



84th International Scientific
Conference of the
University of Latvia 2026



LATVIJAS
UNIVERSITĀTE

Digitālie dvīņi un skaitliskā modelēšana tehnoloģijām un videi / Digital twins ar numerical modelling for technology and environment

Trešdiena, 2026. gada 15. aprīlī, plkst. 11.00
Zinātnes mājā, Jelgavas ielā 3, Rīga

Wednesday, 15 April 2026, 11.00 a.m
House of Science, Jelgavas street 3, Riga

Programma | Programme

10.30–11.00 Kafijas pauze, diskusijas | Coffee, discussions

Sesija 1 | Session 1

Vadītājs | Chair: Kirils Surovovs

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|-------------|--|---|
| 11.00–11.18 | Linards Goldšteins
Oskars Mikanovskis
Leonīds Buligins
Kalvis Kravalis
University of Latvia | Modelling of an EM pump and loop coupling for cavitation onset prediction |
| 11.18–11.36 | Maksimilians Pīrs
Aleksandrs Jegorovs
Andris Jakovičs
Mihails Birjukovs
University of Latvia | Simultaneous 2D Phase & Velocity Field Measurements for Hele-Shaw Bubble Flow in Liquid Metal |
| 11.36–11.54 | Antons Cvečovskis
University of Oslo;
CENOS | Physics-Informed Graph Neural Network for Fast Thermal Prediction in Induction Heating |
| 11.54–12.12 | Mihails Birjukovs
Ansis Emīls Zīvers
Krisrofers Rolands
Kangīzers
University of Latvia | 2WCF-SVD: 2-way consistent Farneback with SVD-based artifact filtering for multiphase optical flow velocimetry |
| 12.12–12.30 | Ansis Emīls Zīvers
Ansis Ziemelis | Shape & Collective Dynamics in Geometrically Confined MHD Bubble Flow |

**Kristofers Rolands
Kangīzers
Pēteris Zvejnieks
Mihails Birjukovs**
University of Latvia

12.30–13.00 Kafijas pauze, diskusijas/Coffee break, discussions

Sesija 2 | Session 2

Vadītājs | Chair: Mihails Birjukovs

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|--------------------|---|--|
| 13.00–13.18 | Krišjānis Kalme
Andrejs Sabanskis
University of Latvia | Towards a Digital Twin in Crystal Growth: Correcting Optical Radius Measurement Biases |
| 13.18–13.36 | Maksims Surovovs
Jānis Virbulis
Staņislavs Luka
Stroževs
University of Latvia | Local transient simulations of feed rod melting during floating zone silicon crystal growth |
| 13.36–13.54 | Kirils Surovovs
Jānis Virbulis
University of Latvia | Calibration of the material properties of BBO and natrium oxide mixture |
| 14.12–14.30 | Andrii Chepurnyi
University of Latvia | DC Plasma–Chemical Enhancement of Methane Combustion in a GTE Chamber |
| 13.54–14.12 | Miks Balodis
Riga Technical University
Engineering High School
Gints Jasmonts
Andris Slavinskis
Riga Technical University | Real-Time Modeling of Comet Dust Tails in the Browser with WebGPU |