HAUSDORFF SCHOOL FOR ADVANCED STUDIES IN MATHEMATICS

UNIVERSITÄT BONN

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

	Monday	**Tuesday**	**Wednesday**	**Thursday**	**Friday**
9:15		Málek	Peletier	Grandmont	Mielke
10:15		*coffee break*	*coffee break*	*coffee break*	*coffee break*
10:45		Peletier	Málek	Mielke	Grandmont
11:45		Contrib. talks	Peletier	Contrib. talks	Mielke
lunch break					
14:30	Grandmont	Peletier		Málek	
15:30	*coffee break*	*coffee break*		*coffee break*	
16:00	Contrib. talks	Grandmont		Mielke	
17:00	Contrib. talks	Málek			
afterwards		Reception			

Main lecture series:

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

Josef Málek
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.