

EQUADIFF 2026

Scientific Programme — Lectures, Minisymposia & Contributed Talks

16th Czechoslovak Equadiff Conference

Prague University of Economics and Business (VŠE), New Building

Winston Churchill Square 1938/4, Prague 3 – Žižkov

Monday, June 29 – Friday, July 3, 2026

All times Central European Summer Time (CEST, UTC+2)



CONTENTS

Monday, June 29 Tuesday, June 30 Wednesday, July 1 Thursday, July 2 Friday, July 3

Monday, June 29, 2026

9:00-9:20 Opening Ceremony

Hall RB 101

Chair: Tomáš Vejchodský

9:20-10:20 Babuška-Kurzweil Lecture

Plenary lectures are live-streamed to Quattro Modulare

Hall RB 101

Chair: Šárka Nečasová

Variational Models for Phase Separation in Heterogeneous Media
Irene Fonseca

10:20-10:50 Coffee break

10:50-11:50 Plenary lecture

Plenary lectures are live-streamed to Quattro Modulare

Hall RB 101

Chair: Jason Mireles James

A spectral approach to computer-assisted proofs in dynamics
Jan Bouwe van den Berg

12:00-12:40 Invited lectures

Hall RB 101

Chair: Julien Vovelle

On the global well-posedness of the stochastic Yang-Mills-Higgs equations in two dimensions
Björn Bringmann

Hall NB A

Chair: Joan Torregrosa

Local minimizers and mountain pass critical points
Gabriele Bonanno

Hall NB B

Chair: Jakub Šístek

Cut finite element methods
Sara Zahedi

12:40-14:00 Lunch break

14:00-18:30 Minisymposia

P03 ELLIPTIC AND PARABOLIC PDE IN GEOMETRIC ANALYSIS

Hall NB A — Chairs: Anna Skorobogatova, Salvatore Stuvard

14:00 Non-uniqueness of locally-minimizing clusters
Anna Skorobogatova

14:30	Phase transitions with bounded index: Parallels to De Giorgi's conjecture <i>Enric Florit-Simon</i>
15:00	Stationary points of conformally invariant polyconvex energies <i>Riccardo Tione</i>
15:30	Global minimality of the Hopf map in the Faddeev-Skyrme model with large coupling constant <i>Konstantinos Zemas</i>
16:00-16:30 Coffee break	
16:30	Brakke's Mean Curvature Flows: an overview <i>Salvatore Stuvard</i>
17:00	Backwards uniqueness and rates of singularity formation in Mean Curvature Flow <i>Joshua Daniels-Holgate</i>
17:30	Non-local Constrained Curvature Flows within non-flat ambients <i>Esther Cabezas-Rivas</i>
18:00	On the singular set of fractional harmonic maps <i>Alessandro Audrito</i>

P08 ANALYSIS OF THIN AND HETEROGENEOUS STRUCTURES IN MATERIALS SCIENCE <i>Hall NB B — Chairs: Igor Velčić, Carolin Kreisbeck, Marin Bužančić</i>	
14:00	The effects of pressure loads in the dimension reduction of elasticity models <i>Martin Kružík</i>
14:30	Variational derivation of the Flamant solution for a nonlinear elastic wedge <i>Dominik Engl</i>
15:00	Variational models for material voids: Dimension reduction and homogenization <i>Manuel Friedrich</i>
15:30	Homogenization in magnetoelasticity under small elastic response <i>Lorenza D'Elia</i>
16:00-16:30 Coffee break	
16:30	Rigorous derivation of a Biot-Plate-System for a thin poroelastic layer <i>Markus Gahn</i>
17:00	Poroelastic plate model obtained by simultaneous homogenization and dimension reduction <i>Josip Žubrinić</i>
17:30	Homogenization of elasto-plastic plate equations with vanishing hardening <i>Marin Bužančić</i>
18:00	Simultaneous dimensional reduction and homogenization in manifold constrained functions spaces <i>Elvira Zappale</i>

P05 PATTERNS IN NETWORKED SYSTEMS: THEORY AND APPLICATIONS <i>Hall NB C — Chairs: Babette de Wolff, Sören von der Gracht</i>	
14:00	Computing phase dynamics in delay-coupled oscillators <i>Babette de Wolff</i>
14:30	Emergent spatiotemporal dynamics in large-scale brain networks with next generation neural mass models <i>Gemma Huguet</i>
15:00	Stability of phase-locked states in signed Kuramoto Networks: Structure versus Adaptation <i>Jaeyoung Yoon</i>
15:30	Phase synchronisation in coupled oscillator chains with endpoint heterogeneity <i>Nicolas Verschueren van Rees</i>
16:00-16:30 Coffee break	
16:30	Switching states: Heteroclinic cycles as organizing centers of neuronal dynamics <i>Kateryna Nechyporenko</i>
17:00	Heteroclinic networks in coupled cell systems <i>Liliana Sofia Garrido da Silva</i>
17:30	Directed hypernetworks: Heteroclinic dynamics and reluctant synchrony breaking <i>Sören von der Gracht</i>

P06 MULTISCALE ANALYSIS OF SELF-ORGANIZATION: HYDRODYNAMIC AND KINETIC FRAMEWORKS

Hall NB D — Chairs: Ewelina Zatorska, Roman Shvydkoy

- 14:00** Spectral analysis of Bochner-positive alignment models and application to relaxation
Roman Shvydkoy
- 14:30** Self-attention as a multi-agent system: A dynamical perspective on transformers
Jan Peszek
- 15:00** Global solutions to cross-diffusion systems with independent advections in one dimension
Jakub Skrzeczkowski
- 15:30** Existence and weak-strong uniqueness of measure solutions to Euler-alignment/Aw-Rascle-Zhang models
Jakub Woznicki

16:00-16:30 Coffee break

P09 FLUID MECHANICS AND TURBULENCE

Hall NB D — Chairs: Cherif Amrouche

- 16:30** Existence of solutions for motions of Cosserat-Bingham fluids
Michael Růžička
- 17:00** Improving accuracy in Eddy Viscosity Turbulence Models through filtering and approximate deconvolution
Argus-Adrian Dunca
- 17:30** Reduced Basis Smagorinsky turbulence models
Tomás Chacón Rebollo
- 18:00** Discussion

