



ECMI 2018

20TH EUROPEAN CONFERENCE ON MATHEMATICS FOR INDUSTRY

CONFERENCE PROGRAM

18-22 JUNE



WELCOME MESSAGE

On behalf of the Organizing Committee, we are pleased to welcome you in Budapest for the 20th European Conference on Mathematics for Industry, ECMI 2018.

We are thankful and proud for being selected to host this special anniversary. Hungary is well-known for its outstanding achievements in pure mathematics, but much less known for its contributions to applied mathematics, in spite of the works of outstanding scientists like, Gyula Farkas, Theodore von Kármán, John von Neumann or Rudolf E. Kalman. Therefore it is our privilege to have the opportunity to reinforce our contacts with the major European network promoting industrial mathematics, by bringing together more than 350 researchers for intellectual interaction for 5 days.

The European Consortium for Mathematics in Industry (ECMI) organized its first international conference in Oberwolfach, in 1983, followed by a series of conferences, a persistent objective of which has been to galvanize interaction between academy and industry, leading to innovations in both fields. We hope that ECMI 2018 will further inspire multidisciplinary research along these lines, leading to the formulation of real-life challenges, where mathematical technologies may provide significant new insights.

Following the traditions of ECMI, the conference will focus on various fields of industrial and applied mathematics, such as Applied Physics, Biology and Medicine, Cybersecurity, Data Science, Economy, Finance and Insurance, Energy, Production Systems, Social Challenges, Vehicles and Transportation. These themes nicely fit to current distinguished national research programs in Hungary, in particular programs on Autonomous Vehicles, Digital Factories, Brain Research or Precision Agriculture, supported by the EU and the National Research, Development and Innovation Office.

The conference is jointly organized by the János Bolyai Mathematical Society, the Institute of Mathematics at Eötvös Loránd University, and the Institute for Computer Science and Control of the Hungarian Academy of Sciences (MTA SZTAKI). The newly appointed Minister of Innovation and Technology, László Palkovics was kind enough to patronize our conference.

The statistics of the conference are more than satisfactory. In addition to the nine plenary talks, given by world class researchers, we have 50 minisymposia, and 45 contributed talks and poster presentations, running in 7 parallel sessions. Altogether we have more than 350 participants, from around 40 countries. More than 50 participants are students.

We express our deepest gratitude to everybody involved in the preparation of this meeting, the plenary speakers, the members of the Scientific Committee, the organizers of the minisymposia, the contributing authors and all the participants of the conference.

It is our pleasure to acknowledge the financial support of Graphisoft, Secudit, Morgan Stanley, and the EPIC Centre of MTA SZTAKI, providing the financial basis for the participation of many young researchers.

We recommend that you take time for exploring the beauty of our capital, but first of all we wish to all of you an intellectually stimulating, successful conference.

Budapest, June 2018

On behalf of the Organizing Committee

Péter L. Simon (chair), **László Gerencsér** (advisor), **Ferenc Izsák** (secretary)

CONTENT

General information.....	5-7
Scientific Committee	
Organizing Committee	
Plenary Speakers	
Conference Venue	
Conference Office	
Conference Fees	
Coffee Breaks	
Lunches	
Internet Access	
Instructions for speakers	
Social Program.....	8
List of Minisymposium	9
Scientific program.....	11
Programs at a glance.....	22
List of Chairpersons.....	31
Speakers Index.....	34
List of posters	43
Sponsors.....	44

GENERAL INFORMATION

Scientific committee

- László Monostori, chair, MTA SZTAKI, Budapest and Fraunhofer Project Center at SZTAKI
- Dietmar Hömberg, co-chair, President of ECMI, Weierstrass Institute and Technische Universität Berlin
- Adérito Araújo, University of Coimbra
- Helen Byrne, University of Oxford
- Raimondas Čiegis, Vilnius Gediminas Technical University
- István Faragó, Eötvös Loránd University, Budapest
- Zoltán Horváth, Széchenyi István University, Győr
- Sergey Lupuleac, Saint Petersburg State Polytechnical University
- Alessandra Micheletti, Università di Milano
- Cláudia Nunes, University of Lisbon
- Ronny Ramlau, Johannes Kepler University, Linz
- Angela Stevens, University of Münster

Organizing committee

- Péter L. Simon, chair, János Bolyai Mathematical Society and Eötvös Loránd University, Budapest
- Aurél Galántai, Óbudai University, Budapest
- László Gerencsér, MTA SZTAKI, Budapest
- András Hajdu, University of Debrecen
- Tibor Illés, Budapest University of Technology and Economics
- Ferenc Izsák, Eötvös Loránd University, Budapest
- Dezső Miklós, Alfréd Rényi Institute of Mathematics, Budapest
- Gábor Molnár-Sáska, János Bolyai Mathematical Society and Morgan Stanley, Budapest
- Gergely Röst, University of Szeged
- András Zempléni, Eötvös Loránd University, Budapest

Plenary speakers

- Paola Goatin, INRIA Sophia Antipolis, France
- Stefan Kurz, TU Darmstadt and Robert Bosch GmbH, Germany
- Knut-Andreas Lie, SINTEF Digital Oslo, Norway
- László Lovász, Hungarian Academy of Sciences, Hungary
- Anna Marciniak-Czochra, University of Heidelberg, Germany
- Christophe Prud'homme, University of Strasbourg and Cemosis, France
- Samuli Siltanen, University of Helsinki, Finland
- Gábor Stépán, BME, Hungary
- Andrew Stuart, CalTech, USA

GENERAL INFORMATION

Conference Venue

- Danubius Hotel Héliá****
62-64. Kárpát utca, 1133 Budapest, Hungary





GENERAL INFORMATION

Conference Office

The Conference office located in the MARS room at conference level. Organizers are also available at the registration desk. Staff is available on each conference day between 08:30 – 19:00h

Conference Fees

Conference fees cover: conference attendance, information material, lunches, coffee breaks and social events.

Coffee Breaks

Coffee breaks are served at conference floor.

Lunches

Lunches are served in buffet style at Jupiter Restaurant of the hotel at Lobby level. Those who requested special meals in registration form ask for guidance. Lunch will be available only with conference badge.

Internet Access

Wireless internet is available throughout the hotel. password is provided at the hotel reception or ask at the conference office.

Instructions for speakers

Each lecture room is equipped with a PC, pointer, video projector. The PC is provided with the following software: Windows 7, Office, Adobe reader, Video player.

Please be aware that each oral presentation has a 20+5 and 15+5 (evening sessions) minutes slot. Please notice that the 5 minutes are devoted to questions.

Presentation upload is necessary to be done as early as possible but at the latest at the morning of the presentation between 08:00 -08:30h. You can also use your own lap top but, in that case, please be aware that the time for your talk will be reduced due to the change of computers.

There will be assistant available to help speakers in technical matters. If you have video or any other special feature, please test the presentation with the technician well in advance of your session.

By participating on the conference, You agree to be filmed, televised, photographed, identified and otherwise recorded during the event under the conditions and for the purposes now or hereafter authorized by the ECMI in relation with the promotion of the event.

If you have problem with this please refer to Organizers!



SOCIAL PROGRAM

The listed programs are included in the registration (excluding the reception on the 19th)! Social events also included for those accompanying who's participation fee (110 Eur) was paid in advance! Booking social program on spot is also available with limited possibility!

18TH JUNE - MONDAY

Welcome reception - 18:30 - 20:30h
Location: Danubius Hotel Héliá

19TH JUNE - TUESDAY (BY INVITATION)

ECMI reception - 20:00 - 22:00h
Location: Danubius Hotel Héliá

20TH JUNE - WEDNESDAY

Budapest sightseeing by bus - 15:30 - 18:30h
Departure: from Danubius Hotel Héliá

21TH JUNE - THURSDAY

Conference Gala Dinnner on Europa boat - 19:00 - 22:00h
Danube River cruise
Departure: 18:45h from Danubius Hotel Héliá
Port is a short walk from the hotel. Please follow directions.
Boat will leave the port at 19:30h only!

LIST OF MINISYMPOSIUMS

- MS01 Fractional Diffusion: Modeling, Theory and Numerics
MS02 Qualitative Properties of Ordinary and Partial Differential Equations and their Numerical Solutions
MS03 Differential Equations in Numerical Modelling: From Theory to Application
MS04 New Trends in Education
MS05 Mathematical Modeling of Vector-borne Disease Transmission
MS06 ECMI Special Interest Group: Mathematical Modelling in Biomedical Applications
MS07 Mathematical Modelling in the Silicon Industry
MS08 Mathematics as a Key Factor to Master the Challenges of the Energy Transition
MS09 Prognostic MR Thermometry for the Thermal Ablation of Liver Tumours
MS10 Mathematics of Planet Earth
MS11 Modelling of Cleaning and Decontamination
MS12 Networks in Finance and Social Sciences
MS13 Modelling, Theory and Numerical Analysis of Reaction-Diffusion Problems
MS14 Shape Optimisation Methods with Applications to Biology and Industry
MS15 Electromagnetic Problems Arising in Industry: Modelling and Numerical Techniques
MS16 Multiple Scales in Electromagnetic Devices - from Quantum Mechanical Effects to Circuit Simulation
MS17 Distributing Challenges - Efficiency Versus Constraints on Networked Consensus and Optimization
MS18 Simulation, Optimization and Uncertainty Quantification of Field/Circuit Problems for E-Mobility Applications
MS19 Control Charts and Case Studies
MS20 Differential Equations and Optimisation
MS21 MSO4SC: an Infrastructure for MSO Frameworks and Software
MS22 Mathematical Modelling of Industrial Processes
MS23 EU-MATHS-IN: Success Stories of Mathematical Technologies in Societal Challenges and Industry
MS24 Modern Stochastic Valuation Techniques in Insurance
MS25 Optimization Success Stories with Portuguese Industry
MS26 ECMI Special Interest Group: Maths for the Digital Factory
MS27 MSO for Steel Production and Manufacturing
MS28 Multidisciplinary Approaches to Biological Modelling
MS29 Finite-Sample System Identification
MS30 Game Theoretic Modelling of Utility Networks
MS33 Sparse and Inverse Problems in Medicine and Biology
MS34 ECMI Special Interest Group: Big Data Models and Challenges
MS35 Reduced Order Modelling for Industrial and Scientific Applications
MS36 Mathematics in Medicine and Life Sciences
MS38 ECMI Special Interest Group: Material Design and Performance in Sustainable Energies



MS39	Towards the Next Generation of Digital Human Modelling
MS40	HU-MATHS-IN: Applications in the Life Sciences
MS41	ECMI Special Interest Group: Computational Methods for Finance and Energy Markets
MS42	Evolutionary Game Theory with Time Constraints (in Biology and Medicine)
MS44	Recent Mathematical and Statistical Approaches in Earth and Environmental Sciences
MS45	Optimization
MS46	Environment Modelling and Remote Sensing by Computational Imaging
MS47	Mathematical Modeling of Charge Transport in Graphene and Low Dimensional Structures
MS48	ECMI Special Interest Group: Towards a Virtual Campus in Industrial Mathematics
MS49	Knowledge Discovery and Graph Data Science
MS51	Mathematics of Biomedical Signal Processing
MS52	Graphisoft
MS53	Morgan Stanley



DAILY SESSIONS

MONDAY, 18 JUNE 2018

9:00-10:20 Opening & Plenary lecture, (Helia), Chair: László Monostori
László Lovász: Partitioning and decomposing graphs

10:20-10:40 Coffee break

10:40-12:20 Morning minisymposia

Helia: MS 41, **Chair:** Jan ter Maten

10:40-11:05 Bevina Handari: Implementation of Agglomerative Clustering and Genetic Algorithm in Portfolio Optimization

11:05-11:30 Kristian Debrabant: Multilevel Price Estimation of Jump-Diffusion Driven Assets

11:30-11:55 Matthias Ehrhardt: High-Order Methods for Parabolic Equations in Multiple Space Dimensions for Option Pricing Problems

11:55-12:20 Ferenc Leitold: SECUDIT Presentation

Panorama: MS 53, **Chair:** András Zempléni

10:40-11:05 Gabor Fath: Quantitative Finance – the Beauty and the Beast

11:05-11:30 Gabor Salamon: A Least-Square Method to Calculate Counterparty Exposure

11:30-11:55 Norbert Hari: How much should you trust your Least Squares Method as a risk manager?

