Hausdorff School on
“Modeling and Analysis of Evolutionary Problems
in Materials Science”

23 to 27 September 2019

organized by
Marco Bonacini, Sebastian Schwarzacher, Juan Velázquez

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Main lecture series:

Céline Grandmont
Modeling and Analysis of some Fluid-Structure Interaction Problems

Josef Málék
PDE large data analysis for unsteady flows of non-Newtonian fluids

Alexander Mielke
Variational methods in time-dependent material models with finite-strain deformations

Mark Peletier
Gradient systems and evolutionary Gamma convergence
• Monday, September 23

13:30 - 14:30  |  Self Registration
14:30 - 15:30  |  Céline Grandmont - lecture 1
15:30 - 16:00  |  Coffee break
16:00 - 16:20  |  Sebastian Hensel (IST Austria)
              |  Weak-strong uniqueness and stability of evolutions for multi-phase mean curvature flow
16:25 - 16:40  |  Anastasiia Hraivoronska (Eindhoven University of Technology)
              |  Towards structure-preserving schemes for Wasserstein gradient flows
16:45 - 17:00  |  Antonio Tribuzio (University of Rome, Tor Vergata)
              |  Perturbations of minimizing movements and applications
17:05 - 17:25  |  Malte Kampschulte (Charles University, Prague)
              |  A variational approach to a quasi-static fluid structure problem
17:30 - 17:45  |  Aras Bacho (TU Berlin)
              |  Doubly Nonlinear Evolution Inclusion of Second Order

• Tuesday, September 24

09:15 - 10:15  |  Josef Málek - lecture 1
10:15 - 10:45  |  Group photo and coffee break
10:45 - 11:45  |  Mark Peletier - lecture 1
11:50 - 12:10  |  Marija Galić (University of Zagreb)
              |  Existence of a weak solution to a 3d nonlinear, moving boundary FSI problem
12:15 - 12:30  |  Gianmarco Sperone (Politecnico di Milano)
              |  Some remarks on the forces exerted by a viscous fluid on a bluff body
12:30 - 14:30  |  Lunch break
14:30 - 15:30  |  Mark Peletier - lecture 2
15:30 - 16:00  |  Coffee break
16:00 - 17:00  |  Céline Grandmont - lecture 2
17:00 - 18:00  |  Josef Málek - lecture 2
              |  Afterwards  |  Reception

• Wednesday, September 25

09:15 - 10:15  |  Mark Peletier - lecture 3
10:15 - 10:45  Coffee break
10:45 - 11:45  Josef Málek - lecture 3
11:45 - 12:45  Mark Peletier - lecture 4
afterwards  Lunch break and free afternoon

Thursday, September 26

09:15 - 10:15  Céline Grandmont - lecture 3
10:15 - 10:45  Coffee break
10:45 - 11:45  Alexander Mielke - lecture 1
11:50 - 12:10  Mario Varga (TU Dresden)
Stochastic homogenization of elasto-plastic spring networks
12:15 - 12:30  Karina Kowalczyk (University of Bonn)
Homogenization for compressible fluids
12:30 - 14:30  Lunch break
14:30 - 15:30  Josef Málek - lecture 4
15:30 - 16:00  Coffee break
16:00 - 17:00  Alexander Mielke - lecture 2

Friday, September 27

09:15 - 10:15  Alexander Mielke - lecture 3
10:15 - 10:45  Coffee break
10:45 - 11:45  Céline Grandmont - lecture 4
11:45 - 12:45  Alexander Mielke - lecture 4

All talks take place at the Lipschitz-Saal (room 1.016), Endenicher Allee 60, Bonn.