N09 NEW TRENDS IN DISCONTINUOUS GALERKIN METHOD

Hall RB 101 — Chairs: Vít Dolejší, Václav Kučera

- 14:00** Oscillation-free discontinuous Galerkin method for conservation laws
Chi-Wang Shu
- 14:30** L^2 -stability of explicit Runge-Kutta methods with SUPG stabilization for transient transport problems
Alexandre Ern
- 15:00** Entropy Stable DGSEM for Multi-Fluid 5-Moment GLM-Maxwell Systems
Daniel Bach
- 15:30** DG = FEM + flat elements
Václav Kučera
- 16:00-16:30** Coffee break
- 16:30** A simple and general framework for the construction of exactly div-curl-grad compatible discontinuous Galerkin finite element schemes on unstructured simplex meshes
Michael Dumbser
- 17:00** Structure-preserving PolyDG discretizations for the numerical modeling of neurodegenerative diseases
Francesca Bonizzoni
- 17:30** Positivity-preserving stationarity preserving PAMPA-DG Scheme with Global Flux Quadrature
Yongle Liu
- 18:00** Adaptive domain decomposition preconditioners for discontinuous Galerkin discretization
Vít Dolejší

N05 NUMERICAL ASPECTS OF MACHINE LEARNING FOR PDES

Hall RB 209 — Chairs: Nicola Rares Franco, Simone Brivio

- 14:00** Deep Symmetric Autoencoders: Error Estimates and Beyond
Simone Brivio
- 14:30** Preconditioning and Numerical Stability in Neural Network Training for Parametric PDEs
Chenguang Duan
- 15:00** A hybrid approach for surrogate modeling of a methanation reactor
Ion Victor Gosea
- 15:30** Convergence and Sketching-Based Efficient Computation of Neural Tangent Kernel Weights in Physics-Based Loss
Max Hirsch

16:00-16:30 Coffee break

16:30 Learning the continuous-time dynamics: from trajectories to velocities

Nicola Farenga

17:00 Low-rank surrogates for parametric PDEs

Benno Huber

17:30 Discovering adaptive basis representations for parametrized PDEs with Deep Orthogonal Decomposition: theory and practice

Nicola Rares Franco

18:00 Neural network-based numerical methods for one-dimensional conservation laws

Vendel Péter Kupás

N07 MATHEMATICAL MODELLING AND NUMERICAL METHODS IN FINANCE

Hall RB 210 — Chairs: Íñigo Arregui, Daniel Ševčovič

14:00 Jump-diffusion models for the generation rate in the pricing of renewable energy certificates (RECs)

Pablo Pérez Picos

14:30 Partial Integro-Differential Equations and their Applications in Financial Modeling

Daniel Ševčovič

15:00 Matrix Riccati BSDEs with singular terminal condition and stochastic LQ control with linear terminal constraint

Petr Petrov

15:30 Pricing American real options with double continuation region under Heston model

Íñigo Arregui

16:00-16:30 Coffee break

N14 ADVANCES IN THE NUMERICAL INVESTIGATION OF DELAY EQUATIONS

Hall RB 210 — Chairs: Dimitri Breda, Alessia Andò

16:30 Functional Runge-Kutta methods for stochastic delay differential equations

Dimitri Breda

17:00 The Hopf Bifurcation for Neutral Delay Differential Equations with State-Dependent Delay

Ahlam Alhadbani

17:30 Towards a proof of chaotic dynamics in the Mackey-Glass equation

Olivier Hénot

18:00 Extracting tent maps from the Mackey-Glass attractor

Davide Di Lenarda

D01 OSCILLATIONS IN DYNAMICAL SYSTEMS

Quattro Modulare — Chairs: Joan Torregrosa, Peter De Maesschalck

14:00 Slow-fast solutions of Abel equations

Maria Jesus Alvarez

14:30 Isolated periodic orbits in behavioristic diffusion models

Robert Kooij

15:00 A geometric approach to exponentially small splitting phenomena

Kristian Uldall Kristiansen

15:30 Unfoldings of limit cycles in families of centers

Joan Torregrosa

16:00-16:30 Coffee break

16:30 C1 perturbations of a continuum of critical points

Antonio Urena

17:00 A systematic study of two-layer canard cycles

Peter De Maesschalck

17:30 Computer assisted study of a perturbed planar vector field in the quadratic case

Zbigniew Galias

18:00 Center conditions and cyclicity for generic planar polynomial vector fields

Warwick Tucker

D08 ASYMPTOTIC THEORY OF DIFFERENTIAL EQUATIONS OF REAL ORDERS

Likešova auditorium — Chairs: Pavel Řehák, Luděk Nechvátal

14:00 Stability of linear systems and two-term equations with Prabhakar derivatives: spectral criteria and computations

Eva Kaslik

14:30 Fractional initial and boundary value problems: from qualitative analysis to applications

Kateryna Marynets

15:00 Asymptotic stability of linear differential equations with discrete and distributed delays

Hideaki Matsunaga

15:30 Period two implies chaos for a class of ODEs revisited

Jan Andres

16:00-16:30 Coffee break

16:30 Asymptotic behavior and stability of nonautonomous linear differential equations with Kirchhoff coefficients

Mihály Pituk

17:00 From fractional differential to difference equations: A stability perspective

Luděk Nechvátal

17:30 Tempered Psi-fractional calculus: Integral inequalities and their applications

Michal Pospíšil

18:00 Fractional integration and differentiation of asymptotic relations and applications in fractional DEs

Pavel Řehák

D04 NONLOCAL EVOLUTION PROBLEMS IN ABSTRACT SPACES

Hall RB 213 — Chairs: Valentina Taddei

14:00 Nonlocal differential problems in abstract spaces

Irene Benedetti

14:30 On impulsive problems driven by second order differential inclusions

Giulia Duricchi

15:00 Controllability of semilinear second-order differential equations in abstract spaces

Martina Pavlačková

15:30 Evolution problems with nonlocal equations and constraints: a survey

Radu Precup

16:00-16:30 Coffee break

D09 INTEGRATION THEORY IN APPLICATIONS TO DIFFERENTIAL EQUATIONS AND BEYOND

Hall RB 213 — Chairs: Antonín Slavík

16:30 The Kurzweil integral in hysteresis modeling

Giselle Monteiro

17:00 The Kernel of the Stieltjes Derivative in the Analysis of Cauchy Problems

Fernando Adrián Fernández Tojo

17:30 Differentiability of the solution operator of a sweeping process

Martin Brokate

18:00 Koopman semigroups on Lebesgue spaces

Pedro J. Miana

Tuesday, June 30, 2026

9:00-10:00 Plenary lecture

Plenary lectures are live-streamed to Quattro Modulare

Hall RB 101

Chair: Paolo Zunino

AI for Data-driven simulations in physics

Siddhartha Mishra

10:00-10:30 Coffee break

10:30-16:00 Minisymposia & Contributed talks

P04 VARIATIONAL METHODS IN PDEs AND CONTINUUM MECHANICS

Hall NB A — Chairs: Martin Kružík, Barbora Benešová

10:30 A two-dimensional variational approach to the modelling of ferronematic thin films

