BAS