

Sixteenth International Conference – School of Young Scientists

WAVES AND VORTICES IN COMPLEX MEDIA

Moscow 2 – 5 December 2025

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



Vernadskogo 101/1, 119526, Moscow, Russia

FIRST ANNOUNCEMENT Website: https://ipmnet.ru/conf/confs/

Contacts: Conference secretary Elena V. Esina E-mail: <u>esinared@gmail.com</u> Phone +7 (495) 434-21-49

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*. The program will include invited and oral reports: normal (15 min), regular (10 min) and informational (3 min). It is recommended that all presentations are supplemented with an A0 poster (vertical orientation), especially for regular (10 min) and informational (3 min) talks. The premises are equipped with stands, screens, video projectors. The conference will be held in a traditional (in-person) format.

KEY DATES

Registration form and extended abstracts **before September 15, 2025**

Author notification on acceptance

before October 30, 2025

REGISTRATION FEE

For regular participant fee is **4000 rub.** For young scientists (under 35 years) – 1000 **rub**. The fee can be paid in cash at the registration desk or by bank transfer order. Bank details are available on request.

ACCOMMODATION

A wide range of hotels of various comfort levels in the vicinity of the conference venue is available.

SCIENTIFIC PROGRAM

- Systems of fundamental equations and constitutive models of complex media flows;
- Methods of mathematical and laboratory modeling of flows;
- Waves, vortices, turbulence and ligaments in flows of liquids and gases;
- Mechanics of simple and complex fluids with phase transitions; gas-liquid systems and suspensions, including flows in electric or magnetic fields and under extreme conditions of high and low temperatures;
- Stability and instability of flows;
- Electrohydrodynamics;
- Technique of modern experiments;
- Technological applications.

A separate meeting is dedicated to the memory of Academician RAS A. G. Kulikovsky



Colored liquid droplet impact on water surface

REGISTRATION

Registration will take place in IPMech RAS (room 253) starting from December 02 2025

INTERNATIONAL PROGRAM COMMITTEE

Prof. Yu.D. Chashechkin (co-chair). Corr.-m. RAS S.E. Yakush (co-chair), Corr.-m. RAS D.A. Gubaidullin (deputy chair), Prof. S.F. Urmacheev (deputy chair), E.V. Esina (sci. sec.). D.Sc. O.G. Chkhetiany, D.Sc. V.B. Bekezhanova, Prof. T. Bodnar (Czech Republic), Prof. H. Choi (Republic of Korea), Prof. Ph. Fraunie (French Republic), Prof. Y. Fukumoto (Japan), Corr.-m. RAS A.M. Gaifullin, Ph.D. M.N. Galimzyanov, Prof. A. Herchinsky (USA), Prof. O.N. Goncharova, D.Sc. E.V. Ermanyuk, Prof. A.T. Ilvichev, Acad. D.M. Klimov, prof. A.D. Kosinov, Ph.D. M.A. Kotov, Prof. T.P. Lyubimova, D.Sc. A.I. Mizev, Prof. A.N. Osiptsov, Ph.D. A.A. Ochirov, Prof. R.M. Vilfand, D.Sc. A.G. Zatsepin, Corr.-m. RAS N.M. Zubarev



Schliern image of internal waves, vortices and fine ligaments in the wake past a cylinder

The texts of the talks will be published in the Conference Proceedings. Selected talks are recommended for publication in the journals "Fluid dynamics"; "Applied Mathematics and Mechanics" and "Physicochemical Kinetics in Gas Dynamics".

CONTACTS

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GENERAL INFORMATION

Continuous updating of remote and contact measurement techniques, development of mathematics and improvement of computer technology open up new possibilities in the study of waves and vortices – key components of fluid flows that play a decisive role in the dynamics of natural and industrial systems, forming the basis of a number of high-performance technologies.

The study of periodic flows is of interest to mechanics, mathematics, physics and several related disciplines such as chemistry, biology, pharmaceuticals, which use the processes of transfer and redistribution of matter.

Both the processes and the studied environments themselves have become more complex, as a rule, multiphase, multicomponent, stratified with extreme temperature conditions. New approaches and experimental data contribute to the development of theoretical fluid mechanics, which, in turn, formulates in-depth requirements for the methodology and technique of the experiment. Discussion of solutions to scientific problems helps to improve the description of the environment, clarify the forecast and develop new methods for controlling flows in natural systems and technological processes.

Transport HOW TO GET THERE

Moscow, Vernadsky Avenue, 101, Bldg. 1

To the Yugo-Zapadnaya metro station. Exit #7 (last carriage from the center). Then walk for about 10 minutes / take bus #t34, 219, 688, 785k to the stop "Vernadsky Avenue, 97".



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SPONSORS

Russian Academy of Sciences Ishlinsky Institute for Problems in Mechanics RAS

ORGANIZERS

Ishlinsky Institute for Problems in Mechanics 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, 2016-2024 in Moscow

Scholars of all specializations: experimentalists, mathematicians (both analytic and numeric) are invited to participate.

Lectures will be delivered by experts in the key branches of mechanics and mathematics, reports by young scientists are particularly welcome.