Anja Schlömerkemper

11:00 Nonlinear models in thermo-viscoelasticity

Manuel Friedrich

11:30 Problems with inertia and their variational limits

Malte Kampschulte

12:00 Linearization in elastodynamics

Barbora Benešová

12:30-14:00 Lunch break

14:00 Existence and selection in the solutions in the energy-variational framework

Robert Lasarzik

14:30 An effective damage and fracture model based on micro-structure

Dorothee Knees

15:00 Derivation of membrane models in nonlocal hyperelasticity

Anastasia Molchanova

15:30 Core-radius approximation of singular minimizers in nonlinear elasticity

Marco Bresciani

16:00-16:30 Coffee break & Posters

P02 ANALYSIS OF SINGULAR LIMIT PROBLEMS ARISING IN FLUID DYNAMICS

Hall NB B — Chairs: Francesco Fanelli, Eduard Feireisl

10:30 Continuous data assimilation for compressible temperature driven fluids

Eduard Feireisl

11:00 Incompressible limits at large Mach number for a reduced compressible MHD system

Aneta Wróblewska-Kamińska

11:30 High and low-Mach number regimes for capillary fluids

Matteo Caggio

12:00 Hydrodynamic limit of the kinetic Cucker-Smale model toward the incompressible Euler-alignment model

David Poyato

12:30-14:00 Lunch break

14:00 Anelastic approximation for the degenerate compressible Navier-Stokes equations

Nilasis Chaudhuri

CANCELLED

14:00 Dynamics of a Large System of Heavy Particles in a Newtonian Fluid

Arnab Roy

14:30 Derivation of the Vlasov-Stokes equation — the monokinetic and the small-inertia case

Richard Höfer

15:00 Recent progresses in the asymptotic dynamics of fast rotating fluids

Francesco Fanelli

16:00-16:30 Coffee break & Posters

P11 UNIQUENESS AND MULTIPLICITY OF POSITIVE SOLUTIONS OF NONLINEAR SPECTRAL PROBLEMS

Hall NB C — Chairs: Peter Takáč, Petr Girg

10:30 An Elliptic Spectral Problem with Concave and Convex Nonlinearity: Positive Solutions

Peter Takáč

11:00 On time-dependent Schrödinger equations constrained by measurements

Jochen Merker

11:30 On the multiplicity of positive solutions for spatially nonhomogeneous elliptic problems

Petr Girg

12:00 Numerical Construction of Multiple Positive Solutions of an Elliptic Problem with Concave and Convex Nonlinearity

Jiří Benedikt

12:30–14:00 Lunch break

P51 CONTRIBUTED TALKS — PARTIAL DIFFERENTIAL EQUATIONS

Hall NB C — Chairs: Jiří Benedikt

14:00 The Dirichlet problem for the Laplacian in Lipschitz Domains

Cherif Amrouche

14:20 Oseen resolvent system with traction boundary conditions

Paul Deuring

14:40 Optimal Korn-Maxwell-Sobolev inequalities

Peter Lewintan

15:00 Second positive solution for spatially nonhomogeneous elliptic problem

Lukáš Kotrla

15:20 Homogenisation of high-contrast integral operators

Igor Velčić

15:40 On stabilization of hyperbolic FitzHugh-Nagumo model

Jamila Kalantarova

16:00–16:30 Coffee break & Posters

P13 STOCHASTIC AND DETERMINISTIC MIXED TYPE PROBLEMS: PARABOLIC/HYPERBOLIC/ELLIPTIC

Hall NB D — Chairs: Nikolai Chemetov, Jeffrey Kuan

10:30 A Smoluchowski-Kramers approximation for the stochastic variational wave equation

Julien Vovelle

11:00 Moving boundary problems in fluid-poroelastic structure interaction

Jeffrey Kuan

11:30 Structure-preserving LDG methods for linear and nonlinear transport equations with gradient noise

Thomas Christiansen

12:00 Global solvability for a stochastic hyperbolic Keller-Segel system

Nikolai Chemetov

12:30–14:00 Lunch break

N10 NUMERICAL METHODS FOR FLUID-STRUCTURE INTERACTION PROBLEMS

Hall RB 101 — Chairs: Petr Sváček, Jan Valášek

10:30 Numerical Approximation of Fluid-Structure Interaction: From Mathematical Modeling to Applications

Petr Sváček

11:00 Fluid-structure interaction algorithm for an elastic structure with large deformations

Ondřej Bublík

11:30 Efficient linear finite element scheme for fluid-structure interaction: partitioned vs monolithic approach

Karel Tůma

12:00 Fluid-structure-acoustic interaction simulation motivated by human phonation

Jan Valášek

12:30–14:00 Lunch break

N12 MULTIPHYSICS PROBLEMS: NUMERICAL METHODS AND APPLICATIONS

Hall RB 101 — Chairs: Sara Zahedi, Daniele Boffi

14:00 Structure-preserving fully discrete methods for magnetoelastic materials

Michele Ruggeri

14:30 Hierarchical surrogate modeling for droplet-laden Stokes flows

Davide Pradovera

15:00 Domain Decomposition with Neural Model Order Reduction or Multiscale Mixed-Dimensional Problems

Paolo Zunino

15:30 Unconditionally stable finite element scheme for fluid-structure interaction problems

Daniele Boffi

16:00-16:30 Coffee break & Posters

N13 ITERATIVE METHODS AND NUMERICAL LINEAR ALGEBRA FOR DIFFERENTIAL EQUATIONS

Hall RB 209 — Chairs: Martin J. Gander, Michal Outrata

10:30 Exploiting Low-rank Structures for the Solution of PDEs

Davide Palitta

11:00 On direct multilevel solvers induced by AMG

Michal Outrata

11:30 Reliable Waveform Relaxation Convergence Estimates for Atmosphere-Ice-Ocean Coupling

Valentina Schüller

12:00 Iterative Methods for Fractional Differential Equations via the *-Product

Stefano Pozza

12:30-14:00 Lunch break

14:00 H-LU preconditioners for the RBF-FD discretized Oseen equations

Michael Koch

14:30 Block-Jacobi preconditioners for advection problems

Ivo Dravins

15:00 Determining the space dependent coefficients in space-time fractional diffusion equations via Krylov preconditioning

Muhammad Faisal Khan

15:30 Block-Schwarz methods and preconditioning strategies using Generalized locally Toeplitz tools **CANCELLED**

Abdessadek Rifqui

16:00-16:30 Coffee break & Posters

N03 NUMERICAL METHODS FOR PDE-BASED RANDOM FIELD GENERATION

Hall RB 210 — Chairs: Robert Scheichl, Björn Müller

10:30 Long-time behavior of some stochastic evolution equations on the sphere and their numerical discretizations

Björn Müller

11:00 Multigrid Monte Carlo revisited: fast sampling of Gaussian Random Fields

Eike Mueller

11:30 Level-set approximation of noisy functions

Matteo Croci

12:00 Dirichlet-Neumann Averaging: Efficient SPDE-Based Gaussian Process Simulation

