



Twelfth International
Conference – School of
Young Scientists

WAVES AND VORTICES IN COMPLEX MEDIA

Moscow
01 – 03 December 2021

Conference venue is Ishlinsky Institute for
Problems in Mechanics RAS (IPMech RAS)



Moscow 119526, Vernadskogo pr-t, 101/1

ANNOUNCEMENT INVITATION TO PARTICIPATE

The conference school program includes
invited and oral presentations
(regular and informative).

Conference materials will be published in the
collection and recommended for publication in
"Fluid Dynamics", "Journal of Applied
Mathematics and Mechanics"

INFORMATION FOR PARTICIPANTS

Conference languages: Russian and English.
Participants present electronic version of the:

– **Registration form**;

– **Presentation materials** prepared in MS Word,
12 pt, up to 3 pages framed by 16×24 cm. **TITLE
OF THE PRESENTATION, authors' names and
addresses** prepared as per sample given at the
school website.

The program will include invited (30 min) and oral
talks (regular, 15 min and informative 3 min +
poster of A0 size). Meeting rooms are equipped
with boards, screens, video projectors. As
appropriate, the conference will take place in off-
line (traditional) and on-line (virtual) form.

It is planned to publish a collection of conference-
school materials and recommend texts of selected
reports for fast publication in the thematic issues of
the journals "Izvestiya RAS. Fluid Dynamics" and
"Journal of Applied Mathematics and Mechanics".

KEY DATES

Registration form and presentation materials
before October 01, 2021

Author notification on acceptance

before October 10, 2021

REGISTRATION FEE

For regular participant fee is **2000 rub.** For young
scientists (before 35 years old) – **500 rub.**

The fee can be paid in cash at the registration
desk or by bank transfer order.

Requisites are available on request.

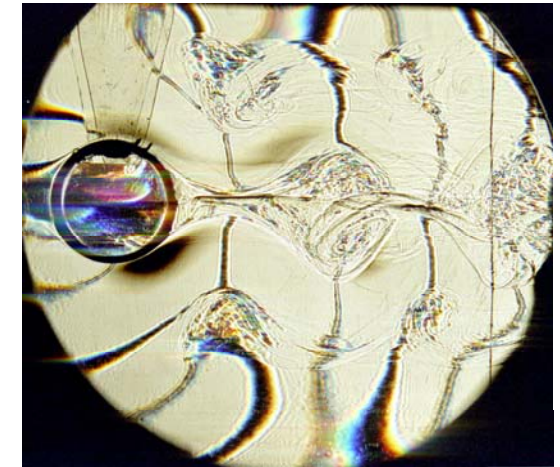
ACCOMMODATION

The organizer is not able to assist in
accommodation of participants.

SCIENTIFIC PROGRAM

- **Systems of fundamental equations and constitutive models of flows of complex media;**
- **Methods of mathematical simulation and laboratory modeling of flows;**
- **Waves, vortices, coherent structures, turbulence and ligaments;**
- **Mechanics of simple and complex liquids with phase transitions, gas-liquid systems and suspensions, including flows in external electric and magnetic fields;**
- **Technique of modern experiment;**
- **Technical and technological applications.**

Papers on close topics can be included in the
school. The number of papers presented by one
author is not limited.



The motion of a cylinder in a stratified fluid:
internal waves, hanging and wake vortices,
ligaments ($T_b = 13$ s, $N = 0.48$ 1/s, $D = 5.0$ cm,
 $U = 0.47$ cm/s, $Fr = U / ND = 0.2$, $Re = 235$)

REGISTRATION

Registration will take place in the IPMech RAS
starting from 01 December 2021

INTERNATIONAL PROGRAM COMMITTEE

Acad. RAS A.G. Kulikovskiy (honorary chair), Prof. Yu.D. Chashechkin (co-chair), Dr. S.E. Yakush (co-chair), Corr.m. RAS D.A. Gubaidullin (deputy chair), Prof. S.F. Urmacheev (deputy chair), Dr. V.G. Baydulov (deputy chair), E.V. Esina (sci. secr.), Prof. T. Bodnar (Czech), Dr. O.G. Chkhetiani, Dr. E.V. Ermanyuk, Prof. P. Fraunie (Fra), Prof. Ya. Fukumoto (Jap), Corr.m. RAS A.M. Gaifullin, Prof. A. Herczynski (USA), Prof. A.A. Kosinov, Dr. V.B. Lobanov, Prof. A.N. Osipov, Prof. R.M. Vilfand, Dr. A.G. Zatspein



Discrete distribution of matter of impact droplet in the target fluid

Contacts

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GENERAL INFORMATION

Update technology of contact and remote sensing, development and improvement of mathematics and computing have opened up new opportunities to study the waves and vortices - key components of flows, which play a dominant role in the dynamics of natural and industrial systems, and form the basis of a number of high-performance technologies.

The study of periodic flows tends of interest for mechanics and a number of related disciplines: physics, chemistry, biochemistry, in which transport processes and redistribution of materials are studied. Their investigation is of interest to a number of related disciplines, such as chemistry, biology, pharmacy, which involves the transport processes and the redistribution of the matter.

Physical processes in the investigated media, usually multi-phase, multi-component, and stratified are complicated. Solving the scientific problems will improve the description, specification and development of the forecast of new management trends in natural systems and processes.

HOW TO GET

Metro Station "Yugo-Zapadnaya". The exit from the last subway car. Then walk about 10 minutes to IPMech RAS.



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SPONSORS

Russian Academy of Sciences

Russian Foundation for Basic Research

ORGANIZERS

Ishlinsky Institute for Problems in Mechanics RAS

Steklov Mathematical Institute of RAS

Upcoming event continues a series of schools on actual problems of theoretical and experimental fluid mechanics in 2010, 2011, 2012, 2013, 2014 Moscow, 2015 in Kaliningrad, 2016, 2017, 2018, 2019, 2020 in Moscow

Scholars of all specializations: experimentalists, theoreticians (both analytic and numeric) and mathematicians are invited to participate. Lectures are delivered by well-known experts in the key branches of mechanics and mathematics, as well as young scientists.