
MASTER PROGRAM

for

**SEVENTEENTH INTERNATIONAL CONFERENCE
*APPLICATION OF MATHEMATICS IN TECHNICAL AND NATURAL
SCIENCES*
JUNE 24-29, 2025**

**All times in the program are GMT+3 (East-European time). Please
synchronize your local time with respect to GMT and join the announced
Zoom sessions on time.**

THUESDAY, JUNE 24, 2025

FLAMINGO GRAND HALL

Join Zoom Meeting **08:00-18:00**

<https://us02web.zoom.us/j/85348193814?pwd=tNYzfzVuHSedjfsI2tv84ab80BSkZr.1>

Meeting ID: 853 4819 3814

Passcode: 076828

Hosted by Michail Todorov

08:30-09:00 OPENING SESSION

09:00-10:00 PLENARY LECTURE: Viktor Didenko
Title: *Approximate Solution of Non-Homogeneous Biharmonic
Problems in Non-Smooth Domains*

10:00-10:30 BREAK

10:30-12:00 Special Session E-LEARNING

- 10:30-11:00 Speaker: Irina Naskinova/Mikhail Kolev
Title: *Advancing Predictive Maintenance Modeling for Renewable Energy Systems*
- 11:00-11:30 Speaker: Irina Naskinova
Title: *Data-centric Reliability Modeling for Energy Assets*
- 11:30-12:00 Speaker: Yana Vasileva
Title: *The Synergy of Mathematics, Computer Science and Generative Artificial Intelligence*

Lunch Break

- 14:00-14:45 KEYNOTE TALK: Valentin Gushchin

Title: *Investigation of the Vortices Couple Motion in a Stratified Fluid*

Session APPLIED ANALISYS

- 15:00-15:30 Speaker: Alex Fedoseev (Y. Gurimskaya)
Title: *First-Principles Study of Radiation-Induced Defects in Silicon Solar Cells and Annealing Using Density Functional Theory Simulation*
- 15:30-16:00 Speaker: Alex Fedoseyev
Title: *Improved Analytical Solution for Turbulent Flow in Channel*

Break

Session NUMERICAL METHODS & SCIENTIFIC
COMPUTING

- 16:30-17:00 Speaker: Ivan Hristov

Title: *A High Precision Implementation of Taylor Series Method for the N-body Gravitational Problem*

Session APPLIED ANALYSIS

17:00-17:30

Speaker: Roman Haynatzki

Title: *Synergizing XGBoost and Propensity Score Matching (PSM) for Early Detection and Causal Insight in Cardiac Rejection*

17:30-18:00

Speaker: Stoyan Apostolov

Title: *Linear Systems and Integral Equations: A Stochastic Approach*

20:00

WELCOME PARTY – TERRACE OF THE RESTAURANT,
FLAMINGO GRAND HOTEL