Robert Scheichl

12:30-14:00 Lunch break

N08 NUMERICAL METHODS FOR CURVATURE DRIVEN FLOW

Hall RB 210 — Chairs: Tetsuya Ishiwata

14:00 Numerical Solution of Allen-Cahn Equation for Planar Curvature Flow with Constraints

Michal Beneš

14:30 Unified numerical analysis of moving boundary problems via the stabilized SAV approach

Koya Sakakibara

15:00 A threshold-type algorithm for fourth order geometric motions

Katsuyuki Ishii

15:30 Stability and Instability in Anisotropic Multi-Phase Interface Evolution

Tokuhiro Eto

16:00-16:30 Coffee break & Posters

D03 ITERATIVE AND TOPOLOGICAL METHODS IN BOUNDARY VALUE PROBLEMS

Quattro Modulare — Chairs: Alberto Cabada, Jan Tomeček

10:30 Spectral Characterization of the Constant Sign Derivatives of Green's Functions Related to Two-Point BVPs

Alberto Cabada

11:00 Radial solutions to equation with inhomogeneous operator

Zuzana Došlá

11:30 Existence results for systems of first-order Stieltjes differential equations

Marlene Frigon

12:00 Maximum Principle for the Hill Equation: Eigenvalue Approach

Gabriela Holubová

12:30-14:00 Lunch break

14:00 Are nonlinear first order Caputo fractional differential equations solvable?

Kunquan Lan

14:30 On the existence of positive solutions to boundary value problems with Riemann-Liouville fractional derivatives

Satoshi Tanaka

15:00 Multiple solutions of Dirichlet problems to implicit differential equations and inclusions in billiard spaces

Jan Tomeček

15:30 Nonlinear effects in linear delay equations and linear approach to nonlinear models with delay mortality

Elena Braverman

16:00-16:30 Coffee break & Posters

D02 DELAY DIFFERENTIAL EQUATIONS AND APPLICATIONS

Likešova auditorium — Chairs: Teresa Faria, Ábel Garab

10:30 On simplicity of solution manifolds

Hans-Otto Walther

11:00 Connecting orbits for some Mackey-Glass type equations

Tibor Krisztin

11:30 Spectral element methods for boundary-value problems of functional differential equations

Alessia Andò

12:00 Discrete Lyapunov functional for cyclic systems of differential equations with time-variable or state-dependent delay

Ábel Garab

12:30-14:00 Lunch break

14:00 Impact of Spatial Heterogeneity in Developmental Delay on Population Dynamics

Jianhong Wu

14:30 On the Geographic Spread of Chikungunya between Brazil and Florida: A Multi-patch Model with Time-delay

Jaqueline Godoy Mesquita

15:00 Blow-up and convergence of solutions to a differential equation with delayed negative feedback

Yukihiko Nakata

15:30 A nonautonomous chemostat system with delays

Teresa Faria

16:00-16:30 Coffee break & Posters

D06 DIFFERENTIAL EQUATIONS FOR LIVING AND INTERACTING SYSTEMS

Hall RB 213 — Chairs: Josef Hofbauer, Cristina Pignotti

10:30 Homogeneous Boltzmann-type equations on graphs

Andrea Tosin

11:00 Complex bifurcations generated by waning and boosting of immunity in infectious disease dynamics

Gergely Röst

11:30 Spontaneous Particle Aggregation with Memory

Jan Haškovec

12:00 Dynamics of a Piecewise Smooth Ghil-Zaliapin-Thompson ENSO model

Tony Humphries

12:30-14:00 Lunch break

D50 CONTRIBUTED TALKS — ORDINARY DIFFERENTIAL EQUATIONS

Hall NB C — Chairs: Irena Jadlovská

14:00 Dynamics of delayed rational difference equations in higher dimensions

Yacine Halim

CANCELLED

14:00 Inverse problem for abstract differential inclusions

Santosh Ruhil

14:20 Perturbations of the Kepler problem under Dirichlet boundary conditions

Tingyu Zhong

14:40 Floquet theory and exponential stabilization of impulsive second-order delay differential equations

Sergey Malev

16:00-16:30 Coffee break & Posters

16:30-18:30 Contributed talks

P52 PARTIAL DIFFERENTIAL EQUATIONS

Hall NB A — Chairs: Jeffrey Kuan

16:30 On the characteristic form of g-valued zero-curvature representations

Jirina Jahnova

16:50 Asymptotic behavior for the Maxwell-Dirac system in Lorenz and Coulomb gauges

Kiyeon Lee

17:10 Lie group analysis, group-invariant solutions and conservation laws of a family of coupled nonlinear Schrödinger equations

Vassil Vassilev

17:30 Regularity for a denoising model on manifolds

Salvador Moll

17:50 Large time-periodic solutions to nonlinear wave equations

Filip Ficek

P53 PARTIAL DIFFERENTIAL EQUATIONS

Hall NB B — Chairs: Ondřej Kreml

16:30 Per aquam ad astra: on stars (and) boiling water

Florian Oschmann

16:50 Qualitative and quantitative homogenization of some non-Newtonian flows in perforated domains

Yong Lu

17:10 On the continuity in time of solutions to a generalized Navier-Stokes-Fourier system

Petr Kaplický

17:30 Existence and weak-strong uniqueness of measure solutions to Euler-alignment/Aw-Rascle-Zhang models

Jakub Woznicki

MOVED TO MS P06

17:50 Nonstationary non-Newtonian fluid flow in a thin tube structure

Borja Rukavina

18:10 Weak-Strong Uniqueness and Relaxation Limit for a Parabolic Relaxation of the Navier-Stokes-Korteweg System

Florian Wendt

P54 PARTIAL DIFFERENTIAL EQUATIONS

Hall NB C — Chairs: Lukáš Kotrla

16:30 Modular topology approach to the Non-Homogeneous Dirichlet problem for the $p(x)$ -Laplacian

Jan Lang

- 16:50** Traveling waves in reaction-diffusion-convection problems with p-Laplacian-type diffusion
Michaela Zahradníková
- 17:10** Solvability of Nonlinear Coupled Systems Including Katugampola Fractional and p-Laplacian Operators
Pratibha Verma
- 17:30** The Brezis-Nirenberg problem: from the local to the nonlocal setting
Raffaella Servadei
- 17:50** Exact low multiplicity results for positive solutions of some sublinear problem with indefinite weight and Robin boundary conditions
Kenichiro Umezu
- 17:50** String stability for hysteretic flows
Haitao Fan

