

## Programme

Rencontre Berlin-Toulon, 05/11–08/11, 2019

### Nonlinear Analysis and its Applications in Continuum Mechanics

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**Wednesday, November 6, M 127**

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1. 9:00-12:00 Work in teams (supervised by E.Feireisl and A. Novotny)
  2. 12:00-14:00 Lunch break
  3. 14:00-17:00 Work in teams (supervised by E.Feireisl and A. Novotny)
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**Thursday, November 7, M 003**

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1. 13:30-14:20 Danica Basaric (TU Berlin)  
Semiflow selection for the compressible Navier-Stokes system
2. 14:30-15:20 Nilasis Chaudhuri (TU Berlin)  
Multiple scales and singular limits of perfect fluid
3. 15:50-16:40 Guy Bouchitté (IMATH, Toulon)  
A repulsive multi-marginal transport model in quantum chemistry.
4. 16:50-17:40 Antonin Novotny (IMATH, Toulon)  
Mathematical analysis of some compressible multifluid models.

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**Friday, November 8, M 141**

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1. 9:00-9:50 Anna Abbatiello (TU Berlin)  
A class of generalized solutions to equations describing viscous fluids
2. 10:00-10:50 Pierre Seppecher (IMATH, Toulon)  
Derivation of a stress-gradient model from linear elasticity through dimension reduction
3. 11:20-11:45 Mohamed Ali Debyaoui (IMATH, Toulon)  
A new dispersive model for open channel and river flow.
4. 11:50-12:25 Soufiane Mouchtabih (IMATH, Toulon)  
An approximation result for a nonlinear Neumann PDE with non smooth coefficients.
5. 12:25-14:00 Lunch break
6. 14:00-14:50 Lukas Jakabcin (IMATH, Toulon)  
Higher order homogenization of highly contrasted elastic structures
7. 15:00-15:50 Frederick Golay (IMATH, Toulon)  
Numerical simulations in hydrodynamics
8. 16:10-17:00 Eduard Feireisl (Praha and Berlin)  
Solving ill-posed problems in fluid mechanics.