



**Ministry of Education and Science of the Russian Federation
Bauman Moscow State Technical University
Scientific and Educational Division «Fundamental Sciences»**

**Russian National Committee on Theoretical and Applied Mechanics
The State Duma Committee on Education of the Russian Federation
Moscow Physical Society of the Russian Federation
Moscow Gravitational Society**

International Scientific Conference

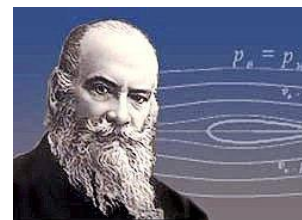
**PHYSICAL AND MATHEMATICAL PROBLEMS OF
ADVANCED TECHNOLOGY DEVELOPMENT
(PHYSMATHTECH-2014)**

*devoted to the 50th Anniversary of the Scientific and Educational Division
«Fundamental Sciences» of the Bauman Moscow State Technical University
to be held on November 17-19, 2014*

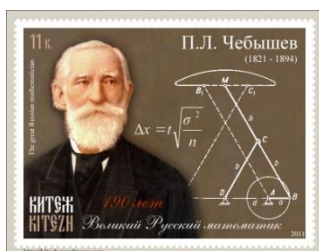
Dear Colleagues!

We are pleased to invite you to participate in the International Scientific Conference **PHYSMATHTECH-2014** which will be held in the Conference Hall of the Training and Laboratory Building of the Bauman Moscow State Technical University at 9 a.m. - 18 p.m. on November 17-19, 2014.

The conference is to take place at the time of the 50th anniversary celebration of the Scientific and Educational Division «Fundamental Sciences» of BMSTU. The division is the major unit of the Bauman Moscow State Technical University. It comprises physical and mathematical departments, the history of which is closely connected with the history of BMSTU.



N.Y.Zhukovsky



P.L.Chebyshev

There are some leading scientific schools originating from the scientific work of such outstanding people as: a mathematician and engineer P.L. Chebyshev, a scientist and encyclopedist D.I. Mendeleev, an engineer N.Y. Zhukovsky, a mathematician and engineer S.A. Chaplygin, a physicist and experimenter P.N. Lebedev, a physicist and biophysicist P.P. Lazarev, and a physicist S.I. Vavilov.

In 1964 the departments were united to establish the General Technical Department then turning into the Scientific and Educational Division «Fundamental Sciences» of BMSTU.

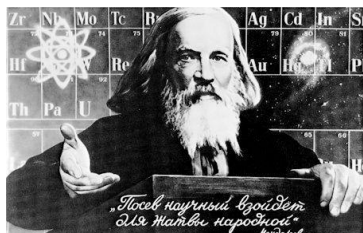
Nowadays there is a demanding necessity to provide high-level scientific and engineering training of students based on up-to-date researches.

The aim of the conference is to bring together different scientific schools and promote exploration of the current and future trends in considering the most complicated scientific and technological problems of the advanced equipment design as well as to spark discussion among creative scientists, educators, researchers, and engineers on innovative approaches in the fields of aviation, space, industry, and related sciences.



S.A. Chaplygin

Chairman is Prof. A.A. Aleksandrov, Rector of BMSTU.



D.I. Mendeleev

Vice-Chairmen are

Prof. V.N. Zimin, the first Vice-Rector - Vice-Rector of Science and Research of BMSTU.

Prof. V.O. Gladyshev, Head of the Scientific and Educational Division «Fundamental Sciences» of BMSTU.

We invite original papers covering the topics within the following fields: physical and mathematical sciences, chemistry, electronics, electronic devices, and interdisciplinary studies.

The conference will include a plenary meeting, section presentations.

Each participant is allowed to make no more than two reports.

Working languages: English and Russian.

The Program of the Conference includes the following key topics:

1. The current trends in machine science and machine operating processes.
2. Advanced research and technology of irreversible processes in physics and astrophysics.
3. High-precision physical experiment.
4. Mathematical simulation in the control science.
5. Mathematical research techniques of non-stationary processes.
6. Mathematical models of continuum mechanics.
7. Challenges of computational mechanics and computer simulation techniques.
8. Fundamental problems of advanced technology development
9. Scientific and methodological approaches to science teaching.

Information for participants:

To participate in the conference you are asked to send an application for participation in the conference containing the following information to the email address of the organizing committee dekan-fn@mail.ru by September 1, 2014:

- first name, patronymic name, surname name
- title (Mr, Ms, Mrs, Miss, Dr, Prof.)
- science degree \ post graduate degree, academic title, position
- full name of a place of employment
- full name of a department \ a chair \ a division
- address, telephone, e-mail
- Title of the report

Abstract of the report

Full texts of the reports presented at the conference will be published in one of the journals included in the recommended list of either State Commission for Academic Degrees and Titles or Russian Science Citation Index.



P.N. Lebedev

Guidelines for authors.

The deadline for sending your papers is October 1st, 2014.

An abstract content is up to 0,5 page, an article content is up to 10 pages of A4 format.

You may write both abstract and articles in either Russian or English languages.

For Russian speakers it is obligatory to have an expert judgment allowing them to publish their reports in the public media.



P.P. Lazarev

The preferable file formats are *.rtf, *.doc or *.tex.

The article must have a title, an abstract, a body, pictures, graphs, diagrams, references.

Article submission guidelines correspond to the requirements of “The Vestnik of BMSTU” :<http://vestniken.bmstu.ru/forauth/>

The full article is to be sent in one e-mail as an attached file. It also must be presented in print format. All its authors on the last page must sign the printed version of the article.

The text layout of the articles is completed by the Editorial committee chosen from the members of the Organizing Committee.



S.I. Vavilov

To get further information on the conference, an application form and article submission guidelines, please, check out a website of the conference:

<http://fn.bmstu.ru/index.php/nuk-fn/news/103-nuk-fn/novosti/426-phymathtech2014>

Organizing Committee:

105005, Moscow, 2 Baumanskay Street, building 5, BMSTU, the Dean office of the Scientific and Educational Division «Fundamental Sciences» of BMSTU.

Scientific secretary of the conference is Vladimir Leonidovich Kauts, Ph.D. in ph.-math., Associate Professor.

Tel.: +7 (499) 263-64-73.

Please send any questions related to the conference to: dekan-fn@mail.ru

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- **Dr. V.L. Kauts**, Physics Department, Bauman MSTU, Moscow, Russia

International Scientific Conference
PHYSICAL AND MATHEMATICAL PROBLEMS OF
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Sessions

1. The current trends in machine science and machine operating processes.
Supervisors: K.S. Kolesnikov, P.M. Shkapov.
2. Advanced research and technology of irreversible processes in physics and astrophysics. Supervisor: *A.N. Morozov.*
3. High-precision physical experiment.
Supervisors: V.O. Gladyshev, V.S. Gorelik.
4. Mathematical simulation in the control science.
Supervisors: A.P. Krishchenko, S.B. Tkachev.
5. Mathematical research techniques of non-stationary processes.
Supervisor: N.I. Sidnyaev.
6. Mathematical models of continuum mechanics.
Supervisors: V.S. Zarubin, G.N. Kuvyrkin.
7. Challenges of computational mechanics and computer simulation techniques. *Supervisor: U.I. Dimitriyenko.*
8. Fundamental problems of advanced technology development.
Supervisors: A.M. Golubev, A.B. Krasovskii.
9. Scientific and methodological approaches to science teaching.
Supervisors: O.S. Erkovich, S.K. Sobolev, N.N. Dvulichanskaya.