

PROGRAM

Workshop on Mathematical Modeling

Vladivostok, July 18 – 22

Monday, 18.07.2022

Campus FEFU, Building D, D950

- 10:00 – 11:00 Anna Maslovskaya
Amur State University
Hybrid stochastic fractional-based approach to modeling bacterial quorum sensing
- 11:00 – 12:00 Andrey Kovtanyuk
Technical University of Munich
Continuum models of oxygen transport in brain

Tuesday, 19.07.2022

Campus FEFU, Building D, D950

- 10:30 – 11:30 Pavel Mesenev
Far Eastern Federal University
Analysis of an optimization method for solving the problem of radiative-conductive heat transfer with Cauchy boundary conditions
- 11:30 – 12:30 Igor Prokhorov
Institute for Applied Mathematics, FEB RAS
Determination of the attenuation coefficient for the nonstationary radiative transfer equation
- 12:30 – 14:00 Lunch
- 14:00 – 15:00 Evgeni Kovalenko
Far Eastern Federal University
Cloud service for sonar signal processing
- 15:00 – 16:00 Vladimir Kan
Far Eastern Federal University
Methods of the theory of radiation transfer for bathymetry problems
- 16:00 – 17:00 Alexander Chebotarev
Far Eastern Federal University
Inverse extremum problem for a model of endovenous laser ablation

Wednesday, 20.07.2022

Campus FEFU, Building D, D950

- 10:30 – 11:30 Nikolai Park
Far Eastern Federal University
An optimal control problem for a quasilinear endovenous laser ablation model
- 11:30 – 12:30 Tim Seleznev
Far Eastern Federal University
Cerebral oxygen transport model with unknown surface sources
- 12:30 – 14:00 Lunch
- 14:00 – 15:00 Konstantin Nefedev
Far Eastern Federal University
Optimization of parallel Monte-Carlo algorithm for 2D Ising model
- 15:00 – 16:00 Veronika Tupikina
Far Eastern Federal University
Mathematical modeling of oxygen transport in blood – tissue medium
- 16:00 – 17:00 Igor Prokhorov
Institute for Applied Mathematics, FEB RAS
An extrapolation method for projection data filtration in pulsed X-ray tomography

Thursday, 21.07.2022

Institute for Applied Mathematics, FEB RAS, Room. 319

- 11:30 – 12:30 Evgeni Marushchenko
Far Eastern Federal University
Methods of machine learning for modeling of blood flow in microvessels
- 12:30 – 14:00 Lunch
- 14:00 – 15:00 Ivan Yarovenko
Institute for Applied Mathematics, FEB RAS
Machine learning techniques for radiative-conductive heat transfer
- 15:00 – 16:00 Elizaveta Liu
Institute for Applied Mathematics, FEB RAS
Determination of the bottom surface profile

16:00 – 17:00 Polina Vornovskich
Institute for Applied Mathematics, FEB RAS
Applicability of the single-scattering approximation for the ocean acoustic sounding

Friday, 22.07.2022

Off-site session – Math Club in Kiparisovo

11:30 – 12:30 Andrey Kovtanyuk
Technical University of Munich
Modeling of the cerebral blood circulation in a capillary network accounting for the influence of the endothelial surface layer

12:30 – 14:00 Lunch

14:00 – 15:00 Alexander Chebotarev
Far Eastern Federal University
Inverse problems for equations of complex heat transfer with reflection and refraction effects

15:00 – 16:00 Andrei Sushchenko
Far Eastern Federal University
Remote sensing of the sea bottom