11:55-12:20 Andras Komarik: Credit Default Risk & Correlated Defaults

Mercure: MS 34, **Chair:** Natasa Krejic

10:40-11:05 Alessandra Micheletti: Statistical Analysis of the Space-Time Distribution of Cultivated Land in Lombardy Region in Italy at Parcel Level

11:05-11:30 Stefano Zapperi: Integrative Analysis of Pathway Deregulation in Obesity

11:30-11:55 Domagoj Matijević: Honoring Ancestors in Matchings of Phylogenetic Trees and Ontologies

11:55-12:20 Dusan Jakovetic: A RealForAll Project Study: Predicting Pollen Concentrations via Signal Processing and Time Series Methods

Orion: MS 15, **Chair:** Dolores Gomez

10:40-11:05 Ana Alonso Rodriguez: High Order Divergence Free Finite Element Basis

11:05-11:30 Stefan Kurz: Isogeometric Boundary Elements in Electromagnetism: Towards Industrial Application

11:30-11:55 Pablo Venegas: A Mathematical Approach to the Dynamic Preisach Hysteresis Model: Analysis and Computations

Uranus: MS 25, **Chair:** Manuel Cruz

- 10:40-11:05** Lopes: Designing a Logistics System Using a Location-Routing Approach
11:05-11:30 Marta Pascoal: The Role of Optimization on Multi-Material 3D Printing Using Stereolithography
11:30-11:55 Isabel Cristina Lopes: Reverse Logistics Modelling of Assets Acquisition in a Liquefied Propane Gas Company
11:55-12:20 Jorge Orestes Cerdeira: On the Scheduling of Periodic Events

Venus: MS 45, **Chair:** Andras Hajdu

- 10:40-11:05** Attila Tiba: Optimizing Majority Voting Based Systems Under a Resource Constraint for Multiclass Problems
11:05-11:30 Péter Györgyi: Pickup and Delivery with Time Window Uncertainty
11:30-11:55 Tamás Kis: B&C for Scheduling with Raw Material Constraints
11:55-12:20 Sándor Bozóki: Pairwise Comparisons in Multi-Criteria Decision Making

Saturnus: MS 09, **Chair:** Béla János Szekeres

- 10:40-11:05** Norbert Siedow: Mathematical Modeling for Laser-Induced Thermotherapy in Liver Tissue
11:05-11:30 Christian Leithäuser: Validation of a Mathematical Model for Laser-Induced Thermotherapy
11:30-11:55 Matthias Andres: Improving Thermal Ablation of Liver Tumors
11:55-12:20 Kevin Tolle: Efficient Therapy Planning via Model Reduction for Laser-Induced Thermotherapy

12:20-14:00 Lunch

- 14:00-14:50** Plenary lecture, (Helia), Chair: Zoltán Horváth
Christophe Prud'homme: Hybridized Discontinuous Galerkin and Model Order Reduction Methods with Applications to Health and Physics

15:00-16:40 Afternoon minisymposia

Helia: MS 41, **Chair:** Kristian Debrabant

- 15:00-15:25** Long Teng: A Multi-Step Spline Scheme for Solving Backward Stochastic Differential Equations
15:25-15:50 Krzysztof Burnecki: Weak Approximation of Index-Linked Catastrophe Bond Prices
15:50-16:15 Alexander Pitkin: High-Order Scheme for Option Pricing with Stochastic Volatility and Jumps in Returns
16:15-16:40 Benjamin Berger: Applications of the Heston Stochastic Local Volatility Model in Commodity Markets

Panorama: MS 12, **Chair:** István Kiss

- 15:00-15:25** James Burrige: Can One Hear the Shape of a Country?
15:25-15:50 Joseph O'Brien: Application of Branching Processes to Simon's Model
15:50-16:15 Kieran Sharkey: Katz Centrality, Control Analysis and Directed Networks
16:15-16:40 Stephen Ashton: The Mathematics of Human Contact

Mercure: MS 34, **Chair:** Alessandra Micheletti

- 15:00-15:25** Dragana Bajovic: Optimal Likelihood Ratio Test for Detecting Multi-State Signals
15:25-15:50 Dejan Vukobratovic: Massive-Scale Data Acquisition and Distributed Information Processing in Future 5g Mobile Cellular Networks
15:50-16:15 Zoltan Kiraly: Research Platform for Cyber-Situational Analysis
16:15-16:40 Natasa Krejic: Exact Spectral Gradient Method for Distributed Optimization

Orion: MS 15, **Chair:** Pilar Salgado

- 15:00-15:25** Dietmar Hömberg: Temporal Homogenization of a Nonlinear Parabolic System
15:25-15:50 Irwin Yousept: Fully Discrete Solution for Bean's Critical with Temperature Effects in Superconductivity
15:50-16:15 Alberto Valli: Optimal Voltage Control of Non-Stationary Eddy Current Problems
16:15-16:40 Pilar Salgado: Analysis of a Transient Magnetic Model with Voltage Drop Excitations

Uranus: MS 10, **Chair:** Iain Moyles

- 15:00-15:25** Iain Moyles: Production of Nitrate Spikes in a Model of Ammonium Biodegradation
15:25-15:50 Alina Dubovskaya: A Model of Phosphorus Recycling at the Plant Scale
15:50-16:15 John Donohue: The Development of Deep-Ocean Anoxia in a Comprehensive Ocean Phosphorus Model

Venus: MS 17, **Chair:** László Á. Kóczy

- 15:00-15:25** Balázs Gerencsér: Consensus and Its Efficiency with Wild or Mild Constraints
15:25-15:50 Simon Apers: Bounding the Convergence of Mixing and Consensus Algorithms
15:50-16:15 Raphael Jungers: Path-Complete Positivity as a Generalization of Consensus
16:15-16:40 Giacomo Como: On Network Centrality, Influence, and Resilience

Saturnus: MS 03, **Chair:** Petra Csomós

- 15:00-15:25** Balázs Kovács: Stable and Convergent Fully Discrete Interior-Exterior Coupling for Problems Related to Maxwell's Equations
15:25-15:50 Lukas Einkemmer: A Split Step Fourier/Discontinuous Galerkin Scheme for the Kadomtsev-Petviashvili Equation
15:50-16:15 Chiara Piazzola: A Low-Rank Integrator for Semilinear Stiff Matrix Differential Equations
16:15-16:40 Petra Csomós: Flood Prevention with Mathematics

16:40-17:00 Coffee break

17:00-18:20 Evening minisymposia

Helia: MS 41, **Chair:** Matthias Ehrhardt

- 17:00-17:25** Cláudia Nunes: Hysteresis Due to Irreversible Exit: Addressing the Option to Mothball
17:25-17:50 Ivan Yamshchikov: European Gas Prices Dynamics: EEX, Ad-Hoc Study
17:50-18:15 Michael Coulon: The Trade-Off Between Liquidity and Correlation: Proxy Hedging of Bunker Fuel

Panorama: MS 12, **Chair:** Kieran Sharkey

- 17:00-17:25** István Kiss: Epidemic Threshold in Pairwise Models for Clustered Networks: Closures and Fast Correlations
17:25-17:50 Ágnes Bodó: Global Stability in Epidemic Models
17:50-18:15 Noémi Nagy: Qualitative Analysis of the Compact Pairwise Model for SIS Epidemic Propagation

Mercure: MS 42, **Chair:** János Karsai

- 17:00-17:25** József Garay: The Replicator Equation in Matrix Games Under Time Constraints
17:25-17:50 Villó Csiszár: Evolutionary Stable Strategies in Matrix Games with Time Durations
17:50-18:15 Tamás Varga: Several Characterizations of ESS of the Matrix Game Under Time Constraints

Orion: CS 1, **Chair:** Tamás Kis

- 17:00-17:20** Juancho Collera: Queues with Choice from a Symmetry Perspective
17:20-17:40 Aurea Martinez: Optimal Control of Heavy Metals Phytoremediation
17:40-18:00 Kolos Ágoston: The Effect of Welding on the One-Dimensional Cutting-Stock Problem: The Case of Fixed Firefighting Systems in the Construction Industry
18:00-18:20 Clement Etienam: An Improved Reservoir Model Calibration Using Sparsity and Stochastic Optimization

Uranus: MS 10, **Chair:** : John Donohue

- 17:00-17:25** Mark McGuinness: Great Balls of Fire - Modelling Surtseyan Volcanic Ejecta
17:25-17:50 James Fannon: Numerical Simulations of Drumlin Formation

Venus: CS 2, **Chair:** Pina Milišić

- 17:00-17:20** Andrey Zvyagin: Thermoviscoelastic Kelvin-Voigt Model
17:20-17:40 Victor Zvyagin: Problem of Viscoelastic Media with Memory Motion
17:40-18:00 Mikhail Turbin: Optimal Feedback Control Problem for Bingham Fluid Motion
18:00-18:20 Vilmos Zoller: The Effect of the Type of the Elastic Foundation on the Dynamics of Track/Vehicle Systems

Saturnus: MS 03, Chair: Petra Csomós

- 17:00-17:25** Matthias Eimer: A Local Time Stepping Method for District Heating Networks
17:25-17:50 Monica Bacon: Comparative Study of Heuristic Algorithms for Electrical Impedance Tomography
17:50-18:15 El Houssaine Quenjel: Numerical Analysis of a Monotone Ddfv Scheme for the Richards Equation

TUESDAY, 19 JUNE 2018

- 9:00-9:50** **Plenary lecture, (Helia),** Chair: Stephen O'Brien
Samuli Siltanen: Three-dimensional X-ray Vision by Sparse Tomography

9:50-10:20 Coffee break

10:20-12:00 Morning minisymposia

Helia: MS 23, Chair: Peregrina Quintela

- 10:20-10:45** Wil Schilders: EU-MATHS-IN Introduction, Opportunities for Its Nodes, and Major On-Going Initiatives
10:45-11:10 Margarida Pina: Novel Modelling, Simulation, and Optimisation Paradigms in a Data Rich Environment
11:10-11:35 Zoltán Horváth, Peregrina Quintela: European Strategies for Promoting Novel Digital Twins
11:35-12:00 Hans Georg Bock: Energy Optimal Cruise Control for Individual and Platoons of Heavy-Duty Trucks

Panorama: MS 28, Chair: Poul Hjorth

- 10:20-10:45** Karunia Putra Wijaya: A Macroscopic Model of Riverine Microplastic Transport
10:45-11:10 John Wyller: Pattern Formation in a Homogenized Neural Field Model
11:10-11:35 Uffe Høgsbro Thygesen: Dynamic Optimization and Game Theory Elucidate Vertical Migrations in the Ocean
11:35-12:00 Mads Peter Soerensen: Design of Supercontinuum Optical Sources Aided by High Performance Computing

Mercure: MS 47, Chair: Orazio Muscato

- 10:20-10:45** Emanuel Mompo: Chaotic Behavior and Coherence Resonance in Semiconductor Superlattices at Room Temperature
10:45-11:10 Francesco Vecil: Hybrid Parallel Deterministic Solver for DG-MOSFETs
11:10-11:35 Vittorio Romano: Charge and Phonon Transport in Graphene
11:35-12:00 Omar Morandi: Asymptotic Study of Quantum Transport in Low Dimensional Nanomaterials

Orion: MS 52, **Chair:** Sándor Bozóki

- 10:20-10:45** Bálint Bognár: Architectural Applications of the Straight Skeleton
10:45-11:10 Alpár A. Csédes: Self-Adaptive Nonlinear Least Square Optimization for Geometric Calculations
11:10-11:35 András Csetri: Boolean Operations Between Polyhedral Solids in ArchiCAD
11:35-12:00 János Reviczky: Constrained Delaunay Triangulation

Uranus: MS 27, **Chair:** Dietmar Hömberg

- 10:20-10:45** Najib Alia: Modeling and Optimization of a Gas-Stirred Liquid Flow for Steelmaking Processes
10:45-11:10 Manuel Arenas: Modelling, Simulation and Optimization of Inductive Pre-Heating for Thermal Cutting of Steel Plates
11:10-11:35 Prerana Das: Numerical Simulation of High-Frequency Induction Welding of Steel Tubes
11:35-12:00 Luigino Capone: Induction Hardening of Cam Profiles: Modeling, Simulation, and Optimization

