

Online Workshop on  
“Free Boundary Problems and Related Evolution Equations”

February 21 – 25, 2022

organized by

Giovanni Bellettini (U Siena), Shokhrukh Kholmatov (U Vienna),  
Paolo Piovano (Politecnico Milano)

• **Monday, February 21st, 2022**

13:20 – 13:30 **Opening**

13:30 – 14:20 **Yoshikazu Giga**

*On a singular limit of a single-well Modica-Mortola functional and its applications*

14:20 – 14:55 **Anna Dall’Acqua**

*An obstacle problem for the  $p$ -elastic energy*

14:55 – 15:15 **Break**

15:15 – 15:50 **Piotr Rybka**

*Dynamic boundary conditions as a limit of a boundary layer problem*

15:50 – 16:25 **Maria Giovanna Mora**

*Explicit minimizers for a class of nonlocal interaction energies*

16:25 – 16:35 **Break**

16:35 – 17:10 **Maurizio Paolini**

*TBA*

• **Tuesday, February 22nd, 2022**

13:30 – 14:05 **Nicola Fusco**

*The isoperimetric inequality outside a convex set: the case of equality*

14:05 – 14:40 **Massimiliano Morini**

*The asymptotics of the area preserving mean curvature flow in two dimensions*

14:40 – 15:00 **Break**

15:00 – 15:35 **Dorin Bucur**

*Rigidity results for measurable sets*

15:35 – 16:10 **Gian Paolo Leonardi**

*The prescribed mean curvature measure equation*

16:10 – 16:20 **Break**

16:20 – 16:55 **Stefan Krömer**

*Relaxation of functionals with linear growth: Interaction of measures and free discontinuities*

- **Wednesday, February 23rd, 2022**

13:30 – 14:05 **Harald Garcke**

*On the interaction of mean curvature flow and diffusion on evolving hypersurfaces*

14:05 – 14:40 **Alessandra Pluda**

*Resolution of singularities of the network flow*

14:40 – 15:00 **Break**

15:00 – 15:35 **Tim Laux** *TBA*

15:35 – 16:10 **Riccardo Scala**

*A non-parametric Plateau problem with partial free boundary*

16:10 – 16:20 **Break**

16:20 – 16:55 **Matteo Novaga (U Pisa)**

*Isoperimetric clusters*

- **Thursday, February 24th, 2022**

13:30 – 14:05 **Vittorino Pata**

*Viscoelasticity with time-dependent memory kernels*

14:05 – 14:40 **Patrick Dondl**

*A proof of Taylor scaling for curvature-driven dislocation motion through random arrays of obstacles*

14:40 – 15:00 **Break**

15:00 – 15:35 **Maurizio Grasselli**

*Cahn-Hilliard-Hele-Shaw systems with singular potential*

15:35 – 16:10 **Martin Kružík**

*Equilibrium for multiphase solids with Eulerian interfaces*

16:10 – 16:20 **Break**

16:20 – 16:55 **Igor Velic**

*High-contrast random composites: homogenisation framework and new spectral phenomena*

16:55 – 17:30 **Anja Schlömerkemper**

*TBA*

- **Friday, February 25th, 2022**

13:30 – 14:05 **Adriana Garroni**

*Derivation of surface tension of grain boundaries in polycrystals*

14:05 – 14:40 **Marcello Ponsiglioni**

*Stability results for nonlocal geometric evolutions*

14:40 – 15:00 **Break**

15:00 – 15:35 **Gilles Francfort**

*Fracture with healing as a template for cavitation*

15:35 – 16:10 **Jean-Francois Babadjian**

*On the convergence of critical points of the Ambrosio-Tortorelli functional*

16:10 – 16:20 **Break**

16:20 – 16:55 **Irene Fonseca**

*Phase separation in heterogeneous media*

**All talks take place at Erwin Schrödinger Institute - virtual! Online participation is possible via zoom. Zoom coordinates are available on request (secr@esi.ac.at) and after registration until February 18, 2022.**