

# 2026 SWICCOMAS Annual Meeting

Friday, February 13<sup>th</sup> 2026 | 09:00 – 17:00 | University of Bern

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## AGENDA

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### 09:00–10:00 | Welcome & Keynote Lecture

#### Keynote Speaker: Rémi Abgrall

Institute for Mathematics & Computational Science, University of Zurich

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### 10:00–10:30 | ☕ Coffee Break

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### Session I – Multiscale Mechanics & Numerical Methods

#### 10:30–11:45 | 5 × 15 min

Chairs: Konstantinos Karapiperis (EPFL), Fabio Nobile (EPFL)

1. Joaquin Garcia Suarez (EPFL, LSMS): Shape influence in fluid-mediated impact of soft solids
  2. Lars Blatny (ETH Zürich): 3D Continuum Modeling of Mass Movements
  3. Lucas Fourel (EPFL): Multiscale modeling of damage in hydroelectric dams under alkali-silica reaction
  4. Florian Spicher (University of Bern): Convergence analysis and optimal rates for semilinear diffusion problems with non-monotone nonlinearities
  5. Anna Peruso (EPFL): A nonlinear least-squares method for the Monge-Ampère equation
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### 11:45–13:00 | 🍽️ Lunch Break (standing)

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### Session II – Scientific Computing & ML

#### 13:00–14:15 | 5 × 15 min

Chairs: Daniel Kressner (EPFL), Hossein Gorji (Empa)

6. Veronica Montanaro (Empa / EPFL): Bridging diffusion and kinetics by Fisher-Entropic Fokker-Planck model
7. Konstantinos Vlachas (ETH Zürich): Reduced Order Modeling for Utility-driven Optimized Decision Support
8. Andrea Lamperti (ETH Zürich): A variationally consistent and asymptotically convergent phase-field model for solute precipitation and dissolution
9. Jan Steven Van Dokkum (ETH Zürich / IfB / SMEC): Green's Function Lattice Dynamics: a semi-analytical boundary element method for lattice structures
10. Ramzi Dakhmouche (EPFL / Empa): Robust Operator Learning: Efficient Computation under Realistic Noise.

## Session III – UQ, Data-Driven Methods & HPC

14:15–15:45 | 6× 15 min

Chairs: Michael Herbst (EPFL), Eleni Chatzi (ETH)

10. Charikleia Stoura (ETH Zürich): An optimization method to estimate mode shapes of railway bridges from on-board monitoring data
  11. Giacomo Arcieri (ETH Zürich): Graph-based Inference and Multi-Agent Reinforcement Learning for Optimal Maintenance of Railway Networks
  12. Styfen Schär (ETH Zürich): Autoregressive surrogate modeling for dynamical systems
  13. Yidong Zhao (ETH Zürich / SLF / CERC): Efficient High-Fidelity Geohazard Simulation by Exploiting Sparsity in the Material Point Method
  14. Fabio Matti (EPFL): Linear system identification using augmented Krylov subspace methods
  15. Anna Herr (ETH Zürich): Inferring Population Parameters using Hierarchical Bayesian Inference with Stochastic Emulators
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15:45–16:00 | ☕ Coffee Break

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16:00–17:00 | Poster Session & Networking over Refreshments

Poster contributions – lightning presentations (Doctoral Candidates):

Chair: Marco Picasso (EPFL)

1. Federico Betti (ETH Zürich): Towards real-time surrogate models for train-track interaction under braking conditions
  2. Raúl Lazo Molina (ETH Zürich): Beyond the linear limit: A tale of a crack undergoing large deformations
  3. Gaëtan Cortes (EPFL): Accelerating BEM Simulations featuring Rate-and-State Friction
  4. Giacomo Mossinelli (EPFL): Homogenized Reynolds Model and Reduced-Order Surrogates for Grooved Gas-Bearing Rotordynamics
  5. Israa Fakh (PSI / EPFL): Efficient QR-based Column Subset Selection through Randomized Sparse Embeddings
  6. Noé Stauffer (EPFL / Empa): Surrogate Trajectories Along Probability Flows: Pseudo-Markovian Alternative to Mori-Zwanzig
  7. Thomas Henzel (EPFL): A Variational Formulation for Deformable Particle Simulations and its Level Set Discrete Element Method Implementation
  8. Hrishikesh Gopakumar Menon (EPFL): Learning transient rheology of granular flows
  9. Elliott Van Dieren (EPFL): LAGO: A Local-Global Optimization Framework Combining Trust Region Methods and Bayesian Optimization
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17:00 | SWICCOMAS Poster Award