



PoreLab
NTNU-UiO Porous Media Laboratory



PoreLab kick off meeting
6-8 September 2017, Soria Moria Conference Center

Wednesday 6th of September

- 1000-1010 *Alex Hansen (NTNU)* Welcome
1010-1020 *Morten Dæhlen (Dean UiO)* Opening remarks
1020-1030 *Øyvind Gregersen (Dean NTNU)* Opening remarks
1030-1040 *Erik Wahlstrøm (Head of dept. of Physics, NTNU)* Opening remarks

Porous media, statistical physics and thermodynamics

Chair: Signe Kjelstrup

- 1040-1100 *Øivind Wilhelmsen (SINTEF)* The equilibrium and nonequilibrium lives of droplets and bubbles
1100-1120 *Dick Bedeaux (NTNU)* Ensemble Distribution for Immiscible Two-Phase Flow in Porous Media
1120-1140 *Claire Chassagne (TU Delft)* Electrokinetic response of porous media
1140-1200 *Seyed Ali Ghoreishian Amiri (NTNU)* Thermo-Hydro-Mechanical Coupling in Geomechanics

1200-1330 **Lunch**

1330-1350 *Eirik Grude Flekkøy (UiO)* Getting trapped in a labyrinth by anomalous diffusion
1350-1410 *Sondre Schnell (NTNU)* Nanothermodynamics to bridge nano and mesoscopic scales
1410-1430 *Bjørn Hafskjold (NTNU)* Molecular dynamics simulations of Soret effects and fluid flow in a porous medium
1430-1450 *Joseph D. Seymour (Montana State Univ.)* NMR measurement of hydrodynamic dispersion in porous media: structure, dynamics and statistical mechanics

1450-1510 **Coffee break and discussions**

Steady states in porous flows

Chair: Marcel Moura

- 1510-1530 *Knut Jørgen Måløy (UiO)* Steady state simultaneous two-phase flow in porous media: An experimental study
1530-1550 *Santanu Sinha (Beijing Computational Science Research Center)* Steady-state two-phase flow in porous media

- 1550-1610 *Marios Valavanides (TEI Athens)* Steady-state two-phase flow in porous media: independent variables, critical flow conditions, universal energy efficiency map and effective, flow and system characterization.
- 1610-1630 *Laurent Talon (FAST)* On the determination of a generalized Darcy equation for yield stress fluid in porous media
- 1630-1800 **Poster Session**
- 1900 **Conference dinner**

Thursday 7th of September

Porous structures and flow in rocks and soil

Chair: Eirik Grude Flekkøy

- 0900-0920 *Bjørn Jamtveit (UiO)* Controls on pore space evolution in the Earth's crust
- 0920-0940 *Renaud Toussaint (Univ. Strasbourg)* Flow-in' rocks
- 0940-1000 *Steinar Nordal (NTNU)* Critical State Soil Mechanics
- 1000-1020 *Gustav Grimstad (NTNU)* Constitutive modelling of frozen soils
- 1020-1040 **Coffee break and discussions**

Imaging and flow characterization

Chair: Renaud Toussaint

- 1040-1100 *Geir Helgesen (IFE)* Neutron imaging and tomography at the IFE Kjeller research reactor
- 1100-1120 *Pål-Eric Øren (Petricore DRS)* Multiscale digital rock analysis
- 1120-1140 *Ståle Fjeldstad (Thermo Fischer Scientific)* Thermo Fisher Scientific Digital Rock Products and R&D
- 1140-1200 *Dag Dysthe (UiO)* Real rock microfluidics
- 1200-1220 *Dag Werner Breiby (NTNU)* Quantitative 3D imaging of porous materials

1230-1330 Lunch

Patterns in porous media

Chair: Guillaume Dumazer

- 1330-1350 *Bjørnar Sandnes (Swansea Univ.)* Patterns of the gas-liquid-grain interface
- 1350-1410 *Joachim Mathiesen (NBI, Copenhagen)* Permeability fluctuations in two-phase porous flow
- 1410-1430 *Santucci Stéphane (ENS Lyon)* Foam flow in model fracture
- 1430-1450 *Dani Or (ETH Zurich)* Pore scale view of fluid displacement fronts in porous media
- 1450-1510 **Coffee break and discussions**

Complex surface effects

Chair: Fredrik Kvalheim Eriksen

- 1510-1530 *Sarah Codd (Montana State Univ.)* Biofilms, Porous Media and NMR
- 1530-1550 *Steven Bryant (University of Calgary)* Wettability-induced Flow Instabilities of Nanoparticle-stabilized Emulsions
- 1550-1610 *Carl Fredrik Berg (NTNU)* Transport and pore structure
- 1610-1630 *Majid Hassanizadeh (Utrecht University)* Dynamic capillarity effect in two-phase flow through porous media
- 1630-1650 *Ole Torsæter (NTNU)* The concept of wettability in petroleum reservoir engineering.
- 1650-1800 **Poster Session**
- 1900 **Dinner**

Friday 8th of September

Industrial challenges

Chair: Santanu Sinha

- 0900-0920 *Signe Kjelstrup (NTNU)* Water and power production from industrial waste heat using nanoporous membranes
- 0920-0940 *Per Arne Slotte (NTNU)* A petroleum tainted view on the challenges in two-phase flow
- 0940-1000 *Ursula Gibson (NTNU)* 2-phase flow in semiconductor core fibers
- 1000-1040 **Coffee break and discussions**
- 1040-1100 *Fridtjov Ruden (Ruden A/S)* Stacking of multiple aquifers in crystalline aquifers
- 1100-1120 *Odne Stokke Burheim (NTNU)* Partially wetted porous electrodes in operation: Heat generation and thermal conductivity in Fuel cells, supercapacitors, and Li-ion batteries.
- 1120-1140 *Srutarshi Pradhan (NTNU)* Fracture propagation during fluid injection in reservoirs
- 1140-1200 *Jan Øystein Haavig Bakke (Schlumberger Stavanger)* Reservoir monitoring and upscaling
- 1200-1220 *Alex Hansen* Closing remarks
- 1230-1400 **Lunch**