Venus: MS 48, **Chair:** Alessandra Micheletti

- 10:20-10:45** Matti Heilio: European Net Portal for Industrial Mathematics
10:45-11:10 Tuomas Myllykoski: Experiences and Modernization on Online Courses in the Finnish National Network on Mathematical Modelling
11:10-11:35 Thomas GoetzGötz: ECMI Modeling Course: Blended Learning in Applied Mathematics
11:35-12:00 Sergey Lupuleac: Beanstalk: Russian Contribution to ECMI Virtual Education Program

Saturnus: MS 11, **Chair:** Vincent Cregan

- 10:20-10:45** Vincent Cregan: A Model for Residue Removal in the Pharmaceutical Industry
10:45-11:10 Julien Landel: Mathematical Modelling of the Decontamination of Chemical Droplets
11:10-11:35 Kristian Kiradjiev: Removal of Sulphur Dioxide from Flue Gas
11:35-12:00 Mohit Dalwadi: Chemical Decontamination with a Neat Agent and an Immiscible Cleanser

12:00-14:00 **Lunch**

14:00-14:50 **Plenary lecture, (Helia),** Chair: István Faragó
Gábor Stépán: Hardware-in-the-loop Experiments on Bistability

15:00-16:40 **Afternoon minisymposia**

Helia: MS 23, **Chair:** Stefano Guarino

- 15:00-15:25** Christophe Prud'homme: M4SE@Home Math for Smart Energy at Home
15:25-15:50 Andreas Sommer: modELTES: Model Based Engineering and Control of Latent Heat Thermal Energy Storages
15:50-16:15 Jenny Niebsch: Imbalance Determination for Wind Turbines
16:15-16:40 Piotr Ptak: Ground-Based Augmentation System Research at Indra Navia AS

Panorama: MS 07, **Chair:** Ferran Brosa Planella

- 15:00-15:25** Caoimhe Rooney: Homogenisation Applied to Electrical Calcination of Carbon Materials
15:25-15:50 Mads Fromreide: Lumped Modelling of Three-phase AC Smelting Furnaces
15:50-16:15 Benjamin Sloman: Heat Transfer and Chemical Reactions in a Silicon Furnace
16:15-16:40 Ferran Brosa Planella: Approaching Solidification Fronts in the Extended Stefan Problem for Binary Alloys in Finite Domains

Mercure: MS 47, **Chair:** Vittorio Romano

- 15:00-15:25** Giovanni Mascali: Charge and Energy Transport in Graphene
15:25-15:50 Ioannis Deretzis: Multiscale Modelling for Materials Science Applications
15:50-16:15 Nella Rotundo: On a Thermodynamically Consistent Coupling of Quantum System and Device Equations
16:15-16:40 Andrey Nasedkin: About Concept of the Finite Element Package ACELAN-COMPOS for Active Composite Materials Simulation

Orion: MS 05, **Chair:** Thomas Götz

- 15:00-15:25** Karunia Putra Wijaya: Designing Simple Epidemic Models for Better Data Assimilation
15:25-15:50 Isti Rodiah: An Agent Based Modeling of Spatially Inhomogeneous Host-Vector Disease Transmission
15:50-16:15 Edy Soewono: Integrating Daily Dengue Incidence, Rainfall and Relative Humidity Data for Early Detection of Dengue Outbreak
16:15-16:40 Dipo Aldila: Analysis of Vector-Bias and Blood Resource Dependence in Malaria Disease Model with Mosquito Repellent

Uranus: MS 44, **Chair:** Stephan Schlüter

- 15:00-15:25** Andras Bardossy: Interpolation Using Different Combinations of Environmental Observations
15:25-15:50 Zsolt Kovács: Optimal Groupings and Inhomogeneity Detection in Environmental Sciences and Beyond: Examples of the Combined Cluster and Discriminant Analysis (CCDA) Method
15:50-16:15 István Hatvani: Utilizing the Periodic Behavior of Water Quality Parameters in Estimating Primary Production in a River
16:15-16:40 László Németh: Damage Margin Calculation for Extreme Natural Disasters

Venus: MS 24, **Chair:** András Zempléni

- 15:00-15:25** Laszlo Martinek: Stochastic Models in Claims Reserving on Actual Data
15:25-15:50 Alexander van Haastrecht: Pricing and Hedging Long-Dated Options and Guarantees
15:50-16:15 Szabolcs Beck: Risk-Free Curves in Stochastic Environment
16:15-16:40 David Bozso: Stochastic Mortality Models

Saturnus: MS 02, **Chair:** Ferenc Izsák

- 15:00-15:25** Szilvia Császár: On the Stability of Non-Autonomous Systems
15:25-15:50 Imre Fekete: Embedded Error Estimation and Adaptive Step-Size Control for Optimal Explicit Strong Stability Preserving Runge-Kutta Methods
15:50-16:15 Róbert Horváth: Qualitative Properties of Linear and Nonlinear Discrete Mesh Operators and their Qualitative Properties
16:15-16:40 Zhiqiang Sheng: A Nonlinear Finite Volume Scheme Preserving Maximum Principle
16:40-17:00 **Coffee break**

17:00-18:20 **Evening minisymposia**

Helia: MS 23, **Chair:** Zoltán Horváth

- 17:00-17:25** Fabín García Daza: Mathematically Enhanced Atomistic Simulation of Diffusion in Advanced Energy Materials
17:25-17:50 Dolores Gomez: Accelerated Finite Element Simulation of Induction Machines
17:50-18:15 Peter Gritzmann: Constrained Clustering and Diagrams for the Consolidation of Farmland

Panorama: CS 3, **Chair:** Vilmos Zoller

- 17:00-17:20** Konstantin Nadolin: A Reduced 3D Model of a Passive Admixture Transport in Shallow and Slightly Curved Natural Watercourse
17:20-17:40 Emilio Defez: Approximating a Class of Non-Linear Third-Order Ordinary Differential Problems
17:40-18:00 Galina Lyutskanova-Zhekova: Motion of Spherical Particle Attached to the Interface Between Two Viscous Fluids
18:00-18:20 Pina Milišić: Analysis of Multi-Species Biofilm Model

Mercure: MS 47, **Chair:** Giovanni Mascali

- 17:00-17:25** Orazio Muscato: A Monte Carlo Algorithm Without Time Discretization Error for the Wigner Equation
17:25-17:50 Giuseppe Ali: Charge Transport in the Three-Dimensional Topological Semimetal Cd₃As₄

Orion: MS 05, **Chair:** Karunia Putra Wijaya

- 17:00-17:25** Sulanie Perera: Comparison of Host Immune Responses on the Behavior of Dengue Viral Dynamics
17:25-17:50 Yashika Jayathunga: Compartmental Spatial Multi-Patch Deterministic and Stochastic Models for Dengue
17:50-18:15 Peter Heidrich: Modelling Dengue Fever with the SIR Model

Uranus: MS 44, **Chair:** István Hatvani

- 17:00-17:25** Stephan Schlüter: Simulating the Air Temperature of the City of Novi Sad, Serbia
17:25-17:50 Sándor Guzmics: Stochastic Order Relations in Various Environments

Venus: CS 4, **Chair:** Victor Zvyagin

- 17:00-17:20** Yuri Skiba: Application of Splitting Algorithm for Solving Advection-Diffusion Equation on a Sphere
17:20-17:40 Nadine Stahl: Moment Matching Based Model Reduction for Quadratic-Bilinear Descriptor Systems
17:40-18:00 Menel Rahrah: Uncertainty Quantification of a Poroelasticity Model Using a Network-Inspired Porosity-Permeability Relation
18:00-18:20 Na Zheng: The Association of Bayesian Statistics and Monte Carlo Simulation in High Energy X-ray Radiography Reconstruction

Saturnus: MS 02, **Chair:** Róbert Horváth

- 17:00-17:25** Bálint Takács: A Two Dimensional Model for the Ecological Collapse of Easter Island
17:25-17:50 János Karátson: Quasi-Newton Variable Preconditioning for Nonlinear Elliptic Problems
17:50-18:15 Yiannis Hadjimichael: Accurate and Stable Boundary Conditions for High-order Discretizations of Hyperbolic PDEs

WEDNESDAY, 20 JUNE 2018

9:00-9:50 **Plenary lecture, (Helia),** Chair: Cláudia Nunes
Paola Goatin: Traffic Management by Macroscopic Models

9:50-10:20 **Coffee break**

10:20-12:50 **Morning minisymposia**

Helia: MS 22, **Chair:** László Pusztai

- 10:20-10:45** Mark McGuinness: Microwaves Measure Moisture — mmm, Really?
10:45-11:10 Kevin Moroney: Modelling Coffee Extraction Using Two-Phase Flow Equations
11:10-11:35 Ken O'Connell: Mathematical Modelling of Drying Dairy Powders Through Spray Drying Technologies
11:35-12:00 Kevin Devine: Modelling of Oscillation Mark Formation in Industrial Steel Casting
12:00-12:25 Niall McInerney: Mathematical Modelling of the Hydration Process in Contact Lens Production

Panorama: MS 04, **Chair:** Cláudia Nunes

- 10:20-10:45** Konstantin Nadolin: Virtual Academic Mobility in the context of the Master's Program "Computational Mechanics and Information Technologies" in the Southern Federal University
- 10:45-11:10** Tihomir Ivanov: The ECMI Modelling Weeks
- 11:10-11:35** Idoia Cortes Garcia: Modelling Workshops from a Student's Perspective
- 11:35-12:00** Ana Moura Santos: Designing Three Math MOOCs for Stem Students
- 12:00-12:25** Matylda Jabłońska-Sabuka: Challenges of Teaching Mathematics in XXI Century

Mercure: MS 35, **Chair:** Wil Schilders

- 10:20-10:45** Karsten Urban: Prospects and Challenges of the Reduced Basis Method for Industrial Problems
- 10:45-11:10** Stephan Rave: Efficient Reduced Order Simulation of Pore-Scale Lithium-Ion Battery Models
- 11:10-11:35** Donsub Rim: Model Reduction of Burgers Equation Using Displacement Interpolation
- 11:35-12:00** Gabriela Diaz Cortes: ROM-Based Deflation Methods to Accelerate the Solution of Time-Varying Linear Systems
- 12:00-12:25** Markus Rein: Stability Preserving Model Order Reduction for District Heating Networks
- 12:25-12:50** Valentin Sulzer: Battery Modelling: Why 2D Matters

Orion: MS 29, **Chair:** Dávid Csercsik

- 10:20-10:45** Algo Carè: Old and New Challenges in Finite-Sample Identification
- 10:45-11:10** Balázs Csáji: Regularization in Finite-Sample System Identification
- 11:10-11:35** Sándor Kolumbán: Data Perturbation Methods for Finite Sample Nonlinear Estimation and Uncertainty Quantification
- 11:35-12:00** Michel Kieffer: Source Localization from Rss Measurements Using LSCR
- 12:00-12:25** Masoud Moravej Khorasani: Non-Asymptotic Confidence Regions for Errors-In-Variables Systems

Uranus: MS 20, **Chair:** René Pinnau

- 10:20-10:45** Naveen Kumar Mahato: Modeling and Simulation of Macroscopic Pedestrian Models
- 10:45-11:10** Susana Gomes: Bayesian Parameter Estimation for Macroscopic Pedestrian Dynamics Models
- 11:10-11:35** Claudia Totzeck: Guiding a Huge Crowd by Controlling Few Leaders
- 11:35-12:00** Stephan Knapp: Production Network Models with Stochastic Capacities
- 12:00-12:25** Stephan Wackerle: Optimization of Buckling Behavior for Textiles
- 12:25-12:50** Mikhail Karyakin: Equilibrium, Stability and Shape Optimization of Nonlinearly Elastic Corrugated Membranes

Venus: MS 06, **Chair:** Tuoi T.N. Vo

- 10:20-10:45** William Lee: Modelling Biology After Implantation of a Drug Eluting Stent
10:45-11:10 Tuoi T.N. Vo: Modelling Drug Release from Polymer-Free Stents with Microporous Surfaces and Drug-Filled Stents
11:10-11:35 Abdul Barakat: Modeling the Effect of Flow on the ATP/ADP Concentration at the Endothelial Cell Surface
11:35-12:00 Martin Meere: Mathematically Modeling Drug Release from Solid Dispersions
12:00-12:25 Dana Mackey: Modelling Protein Adsorption and Optimisation of Novel Immunodiagnostic Devices
12:25-12:50 Daniele Andreucci: Electrical Conduction in Media with Microstructures

