



9th EarthFlows seminar, June 14th-15th 2023

Organization: Torstein Sæeter, Janne Hoff, Luiza Angheluta, Luca Menegon, François Renard
Toppssenteret (First floor), Forskningsparken (Oslo Science Park), Gaustadalléen 21, 0349 Oslo

How to get there: <https://www.forskningsparken.no/en/about-us/directions/>

Talks: 20 minutes + 10 minutes questions (Keynote: 30 minutes + 10 minutes questions)

Day 1 – Wednesday June 14th 2023

09:00-09:10	<i>Welcome & coffee</i>
09:10-09:20	<i>Introduction: The 9th EarthFlows seminar</i> Luiza Angheluta (University of Oslo, Norway)
Part 1	<i>Multiple scale processes in complex systems</i> Chair: Kevin Peirce
09:25-09:55	<i>Keynote lecture</i> Ian Main (University of Edinburgh, Scotland) <i>Approach to catastrophic failure in porous media: sound and vision</i>
10:05-10:25	Matthieu Wyart (Ecole Polytechnique Fédérale Lausanne, Switzerland) TBA
10:25-10:35	<i>Coffee break</i>
10:35-10:55	Soumaya Latour (University of Toulouse, France) <i>Nucleation of slip events on periodically heterogenous interfaces</i>
11:05-11:25	Aurelien Rigotti (University Grenoble Alpes, France) <i>Investigating the rheology of the marginal ice zone trough DEM simulations of a dry frictional granular material</i>
11:35-11:55	Thea Josefine Ellevold (University of Oslo, Norway) <i>Internal solitary waves</i>
12:05-13:00	Lunch break
Part 2	<i>Transport in complex media</i> Chair: Vidar Skogvoll
13:00-13:30	<i>Keynote</i> Hartmut Löwen (University of Düsseldorf, Germany) <i>Motion of active particles in porous environments</i>
13:40-14:00	Marco Salvalaglio (Technical University of Dresden, Germany) <i>Solid-state dewetting scenarios of crystalline thin films</i>
14:10-14:20	<i>Coffee break</i>
14:20-14:40	Vidar Skogvoll (University of Oslo, Norway) <i>Symmetry, topology and crystal deformations: A phase-field crystal approach</i>
14:50-15:10	Kristian Olsen (Stockholm University, Sweden) <i>Non-equilibrium and intermittent phenomena modelled with stochastic resetting</i>
15:10-15:20	<i>Coffee break</i>
15:20-15:40	Gaute Linga (University of Oslo, Norway) <i>Chaotic mixing in time-dependent porous media flows</i>
15:50-16:10	Kevin Peirce (University of Oslo, Norway) <i>Progress in stochastic descriptions of fluid-driven sediment transport</i>
16:20-16:40	Stéphane Santucci (ENS Lyon, France) <i>Capillary washboarding during slow drainage of a frictional fluid</i>
16:50-20:00	<i>Dinner</i>



Day 2 – Thursday June 15th 2023

09:00-09:10	<i>Welcome and coffee</i>
Part 3	Fracture and Friction Chair: Torstein Sæter
09:15-09:45	<i>Keynote lecture</i> Zoe Mildon (University of Plymouth) <i>Physical processes affecting interactions of earthquakes and active faults</i>
09:55-10:15	Eric Larose (University Grenoble Alpes, France) <i>Role of fluids temperature and climate change in the mechanical behavior of rocky glaciers: insights from ambient seismic vibrations</i>
10:25-10:35	<i>Coffee break</i>
10:35-10:55	Karianne Lilleøren (University of Oslo, Norway) <i>Ice glaciers in Norway</i>
11:05-11:25	Coline Bouchayer (University of Oslo, Norway) <i>Multi-scale variations of hydro-mechanical conditions at the base of a surge-type glacier</i>
11:35-11:45	<i>Coffee break</i>
11:45-12:05	Elena Spagnuolo (Istituto Nazionale di Geofisica e Vulcanologia, Italy) <i>Weak or strong? Slip behavior, stress and strength of the incoming sediments at the Sumatra subduction zone</i>
12:15-13:00	Lunch break
13:00-13:20	Renaud Toussaint (University of Strasbourg, France) <i>How to trigger seismicity during fluid injection in wells, and how to avoid it</i>
13:30-13:50	Marthe Guren (University of Oslo, Norway) <i>Nanoscale fracturing of silica and basaltic glass</i>
14:00-14:10	<i>Coffee break</i>
Part 4	Fluid-solid interactions Chair: Coline Bouchayer
14:10-14:40	<i>Keynote lecture</i> Christine Putnis (University of Münster, Germany) <i>Understanding mechanisms at the nanoscale: What can we learn about larger-scale Earth processes?</i>
14:50-15:10	Anna Rogowitz (University of Vienna, Austria) <i>TBA</i>
15:20-15:40	Stephen Michalchuk (University of Oslo, Norway) <i>Dynamic evolution of porosity in lower crustal faults during the earthquake cycle</i>
15:50-16:10	Håkon Austrheim (University of Oslo, Norway) <i>Extreme enrichment of Arsenic and Antimony in altered peridotite; mechanism and consequences.</i>
16:20-16:40	Torstein Sæter (University of Oslo, Norway) <i>Elastohydrodynamical models for viscous and viscoplastic fluid flows</i>
16:50-17:00	<i>Concluding remarks</i> François Renard (University of Oslo, Norway)
17:00-18:00	<i>Open discussion</i>
18:30	<i>End of day 2</i>

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