

# EARTH FLOWS 2017

## Interface Dynamics during Geophysical Flows

3<sup>rd</sup> EarthFlows seminar,  
15-16 June 2017, Oslo Science Park



### Thursday 15<sup>th</sup> of June

0915-0920 *Luiza Angheluta/Bjørn Jamtveit (EF/PGP) Welcome*

0920-1000 *The EarthFlows lecture*

*Jorge Vinals (Univ. of Minnesota, USA)*

*Rheology and flows at the mesoscale*

1000-1015 Coffee break and Discussion

### Turbulent flows

*Chair: Joe LaCasce*

1015-1045 *Cristobal Lopez (IFISC, Mallorca) Flow networks: a useful tool to study marine ecosystems*

1045-1115 *Marta Sanchez de Lama (EF/IG) Turbulent dispersion in the Nordic seas*

1115-1145 *Anis Awal Ayati (EF) Air-flow structure above a wavy interface in stratified air-water pipe flow*

1145-1215 *Audun Skaugen (PGP, UiO) Spectral energy and vortex clustering in quantum turbulence*

1215-1345 Lunch

### Flows in complex systems

*Chair: Eirik Flekkøy*

1345-1415 *Emilio Hernandez-Garcia (IFISC, Mallorca) Stretching fields in the ocean: transport and coherent structures*

1415-1445 *Joachim Mathiesen (NBI, Copenhagen) Laminar and transitional flows in complex geometries*

1445-1515 *Knut Jørgen Måløy (EF) TBA*

1515-1530 Coffee break

### Fracture and friction processes

*Chair: Julien Scheibert*

1530-1600 *Piotr Szymczak (Univ of Warsaw, Poland) Karst-on-a-chip: dissolving gypsum fracture in a microfluidic cell*

1600-1630 *Stephane Santucci (LP-ENS, Lyon) ] Multiscale stick-slip dynamics of adhesive tap peeling*

1630-1700 *Julien Scheibert (Ecole Centrale Lyon, France) Onset of sliding of rough contacts*

1700-1715 Break

### Dislocation patterns in rocks

*Chair: Audun Skaugen*

1715-1745 *Patrick Cordier (UMET, Universite Lille) What numerical modeling tells us about flow in planetary interiors*

- 1745-1815 *Bjørn Jamtveit (EF, PGP)* Microstructural records of deep crustal earthquakes  
1900 Dinner

### ***Friday 16<sup>th</sup> of June***

#### **Fluid migration and magma dynamics**

*Chair: Ben Rogers*

- 0915-0945 *Laurent G.J. Montesi (Univ of Maryland, USA)* Speed of melt migration at mid-ocean ridges: A multiscale approach  
0945-1015 *Muriel Gerbault (Toulouse, France)* Stress rotation and inferences on magma pathways from elasto-plastic numerical models, at 2 scales around magma chambers and in a lithosphere above a mantle plume  
1015-1030 Coffee break

#### **Rock deformation and failure**

*Chair: Anis Ayati*

- 1030-1115 *Wenlu Zhu (Univ of Maryland, USA)* Effect of pore pressure on rupture propagation  
1115-1145 *Francois Renard (EF, PGP)* The microscale dynamics of precursors to failure in rocks  
1145-1215 *Anders Malthe-Sørenssen (EF, PGP)* TBA  
1215-1400 Lunch

#### **Ice, glacier motion**

*Chair: Aylin Dursun*

- 1415-1500 *Jerome Weiss ( ISTERre, France)* Sea ice rheology and fracturing: A perspective across scales  
1500-1530 *Andreas Käab (EF)* Collapsing glaciers  
1530-1600 *Kjetil Thøgersen (EF, PGP)* Glacier sliding laws