Saturnus: MS 01, **Chair:** János Karátson

- 10:20-10:45** Silvia Licciardi: Umbral Fractional Calculus and Applications
10:45-11:10 Petr Vabishchevich: Numerical Solution of Nonstationary Problems for a Space-fractional Diffusion Equation
11:10-11:35 Béla János Szekeres: On the Use of Fractional Derivatives in Fluid Dynamic Simulations
11:35-12:00 Vladimir Orlov: On Solvability of Initial-Boundary Value Problem for one model of Viscoelastic Fluid with Fractional Derivatives
12:00-12:25 Magda Rebelo: Numerical Solution of the Black-Scholes Equation with Distributed Order in Time
12:25-12:50 Ferenc Izsák: An Efficient Numerical Simulation of Space-Fractional Diffusion Problems
12:50-14:00 **Lunch**
14:00-15:00 **Posters**

THURSDAY, 21 JUNE 2018

9:00-9:50 **Plenary lecture, (Helia),** Chair: Wil Schilders
Andrew Stuart: The Legacy of Rudolph Kalman

9:50-10:20 **Coffee break**

10:20-12:00 **Morning minisymposia**

Helia: MS 21, **Chair:** Marcus Weber

- 10:20-10:45** Atgeirr Rasmussen: Reservoir Simulation Using the MSO4SC Infrastructure and OPM Flow
10:45-11:10 Carlos Fernández: MSO4SC: Cloud E-Infrastructure Designed by and for the Mathematical Community
11:10-11:35 Christophe Trophime: High Field Magnets Design and in Operation Toolchain in the Cloud with Feel++ and MSO4SC
11:35-12:00 Guillaume Dollé: Mono- and Multi-Physics Toolboxes in the Cloud with Feel++ and MSO4SC

		MONDAY		
room		morning	afternoon	evening
HELIA	MS 41	MS 41	MS 41	
	Handari, B.	Teng, L.	Nunes, C.	
	Debrabant, K.	Burneck, K.	Yamshchikov, I.	
	Ehrhardt, M.	Pitkin, A.	Coulon, M.	
	Leitold, F.	Berger, B.		

		TUESDAY		
		morning	afternoon	evening
HELIA	MS 23	MS 23	MS 23	
	Schilders, W.	Prud'homme, C.	García Daza, F.	
	Pina, M.	Sommer, A.	Gomez, D.	
	Horváth, Z., Quintela, P.	Niebsch, J.	Gritzmann, P.	
	Bock, H. G.	Ptak, P.		

PANORAMA	MS 53	MS 12	MS 12	
	Fath, G.	Burridge, J.	Kiss, I.	
	Salamon, G.	O'Brien, J.	Bodó, Á.	
	Hari, N.	Sharkey, K.	Nagy, N.	
	Komarik, A.	Ashton, S.		

PANORAMA	MS 28	MS 07	CS 3	
	Wijaya, K. P.	Rooney, C.	Nadolin, K.	
	Wyller, J.	Fromreide, M.	Defez, E.	
	Thygesen, U. H.	Sloman, B.	Lyutskanova-Zhekova, G.	
	Soerensen, M. P.	Brosa Planella, F.	Milišić, P.	

MERCURE	MS 34	MS 34	MS 42	
	Micheletti, A.	Bajovic, D.	Garay, J.	
	Zapperi, S.	Vukobratovic, D.	Csiszár, V.	
	Matijević, D.	Király, Z.	Varga, T.	
	Jakovetic, D.	Krejic, N.		

MERCURE	MS 47	MS 47	MS 47	
	Mompo, E.	Mascali, G.	Muscato, O.	
	Vecil, F.	Deretzis, I.	Ali, G.	
	Romano, V.	Rotundo, N.		
	Morandi, O.	Nasedkin, A.		

ORION	MS 15	MS 15	CS 1	
	Alonso Rodriguez, A.	Hömberg, D.	Collera, J.	
	Kurz, S.	Yousept, I.	Martinez, A.	
	Venegas, P.	Valli, A.	Agoston, K.	
		Salgado, P.	Etienam, C.	

ORION	MS 52	MS 05	MS 05	
	Bognár, B.	Wijaya, K. P.	Perera, S.	
	Csendes, A. A.	Rodiah, I.	Jayathunga, Y.	
	Csetri, A.	Soewono, E.	Heidrich, P.	
	Reviczky, J.	Aldila, D.		

URANUS	MS 25	MS 10	MS 10	
	Lopes, R. B.	Moyles, I.	McGuinness, M.	
	Pascoal, M.	Dubovskaya, A.	Fannon, J.	
	Lopes, I. C.	Donohue, J.		
	Orestes Cerdeira, J.			

URANUS	MS 27	MS 44	MS 44	
	Alia, N.	Bardossy, A.	Schlüter, S.	
	Arenas, M.	Kovács, S.	Guzmics, S.	
	Das, P.	Hatvani, I.		
	Capone, L.	Németh, L.		

VENUS	MS 45	MS 17	CS 2	
	Tiba, A.	Gerencsér, B.	Zvyagin, A.	
	Györgyi, P.	Apers, S.	Zvyagin, V.	
	Kis, T.	Jungers, R.	Turbin, M.	
	Bozóki, S.	Como, G.	Zoller, V.	

VENUS	MS 48	MS 24	CS 4	
	Heilio, M.	Martinek, L.	Skiba, Y.	
	Mylykoski, T.	van Haastrecht, A.	Stahl, N.	
	Götz, T.	Beck, S.	Rahrah, M.	
	Lupuleac, S.	Bozso, D.	Zheng, N.	

SATURNUS	MS 09	MS 03	MS 03	
	Siedow, N.	Kovács, B.	Eimer, M.	
	Leithäuser, C.	Einkemmer, L.	Bacon, M.	
	Andres, M.	Piazzola, C.	Quenjel, E. H.	
	Tolle, K.	Csomós, P.		

SATURNUS	MS 11	MS 02	MS 02	
	Cregan, V.	Császár, S.	Takács, B.	
	Landel, J.	Fekete, I.	Karátson, J.	
	Kiradjiev, K.	Horváth, R.	Hadjimichael, Y.	
	Dalwadi, M.	Sheng, Z.		

room	WEDNESDAY	THURSDAY			FRIDAY				
	morning	morning	afternoon	evening	morning	afternoon			
HELIA	MS 22 McGuinness, M. Moroney, K. O'Connell, K. Devine, K. McInerney, N.	MS 21 Rasmussen, A. Fernández, C. Trophime, C. Dollé, G.	MS 21 Degirmenci, N. C. Weber, M. Fackeldey, K.	CS 6 Pidatella, R. M. Raichik, I. Kimpan, A. Ogata, H.	MS 22 Wieland, M. Pascoal-Faria, P. Pusztai, L.	MS 22 Myers, T. Calvo-Schwarzwalder, M. Hennessy, M. Fanelli, C.			
	PANORAMA	MS 04 Nadolin, K. Ivanov, T. Cortes Garcia, I. Moura Santos, A. Jablońska-Sabuka, M.	MS 36 Naghipoor, J. Silva, P. Barbeiro, S.	MS 36 Tiago, J. Pinto, L. Araújo, A. Lin, M.	MS 36 Hajdu, A. Teodoro, M. F. Ciegis, R.	MS 23 Guarino, S. Degirmenci, N. C. Bánhelyi, B.	MS 28 Hall, C. Martens, E. A. Laouini, G. Hjorth, P.		
		MERCURE	MS 35 Urban, K. Rave, S. Rim, D. Diaz Cortes, G. Rein, M. Sulzer, V.	MS 23 Gerardo-Giorda, L. Benito, S. Pérez-Pérez, L. J. Budko, N.	MS 49 San Segundo, P. Zavalnij, B. Depolli, M.	MS 49 Predari, M. London, A. Figueiredo, R.	MS 18 Friedhoff, S. Kulchytska-Ruchka, I. Gangl, P.	MS 18 Bontinck, Z. Bartel, A. Pulch, R. Mach, F.	
			ORION	MS 29 Carè, A. Csáji, B. Kolumbán, S. Kieffer, M. Khorasani, M. M.	MS 16 Strohm, C. Brinkman, D. Schilders, W. Fischer, A.	MS 16 Rupp, K. Di Vito, A. Adam, C. Cortes Garcia, I.	CS 7 Awawdeh, F. Wei, S. Pena, M. Kovács, S.	MS 14 Hohmann, R. Hahn, C. Ptashnyk, M. Wechsung, F.	MS 14 Renner, G. Vromans, A. Trucu, D. Madzvamuse, A.
				URANUS	MS 20 Mahato, N. K. Gomes, S. Totzeck, C. Knapp, S. Wackerle, S. Karyakin, M.	MS 26 Lux, K. Togobytska, N. Schmidt, A. Jahn, M.	MS 38 Birke, K. P. Hennessy, M. Roper, I. Ivanov, T.	MS 38 Wagner, B. Jäger, K. Peschka, D.	MS 39 Grferer, M. Gottschalk, S. Penner, J. Phutane, U.
VENUS					MS 06 Lee, W. Vo, T. T. N. Barakat, A. Meere, M. Mackey, D. Andreucci, D.	MS 33 Gyöngy, M. Xu, H. Földi, S. Szederkényi, G.	MS 13 Ferreira, J. Cuesta, E. Morgado, M. L. Mikula, K.	MS 13 Grindel, R. Zhao, Q. Jurak, M.	MS 19 Dobi, B. Kosztján, Z. T. Scheideler, E. Coleman, S.
	SATURNUS				MS 01 Licciardi, S. Vabishchevich, P. Szekeres, J. B. Orlov, V. Rebello, M. Izsák, F.	MS 30 Álvarez-Vazquez, L. J. Sziklai, B. Csercsik, D. Oktoviany, P.	MS 51 Fazekas, Z. Bognár, G. Pasik-Duncan, B. Gerencsér, L.	CS 5 Daroczy, B. Dávid, B. Tezer-Sezgin, M. Gurbuz, M.	MS 40 Karsai, J. Hajdu, A. Röst, G. Ferencsi, T.

Panorama: MS 36, **Chair:** José Ferreira

- 10:20-10:45** Jahed Naghipoor: A Computational Contribution on an Ocular Iontophoretic Drug Delivery Device
- 10:45-11:10** Pascoal Silva: Towards a Precision Ophthalmology: Targetting the Retina
- 11:10-11:35** Sílvia Barbeiro: Iteratively Coupled Methods for Bone Poroelasticity

Mercure: MS 23, **Chair:** Peregrina Quintela

- 10:20-10:45** Luca Gerardo-Giorda: Advanced Computational Modelling in the Design of New Cardiac Radiofrequency Ablation Strategies
- 10:45-11:10** Sylvain Benito: Exactcure: Personalization of Your Medical Digital Twin
- 11:10-11:35** Luis Javier Pérez-Pérez: Numerical Simulation of Fluid Flow and Heat Transfer at a Blast Furnace Runner
- 11:35-12:00** Neil Budko: Understanding the Charging Problem in Scanning Electron Microscopy, Particle Detectors and E-Beam Lithography

Orion: MS 16, **Chair:** Dirk Peschka

- 10:20-10:45** Christian Strohm: Coupled Electromagnetic Field & Electric Circuit Simulation: Co-Simulation Benchmark and Convergence Analysis
- 10:45-11:10** Daniel Brinkman: Asymptotic-Preserving Schemes for the Semiconductor Equations
- 11:10-11:35** Wil Schilders: Model Order Reduction for Dynamic Thermal Models of LED Packages
- 11:35-12:00** Axel Fischer: Electrothermal Feedback Due to Light Absorption Induced Device Heating

Uranus: MS 26, **Chair:** Dietmar Hömberg

- 10:20-10:45** Kerstin Lux: Optimal Inflow Control in Supply Systems with Uncertain Demands
- 10:45-11:10** Nataliya Togobytska: Optimal Control for Hot Rolling of Multiphase Steels
- 11:10-11:35** Alfred Schmidt: Simulation and Optimization of Thermal Distortions for Milling Processes
- 11:35-12:00** Mischa Jahn: Modeling and Simulation Approaches for the Production of Functional Parts in Micro Scale

Venus: MS 33, **Chair:** Gábor Szederkényi

- 10:20-10:45** Miklós Gyöngy: Ultrasound Point Spread Function Estimation Using Phase Retrieval
- 10:45-11:10** Haibo Xu: The Influence of Source Out of Focused Grid on Image in High-energy X-ray Radiography
- 11:10-11:35** Sándor Földi: Pulse Diagnosis Using Arterial Blood Pressure Waveforms
- 11:35-12:00** Gábor Szederkényi: Sparsity Analysis of Biochemical Reaction Networks