N51 NUMERICAL ANALYSIS

Hall RB 101 — Chairs: Petr Sváček

- 16:30** Mixed-Dimensional Modeling for Flow in Fractured Porous and Poroelastic Media
Maximilian Hörl
- 16:50** Hybrid-dimensional models for fluid-filled fractured porous media **CANCELLED**
Iryna Rybak
- 16:50** Phase-Field Modeling of Fluid-Driven Fracture in Porous Media with Application to Desiccation Cracking
Sayahdin Alfat
- 17:10** Boundary Control and Data Assimilation for Navier-Stokes Flows with Applications to Hemodynamic
Jorge Tiago
- 17:30** Impact of turbulence modeling on hemodynamic risk indicators for aortic dissection
Anne von Nida
- 17:50** A Robin-Robin domain decomposition method for Stokes-Darcy problems with generalised coupling conditions
Paula Strohbeck

N52 NUMERICAL ANALYSIS

Hall RB 209 — Chairs: Jan Chleboun

- 16:30** Graph-Based Semi-Supervised Learning via PDEs and Total Variation
Farid Bozorgnia
- 16:50** Adaptive Thresholded Physics-Informed CNN for Mixed Noise Removal Using Anisotropic Diffusion
Sanjeev Kumar
- 17:10** A numerical algorithm for solving singularly perturbed boundary value problem arising in neuronal variability model
Ashifa Khan
- 17:30** Data-driven PDE models of tumor-immune dynamics in tumor micro-environment
Leili Shahriyari
- 17:50** Use of repeated integration in efficient algorithms for numerical analysis of selected problems
Jiří Vala

N53 NUMERICAL ANALYSIS

Hall RB 210 — Chairs: Jan Valášek

- 16:30** A compact higher-order formulation for unsteady two-dimensional convection-diffusion systems with RK-type time integration
Sumit Kumar
- 16:50** Order Reduction of Exponential Runge-Kutta Methods: Non-Commuting Operators
Trung Hau Hoang
- 17:10** Invariant Region Preserving Schemes for Mixed Hyperbolic-Parabolic SPDEs
Kristian Nekstad Maroni
- 17:30** Time Filtered Finite Difference Schemes for Hyperbolic Problems
Lisa Davis
- 17:50** Stable Long-Horizon Prediction of Parametric PDE Solution with Latent-Tensor Vision Transformers
Domagoj Vlah

18:10 A posteriori error estimation of the immersed weak Galerkin method for parabolic problems with non-smooth coefficients
Jhuma Sen Gupta

D51 ORDINARY DIFFERENTIAL EQUATIONS

Quattro Modulare — Chairs: Gabriela Holubová

16:30 Periodic solutions of Hamiltonian systems with symmetries
Anna Gołębiewska

16:50 Stable and unstable periodic motions in a bouncing ball model
Stefano Marò

17:10 Levinson-Pliss Theorem for Periodic Lattice Dynamical Systems
Andrei Sultan

17:30 Periodic solutions of cosmology inspired Hamiltonian system
Agnieszka Golembiewska

17:50 Distributional Adjoint Theory for Retarded Differential Operators: Uncovering the Structural Origin of Hale's Bilinear Form
Junya Nishiguchi

18:10 On parameter-dependent inhomogeneous boundary-value problems in Sobolev spaces
Olena Atlasiuk

D52 ORDINARY DIFFERENTIAL EQUATIONS

Likešova auditorium — Chairs: Zuzana Došlá

16:30 On impulsive differential equations with adaptive state-dependent delays
Ferenc Hartung

16:50 Sharp oscillation criteria for nth order linear delay differential equations
Irena Jadlovská

17:10 Sharp delay-independent global stability for a Lotka-Volterra system with multiple delays
Yasuhisa Saito

17:30 Delay-induced instabilities in neural field equations
Mónika Polner

17:50 The least-squares method in the theory of boundary value problems with delay
Sergey Chuiko

18:10 Morse Decomposition for Semi-Dynamical Systems with an Application to Systems of State-Dependent Delay DDEs
István Balázs

D53 ORDINARY DIFFERENTIAL EQUATIONS

Hall RB 213 — Chairs: Tomáš Vejchodský

16:30 Oscillation results for first order neutral delay differential equations with several positive and negative coefficients
Gergő Tóth

16:50 Oscillation criterion for generalized Euler difference equations
Ludmila Linhartová

17:10 Some oscillation criteria for the second-order linear advanced differential equations
Zdeněk Opluštil

17:30 Oscillation theorems for linear differential equations with a proportional-derivative controller
Kazuki Ishibashi

17:50 Threshold points and oscillation criteria for differential and difference equations
Petr Hasil

18:10 A Leighton-Wintner type oscillation theorem for $p(t)$ -Laplacian dynamic equations on time scales
Masakazu Onitsuka

Wednesday, July 1, 2026

9:00-10:00 Plenary lecture

Plenary lectures are live-streamed to Quattro Modulare

Hall RB 101

Chair: Barbara Kaltenbacher

On (In-)Stability mechanisms in inverse problems
Angkana Rüland

10:00-10:30 Coffee break

10:30-11:30 Plenary lecture

Plenary lectures are live-streamed to Quattro Modulare

Hall RB 101

Chair: Yingfei Yi

A periodic prey-predator system
Rafael Ortega

11:40-13:00 Invited lectures

Hall RB 101

Chair: Irena Lasiecka

11:40 Dynamics of Non-Equilibrium Systems: Homoenergetic Flows for the Boltzmann Equation
Alessia Nota

Chair: Giovanni P. Galdi

12:20 On the dispersive effect of internal gravity waves in two-phase incompressible viscous flows
Hirokazu Saito

Hall NB A

Chair: Jean-Philippe Lessard

11:40 Parameterizing asymptotic dynamics with manifolds and bundles
Jonathan Jaquette

Chair: Jan Andres

12:20 Bifurcations from a normally degenerate cycle in forced differential equations
Adriana Buică

Hall NB B

Chair: Michal Outrata

11:40 Landmarks in the History of Linear and Nonlinear Preconditioning
Martin J. Gander

Chair: Alexandre Ern

12:20 Potential and flux reconstructions for optimal a priori and a posteriori error estimates
Martin Vohralík

13:00-14:00 Lunch break

14:00 Wednesday Afternoon Tours

[A-F] Prague tours · [G] Karlštejn · [H] Křivoklát + Růckl · [I] Nelahozeves + Dvořák

No scientific programme — see Social Programme for tour details.

