

Eleventh International Conference – School of Young Scientists

# WAVES AND VORTICES IN COMPLEX MEDIA

# Moscow 01 – 03 December 2020

Conference venue: Ishlinsky Institute for Problems in Mechanics of the Russian Academy of Sciences (IPMech RAS)



101/1 Prospect Vernadskogo, Moscow, 119526

# ANNOUNCEMENT INVITATION TO PARTICIPATE

The conference - school program includes invited and oral presentations as well as short communications. Conference materials will be published.

## 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 website:

#### http://ipmnet.ru/files/conf/2020waves\_school/templ ate\_Waves\_School\_2020\_en.doc

The program will include invited lectures (30 min), oral talks (15 min), and communications (3 min + poster at A0). Meeting rooms are equipped with boards, screens, multimedia projectors.

It is planned to publish a collection of conferenceschool materials and texts of selected reports for publication in the thematic issues of the journals "Izvestiya RAS. Fluid dynamics" "Priklanaya matematika i mekhanika", and "Disaster Advances".

Conference information package will be distributed at the registration.

# **KEY DATES**

Registration form and presentation materials **before October 01, 2020** 

Author notification on acceptance **before October 15, 2020** 

## **REGISTRATION FEE**

**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. Bank details are available on request. Contract and invoice sent upon request

#### ACCOMMODATION

Participants accommodate in hotels on their own booking (trivago.ru, booking.com, etc).

# **SCIENTIFIC PROGRAM**

- Fundamental equations and constitutive models of flows of complex media;
- Methods of mathematical simulation and laboratory modeling of flows;
- Ligaments, waves, vortices, coherent structures and turbulence;
- Mechanics of regular and complex fluids with sludge, ice, foam, bubbles, phase transitions, as well as gas-liquid systems and suspensions, including external forcing fields;
- Modern experimental techniques;
- Engineering and technology applications.

A Thematic Session is planned on the topic: "Impacts of the ideas and work of Academician S. A. Khristianovich (10.27.1908 - 04.28.2000) on the modern mechanics of fluids and gases"

Papers on relevant topics can be submitted to the school, with no restrictions on the number of papers presented by one author.



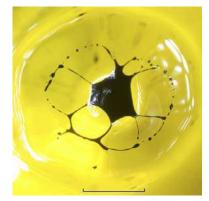
Splash of water drop on water surface

#### REGISTRATION

Registration will lake place in the IPMech RAS (lobby of the main hall or room 235) starting from 01 December 2020

### INTERNATIONAL PROGRAM COMMITTEE

Acad. RAS A.G. Kulikovsky (honorary chair), Dr. V.G. Baydulov- sci. secr., Prof. T. Bodnar (Czech), Yu.D. Chashechkin Prof. (co-chair), Dr. O.G. Chkhetiany, Prof. H. Choi (Korea), Dr. E.V. Ermanyuk, Acad. RAS V.M. Fomin, Prof. P. Fraunie (Fra), Prof. Ya. Fukumoto (Jap), Corr.m. RAS A.M. Gaifullin, Corr.m. RAS D.A. Gubaidullin (deputy chair), Prof. A. Herczynski (USA), Dr. P.A. Kuibin, Prof. A.A. Kosinov, Prof. S.V. Nesterov (deputy chair), Prof. A.N. Osiptsov, Prof. S.F. Urmacheev (deputy chair), Prof. M.G. Shatrov, Prof. R.M. Vilfand, Dr. S.E. Yakush (co-chair). Dr. A.G. Zatsepin



Spreading of water drop on the surface of cavity in oil

#### **Contacts**

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website: http://www.ipmnet.ru/conf/confs/

#### **GENERAL INFORMATION**

Advances in the technology of contact and remote sensing, progress in mathematics and computations have opened new opportunities to study the waves and vortices as the key components of flows playing a dominant role in the dynamics of natural and industrial systems, and forming the basis of a number of high-performance technologies.

The study of periodic flows attracts significant interest of scientists in mechanics and a number of related disciplines, including physics, chemistry, biochemistry, where transport processes and redistribution of materials are studied.

As the physical processes and the media where they occur are becoming increasingly complex, embracing the multi-phase, multi-component and stratified systems, appearance of new experimental data is driving the development of fluid dynamics theory. Theoretical achievements, in return, pose new challenging problems and requirements before the experimentalists. Solving the scientific problems paves the path towards the development of new prediction and flow control approaches in natural and industrial systems.

## **HOW TO GET THERE**

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



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# **SPONSORS**

Ministry of Science and Higher Education of the Russian Federation Russian Academy of Sciences Russian Science Foundation Russian Foundation for Basic Research

## Organizer

Ishlinsky Institute for Problems in Mechanics of the 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 in Moscow

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