Saturnus: MS 30, **Chair:** József Garay

- 10:20-10:45** Lino J. Álvarez-Vazquez: Environmentally Optimized Management of Urban Road Networks
- 10:45-11:10** Balázs Sziklai: Bargaining Power in the European Gas Network
- 11:10-11:35** Dávid Csercsik: A Simple Market Coupling Model with Reserve Allocation and Minimum Income Condition Bids
- 11:35-12:00** Prilly Oktoviany: A Stochastic Price Model for the German Secondary Balancing Power Market
- 12:00-14:00** **Lunch**
- 14:00-14:50** Alan Tayler lecture, (Helia), Chair: Barbara Wagner
Anna Marciniak-Czochra: Heterogeneity in Acute Leukemias and its Clinical Relevance: Insights from Mathematical Modelling

15:00-16:40 **Afternoon minisymposia**

Helia: MS 21, **Chair:** Guillaume Dollé

- 15:00-15:25** Niyazi Cem Degirmenci: The FEniCS-HPC High Performance Finite Element Framework and an Adaptive Turbulent Flow Solver Application in the MSO4SC Project
- 15:25-15:50** Marcus Weber: Molecular Simulation for a Successful Computational Drug Design (ZIBAffinity)
- 15:50-16:15** Konstantin Fackeldey: Next Generation Markov Modeling for Protein Function Design (GenPCCA)

Panorama: MS 36, **Chair:** Sílvia Barbeiro

- 15:00-15:25** Jorge Tiago: Improving Blood Flow Simulations: A Velocity Control Approach
- 15:25-15:50** Luis Pinto: Effect of Aging on Transdermal Drug Delivery Enhanced by Iontophoresis: A Numerical Study
- 15:50-16:15** Adérito Araújo: A Mathematical Model for Oscillationa Plant Circadian Oscillator
- 16:15-16:40** Moshe Lin: Time Reversal Methods in Acousto-Elastodynamics

Mercure: MS 49, **Chair:** András London

- 15:00-15:25** Pablo San Segundo: On Branching Strategies for Exact Maximum Clique Search
- 15:25-15:50** Bogdan Zavalnij: Job Sequencing and Clique Search
- 15:50-16:15** Matjaž Depolli: An Improved Maximum Common Subgraph Solver

Orion: MS 16, Chair: Patricio Farrell

- 15:00-15:25** Karl Rupp: Spherical-Harmonics-Based Solution of the Boltzmann Transport Equation on Supercomputers
- 15:25-15:50** Alessia Di Vito: Simulation of Optoelectronic Devices: From the Atomic Structure to Macroscopic Device Properties
- 15:50-16:15** Christian Adam: Analog-to-Probability Conversion -- Efficient Extraction of Information Based on Stochastic Signal Models
- 16:15-16:40** Idoia Cortes Garcia: Generalised Elements for Analysis of Field /Circuit Coupled Systems

Uranus: MS 38, Chair: Andreas Münch

- 15:00-15:25** Kai Peter Birke: On the Life Span of Batteries for 2nd Life Applications
- 15:25-15:50** Matthew Hennessy: Asymptotic Reduction of a Porous-Electrode Model for Lithium-Ion Batteries
- 15:50-16:15** Ian Roper: Modelling Distribution of Charge and Stress in Silicon/Graphite Anodes for Lithium-Ion Batteries
- 16:15-16:40** Tihomir Ivanov: Mathematical Modelling for Wind Power Forecasting

Venus: MS 13, Chair: Qiang Zhao

- 15:00-15:25** 25 José Ferreira: Coupling Convection-Diffusion-Reaction and Telegraph Phenomena: Second Order Approximations
- 15:25-15:50** Eduardo Cuesta: Cross-Diffusion Based Filtering. Applications in Remote Sensing
- 15:50-16:15** María Luisa Morgado: Modelling Time-Of-Flight Transient Currents with Time-Fractional Diffusion Equations
- 16:15-16:40** Karol Mikula: Numerical Methods for Level-Set Equations

Saturnus: MS 51, Chair: Sándor Fridli

- 15:00-15:25** Zoltán Fazekas: Rational Zernike Functions Capture the Rotations of the Eye-Ball
- 15:25-15:50** Gergő Bognár: Adaptive Transformations in Biomedical Signal Processing
- 15:50-16:15** Bozenna Pasik Duncan: Using Unsupervised Diffusion Component Analysis on EEG of Posttraumatic Epilepsy Patients
- 16:15-16:40** László Gerencsér: Epileptic Seizure Detection via Hawkes Processes

16:40-17:00 **Coffee break**

17:00-18:20 **Evening minisymposia**

Helia: CS 6, Chair: Petra Csomós

- 17:00-17:20** Rosa Maria Pidotella: New Special Functions and Integral Transforms
- 17:20-17:40** Irina Raichik: Numerical Computation of Electromagnetic Fields in 3D Axisymmetric Singular Domains

- 17:40-18:00 Attila Kimpan: Patents and Mathematics
18:00-18:20 Hidenori Ogata: Numerical Fourier Transform Based on Hyperfunction Theory

Panorama: MS 36, **Chair:** José Ferreira

- 17:00-17:25 Andras Hajdu: Detecting Periodicity in Digital Images by the LII Algorithm
17:25-17:50 M. Filomena Teodoro: Relating Barotrauma Occurrence and Hyperbaric Oxygen Therapy
17:50-18:15 Raimondas Ciegis: On New Proportional Controllers for Smart Bioreactors

Mercure: MS 49, **Chair:** Matjaž Depolli

- 17:00-17:25 Maria Predari: Network Analysis with NetworKit - Interactive and Fast
17:25-17:50 András London: Social Networks from Recommendation Graphs?
17:50-18:15 Rosa Figueiredo: An Integrated MILP Approach to Mobile Network Expansion in Presence of Subscriber Migration

Orion: CS 7, **Chair:** Jan ten Thije Boonkkamp

- 17:00-17:20 Fadi Awawdeh: Inverse Problems in Industry: Theory and Methods
17:20-17:40 Suhua Wei: The Inverse Problem Approach for X-ray Radiographic Tomography
17:40-18:00 Manuel Pena: Damage Detection in Thin Plates via Time-Harmonic Infrared Thermography
18:00-18:20 Solt Kovács: Change Point Detection for High-Dimensional Linear Regression and Its Applications for Covariance Matrices

Uranus: MS 38, **Chair:** Andreas Münch

- 17:00-17:25 Barbara Wagner: Modeling Microstructures for Light Harvesting Surfaces
17:25-17:50 Klaus Jäger: On Accurate Optical Simulations for Solar Cells
17:50-18:15 Dirk Peschka: Steering Pattern Formation During Dewetting with Interface and Contact Lines Properties

Venus: MS 13, **Chair:** Eduardo Cuesta

- 17:00-17:25 Ria Grindel: MLMC for SetStochastic Delay Differential Equations in a Biochemical Setting
17:25-17:50 Qiang Zhao: An Efficient 2D Arbitrary Lagrangian-Eulerian Modeling for Pulsed Laser-Matter Interaction
17:50-18:15 Mladen Jurak: An Existence Theorem for Compositional Two-Phase Flow Model

Saturnus: CS 5, **Chair:** Godwin Kakuba

- 17:00-17:20 Balint Daroczy: Sparsity of Deep Structures
17:20-17:40 Balázs Dávid: A State-Expanded Model for the Bus Schedule Assignment Problem
17:40-18:00 Munewer Tezer-Sezgin: DRBEM Solution of MHD Flow in an Array of Electromagnetically Coupled Rectangular Ducts
18:00-18:20 Merve Gurbuz: Solution of MHD Flow with Bem Using Direct Radial Basis Function Interpolation

FRIDAY, 22 JUNE 2018

9:00-9:50 **Plenary lecture, (Helia)**, Chair: Dietmar Hömberg
Stefan Kurz: Div Grad Curl are Dead – Are they?

9:50-10:20 **Coffee break**

10:20-12:00 **Morning minisymposia**

Helia: MS 22, Chair: Kevin Moroney

10:20-10:45 Manuel Wieland: On Dry Spinning Processes In Airflows

10:45-11:10 Paula Pascoal-Faria: Numerical Simulation of Tubular Components with Multi Channels Using Water-Assisted Injection Moulding

11:10-11:35 László Pusztai: Production Schedule Optimization by Applying Stochastic Network Programming

Panorama: MS 23, Chair: Andreas Sommer

10:20-10:45 Stefano Guarino: Unsupervised Classification of Routes and Plates from the TRAP2017 Dataset

10:45-11:10 Niyazi Cem Degirmenci: Adaptive Direct FEM Simulation of Turbulent Flow in FEniCS-HPC in the MSO4SC Web Portal

11:10-11:35 Balázs Bánhelyi: Decision Support Heuristic for Dairy Farms

Mercure: MS 18, Chair: Sebastian Schöps

10:20-10:45 Stephanie Friedhoff: Exploring Parallel-in-Time Approaches for Eddy Current Problems

10:45-11:10 Iryna Kulchytska-Ruchka: Convergence Analysis of Parareal for Systems with Discontinuous Inputs

11:10-11:35 Peter Gangl: Multimaterial Topology Optimization of Electric Motors Based on the Topological Derivative

Orion: MS 14, Chair: Anotida Madzvamuse

10:20-10:45 Raphael Hohmann: Shape Optimization of Liquid Polymer Distributors

10:45-11:10 Camilla Hahn: Shape Optimization for a Stochastic Objective Functional

11:10-11:35 Mariya Ptashnyk: Relation Between Shape and Mechanics: Multiscale Modelling and Analysis of Plant Tissue Biomechanics

11:35-12:00 Florian Wechsung: Shape Optimisation with Nearly Conformal Mappings

Uranus: MS 39, Chair: Bernd Simeon

10:20-10:45 Michael Gfrerer: Fiber-Based Modeling of Muscles in the Musculoskeletal System

10:45-11:10 Simon Gottschalk: Reinforcement Learning in Order to Control Biomechanical Applications

11:10-11:35 Johann Penner: Multi-Obstacle Muscle Wrapping Based on a Discrete Variational Principle

11:35-12:00 Uday Phutane: Optimal Control Simulations of Lateral and Tip Pinch Grasps

Venus: MS 19, Chair: András Zempléni

- 10:20-10:45** Balázs Dobi: Generalizations of Cost-Optimal Control Charts for Healthcare Data
10:45-11:10 Zsolt Tibor Kosztyán: Risk-Based Control Charts in Process and Project Management
11:10-11:35 Eva Scheideler: Metamodels to Support Industry 4.0 in Glass Construction
11:35-12:00 Shirley Coleman: Data Science in Industry 4.0

Saturnus: MS 40, Chair: Noémi Nagy

- 10:20-10:45** János Karsai: The Impact of Vaccination on the Spread of Varicella in Hungary
10:45-11:10 Andras Hajdu: Combining Convolutional Neural Networks and Hand-Crafted Features in Medical Image Classification Tasks
11:10-11:35 Gergely Röst: Dynamics of Novel Delay Logistic Equations from Cell Biology
11:35-12:00 Tamas Ferenci: Model Diagnostics and -Specification for Epidemiologic Models
- 12:00-14:00** **Lunch**
- 14:00-14:50** **Plenary lecture, (Helia),** Chair: Natasa Krejic
Knut-Andreas Lie: Modelling CO2 Storage in Large-scale Aquifer Systems

15:00-16:40 **Afternoon minisymposia**

Helia: MS 22, Chair: Kevin Moroney

- 15:00-15:25** Timothy Myers: Phase Change at the Nanoscale
15:25-15:50 Marc Calvo-Schwarzwalder: Thermal Transport Equations and Boundary Conditions at the Nanoscale
15:50-16:15 Matthew Hennessy: Asymptotic Analysis of the Guyer-Krumhansl-Stefan Model for Nanoscale Solidification
16:15-16:40 Claudia Fanelli: Mathematical Modelling of Nanocrystal Growth

Panorama: MS 28, Chair: Mads Peter Soerensen

- 15:00-15:25** Cameron Hall: A Modified Hawk-Dove Game for Modelling Dominance, Sharing, and Learning
15:25-15:50 Erik Andreas Martens: Transitions from Trees to Cycles in Adaptive Biological Transport Networks
16:00-16:15 Ghaylen Laouini: Mathematical Modeling of the Heart Rate Variability
16:15-16:40 Poul Hjorth: A New Model for the Inflammatory Stress Response