Thursday, July 2, 2026

9:00-10:00 Plenary lecture

Plenary lectures are live-streamed to Quattro Modulare

Hall RB 101

Chair: Šárka Nečasová

Very weak solutions and asymptotic behavior of Leray solutions to the steady-state Navier-Stokes equations in exterior domains

Giovanni P. Galdi

10:00-10:30 Coffee break

10:30-16:00 Minisymposia & Contributed talks

P10 STRUCTURES AND FLUIDS

Hall NB A — Chairs: Tomáš Bodnár, Giovanni P. Galdi

10:30 Can One Control Large Sustained Oscillations in Flow-Structure Interactions?
Irena Lasiecka

11:00 Uniform stabilization of the Boussinesq System in Besov spaces with boundary-based, localized, finite dimensional, fluid and thermal feedback controllers
Roberto Triggiani

11:30 Regularized interface methods for geometrically nonlinear Navier-Stokes-Biot interaction
Boris Muha

12:00 Mathematical models for hemorheology and hemolysis
Tomáš Bodnár

12:30-14:00 Lunch break

14:00 Generalized Newtonian Flows with Directional Do-Nothing Boundary Conditions
Ana Leonor Silvestre

14:30 Contact in fluid-plate interaction: formation and detachment
Srđan Trifunović

15:00 On the compactness of artificial compressibility approximations of weak solutions for fluid problems in a general moving geometry
Anna Hundertmark

15:30 Semigroup Solutions for a Biot-Poroelastic plate-Stokes System
George Avalos

16:00-16:30 Coffee break and posters

P07 NONLINEAR WAVES IN COMPLEX SYSTEMS - FRONTS, FLUIDS AND FLUCTUATIONS

Hall NB B — Chairs: Bastian Hilder, Jonas Jansen

10:30 Heterogeneity in Reaction-Diffusion Systems: A Feature, Not a Perturbation
Martina Chirilus-Bruckner

11:00 Beyond the Marginal Stability Criterion: Travelling Waves and Model Discrimination in Reaction-Diffusion Systems
Vaclav Klika

11:30 Some remarks about an effective description of high-frequency non-polarized wave-packet propagation
Anna Logioti

12:00 Think Global, Act Local: Inducing Fully Localised Patterns via Spatial Heterogeneity
Dan Hill

12:30-14:00 Lunch break

14:00 Traveling bore wave solutions to the free boundary incompressible Navier-Stokes equations
Ian Tice

14:30 Subcritical transition to turbulence via large-scale coherent structures
Sébastien Gomé

15:00 Rolls, runaway modes and energetic consistency in spectral truncations of the Rayleigh-Bénard problem
Roland Welter

15:30 Dynamics of a rimming flow in a cylinder of finite length

Juri Jousen

16:00-16:30 Coffee break and posters

P01 PDES IN VARIATIONAL THEORIES FOR LIQUID CRYSTALS AND ALLIED AREAS

Hall NB C — Chairs: Apala Majumdar

10:30 A free-discontinuity and free-boundary problem for smectic A liquid crystals

Giacomo Canevari

11:00 Compressible Active Nematic Liquid Crystals: Existence of Dissipative Solutions

Kuntal Bhandari

11:30 A relative energy inequality for electrolytes with liquid-crystal-like solvent: weak-strong uniqueness and a posteriori error estimates

Luisa Plato

12:00 Variational Approximation of the Heat Flow of Harmonic Maps

Antonio Segatti

12:30-14:00 Lunch break

P55 CONTRIBUTED TALKS, PARTIAL DIFFERENTIAL EQUATIONS

Hall NB C — Chairs: Václav Mácha

14:00 Global solutions to a Keller-Segel-Navier-Stokes system with potential consumption

Gabriela Planas

14:20 On the optimal rate of vortex stretching for axisymmetric Euler flows without swirl

Deokwoo Lim

14:40 Navier-Stokes-Cahn-Hilliard system in a 3D perforated domain with free slip and source term

Haradhan Dutta

15:00 Existence of Solutions to the Navier-Stokes Equations in Lorentz-Besov Spaces

Bholanath Kumbhakar

15:20 Multiscale hyperbolic-parabolic models for nonlinear reactive transport in heterogeneously fractured porous media

Taras Melnyk

15:40 Linearization for Fluid Structure Interaction

Christopher Körber

16:00-16:30 Coffee break and posters

P12 MULTISCALE ANALYSIS OF COUPLED PROBLEMS AND APPLICATIONS

Hall NB D — Chairs: Maria Neuss-Radu, Markus Gahn

10:30 Geometric determinants of oxygen and heat exchange in placental mammals

Igor Chernyavsky

11:00 On some multifluid systems

Milan Pokorný

11:30 A Lumen-Tissue Magneto-Two-Phase Flow Model with Transendothelial Transport for Magnetic Drug Targeting

Jonas Knoch

12:00 Homogenization of a Stokes-transport system in an anisotropic porous medium with thin, evolving tubes

Kilian Hacker

12:30-14:00 Lunch break

P56 CONTRIBUTED TALKS, PARTIAL DIFFERENTIAL EQUATIONS

Hall NB D — Chairs: Gabriela Holubová

14:00 Low regularity approach for kinetic equations

Donghyun Lee

14:20 Initial layer for the Boltzmann equation

Hung-Wen Kuo

14:40 Self-similar solutions with finite time blow-up for reaction-diffusion equations

Razvan Gabriel Iagar

- 15:00** Fourth-order diffusion equations and Renyi entropies
Mario Bukal
- 15:20** Something other than the usual kind of instability and spatial patterns
Jan Eisner
- 15:40** Energy consistent hyperbolic approximations for some higher order PDEs
Rahul Barthwal

16:00-16:30 Coffee break and posters

N04 NUMERICAL ALGORITHMS FOR PDE SOLVERS ON MODERN HPC ARCHITECTURES

Hall RB 101 — Chairs: Erin Claire Carson, Jakub Šístek

- 10:30** Mixed-precision Computing: High Accuracy With Low Precision
Erin Claire Carson
- 11:00** Reduced and Mixed Precision QR Decomposition Techniques
Eda Oktay
- 11:30** Hybrid Hierarchical Matrices with Adaptive Precision Storage
Ritesh Khan
- 12:00** TNL: Numerical library for modern parallel architectures
Tomáš Oberhuber
- 12:30-14:00 Lunch break**
- 14:00** Acceleration of a nonoverlapping domain decomposition solver by using GPUs on subdomains
Jakub Šístek
- 14:30** Parallel-in-time solver for the Runge-Kutta discretization of the heat equation
Santolo Leveque
- 15:00** A High-Level Quantum Lattice Boltzmann Solver for Pure Advection with Subregion Local Measurement
Tomáš Bezděk
- 15:30** Low-Rank Methods in Isogeometric Analysis
Tom-Christian Riemer

