



Fifteenth International  
Conference – School  
of Young Scientists

## WAVES AND VORTICES IN COMPLEX MEDIA

**Moscow**

**19 – 22 November 2024**

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



Moscow 119526, Vernadskogo prospect, 101/1

### ANNOUNCEMENT INVITATION TO PARTICIPATE

[ipmnet.ru/en/conf/](http://ipmnet.ru/en/conf/)  
[#conf2024waves\\_school](https://twitter.com/conf2024waves_school)

**Contacts: Conference secretary**  
**Elena V. Esina**

E-mail: [esinared@gmail.com](mailto:esinared@gmail.com)

Phone: +7 (495) 434-2149

Fax: +7 (499) 739-9531

### 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 school website.

The program will include invited (20 min) and oral talks: regular (15 min), brief (10 min) and informative (3 min) ones. Brief presentations (10 min) are recommended to be supplemented with an A0 format poster; for informative ones – it is required. Meeting rooms are equipped with boards, screens, video projectors. As appropriate, it will be in-person (traditional form) and on-line (virtual form) conference.

### KEY DATES

Registration form and extended abstracts  
**before September 30, 2024**

Author notification on acceptance  
**before October 20, 2024**

### REGISTRATION FEE

For regular participant fee is **4000 rub**,  
for young scientists (under 35 years) – **800 rub**  
**(for each meeting participant).**

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

Requisites are available on request.

### ACCOMMODATION

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

### SCIENTIFIC PROGRAM

- **Systems of fundamental equations and constitutive models of complex media flows;**
- **Methods of mathematical simulation and laboratory modeling of flows;**
- **Waves, vortices, turbulence and ligaments in fluid and gas flows;**
- **Mechanics of simple and complex liquids with phase transitions, gas- fluid systems and suspensions, including flows in external electric or magnetic fields and extreme conditions of low and high temperature;**
- **Electrohydrodynamics;**
- **Technique of modern experiment;**
- **Engineering and technological applications.**



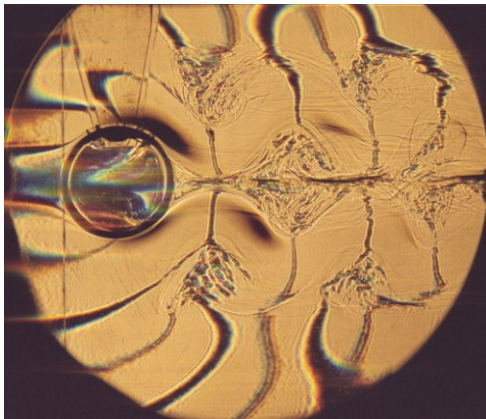
Regular flow structure of compound drop impact with water  
(Fluid Dynamics, 2024)

### REGISTRATION

Registration will take place in IPMech RAS  
(room 253) starting from 19 November 2024

## 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. secr.), Prof. T. Bodnar (Czech), Dr.  
O.G. Chkhetiani, Prof. Hyo Choi, Dr. E.V. Ermanyuk,  
Prof. P. Fraunie (Fra), Prof. Ya. Fukumoto (Jap),  
Corr.m. RAS A.M. Gaifullin, Ph.D. M.N. Galimzyanov,  
Dr. O.N. Goncharova, Prof. A. Herczynski (USA), Acad.  
D.M. Klimov, Ph.D. M.A. Kotov, Prof. A.D. Kosinov,  
Prof. T.P. Lubimova, Dr. A.I. Mizev, Prof. A.N. Osipov,  
Prof. R.M. Vilfand, Dr. A.G. Zatsepin, Corr.m. RAS  
N.M. Zubarev



Internal waves and vortex soaring ligaments in schlieren photo of stratified flow past cylinder ( $D = 5$  cm,  $U = 0,35$  cm/s,  $T = 13$  s)

The conference school program includes invited and oral presentations (regular and informative). Materials of accepted talks will be published in the Conference Proceedings Volume. Selected papers will be recommended for publication in Journals "Fluid Dynamics", "Applied Mathematics and Mechanics" and "Axioms".

### Contacts

Ishlinsky Institute for Problems in Mechanics RAS  
Vernadskogo prospect, 101/1, 119526, Moscow,  
Russia

Phone: +7 (495) 434-0017

Fax: +7 (499) 739-9531

**Yuli D. Chashechkin**

E-mail: [yulidch@gmail.com](mailto:yulidch@gmail.com)

## 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.

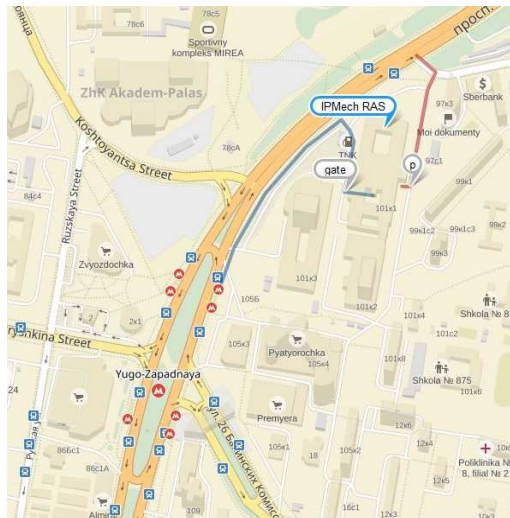
The study of periodic flows tends of interest for mechanics and a number of related disciplines: physics, chemistry, biochemistry, in which transport processes and redistribution of materials are studied.

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

Prospekt Vernadskogo 101-1, Moscow  
Metro Station "Yugo-Zapadnaya". The exit 7 (from the last subway car from center). Then walk about 10 minutes to IPMech RAS / by bus No.  $\tau 34, 219, 688, 785k$  to the stop "Vernadskogo prospect, 97"



## Fifteenth International Conference – School of Young Scientists WAVES AND VORTICES IN COMPLEX MEDIA



### SPONSORS

Russian Academy of Sciences  
Ishlinsky Institute for Problems in  
Mechanics RAS

### ORGANIZER

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 – 2014 in Moscow, 2015 in Kaliningrad, 2016 – 2023 in Moscow.

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

Open discourse "What is the fluid mechanics" will be organized by experts in the key branches of mechanics and mathematics, as well as by young scientists.