Mercure: MS 18, Chair: Peter Gangl

- 15:00-15:25** Zeger Bontinck: Iso-Geometric Analysis as a Tool for Simulating Electric Machines
15:25-15:50 Andreas Bartel: Cosimulation Interfaces for Field/Circuit Systems and Hysteresis Modeling
15:50-16:15 Roland Pulch: Sparse Representations for Uncertainty Quantification of Coupled Problems
16:15-16:40 Frantisek Mach: Uncertainty Quantification for Real Time Operation of Electromagnetic Actuators

Orion: MS 14, **Chair:** : Florian Wechsung

- 15:00-15:25** Gabor Renner: Refinement of Surfaces of Industrial Objects
15:25-15:50 Arthur Vromans: Upscaling Volume Expansions Due to the Sulfate Corrosion of Concrete
15:50-16:15 Dumitru Trucu: Multiscale Dynamics of Bulk and Leading Edge in Cancer Invasion
16:15-16:40 Anotida Madzvamuse: A Robust and Efficient Adaptive Multigrid Solver for the Optimal Control of Phase Field Formulations of Geometric Evolution Laws with Applications to Cell Migration

Uranus: MS 08, **Chair:** Karl Worthmann

- 15:00-15:25** Björn Liljegren-Sailer: Towards an Input-Aware System-Theoretic Model Order Reduction Approach for Nonlinear Systems
15:25-15:50 Stephan Gerster: Mathematical Formulation of Stochastic Fluctuations in Gas Networks
15:50-16:15 Philipp Sauerteig: Price-based Model Predictive Control of Residential Energy Systems using Energy Storage and Controllable Loads
16:15-16:40 Nicodemus Banagaaya: Index-Aware MOR for Gas Transport Networks with Many Supply Inputs

Venus: MS 46, **Chair:** Tamás Szirányi

- 15:00-15:25** Tamás Szirányi: Segmentation and Change-Detection of Remote Sensing Images Using Fusion-MRF Model
15:25-15:50 András Zlinszky: Point Cloud Based Vegetation Habitat Quality Assessment Using Fuzzy Classification
15:50-16:15 Zoltan Kato: Relative Pose Estimation of Omnidirectional, Perspective and Lidar Camera Systems

Saturnus: CS 8, **Chair:** Ferenc Izsák

- 15:00-15:20** Godwin Kakuba: Properties of Local Defect Correction for Boundary Element Methods
15:20-15:40 Jan ten Thije Boonkkamp: Double Freeform Surfaces Design for Laser Beam Shaping: A Least-Squares Approach
15:40-16:00 Moustafa Ibrahim: Instability and Heterogeneous Steady State in a Degenerate Chemotaxis Model
16:40-17:00 **Closing (Helia)**

LIST OF CHAIR PERSONS

Name	Day	Time	Room	Session
Barbeiro, S.	Thursday	15:10-16:50	Panorama	MS 36
Bozóki, S.	Tuesday	10:20-12:00	Orion	MS 52
Brosa Planella, F.	Tuesday	15:10-16:50	Panorama	MS 07
Cregan, V.	Tuesday	10:20-12:00	Saturnus	MS 11
Cruz, M.	Monday	10:40-12:20	Uranus	MS 25
Csercsik, D.	Wednesday	10:20-12:25	Orion	MS 29
Csomós, P.	Monday	15:10-16:50	Saturnus	MS 03
Csomós, P.	Monday	17:00-18:15	Saturnus	MS 03
Csomós, P.	Thursday	17:00-18:20	Helia	CS 6
Cuesta, E.	Thursday	17:00-18:15	Venus	MS 13
Debrabant, K.	Monday	15:10-16:50	Helia	MS 41
Depolli, M.	Thursday	17:00-18:15	Mercure	MS 49
Dollé, G.	Thursday	15:10-16:25	Helia	MS 21
Donohue, J.	Monday	17:00-17:50	Uranus	MS 10
Ehrhardt, M.	Monday	17:00-18:15	Helia	MS 41
Faragó, I.	Tuesday	14:00-14:50	Helia	Plenary
Farell, P.	Thursday	15:10-16:50	Orion	MS 16
Ferreira, J.	Thursday	10:20-11:35	Panorama	MS 36
Ferreira, J.	Thursday	17:00-18:15	Panorama	MS 36
Fridli, S.	Thursday	15:10-16:50	Saturnus	MS 51
Gangl, P.	Friday	15:10-16:50	Mercure	MS 18
Garay, J.	Thursday	10:20-12:00	Saturnus	MS 30
Götz, T.	Tuesday	15:10-16:50	Orion	MS 05
Gomez, D.	Monday	10:40-11:55	Orion	MS 15
Guarino, S.	Tuesday	15:10-16:50	Helia	MS 23
Hajdu, A.	Monday	10:40-12:20	Venus	MS 45
Hatvani, I.	Tuesday	17:00-17:50	Uranus	MS 44
Hjorth, P.	Tuesday	10:20-12:00	Panorama	MS 28
Horváth, R.	Tuesday	17:00-18:15	Saturnus	MS 02
Horváth, Z.	Monday	14:00-14:50	Helia	Plenary
Horváth, Z.	Tuesday	17:00-18:15	Helia	MS 23
Hömborg, D.	Tuesday	10:20-12:00	Uranus	MS 27
Hömborg, D.	Thursday	10:20-12:00	Uranus	MS 26
Hömborg, D.	Friday	9:00-9:50	Helia	Plenary
Izsák, F.	Tuesday	15:10-16:50	Saturnus	MS 02

Izsák, F.	Friday	15:10-16:10	Saturnus	CS 8
Kakuba, G.	Thursday	17:00-18:20	Saturnus	CS 5
Karátson, J.	Wednesday	10:20-12:50	Saturnus	MS 01
Karsai, J.	Monday	17:00-18:15	Mercure	MS 42
Kis, T.	Monday	17:00-18:20	Orion	CS 1
Kiss, I.	Monday	15:10-16:50	Panorama	MS 12
Kóczy, Á. L.	Monday	15:10-16:50	Venus	MS 17
Krejčić, N.	Monday	10:40-12:20	Mercure	MS 34
Krejčić, N.	Friday	14:00-14:50	Helia	Plenary
London, A.	Thursday	15:10-16:25	Mercure	MS 49
Madzvamuse, A.	Friday	10:20-12:00	Orion	MS 14
Mascali, G.	Tuesday	17:00-17:50	Mercure	MS 47
Micheletti, A.	Monday	15:10-16:50	Mercure	MS 34
Micheletti, A.	Tuesday	10:20-12:00	Venus	MS 48
Milišić, P.	Monday	17:00-18:20	Venus	CS 2
Monostori, L.	Monday	9:00-10:20	Helia	Plenary
Moroney, K.	Friday	10:20-11:35	Helia	MS 22
Moroney, K.	Friday	15:10-16:50	Helia	MS 22
Moyles, I.	Monday	15:10-16:25	Uranus	MS 10
Muscato, O.	Tuesday	10:20-12:00	Mercure	MS 47
Münch, A.	Thursday	15:10-16:50	Uranus	MS 38
Münch, A.	Thursday	17:00-18:15	Uranus	MS 38
Nagy, N.	Friday	10:20-12:00	Saturnus	MS 40
Nunes, C.	Wednesday	9:00-9:50	Helia	Plenary
Nunes, C.	Wednesday	10:20-12:25	Panorama	MS 04
O'Brien, S.	Tuesday	9:00-9:50	Helia	Plenary
Peschka, D.	Thursday	10:20-12:00	Orion	MS 16
Pusztai, L.	Wednesday	10:20-12:25	Helia	MS 22
Pinnau, R.	Wednesday	10:20-12:50	Uranus	MS 20
Quintela, P.	Tuesday	10:20-12:00	Helia	MS 23
Quintela, P.	Thursday	10:20-12:00	Mercure	MS 23
Romano, V.	Tuesday	15:10-16:50	Mercure	MS 47
Devine, K.	Wednesday	11:35-12:00	Helia	MS 22
Salgado, P.	Monday	15:10-16:50	Orion	MS 15
Schilders, W.	Wednesday	10:20-12:50	Mercure	MS 35
Schilders, W.	Thursday	9:00-9:50	Helia	Plenary
Schlüter, S.	Tuesday	15:10-16:50	Uranus	MS 44
Schöpf, S.	Friday	10:20-11:35	Mercure	MS 18
Sharkey, K.	Monday	17:00-18:15	Panorama	MS 12
Simeon, B.	Friday	10:20-12:00	Uranus	MS 39



Soerensen, M. P.	Friday	15:10-16:50	Panorama	MS 28
Sommer, A.	Friday	10:20-11:35	Panorama	MS 23
Szederkényi, G.	Thursday	10:20-12:00	Venus	MS 33
Szekerés, J. B.	Monday	10:40-12:20	Saturnus	MS 09
Szirányi, T.	Friday	15:10-16:25	Venus	MS 46
Ten Thije Boonkkamp, J.	Thursday	17:00-18:20	Orion	CS 7
Ter Maten, J.	Monday	10:40-12:20	Helia	MS 41
Vo, T. T. N.	Wednesday	10:20-12:50	Venus	MS 06
Wagner, B.	Thursday	14:00-14:50	Helia	Plenary
Weber, M.	Thursday	10:20-12:00	Helia	MS 21
Wechsung, F.	Friday	15:10-16:50	Orion	MS 14
Wijaya, K. P.	Tuesday	17:00-18:15	Orion	MS 05
Worthmann, K.	Friday	15:10-16:50	Uranus	MS 08
Zempléni, A.	Monday	10:40-12:20	Panorama	MS 53
Zempléni, A.	Tuesday	15:10-16:50	Venus	MS 24
Zempléni, A.	Friday	10:20-12:00	Venus	MS 19
Zhao, Q.	Thursday	15:10-16:50	Venus	MS 13
Zoller, V.	Tuesday	17:00-18:20	Panorama	CS 3
Zvyagin, V.	Tuesday	17:00-18:20	Venus	CS 4



SPEAKER INDEX

Name	Day	Time	Room	Session
Adam, C.	Thursday	15:50-16:15	Orion	MS 16
Ágoston, K.	Monday	17:40-18:00	Orion	CS 1
Aldila, D.	Tuesday	16:15-16:40	Orion	MS 05
Ali, G.	Tuesday	17:25-17:50	Mercure	MS 47
Alia, N.	Tuesday	10:20-10:45	Uranus	MS 27
Alonso Rodriguez, A.	Monday	10:40-11:05	Orion	MS 15
Álvarez-Vazquez, L. J.	Thursday	10:20-10:45	Saturnus	MS 30
Andres, M.	Monday	11:30-11:55	Saturnus	MS 09
Andreucci, D.	Wednesday	12:25-12:50	Venus	MS 06
Apers, S.	Monday	15:25-15:50	Venus	MS 17
Araújo, A.	Thursday	15:50-16:15	Panorama	MS 36
Arenas, M.	Tuesday	10:45-11:10	Uranus	MS 27
Ashton, S.	Monday	16:15-16:40	Panorama	MS 12
Awawdeh, F.	Thursday	17:00-17:20	Orion	CS 7
Bacon, M.	Monday	17:25-17:50	Saturnus	MS 03
Bajovic, D.	Monday	15:00-15:25	Mercure	MS 34
Banagaaya, N.	Friday	16:15-16:40	Uranus	MS 08
Bánhelyi, B.	Friday	11:10-11:35	Panorama	MS 23
Barakat, A.	Wednesday	11:10-11:35	Venus	MS 06
Barbeiro, S.	Thursday	11:10-11:35	Panorama	MS 36
Bardossy, A.	Tuesday	15:00-15:25	Uranus	MS 44
Bartel, A.	Friday	15:25-15:50	Mercure	MS 18
Beck, S.	Tuesday	15:50-16:15	Venus	MS 24
Benito, S.	Thursday	10:45-11:10	Mercure	MS 23
Berger, B.	Monday	16:15-16:40	Helia	MS 41
Birke, K. P.	Thursday	15:00-15:25	Uranus	MS 38
Bock, H. G.	Tuesday	11:35-12:00	Helia	MS 23
Bodó, Á.	Monday	17:25-17:50	Panorama	MS 12
Bognár, B.	Tuesday	10:20-10:45	Orion	MS 52
Bognár, G.	Thursday	15:25-15:50	Saturnus	MS 51
Bontinck, Z.	Friday	15:00-15:25	Mercure	MS 18
Bozóki, S.	Monday	11:55-12:20	Venus	MS 45
Bozso, D.	Tuesday	16:15-16:40	Venus	MS 24
Brinkman, D.	Thursday	10:45-11:10	Orion	MS 16
Brosa Planella, F.	Tuesday	16:15-16:40	Panorama	MS 07

