

10 July, Friday

Oral reports

Big Conference Hall

Chairs: Jin Cheng, *Fudan University, Shanghai, China*  
Sergey Kabanikhin, *Novosibirsk State University, Russia*  
Olga Krivorotko, *Novosibirsk State University, Novosibirsk, Russia*

9.00 – 9.30

**PLENARY REPORT****Mathematical problems driven by COVID-19***Sergey Kabanikhin**Novosibirsk State University, Novosibirsk, Russia*

9:30 – 10:00

**A linear nonlocal model for outbreak of COVID – 19 and parameter identification***Jin Cheng**Fudan University, China*

10:05 – 10:35

**The dynamical model for COVID – 19 with asymptotic analysis and numerical implementations***Jijun Liu**School of Mathematics, Southeast University, Nanjing Center for Applied Mathematics, China*

10:40 – 11:10

**Macro scenarios of the US state – monopoly capitalism dynamics through the corona – crisis***Alexander Ryzhenkov**Institute of Economics and Industrial Engineering, SB RAS, Novosibirsk, Russia*

11:15 – 11:35

**Impact of the pandemic Covid – 19 on economic growth***Alexander Sokolov<sup>1</sup>, Maxim Shishlenin<sup>2</sup>**<sup>1</sup>Institute of Economics and Industrial Engineering, SB RAS, Novosibirsk, Russia**<sup>2</sup>Novosibirsk State University, Novosibirsk, Russia*

11:40 – 12:00

**Mathematical models of US economy during the crises caused by COVID – 19***Nikolay Zyatkov<sup>1</sup>, Olga Krivorotko<sup>2</sup>**<sup>1</sup>Institute of Computational Mathematics and Mathematical Geophysics, Novosibirsk, Russia**<sup>2</sup>Novosibirsk State University, Novosibirsk, Russia*

12:05 – 12:25	<b>Acoustic sounding in the detecting of pneumonia</b> Nikita Novikov <sup>1</sup> , Maxim Shishlenin <sup>1</sup> <sup>1</sup> <i>Novosibirsk State University, Novosibirsk, Russia</i>
12:30 – 12:50	<b>Modernization of the SEIR – D model</b> Alexey Prikhodko <sup>1</sup> , Maxim Shishlenin <sup>1</sup> , Sergey Kabanikhin <sup>1</sup> <sup>1</sup> <i>Novosibirsk State University, Novosibirsk, Russia</i>
12:55 – 13:15	<b>Mathematics of online social networks</b> Tatyana Zvonareva <sup>1</sup> , Olga Krivorotko <sup>1</sup> <sup>1</sup> <i>Novosibirsk State University, Novosibirsk, Russia</i>
13:50 – 14:30	<b>Lunch</b>
14:30 – 15:00	<b>PLENARY REPORT</b> <b>Epidemics: challenges and responses</b> <b>Alexey Romanykha</b> <b><i>Marchuk Institute of Numerical Mathematics, Moscow, Russia</i></b>
15:05 – 15:35	<b>Mathematical problems driven by COVID – 19</b> Sergey Kabanikhin <i>Novosibirsk State University, Novosibirsk, Russia</i>
15:40 – 16:10	<b>Mathematical modeling of the consequences of the Covid19 pandemic for the Russian economy</b> Natalia Obrosova, Alexander Shananin, Nikolay Trusov <i>Moscow Institute of Physics and Technology, Moscow, Russia</i>
16:15 – 16:45	<b>Mathematical immunology of virus infections</b> Gennady Bocharov <i>Marchuk Institute of Numerical Mathematics, Moscow, Russia</i>
16:50 – 17:10	<b>Mathematical modeling and scenarios of COVID – 19 epidemy in Moscow and Novosibirsk region based on SEIR – HCD model</b> Olga Krivorotko <sup>1</sup> , Nikolay Zyatkov <sup>2</sup> , Daria Andornaya <sup>3</sup> , Sergey Kabanikhin <sup>1</sup> <sup>1</sup> <i>Novosibirsk State University, Novosibirsk, Russia</i> <sup>2</sup> <i>Institute of Computational Mathematics and Mathematical Geophysics, Novosibirsk, Russia</i> <sup>3</sup> <i>Baker Hughes Company</i>
17:15 – 17:35	<b>Analysis of COVID – 19 data used in SEIR models</b> Olga Krivorotko <sup>1</sup> , Nikita Prokhoshin <sup>1</sup> <sup>1</sup> <i>Novosibirsk State University, Novosibirsk, Russia</i>
14:30 – 15:00	<b>Inverse problems for systems of nonlinear ordinary differential equations</b> Alexey Prikhodko <sup>1</sup> , Maxim Shishlenin <sup>1</sup> <sup>1</sup> <i>Novosibirsk State University, Novosibirsk, Russia</i>