

**Workshop 2 on “Geometric Variational Problems” of the Thematic Programme
on****“Free Boundary Problems”****November 10 - 14, 2025****organized by****Serena Dipierro (UWA, Perth), Julian Fischer (ISTA, Klosterneuburg), Matteo Novaga (U Pisa),
Elisabetta Rocca (U of Pavia), Xavier Ros-Oton (U of Barcelona), Ulisse Stefanelli (U of Vienna),
Enrico Valdinoci (UWA, Perth)****• Monday, November 10th, 2025**09:00 – 09:15 **Registration**09:15 – 09:55 **Melanie Rupflin (U Oxford)***Quantitative estimates for the Dirichlet energy*09:55 – 10:35 **Antonin Chambolle (CEREMADE, Paris)***A (tentative) phase-field approach for the curvature flow of non-oriented boundaries*10:35 – 11:00 **Coffee break**11:00 – 11:40 **Annalisa Cesaroni (U Padova)***Periodic tilings with minimal energy*11:40 – 12:20 **Francesco Nobili (U Pisa)***Isoperimetric planar Tilings with unequal cells*12:20 – 14:00 **Lunch break**14:00 – 14:40 **Antonio De Rosa (U Bocconi, Milano)***Rigidity of critical points of hydrophobic capillary functionals*14:40 – 15:20 **Felix Schulze (U Warwick)***Generic regularity of area minimising hypersurfaces up to dimension 11*15:20 – 15:45 **Coffee break**15:45 – 16:15 **Sebastian Schwarzacher (Uppsala U)***Regularity estimates of a fluid-free surface evolution*16:15 – 16:45 **Fabian Rupp (U of Vienna)***Obstacle problems for elastic membranes – Existence, regularity, and rigidity***• Tuesday, November 11th, 2025**09:00 – 09:40 **Helmut Abels (U of Regensburg)***Sharp Interface Limit of a Navier-Stokes/Allen-Cahn System with Vanishing Mobility*09:40 – 10:20 **José Francisco Rodrigues (U Lisbon)***On Minimal and Capillary Surfaces with Bounded Slopes*

10:20 – 11:00 **Coffee break**

11:00 – 11:40 **Michael Goldman (CNRS & Ecole Polytechnique, Palaiseau)**

Variational models for charge liquid drops

11:40 – 12:20 **Marco Pozzetta (Politecnico Milano)**

Quantitative isoperimetric inequalities in capillarity problems

12:20 – 14:00 **Lunch break**

14:00 – 14:40 **Luigi De Masi (U of Trento)**

Regularity of capillary minimal surfaces

14:40 – 15:20 **Lauro Silini (ISTA, Klosterneuburg)**

Stability of spheres in the Complex Hyperbolic Space

15:20 – 16:00 **Coffee break**

16:00 – 16:40 **Davide Parise (Imperial College London)**

Log-epiperimetric Inequalities for conformally invariant geometric variational problems

19:00 – **Workshop Dinner**

- **Wednesday, November 12th, 2025**

09:00 – 09:40 **Anna Dall’Acqua (U Ulm)**

On the free boundary elastic flow

09:40 – 10:20 **Tatsuya Miura (Kyoto U)**

A direction energy approach to elastica and elastic flow

10:20 – 11:00 **Coffee break**

11:00 – 11:40 **Shokhrukh Kholmatov (U of Vienna)**

Crystalline elastic flow of polygonal curves

11:40 – 12:20 **Paola Pozzi (U Duisburg-Essen)**

Elastic Flow Revisited

12:20 – 13:00 **Sebastian Hensel (U Leipzig)**

A weak-strong uniqueness principle for the Mullins-Sekerka equation

- **Thursday, November 13th, 2025**

09:00 – 09:40 **Tim Laux (U Heidelberg)**

Equivalence of weak solution concepts for mean curvature flow

09:40 – 10:20 **Salvatore Stuvard (U degli Studi di Milano)**

The epsilon-regularity theorem for Brakke flows near triple junctions

10:20 – 11:00 **Coffee break**

11:00 – 11:40 **Alessandra Pluda (U Pisa)**

Monotonicity formulas for the inverse mean curvature flow and the p -Laplacian

11:40 – 12:20 **Xavier Lamy (IMT, Toulouse)**

Minimality of the Hopf map for the Faddeev-Skyrme energy

12:20 – 14:00 **Lunch break**

14:00 – 14:40 **Alice Marveggio (HCM, Bonn)**

Convergence of a heterogeneous Allen-Cahn equation to weighted mean curvature flow

14:40 – 15:20 **Theresa Simon (U Münster)**

Linear stability of the self-similarly shrinking lens

15:20 – 15:45 **Coffee break**

15:45 – 16:15 **Enric Florit-Simon (ETH Zurich)**

Regularity for stable phase transitions

16:15 – 16:45 **Andrea Poiatti (U of Vienna)**

Global weak solutions to a Navier-Stokes/Mullins-Sekerka system with different densities and viscosities

- **Friday, November 14th, 2025**

09:00 – 09:40 **Costante Bellettini (University College London)**

Bernstein-type theorems for stable minimal hypersurfaces

09:40 – 10:20 **Gaoming Wang (BIMSA, Beijing)**

Allard-Type Regularity for Varifolds with Prescribed Contact Angles

10:20 – 11:00 **Coffee break**

11:00 – 11:40 **Alessandro Pigati (U of Bocconi)**

Anisotropic Allen-Cahn and convergence to anisotropic integrands

11:40 – 12:20 **Harald Garcke (U of Regensburg)**

Overhang Penalization in Additive Manufacturing via Phase Field Structural Topology Optimization with Anisotropic Energies

All talks take place at ESI Boltzmann Lecture Hall!