Budko, N.	Thursday	11:35-12:00	Mercure	MS 23
Burnecki, K.	Monday	15:25-15:50	Helia	MS 41
Burridge, J.	Monday	15:00-15:25	Panorama	MS 12
Calvo-Schwarzwalder, M.	Friday	15:25-15:50	Helia	MS 22
Capone, L.	Tuesday	11:35-12:00	Uranus	MS 27
Carè, A.	Wednesday	10:20-10:45	Orion	MS 29
Ciegis, R.	Thursday	17:50-18:15	Panorama	MS 36
Coleman, S.	Friday	11:35-12:00	Venus	MS 19
Collera, J.	Monday	17:00-17:20	Orion	CS 1
Como, G.	Monday	16:15-16:40	Venus	MS 17
Cortes Garcia, I.	Thursday	16:15-16:40	Orion	MS 16
Cortes Garcia, I.	Wednesday	11:10-11:35	Panorama	MS 04
Coulon, M.	Monday	17:50-18:15	Helia	MS 41
Cregan, V.	Tuesday	10:20-10:45	Saturnus	MS 11
Csáji, B.	Wednesday	10:45-11:10	Orion	MS 29
Császár, S.	Tuesday	15:00-15:25	Saturnus	MS 02
Csendes, A. A.	Tuesday	10:45-11:10	Orion	MS 52
Csercsik, D.	Thursday	11:10-11:35	Saturnus	MS 30
Csetri, A.	Tuesday	11:10-11:35	Orion	MS 52
Csiszár, V.	Monday	17:25-17:50	Mercure	MS 42
Csomós, P.	Monday	16:15-16:40	Saturnus	MS 03
Cuesta, E.	Thursday	15:25-15:50	Venus	MS 13
Dalwadi, M.	Tuesday	11:35-12:00	Saturnus	MS 11
Daroczy, B.	Thursday	17:00-17:20	Saturnus	CS 5
Das, P.	Tuesday	11:10-11:35	Uranus	MS 27
Dávid, B.	Thursday	17:20-17:40	Saturnus	CS 5
Debrabant, K.	Monday	11:05-11:30	Helia	MS 41
Defez, E.	Tuesday	17:20-17:40	Panorama	CS 3
Degirmenci, N. C.	Thursday	15:00-15:25	Helia	MS 21
Degirmenci, N. C.	Friday	10:45-11:10	Panorama	MS 23
Depolli, M.	Thursday	15:50-16:15	Mercure	MS 49
Deretzis, I.	Tuesday	15:25-15:50	Mercure	MS 47
Devine, K.	Wednesday	11:35-12:00	Helia	MS 22
Di Vito, A.	Thursday	15:25-15:50	Orion	MS 16
Diaz Cortes, G.	Wednesday	11:35-12:00	Mercure	MS 35
Dobi, B.	Friday	10:20-10:45	Venus	MS 19
Dollé, G.	Thursday	11:35-12:00	Helia	MS 21
Donohue, J.	Monday	15:50-16:15	Uranus	MS 10
Dubovskaya, A.	Monday	15:25-15:50	Uranus	MS 10
Duncan, D.	Thursday	15:50-16:15	Saturnus	MS 51

Ehrhardt, M.	Monday	11:30-11:55	Helia	MS 41
Eimer, M.	Monday	17:00-17:25	Saturnus	MS 03
Einkemmer, L.	Monday	15:25-15:50	Saturnus	MS 03
Etienam, C.	Monday	18:00-18:20	Orion	CS 1
Fackeldey, K.	Thursday	15:50-16:15	Helia	MS 21
Fanelli, C.	Friday	16:15-16:40	Helia	MS 22
Fannon, J.	Monday	17:25-17:50	Uranus	MS 10
Fath, G.	Monday	10:40-11:05	Panorama	MS 53
Fazekas, Z.	Thursday	15:00-15:25	Saturnus	MS 51
Fekete, I.	Tuesday	15:25-15:50	Saturnus	MS 02
Ferenci, T.	Friday	11:35-12:00	Saturnus	MS 40
Fernández, C.	Thursday	10:45-11:10	Helia	MS 21
Ferreira, J.	Thursday	15:00-15:25	Venus	MS 13
Figueiredo, R.	Thursday	17:50-18:15	Mercure	MS 49
Fischer, A.	Thursday	11:35-12:00	Orion	MS 16
Földi, S.	Thursday	11:10-11:35	Venus	MS 33
Friedhoff, S.	Friday	10:20-10:45	Mercure	MS 18
Fromreide, M.	Tuesday	15:25-15:50	Panorama	MS 07
Gangl, P.	Friday	11:10-11:35	Mercure	MS 18
Garay, J.	Monday	17:00-17:25	Mercure	MS 42
García Daza, F.	Tuesday	17:00-17:25	Helia	MS 23
Gerardo-Giorda, L.	Thursday	10:20-10:45	Mercure	MS 23
Gerencsér, B.	Monday	15:00-15:25	Venus	MS 17
Gerencsér, L.	Thursday	16:15-16:40	Saturnus	MS 51
Gerster, S.	Friday	15:25-15:50	Uranus	MS 08
Gfrerer, M.	Friday	10:20-10:45	Uranus	MS 39
Goatin, P.	Wednesday	9:00-9:50	Helia	Plenary
Gomes, S.	Wednesday	10:45-11:10	Uranus	MS 20
Gomez, D.	Tuesday	17:25-17:50	Helia	MS 23
Gottschalk, S.	Friday	10:45-11:10	Uranus	MS 39
Götz, T.	Tuesday	11:10-11:35	Venus	MS 48
Grindel, R.	Thursday	17:00-17:25	Venus	MS 13
Gritzmann, P.	Tuesday	17:50-18:15	Helia	MS 23
Guarino, S.	Friday	10:20-10:45	Panorama	MS 23
Gurbuz, M.	Thursday	18:00-18:20	Saturnus	CS 5
Guzmics, S.	Tuesday	17:25-17:50	Uranus	MS 44
Gyöngy, M.	Thursday	10:20-10:45	Venus	MS 33
Györgyi, P.	Monday	11:05-11:30	Venus	MS 45
Hadjimichael, Y.	Tuesday	17:50-18:15	Saturnus	MS 02
Hahn, C.	Friday	10:45-11:10	Orion	MS 14
Hajdu, A.	Thursday	17:00-17:25	Panorama	MS 36

Hajdu, A.	Friday	10:45-11:10	Saturnus	MS 40
Hall, C.	Friday	15:00-15:25	Panorama	MS 28
Handari, B.	Monday	10:40-11:05	Helia	MS 41
Hari, N.	Monday	11:30-11:55	Panorama	MS 53
Hatvani, I.	Tuesday	15:50-16:15	Uranus	MS 44
Heidrich, P.	Tuesday	17:50-18:15	Orion	MS 05
Heilio, M.	Tuesday	10:20-10:45	Venus	MS 48
Hennessy, M.	Friday	15:50-16:15	Helia	MS 22
Hennessy, M.	Thursday	15:25-15:50	Uranus	MS 38
Hjorth, P.	Friday	16:15-16:40	Panorama	MS 28
Hohmann, R.	Friday	10:20-10:45	Orion	MS 14
Horváth, R.	Tuesday	15:50-16:15	Saturnus	MS 02
Horváth, Z., Quintela, P.	Tuesday	11:10-11:35	Helia	MS 23
Hömborg, D.	Monday	15:00-15:25	Orion	MS 15
Ibrahim, M.	Friday	15:40-16:00	Saturnus	CS 8
Ivanov, T.	Wednesday	10:45-11:10	Panorama	MS 04
Ivanov, T.	Thursday	16:15-16:40	Uranus	MS 38
Izsák, F.	Wednesday	12:25-12:50	Saturnus	MS 01
Jabłońska-Sabuka, M.	Wednesday	12:00-12:25	Panorama	MS 04
Jäger, K.	Thursday	17:25-17:50	Uranus	MS 38
Jahn, M.	Thursday	11:35-12:00	Uranus	MS 26
Jakovetic, D.	Monday	11:55-12:20	Mercure	MS 34
Jayathunga, Y.	Tuesday	17:25-17:50	Orion	MS 05
Jungers, R.	Monday	15:50-16:15	Venus	MS 17
Jurak, M.	Thursday	17:50-18:15	Venus	MS 13
Kakuba, G.	Friday	15:00-15:20	Saturnus	CS 8
Karátson, J.	Tuesday	17:25-17:50	Saturnus	MS 02
Karsai, J.	Friday	10:20-10:45	Saturnus	MS 40
Karyakin, M.	Wednesday	12:25-12:50	Uranus	MS 20
Kato, Z.	Friday	15:50-16:15	Venus	MS 46
Khorasani, M. M.	Wednesday	12:00-12:25	Orion	MS 29
Kieffer, M.	Wednesday	11:35-12:00	Orion	MS 29
Kimpan, A.	Thursday	17:40-18:00	Helia	CS 6
Kiradjiev, K.	Tuesday	11:10-11:35	Saturnus	MS 11
Király, Z.	Monday	15:50-16:15	Mercure	MS 34
Kis, T.	Monday	11:30-11:55	Venus	MS 45
Kiss, I.	Monday	17:00-17:25	Panorama	MS 12
Knapp, S.	Wednesday	11:35-12:00	Uranus	MS 20
Kolumbán, S.	Wednesday	11:10-11:35	Orion	MS 29
Komarik, A.	Monday	11:55-12:20	Panorama	MS 53
Koszttyán, Z. T.	Friday	10:45-11:10	Venus	MS 19

Kovács, B.	Monday	15:00-15:25	Saturnus	MS 03
Kovács, S.	Thursday	18:00-18:20	Orion	CS 7
Kovács, S.	Tuesday	15:25-15:50	Uranus	MS 44
Krejc, N.	Monday	16:15-16:40	Mercure	MS 34
Kulchytska-Ruchka, I.	Friday	10:45-11:10	Mercure	MS 18
Kurz, S.	Monday	11:05-11:30	Orion	MS 15
Kurz, S.	Friday	9:00-9:50	Helia	Plenary
Landel, J.	Tuesday	10:45-11:10	Saturnus	MS 11
Laouini, G.	Friday	15:50-16:15	Panorama	MS 28
Lee, W.	Wednesday	10:20-10:45	Venus	MS 06
Leithäuser, C.	Monday	11:05-11:30	Saturnus	MS 09
Leitold, F.	Monday	11:55-12:20	Helia	MS 41
Licciardi, S.	Wednesday	10:20-10:45	Saturnus	MS 01
Lie, K-A.	Friday	14:00-14:50	Helia	Plenary
Liljegren-Sailer, B.	Friday	15:00-15:25	Uranus	MS 08
Lin, M.	Thursday	16:15-16:40	Panorama	MS 36
London, A.	Thursday	17:25-17:50	Mercure	MS 49
Lopes, I. C.	Monday	11:30-11:55	Uranus	MS 25
Lopes, R. B.	Monday	10:40-11:05	Uranus	MS 25
Lovász, L.	Monday	9:00-10:20	Helia	Plenary
Lupuleac, S.	Tuesday	11:35-12:00	Venus	MS 48
Lux, K.	Thursday	10:20-10:45	Uranus	MS 26
Lyutskanova-Zhekova, G.	Tuesday	17:40-18:00	Panorama	CS 3
Mach, F.	Friday	16:15-16:40	Mercure	MS 18
Mackey, D.	Wednesday	12:00-12:25	Venus	MS 06
Madzvamuse, A.	Friday	16:15-16:40	Orion	MS 14
Mahato, N. K.	Wednesday	10:20-10:45	Uranus	MS 20
Marciniak-Czochra, A.	Thursday	14:00-14:50	Helia	Plenary
Martens, E. A.	Friday	15:25-15:50	Panorama	MS 28
Martinek, L.	Tuesday	15:00-15:25	Venus	MS 24
Martinez, A.	Monday	17:20-17:40	Orion	CS 1
Mascali, G.	Tuesday	15:00-15:25	Mercure	MS 47
Matijević, D.	Monday	11:30-11:55	Mercure	MS 34
McGuinness, M.	Wednesday	10:20-10:45	Helia	MS 22
McGuinness, M.	Monday	17:00-17:25	Uranus	MS 10
McInerney, N.	Wednesday	12:00-12:25	Helia	MS 22
Meere, M.	Wednesday	11:35-12:00	Venus	MS 06
Micheletti, A.	Monday	10:40-11:05	Mercure	MS 34
Mikula, K.	Thursday	16:15-16:40	Venus	MS 13
Milišić, P.	Tuesday	18:00-18:20	Panorama	CS 3
Mompo, E.	Tuesday	10:20-10:45	Mercure	MS 47