16:00-16:30 Coffee break and posters

N11 ANALYSIS AND NUMERICAL ANALYSIS OF MEAN FIELD GAMES

Hall RB 209 — Chairs: Iain Smears, Harry Wells

- 10:30** Long Time Behaviour, Stabilisation and Turnpike for Displacement Monotone Mean Field Games
Alpár R. Mészáros
- 11:00** A posteriori error bounds for finite element approximations of mean field games
Harry Wells
- 11:30** Wellposedness and quantitative convergence for distributed equilibria of displacement monotone N-player games
Hei Jie Lam
- 12:00** On Schauder Estimates for Nonlocal Viscous Hamilton-Jacobi Equations
Robin Lien
- 12:30-14:00 Lunch break**
- 14:00** Hölder Regularity for Degenerate First-Order Hamilton-Jacobi Equations Under Controllability Conditions
Megan Griffin-Pickering
- 14:30** Error bounds for finite element approximations of stationary second-order mean field game systems
Yohance Osborne
- 15:00** The Effect of Quadrature on the Convergence of Policy Iteration for Hamilton-Jacobi-Bellman Equations
Thomas Hall
- 15:30** Discussion

N01 NEW METHODS AND TECHNIQUES FOR THE APPROXIMATION OF PDES

Hall RB 210 — Chairs: Paola Antonietti

- 10:30** A MLMC-VE method for uncertainty quantification of elliptic PDEs
Francesca Bonizzoni

11:00	A priori error analysis for a nonconforming virtual element method for the Monge-Ampere equation <i>Scott Congreve</i>
11:30	A Reynolds-Semi-Robust H(div)-Conforming Method For Unsteady Incompressible Power-Law Flows <i>Kirubell Biniam Haile</i>
12:00	Maxwell compactness for polytopal methods <i>Simon Lemaire</i>
12:30-14:00 Lunch break	
14:00	A High-Order Localized Orthogonal Decomposition for Stokes Equations <i>Alexei Lozinski</i>
14:30	A higher order polytopal method for contact mechanics with Tresca friction <i>Raman Kumar Kumar</i>
15:00	A high-order Discontinuous Galerkin method for the numerical modeling of neuronal electro-metabolic dynamics <i>Francesco Daniele</i>
15:30	On positivity preservation of HDG methods for the diffusion equation on hypergraphs <i>Petr Knobloch</i>
16:00-16:30 Coffee break and posters	

D05 HAMILTONIAN DYNAMICS AND KAM THEORY <i>Quattro Modulare — Chairs: Yingfei Yi</i>	
10:30	Quasi-Periodic Breathers in Newton's Cradle <i>Yingfei Yi</i>
11:00	Ejection-collision solutions and KAM tori in restricted N-body problems <i>Jesús F. Palacián</i>
11:30	Quasi-periodic solutions to the nonlinear Klein-Gordon equations in two dimensions <i>Wei-Min Wang</i>
12:00	Quasi-periodic Breathers for Klein-Gordon chains and discrete nonlinear Schrödinger equations with quasi-periodic Potential <i>Chuanfang Ge</i>
12:30-14:00 Lunch break	
14:00	Co-orbital solutions in the planar three-body problem <i>Patricia Yanguas</i>
14:30	Quasiperiodic motion in a planar Sun-Jupiter-Saturn system <i>Alex Haro</i>
15:00	Nekhoroshev estimates for multi-scale Hamiltonian systems <i>Lu Xu</i>
15:30	Discussion
16:00-16:30 Coffee break and posters	

D12 COMPUTER-ASSISTED PROOFS IN DIFFERENTIAL EQUATIONS <i>Likešova auditorium — Chairs: Jean-Philippe Lessard, Jason Mireles James</i>	
10:30	An Introduction to Computer-Assisted Proofs in Differential Equations <i>Jean-Philippe Lessard</i>
11:00	Computer-assisted proofs for PDEs: a matrix-free approach <i>Maxime Breden</i>
11:30	Periodic solutions in state-dependent delay differential equations <i>Matthieu Cadiot</i>
12:00	Validated numerics for convolutions in the Borel plane <i>Jason Mireles James</i>
12:30-14:00 Lunch break	

D11 NONLOCAL EFFECTS IN DIFFERENTIAL EQUATIONS <i>Likešova auditorium — Chairs: Tetsuya Ishiwata, Tatsuki Kawakami</i>	

- 14:00** Existence and uniqueness of L^1 -solutions to time-fractional nonlinear diffusion equations
Tatsuki Kawakami
- 14:30** On the singularities in area-preserving curvature flows of convex symmetric immersed closed plane curves
Takeo Ushijima
- 15:00** Fractional Model of Danckwerts Tubular Catalytic Reactor
Jaromir Kukal
- 15:30** Blow-up problems to some delay differential equations
Tetsuya Ishiwata
- 16:00-16:30** Coffee break and posters

D10 OSCILLATION THEORY FOR DIFFERENTIAL EQUATIONS ON HYBRID TIME DOMAINS

Hall RB 213 — Chairs: Roman Šimon Hilscher, Alim Sukhtayev

- 10:30** Generalized oscillation theory for canonical differential systems on hybrid time domains
Roman Šimon Hilscher
- 11:00** Exponential stability of second order delay differential equations through Floquet theory with application to angular stabilization of drone flight
Alexander Domoshnitsky
- 11:30** Renormalized Oscillation Theory for Hamiltonian Pencils
Alim Sukhtayev
- 12:00** On an optimal strict Sturm majorant condition for second order linear differential equations
Peter Sepitka
- 12:30-14:00** Lunch break

D54 CONTRIBUTED TALKS, ORDINARY DIFFERENTIAL EQUATIONS

Hall RB 213 — Chairs: Masakazu Onitsuka

- 14:00** About properties of ultrametric meromorphic solutions of some types of difference equations
Tahar Zerzaihi
- 14:20** Bifurcations of Limit Cycles in DDEs: Theory & Software
Bram Lentjes
- 14:40** On Observability of Limit Cycles in the Chemostat
Torsten Lindström
- 15:00** Controllability problem of a differential equation with memory
Sumit Arora
- 15:20** Robustness of Sacker-Sell trichotomy for nonautonomous dynamics
Davor Dragičević
- 15:40** Localization of solutions in annular regions times conical shells for systems with sign-changing nonlinearities
Jorge Rodríguez-López
- 16:00-16:30** Coffee break and posters

16:30-18:10 Contributed talks

P57 PARTIAL DIFFERENTIAL EQUATIONS

Hall NB A — Chairs: Václav Mácha

- 16:30** Evolutionary equations with state-dependent delay
Bernhard Aigner
- 16:50** Criteria for Controllability of Semilinear Measure-Driven Evolution Systems with Impulses and Nonlocal Inclusions
Jaydev Dabas
- 17:10** Regularity lost: the fundamental limitations and constraint qualifications in the problems of elastoplasticity
Ivan Gudoshnikov
- 17:30** Extinction, persistence and pattern formation in non-linear models with non-local dispersal on flat landscapes
Maciej Tadej

