
DIMO2013 – Diffuse Interface Models

LEVICO TERME (TN) – SEPTEMBER 10-13, 2013

WORKSHOP PROGRAM

Tuesday 10

08:30-09:00 Registration

09:00-09:10 Opening

09:10-09:50 EDUARD FEIREISL, *On the weak solutions to the Euler-Fourier system*

09:50-10:30 HELMUT ABELS, *Sharp interface limit for the Cahn-Larche system*

10:30-11:10 DANIELLE HILHORST, *Formal asymptotic limit of a diffuse-interface tumor-growth model*

11:10-11:40 Coffee Break

11:40-12:20 HAO WU, *Well-posedness and stability of a hydrodynamic system modeling vesicle and fluid interactions*

12:20-13:00 MAURIZIO GRASSELLI, *Nonlocal Cahn-Hilliard-Navier-Stokes systems with nonconstant mobility*

13:00-14:30 Lunch

14:30-15:10 MITSU HARU ÔTANI, *Global solvability of some double-diffusive convection systems*

15:10-15:50 GÜNTHER GRÜN, *On convergent schemes for diffuse-interface models for two-phase flow of incompressible fluids with different mass densities*

15:50-16:20 Coffee Break

16:20-17:00 CECILIA CAVATERRA, *Long-time dynamics of a hyperbolic non-isothermal viscous Cahn Hilliard equation with dynamic boundary conditions*

17:00-17:40 SERGEY ZELIK, *Infinite energy solutions for Cahn-Hilliard type equations in unbounded domains*

17:40-18:20 JOHN LOWENGRUB, *Kinetic density functional theory: a time dependent hydrodynamic density functional theory for freezing*

Wednesday 11

09:00-09:40 GIUSEPPE SAVARÉ, *Cahn-Hilliard and Thin Film equations with nonlinear mobility as gradient flows in weighted-Wasserstein metrics*

09:40-10:20 GORO AKAGI, *On some nonlinear parabolic equation involving variable exponents*

10:20-11:00 CHRISTIANE KRAUS, *Damage and phase separation processes. Modeling and analysis of nonlinear PDE-systems*

11:00-11:30 Coffee Break

(Wednesday 11 continued)

11:30-12:10 RICCARDA ROSSI, *Existence results for a PDE system modeling damage, in nonsmooth domains*

12:10-12:50 AUGUSTO VISINTIN, *Structural stability of nonlinear flows*

13:00-14:30 Lunch

14:30-15:10 NOBUYUKI KENMOCHI, *Phase-field approach to models of regional economic trend*

15:10-15:50 GABRIELA MARINOSCHI, *Existence of the free boundary in a diffusive flow in porous media*

15:50-16:20 Coffee Break

16:20-17:00 ALAIN MIRANVILLE, *The Penrose-Fife phase-field system with dynamic boundary conditions*

17:00-17:40 JÜRGEN SPREKELS, *Optimal control of Allen-Cahn equations with singular potentials and dynamic boundary conditions*

17:40-18:40 Poster Session

Thursday 12

09:00-09:40 MICHEL FRÉMOND, *Collisions and shape memory alloys*

09:40-10:20 RALF KORNUBER, *Numerical solution of vector-valued phase field models*

10:20-11:00 VANESSA STYLES, *Multi-material structural topology optimization using phase field methods*

11:00-11:30 Coffee Break

11:30-12:10 JOHANNES ZIMMER, *Moving martensitic phase boundaries: from micro to macro*

12:10-12:50 ELENA BONETTI, *New modeling, analysis, and computations for thermal retraction*

13:00-14:30 Lunch

14:30-15:10 KEN SHIRAKAWA, *Coupling models of phase transitions and grain boundary motions*

15:10-15:50 JULIA YEOMANS, *Continuum models of active nematics*

15:50-16:20 Coffee Break

16:20-17:00 ANTONIO SEGATTI, *Equilibrium configurations of nematic liquid crystals on a torus*

17:00-17:40 FRANCISCO GUILLÉN-GONZÁLEZ, *On a initial-boundary Q-Tensor problem related to Liquid Crystals*

17:40-18:20 CHARLIE ELLIOTT, *Parabolic equations on evolving domains*

Friday 13

09:00-09:40 GIANNI GILARDI, *A PDE system related to solid-solid phase transition in shape memory alloys*

09:40-10:20 ARGHIR ZARNESCU, *On the cubic instability in the Q-tensor theory of liquid crystals*

10:20-10:50 Coffee Break

10:50-11:30 MARITA THOMAS, *Local versus energetic solutions in rate-independent brittle delamination*

11:30-12:10 GIANNI DAL MASO, *Quasistatic evolution as limit of dynamic evolutions: the case of perfect plasticity*

12:15-14:00 Lunch