Morandi, O.	Tuesday	11:35-12:00	Mercure	MS 47
Morgado, M. L.	Thursday	15:50-16:15	Venus	MS 13
Moroney, K.	Wednesday	10:45-11:10	Helia	MS 22
Moura Santos, A.	Wednesday	11:35-12:00	Panorama	MS 04
Moyles, I.	Monday	15:00-15:25	Uranus	MS 10
Muscato, O.	Tuesday	17:00-17:25	Mercure	MS 47
Myers, T.	Friday	15:00-15:25	Helia	MS 22
Myllykoski, T.	Tuesday	10:45-11:10	Venus	MS 48
Nadolin, K.	Tuesday	17:00-17:20	Panorama	CS 3
Nadolin, K.	Wednesday	10:20-10:45	Panorama	MS 04
Naghipoor, J.	Thursday	10:20-10:45	Panorama	MS 36
Nagy, N.	Monday	17:50-18:15	Panorama	MS 12
Nasedkin, A.	Tuesday	16:15-16:40	Mercure	MS 47
Németh, L.	Tuesday	16:15-16:40	Uranus	MS 44
Niebsch, J.	Tuesday	15:50-16:15	Helia	MS 23
Nunes, C.	Monday	17:00-17:25	Helia	MS 41
O'Brien, J.	Monday	15:25-15:50	Panorama	MS 12
O'Connell, K.	Wednesday	11:10-11:35	Helia	MS 22
Ogata, H.	Thursday	18:00-18:20	Helia	CS 6
Oktoviany, P.	Thursday	11:35-12:00	Saturnus	MS 30
Orestes Cerdeira, J.	Monday	11:55-12:20	Uranus	MS 25
Orlov, V.	Wednesday	11:35-12:00	Saturnus	MS 01
Pascoal, M.	Monday	11:05-11:30	Uranus	MS 25
Pascoal-Faria, P.	Friday	10:45-11:10	Helia	MS 22
Pena, M.	Thursday	17:40-18:00	Orion	CS 7
Penner, J.	Friday	11:10-11:35	Uranus	MS 39
Perera, S.	Tuesday	17:00-17:25	Orion	MS 05
Pérez-Pérez, L. J.	Thursday	11:10-11:35	Mercure	MS 23
Peschka, D.	Thursday	17:50-18:15	Uranus	MS 38
Phutane, U.	Friday	11:35-12:00	Uranus	MS 39
Piazzola, C.	Monday	15:50-16:15	Saturnus	MS 03
Pidatella, R. M.	Thursday	17:00-17:20	Helia	CS 6
Pina, M.	Tuesday	10:45-11:10	Helia	MS 23
Pinto, L.	Thursday	15:25-15:50	Panorama	MS 36
Pitkin, A.	Monday	15:50-16:15	Helia	MS 41
Predari, M.	Thursday	17:00-17:25	Mercure	MS 49
Prud'homme, C.	Monday	14:00-14:50	Helia	Plenary
Prud'homme, C.	Tuesday	15:00-15:25	Helia	MS 23
Ptak, P.	Tuesday	16:15-16:40	Helia	MS 23
Ptashnyk, M.	Friday	11:10-11:35	Orion	MS 14
Pulch, R.	Friday	15:50-16:15	Mercure	MS 18



Pusztai, L.	Friday	11:10-11:35	Helia	MS 22
Quenjel, E. H.	Monday	17:50-18:15	Saturnus	MS 03
Rahrah, M.	Tuesday	17:40-18:00	Venus	CS 4
Raichik, I.	Thursday	17:20-17:40	Helia	CS 6
Rasmussen, A.	Thursday	10:20-10:45	Helia	MS 21
Rave, S.	Wednesday	10:45-11:10	Mercure	MS 35
Rebelo, M.	Wednesday	12:00-12:25	Saturnus	MS 01
Rein, M.	Wednesday	12:00-12:25	Mercure	MS 35
Renner, G.	Friday	15:00-15:25	Orion	MS 14
Reviczky, J.	Tuesday	11:35-12:00	Orion	MS 52
Rim, D.	Wednesday	11:10-11:35	Mercure	MS 35
Rodiah, I.	Tuesday	15:25-15:50	Orion	MS 05
Romano, V.	Tuesday	11:10-11:35	Mercure	MS 47
Rooney, C.	Tuesday	15:00-15:25	Panorama	MS 07
Roper, I.	Thursday	15:50-16:15	Uranus	MS 38
Rotundo, N.	Tuesday	15:50-16:15	Mercure	MS 47
Röst, G.	Friday	11:10-11:35	Saturnus	MS 40
Rupp, K.	Thursday	15:00-15:25	Orion	MS 16
Salamon, G.	Monday	11:05-11:30	Panorama	MS 53
Salgado, P.	Monday	16:15-16:40	Orion	MS 15
San Segundo, P.	Thursday	15:00-15:25	Mercure	MS 49
Sauerteig, P.	Friday	15:50-16:15	Uranus	MS 08
Scheideler, E.	Friday	11:10-11:35	Venus	MS 19
Schilders, W.	Tuesday	10:20-10:45	Helia	MS 23
Schilders, W.	Thursday	11:10-11:35	Orion	MS 16
Schlüter, S.	Tuesday	17:00-17:25	Uranus	MS 44
Schmidt, A.	Thursday	11:10-11:35	Uranus	MS 26
Sharkey, K.	Monday	15:50-16:15	Panorama	MS 12
Sheng, Z.	Tuesday	16:15-16:40	Saturnus	MS 02
Siedow, N.	Monday	10:40-11:05	Saturnus	MS 09
Siltanen, S.	Tuesday	9:00-9:50	Helia	Plenary
Silva, P.	Thursday	10:45-11:10	Panorama	MS 36
Skiba, Y.	Tuesday	17:00-17:20	Venus	CS 4
Sloman, B.	Tuesday	15:50-16:15	Panorama	MS 07
Soerensen, M. P.	Tuesday	11:35-12:00	Panorama	MS 28
Soewono, E.	Tuesday	15:50-16:15	Orion	MS 05
Sommer, A.	Tuesday	15:25-15:50	Helia	MS 23
Stahl, N.	Tuesday	17:20-17:40	Venus	CS 4
Stépan, G.	Tuesday	14:00-14:50	Helia	Plenary
Strohm, C.	Thursday	10:20-10:45	Orion	MS 16
Stuart, A.	Thursday	9:00-9:50	Helia	Plenary



Sulzer, V.	Wednesday	12:25-12:50	Mercure	MS 35
Szederkényi, G.	Thursday	11:35-12:00	Venus	MS 33
Szekerés, J. B.	Wednesday	11:10-11:35	Saturnus	MS 01
Sziklai, B.	Thursday	10:45-11:10	Saturnus	MS 30
Szirányi, T.	Friday	15:00-15:25	Venus	MS 46
Takács, B.	Tuesday	17:00-17:25	Saturnus	MS 02
Ten Thije Boonkkamp, J.	Friday	15:20-15:40	Saturnus	CS 8
Teng, L.	Monday	15:00-15:25	Helia	MS 41
Teodoro, M. F.	Thursday	17:25-17:50	Panorama	MS 36
Tezer-Sezgin, M.	Thursday	17:40-18:00	Saturnus	CS 5
Thygesen, U. H.	Tuesday	11:10-11:35	Panorama	MS 28
Tiago, J.	Thursday	15:00-15:25	Panorama	MS 36
Tiba, A.	Monday	10:40-11:05	Venus	MS 45
Togobytska, N.	Thursday	10:45-11:10	Uranus	MS 26
Tolle, K.	Monday	11:55-12:20	Saturnus	MS 09
Totzeck, C.	Wednesday	11:10-11:35	Uranus	MS 20
Trophime, C.	Thursday	11:10-11:35	Helia	MS 21
Trucu, D.	Friday	15:50-16:15	Orion	MS 14
Turbin, M.	Monday	17:40-18:00	Venus	CS 2
Urban, K.	Wednesday	10:20-10:45	Mercure	MS 35
Vabishchevich, P.	Wednesday	10:45-11:10	Saturnus	MS 01
Valli, A.	Monday	15:50-16:15	Orion	MS 15
Van Haastrecht, A.	Tuesday	15:25-15:50	Venus	MS 24
Varga, T.	Monday	17:50-18:15	Mercure	MS 42
Vecil, F.	Tuesday	10:45-11:10	Mercure	MS 47
Venegas, P.	Monday	11:30-11:55	Orion	MS 15
Vo, T. T. N.	Wednesday	10:45-11:10	Venus	MS 06
Vromans, A.	Friday	15:25-15:50	Orion	MS 14
Vukobratovic, D.	Monday	15:25-15:50	Mercure	MS 34
Wackerle, S.	Wednesday	12:00-12:25	Uranus	MS 20
Wagner, B.	Thursday	17:00-17:25	Uranus	MS 38
Weber, M.	Thursday	15:25-15:50	Helia	MS 21
Wechsung, F.	Friday	11:35-12:00	Orion	MS 14
Wei, S.	Thursday	17:20-17:40	Orion	CS 7
Wieland, M.	Friday	10:20-10:45	Helia	MS 22
Wijaya, K. P.	Tuesday	15:00-15:25	Orion	MS 05
Wijaya, K. P.	Tuesday	10:20-10:45	Panorama	MS 28
Wyller, J.	Tuesday	10:45-11:10	Panorama	MS 28
Xu, H.	Thursday	10:45-11:10	Venus	MS 33
Yamshchikov, I.	Monday	17:25-17:50	Helia	MS 41
Yousept, I.	Monday	15:25-15:50	Orion	MS 15



Zapperi, S.	Monday	11:05-11:30	Mercure	MS 34
Zavalnij, B.	Thursday	15:25-15:50	Mercure	MS 49
Zhao, Q.	Thursday	17:25-17:50	Venus	MS 13
Zheng, N.	Tuesday	18:00-18:20	Venus	CS 4
Zlinszky, A.	Friday	15:25-15:50	Venus	MS 46
Zoller, V.	Monday	18:00-18:20	Venus	CS 2
Zvyagin, A.	Monday	17:00-17:20	Venus	CS 2
Zvyagin, V.	Monday	17:20-17:40	Venus	CS 2



LIST OF POSTERS

- Deepthee Madenoor Ramapriya:** A Phase-Space Approach to the Propagation of Stochastic Fields
- Hidekazu Yoshioka:** Non-Renewable Fishery Resource Management Under Incomplete Information
- Tamas Erdei:** Comparison on Different Curve Fitting Settings During the Application of the Receptorial Responsiveness Method (RRM)
- Łukasz Błaszczyk:** Hypercomplex Fourier Transforms in the Analysis of Multidimensional Linear Time-Invariant Systems
- Kai Bittner:** Coupled Simulation of Semiconductor Devices and Circuits in the THz Range
- Pamela Kim Salonga:** An Unconstrained Minimization Technique Using Successive Implementations of Golden Search Algorithm
- Kristine Rey Recio:** A Three-Step Approach to Edge Detection of Texts
- Hueili Lin:** Multiplicity of Nontrivial Solutions for Perturbed Fourth Order Kirchhoff Type Elliptic Equations
- Andrey Nasedkin:** Finite Element Simulation of Transducer with Plano-Concave Face from Nanostructured Porous Piezoceramics
- Konstanty Junosza-Szaniawski:** Perfect Landmark Sets in the Alt Route Planning Algorithm
- Norbert Bogya:** Lane Modelling Algorithm for Video-Based Driver Assistance System
- Kamil Wolos:** Mathematical Analysis and Numerical Methods for Internal Incompressible Flows with Inertial-dissipative Influx/Outflow Conditions

SPONSORS



Morgan Stanley



ECMI.BOLYAI.HU