P58 PARTIAL DIFFERENTIAL EQUATIONS

Hall NB B — Chairs: Martin Kalousek

16:30 Analysis of anisotropic and heterogeneous models with applications to complex materials

Kateryna Buryachenko

16:50 Temple-Type Systems with Discontinuous Flux

Massimiliano Daniele Rosini

17:10 A Variational View on Constitutive Laws in Parabolic Problems

Espen Xylander

17:30 About the occurrence of Akhmediev breathers in general dispersive systems

Nils Thorin

P59 PARTIAL DIFFERENTIAL EQUATIONS

Hall NB C — Chairs: Ondřej Kreml

16:30 The energy-variational framework for binormal curvature flow

Thomas Eiter

16:50 Singular vortical flows

Volker Elling

17:10 On the mean curvature flow of closed curves evolving on surfaces and two dimensional manifolds

Miroslav Kolar

17:30 Optimal control problem for a nonlinear, nonlocal evolution system describing an interacting ternary mixture

Arghya Kundu

17:50 On the Modeling of Thermal Effects in Forchheimer Flow

Luka Tolj

N54 NUMERICAL ANALYSIS

Hall RB 101 — Chairs: Jiří Vala

16:30 Unconditionally stable numerical solution for the high-order Allen-Cahn equation

Seungyoon Kang

16:50 Thermodynamical Allen-Cahn equation with general polynomial free energy

Gyeonggyu Lee

17:10 A parabolic-elliptic-hyperbolic system of Keller-Segel type: numerical analysis and simulation

José Augusto Ferreira

17:30 The linearized Westervelt-Pennes bioheat system: numerical analysis and simulation

Gonçalo Pena

17:50 Data-Driven Stabilization Parameters for CDR Equations on General Meshes

Manoj Prakash

N55 NUMERICAL ANALYSIS

Hall RB 209 — Chairs: Václav Kučera

16:30 Trefftz Discontinuous Galerkin Approximation of the T-Matrix for Scattering by Periodic Layered Structures

Armando Maria Monforte

16:50 A fully discrete weak Galerkin mixed approximation for parabolic interface problems on polygonal meshes

Amit Kumar Pal

17:10 A posteriori algebraic error estimates and nonoverlapping domain decomposition in mixed formulations

Akram Beni Hamad

17:30 A priori and a posteriori estimates for vectorial problems via convex duality

Pablo Alexei Gazca Orozco

17:50 An alternative model of multicomponent diffusion based on a combination of the Maxwell-Stefan theory and continuum mechanics

Jiří Mikyška

N56 NUMERICAL ANALYSIS

Hall RB 210 — Chairs: Jan Chleboun

16:30 Criteria for asymptotic stability of three-term linear difference equation with two parameters

Petr Tomášek

16:50 Fractional SIR model with distributed contacts

Bárbara Rodrigues

17:10 Optimal Time-Adaptivity for Parabolic Problems with applications to Model Order Reduction

David Niederkofler

17:30 Transport of scalar quantities along evolving planar curves and its numerical solution

Maneesh Narayanan

17:50 Stability of equilibria in an infinite dimensional network of theta neurons with time delay

Lavinia Florina Rodica Fildan (Birdac)

D55 ORDINARY DIFFERENTIAL EQUATIONS

Quattro Modulare — Chairs: Ábel Garab

16:30 Robust Stability of a Class of Complex Balanced Chemical Reaction Networks with Time Delays and Time Varying Perturbations

Hirokazu Komatsu

16:50 Symbolic dynamics in Pseudospectral projection of Delay Differential Equations

Robert Szczelina

17:10 Voter model with time dependent dynamics

Peter Malárik

17:30 Finitude of limit cycles of linear piecewise ODEs in the cylinder

Roberto Trinidad-Forte

D56 ORDINARY DIFFERENTIAL EQUATIONS

Likešova auditorium — Chairs: Stefano Pozza

16:30 Regularity of Lagrangian flows associated to singular vector fields

Henrique Borrin de Souza

16:50 Applications of Coincidence Degree Theory to Fractional Boundary Value Problems and Non-Autonomous Ecological ODE Models

Satyam Narayan Srivastava

17:10 Nonlinear systems of ODEs subject to non-local boundary conditions

Lucía López Somoza

17:30 Weakly nonlinear degenerate differential-algebraic boundary value problems

Olga Neshmelova

D57 ORDINARY DIFFERENTIAL EQUATIONS

Hall RB 213 — Chairs: Jan Tomeček

16:30 Multiple solutions of Dirichlet problems in billiard spaces with impulses at fixed times

David Švec

16:50 Multiplicity of solutions for nonlinear differential systems using fixed point theory in product spaces

Laura María Fernández-Pardo

17:10 Chaos in the Hyperion tumbling model

Anna Gierzkiewicz

17:30 Functional equations involving reflection and piecewise constant arguments

Paula Cambeses Franco

19:00 Conference Dinner

Kaiserštejnský palác, Malostranské náměstí 23/37, Praha 1
(not included in registration fee)

Friday, July 3, 2026

9:00-11:30 Invited lectures

Hall RB 101

Chair: Aneta Wróblewska-Kamińska

9:00 Global solvability of the Q-tensor model for nematic liquid crystals
Miho Murata

Chair: Anja Schlömerkemper

9:40 Fisher's infinitesimal model features a nice convexity structure
Vincent Calvez

10:20-10:50 Coffee break

Chair: Anna Logioti

10:50 The Hunter-Saxton equation – wave breaking leads the way
Katrin Grunert

Hall NB A

Chair: Hans-Otto Walther

9:00 The strong unstable manifold and periodic solutions in differential delay equations with cyclic monotone negative feedback
Bernhard Lani-Wayda

Chair: Tony Humphries

9:40 Continuous and discrete time dynamics of regulatory networks
Tomas Gedeon

10:20-10:50 Coffee break

Chair: Tibor Krisztin

10:50 Exploring the relativistic Kepler problem: A journey through bounded orbits and bifurcation phenomena
Guglielmo Feltrin

Hall NB B

Chair: Václav Kučera

9:00 Funny things happening in Neural Galerkin Schemes
Olga Mula Hernandez

Chair: Michele Ruggeri

9:40 New Banach spaces-based mixed finite element methods for steady-state flows of magnetic fluids
Gabriel N. Gatica

10:20-10:50 Coffee break

Chair: Paola F. Antonietti

10:50 Multiharmonic Algorithms for Contrast-enhanced Ultrasound
Vanja Nikolić

11:40-12:40 Plenary lecture

Plenary lectures are live-streamed to Quattro Modulare

Hall RB 101

Chair: Luca Formaggia

Modeling human brain function and pathways of neurodegeneration
Paola F. Antonietti

12:40-12:50 Closing ceremony

Hall RB 101

Chair: Tomáš Vejchodský

12:50-14:00 Lunch — End of Conference