



**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE  
V.N.KARAZIN KHARKOV NATIONAL UNIVERSITY**

**INTERNATIONAL SCIENTIFIC CONFERENCE  
“Contemporary problems of mathematics and its application  
in natural sciences and information technologies”**

*Kharkov, April, 17-22, 2011*

**International conference “Contemporary problems of mathematics and its application in natural sciences and information technologies”**, dedicated to the 50<sup>th</sup> anniversary of faculty of mechanics and mathematics will be held at V.N.Karazin Kharkov national university on April, 17-22, 2011.

The conference is aimed at exchange of the novel results obtained by the researchers in different areas of mathematics, mechanics and informatics, mathematical modeling of the processes and phenomena in the physical, mechanical, chemical, biological, technical and social systems. A series of **plenary lectures** on the advanced topics of modern mathematics, mechanics and informatics will be given by the **invited lecturers**.

**Topics:**

1. Mechanics
2. Theory of functions and mathematical analysis.
3. Geometry and topology.
4. Mathematical and computer modeling: theory and applications.
5. Differential equations and mathematical physics.
6. Algebra, logic and grounds of informatics.
7. Information technologies.

**Scientific Committee**

1. Borysenko A.A., D.Sc., professor, corresponding member of National Academy of Sciences of Ukraine, Head of Department of Geometry
2. Chueshov I.D., D.Sc., professor, corresponding member of National Academy of Sciences of Ukraine, Head of Department of Mathematical Physics and Computational Mathematics
3. Zoltkevich G.N., D.Sc., professor, Head of Department of Theoretical and Applied Informatics, Dean of the Faculty of Mechanics and Mathematics
4. Gandel Yu.V., D.Sc., professor, professor of Department of Mathematical Physics and Computational Mathematics
5. Gordevsky V.D., D.Sc., professor, Head of Department of Mathematical Analysis
6. Kizilova N.N., PhD, docent, Head of Department of Theoretical Mechanics <http://theormech.univer.kharkov.ua/>
7. Korobov V.I., D.Sc., professor, Head of Department of Differential Equations and Control Theory
8. Rutkas A.G., D.Sc., professor, Head of Department of Mathematical Modelling and Software
9. Favorov S.Yu., D.Sc., professor, Head of Department of Theory of Functions and Functional Analysis
10. Yantsevich A.A., D.Sc., professor, Head of Department of Higher Mathematics and Informatics

## Organizing Committee

1. Zoltkevich G.N., D.Sc., professor, Head of Department of Theoretical and Applied Informatics, Dean of the Faculty of Mechanics and Mathematics
2. Tarapova E.I., PhD, docent of Department of Mathematical Analysis
3. Kizilova N.N., PhD, docent, Head of Department of Theoretical Mechanics
4. Cabalyants P.S., docent of Department of Mathematical Modelling and Software
5. Barhaev P.Yu., PhD, docent of Department of Differential Equations and Control Theory
6. Soljanik Yu.B., PhD, docent of Department of Theoretical and Applied Informatics
7. Ivanova M.A., deputy-dean of Faculty of Mechanics and Mathematics
8. Chystina E.O., PhD student of Department of Theoretical Mechanics

The section «**Mechanics**» will be organized as a conference «**Tarapov's readings**», dedicated to the **85-th anniversary of Professor I.Ye. Tarapov** – a well-known mechanic, outstanding organizer of science and education in the Ukraine, rector of Kharkov University (1975-1993) and head of Department of Theoretical Mechanics (1966-1999).

«**Tarapov's readings**» will include the following sections

1. History of mechanics
2. Theoretical mechanics
3. Mechanics of liquid, gas and plasma
4. Mechanics of the solid bodies
5. Engineering mechanics and material sciences
6. Biomedical engineering and biomechanics
7. Numerical methods and computer technologies in mechanics
8. Nanomechanics and nanotechnologies

**Languages:** English, Russian, Ukrainian.

**Registration of the participants** will take place on April, 17, 2011 in the main building of V.N.Karazin Kharkov National University (Svobody square, 4, 1-st floor, main hall). Accommodation will be organized in the hotels in the walking distance from Kharkov National University. For the PhD students and graduate students a cheap accommodation in the student dormitories will be arranged.

**Opening ceremony** - April, 18; plenary and section presentations – April, 18-22; social program – April, 17-22.

We invite you to fill in the online registration form before March, 15, 2011 and submit an abstract to the e-mail address [tarapov-conf@univer.kharkov.ua](mailto:tarapov-conf@univer.kharkov.ua) or [tarapovconf2011@gmail.com](mailto:tarapovconf2011@gmail.com). Information on the acceptance will be sent to the registered participants before March, 25, 2011.

Duration of the plenary lectures is 45 minutes (40 min. lecture + 5min. for discussions), conference talks - 20 minutes (15 min. presentation + 5min. for discussions).

The accepted abstracts will be published in **the Book of Abstracts** prior to the conference. Lectures and talks on the most interesting and topical directions of contemporary mathematics and mechanics will be recommended for publication in the **book “Contemporary problems of mathematics and its application in natural sciences and information technologies”** supplied by the ISBN number and distributed to the participants after the conference.

The best presentations (by decision of the section chairmen) will be recommended for publication in the special issues of the journals «Kharkov National University Vestnik. Ser. Mathematics, applied mathematics and mechanics» and «Kharkov National University Vestnik. Ser. Mathematical modelling. Information technologies. Automated control systems».

The best presentations will be awarded by the Organizing committee in the nominations: students, PhD students and young scientists (up to 35 years old).

Within the framework of the conference **the exhibitions and sales of scientific literature** on mathematics, physics and computer sciences, exhibitions of modern **computer technique** and **software** for scientific computations, and a **fair of vacancies** of leading hard- and software firms and companies will be organized. The companies will offer to the conference participants the opened vacancies, educational programs for young scientists and fellowships for students and PhD students.

The **round table talks** «**Natural sciences in the modern society: state and perspectives**» will be organized to discuss the problems and perspectives of higher education in the field of natural sciences, first of all, mathematics, mechanics and computer sciences.

A book «Tarapov’s scientific school and advanced problems of contemporary mechanics» will be presented to the participants.

A special issue of the journal «UNIVERSITATES» founded by Prof. I.Ye.Tarapov and dedicated to the 50-th anniversary of the school of mechanics and mathematics will be published and presented at the conference.

**Contact information:**

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