

Workshop on

***Modeling of Crystalline Interfaces and Thin Film Structures:
A Joint Mathematics-Physics Symposium***

November 11 - 15, 2019

organized by

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The schedule of the workshop is below. Please, visit the website https://www.univie.ac.at/esi_workshop_thin_films/ for more information and for the abstracts of the talks.

• **Monday, November 11, 2019**

09:00 – 09:25 **Opening & Registration**

09:25 – 10:25 **Keynote Lecture: David Srolovitz**

Grain boundary dynamics: a disconnection perspective

10:25 – 10:45 *Coffee / Tea break*

10:45 – 11:20 **Giovanni Leoni**

A Sharp Interface Model for Solid-State Dewetting Problems

11:20 – 11:55 **Maria Stella Gelli**

Variational approach to the dynamics of multiphase models with density constraints

11:55 – 13:55 *Lunch break*

13:55 – 14:30 **Tomáš Šikola**

Electronic transport properties of graphene doped by gallium – application of density functional theory

14:30 – 15:05 **Bernd Schmidt**

Effective theories and energy minimizing configurations for heterogeneous multilayers

15:05 – 15:35 *Coffee / Tea break*

15:35 – 16:10 **Massimiliano Morini**

The surface diffusion flow with elasticity in two and three dimensions

16:10 – 16:45 **Peter Bella**

Wrinkling of a thin elastic sheet on a compliant sphere

• **Tuesday, November 12, 2019**

09:00 – 09:35 **Guus Rijnders**

Novel Functionalities in Atomically Controlled Oxide Heterostructures by Pulsed Laser Deposition

9:35 – 10:10 **Marco Cicalese**

Does the N-clock model approximate the NY-model?

10:10 – 10:40 *Coffee / Tea break*

10:40 – 11:15 **Antonin Chambolle**
Crystalline evolution of mean-convex sets

11:15 – 11:50 **Barbara Zwicknagl**
Low-volume fraction martensitic microstructures close to interfaces

11:50 – 13:55 *Lunch break*

13:55 – 14:30 **Cyrill Muratov**
Chiral domain walls and domain wall tilt in ferromagnetic nanostrips

14:30 – 15:05 **Jian-Guo Liu**
Dynamics of a degenerate PDE model of epitaxial crystal growth

15:05 – 15:35 *Coffee / Tea break*

15:35 – 16:10 **Aldo Pratelli**
On the optimization of Riesz-like potentials

16:10 – 16:45 **Michael Goldman**
Connectedness of drops in convex potentials

• **Wednesday, November 13, 2019**

09:00 – 09:35 **Jim Evans**
Assembly and stability of nanoclusters during thin film deposition

9:35 – 10:10 **Mariapia Palombaro**
Derivation of linearised polycrystals from a 2D system of edge dislocations

10:10 – 10:40 *Coffee / Tea break*

10:40 – 11:15 **Andrea Braides**
Homogenization of oscillating networks

11:15 – 11:50 **Igor Velčić**
Microscopical justification of the Wignerbottom shape

11:50 – 12:20 *Group picture*

12:20 – 19:00 *Free afternoon*

19:00 – 23:00 *Social dinner*

• **Thursday, November 14, 2019**

09:45 – 10:20 **Christian Teichert**
Interfaces between crystalline organic semiconductor nanostructures and 2D materials

10:20 – 10:40 *Coffee / Tea break*

10:40 – 11:15 **Giovanni Bellettini**
Some results on the relaxation of the area functional for graphs in dimension two and codimension two

11:15 – 11:50 **Giuliano Lazzaroni**
Discrete energies with surface scaling: interactions beyond nearest neighbours versus non-interpenetration

11:50 – 13:55 *Lunch break*

13:55 – 14:30 **Tevfik Onur Montes**

Ultra-thin Co films: structure and magnetism

14:30 – 15:05 **Matteo Focardi**

How a minimal surface leaves a thin obstacle

15:05 – 15:35 *Coffee / Tea break*

15:35 – 16:10 **Matteo Novaga**

The 0-fractional perimeter

16:10 – 16:45 **Marco Morandotti**

Analysis of a perturbed Cahn-Hilliard model for Langmuir-Blodgett films

● **Friday, November 15, 2019**

09:00 – 09:35 **Michele Riva**

TBA

9:35 – 10:10 **Roberto Alicandro**

Derivation of linear elasticity from atomistic energies with multiple wells

10:10 – 10:40 *Coffee / Tea break*

10:40 – 11:15 **Patrick Dondl**

Pinning of interfaces by localized dry friction

11:15 – 11:50 **Gianni Dal Maso**

On the jerky crack growth in elastoplastic materials

All talks take place at ESI, Boltzmann Lecture Hall!