



**International Scientific Conference**  
**Modern challenges of inverse problems**  
dedicated to the 70th anniversary of Professor Alemdar Hasanov Hasanoglu  
October 3-5, 2024  
Conference Programme  
Novosibirsk time: GMT+7



**Zoom:** <https://us02web.zoom.us/j/82680294606?pwd=MzNZRVVvK2YwZGZhZThBUmIxM3BrUT09>

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In case of problems logging in to Zoom, you can connect to the **YouTube channel:**

<https://youtube.com/channel/UCEfDHH6-AcdAYEaizUzrelw>



Zoom:

**Friday, October 4th**  
**Sobolev Institute of Mathematics, RAS**  
**305 Room**

9:00-9:30	<b>Gunther Uhlmann</b> University of Washington, USA	Inverse problems for nonlinear equations
9:35-10:05	<b>Plamen D. Stefanov</b> Purdue University, USA	Inverse back-scattering for time-dependent potentials
10:10-10:40	<b>Shuai Lu</b> Fudan University, Shanghai, China	Increasing stability in the linearized inverse Schrodinger potential problems
10:45-11:10	<b>Coffee</b>	
11:10-11:40	<b>Anatoly Yagola, Wang Y., Leonov A.S., Stepanova I.E., Lukyanenko D., Churbanov D.V.</b> Lomonosov Moscow State University, Moscow, Russia	Joint inversion gravitational and magnetic fields in geophysics
11:45-12:15	<b>Ye Zhang</b> Beijing Institute of Technology & Shenzhen MSU-BIT University, China	An accelerated inexact Newton regularization scheme with a learned feature-selection rule for non-linear inverse problems
12:20-12:50	<b>Yu Chen</b> Shanghai University of Finance and Economics, China	Numerical unique continuation for Helmholtz equations along analytic curves
12:55-14:00	<b>Lunch</b>	
14:00-14:30	<b>Gulnara Kuramshina</b> Lomonosov Moscow State University, Moscow, Russia	Modern mathematical methods for processing vibrational spectra of polyatomic molecules

14:35-15:05	<b>Alexander Khludnev</b> Lavrentyev Institute of Hydrodynamics of SB RAS, Novosibirsk, Russia	Inverse problems in mechanics of composite materials
15:10-15:40	<b>Alexander Kozhanov</b> S.L. Sobolev Institute of Mathematics SB RAS, Novosibirsk, Russia	Non–local problems for differential equations with Samarsky-Ionkin conditions. Applications to inverse problems
15:40-16:00	<b>Kadenova Zuurakan Azhimamatovna, Asanov A., Pirmatov A.Z.</b> Institute of Mathematics of the National Academy of Sciences, Bishkek, Kyrgyzstan	On a class of systems of linear integral equations Fredholm-Stieltjes of the first kind with two independent variables
16:00-16:25	<b>Alexey Vasyukov, Beklemysheva K.A., Stankevich A.S., Petrov I.B.</b> Moscow Institute of Physics and Technology (National Research University), Dolgoprudny, Russia	The problem of determining the shape of an aberrator in a medical ultrasound to correct aberrations in an image
16:25-16:40	<b>Coffee</b>	
16:40-17:10	<b>Alexander Denisov, Zhu D.</b> Lomonosov Moscow State University, Moscow, Russia	Iterative methods for solving the inverse coefficient problem for a model of sorption dynamics
17:10-17:35	<b>Valery Zorkaltsev, Kazazaeva A.V.</b> Baikal State University, Irkutsk, Russia	Properties and relationships of different approximation methods
17:35-18:00	<b>Nikolai Trusov, Shananin A.A.</b> Federal Research Center “Informatics and Management” Russian Academy of Sciences, Moscow, Russia	Mathematical modeling of the consumer loan market in Russia
18:00-18:20	<b>Grigorev Georgii Vladimirovich, Nikitin N.O., Hvatov A., Kalyuzhnaya A.V.</b> Tsinghua University, Shenzhen, China	AI-based solution to the optimization problem of the microfluidic geometry design