

International Workshop on
***Non-Equilibrium Thermodynamics
in Porous Media***

on the occasion of

Signe Kjelstrup's 70th Birthday

August 29-30, 2019
PoreLab, NTNU
Trondheim, Norway

Organizing committee:

Dick Bedeaux (PoreLab, IKJ, NTNU, NO)
Olav Galteland (PoreLab, IKJ, NTNU, NO)
Alex Hansen (PoreLab, Physics, NTNU, NO)
Marie-Laure Olivier (PoreLab, Physics, NTNU, NO)
Marco Sauermoser (PoreLab, IKJ, NTNU, NO)

Thursday, August 29, 2019, morning session

Discussion leader: **Dick Bedeaux** (PoreLab, NTNU)

9:00	Registration / Coffee
9:40	Opening by Alex Hansen (PoreLab, NTNU)
10:00	Hamid H. Khanamiri (PoreLab, NTNU) Free Energy of Immiscible Two-Fluid Flow in Porous Media by Integral Geometry and Thermodynamics
10:40	Jean-Marc Simon (Université de Bourgogne, Dijon, France) Kirkwood-Buff integrals from molecular simulation
11:20	Olav Galteland (PoreLab, NTNU) Pressures inside a nano-porous medium. The case of a single-phase fluid
12:00	Lunch

Thursday, August 29, 2019, afternoon session

Discussion leader: **Daan Frenkel** (Cambridge University, UK)

13:00	Miguel Rubi (PoreLab, University of Barcelona, Spain) Out-of-equilibrium self-assembly for the formation of biological and soft-matter structures
13:40	Fredrik K. Eriksen (PoreLab, UiO) Impact of gravity on pore-scale steady state flow patterns
14:20	Vilde Bråten (Dept. of Materials Science and Engineering, NTNU) Physical Validation of Properties of Small Grand Canonical Systems
15:00	<i>Tea</i>
15:30	Srutarshi Pradhan (PoreLab, NTNU) The energy budget of Fiber Bundle Model
18:00	<i>Dinner</i>

Friday, August 30, 2019, morning session

Discussion leader: **Thijs Vlugt** (Technical University Delft, Netherlands)

9:00	Eirik Grude Flekkøy (PoreLab, UiO) Onsager symmetries in miscible fluid flow
9:40	Mathias Winkler (PoreLab, NTNU) Time-Correlation Functions of Immiscible Two-Phase Flow in Porous Media
10:00	Ailo Aasen (PoreLab, NTNU) Nucleation of Multicomponent Droplets
10:20	<i>Coffee</i>
11:00	Eivind Bering (PoreLab, NTNU) Thermodynamics for single-molecule stretching experiments: a molecular dynamics study
11:40	Astrid F. Gunnarshaug (PoreLab, NTNU) Peltier heats of lithium-ion battery electrodes
12:00	<i>Lunch</i>

Friday, August 30, 2019, afternoon session

Discussion leader: **Fernando Bresme** (Imperial College, London, UK)

13:00	Michael T. Rauter (PoreLab, NTNU) Power and clean water from thermal energy (PoreWatt)
13:40	Seyed Ali Ghoreishian Amiri (PoreLab, NTNU) A discontinuous approach for modelling distinct ice lenses in frost heave phenomenon
14:20	Magnus A. Gjennestad (PoreLab, NTNU) Thermodynamic stability of droplets and thick films confined in a pore
15:00	<i>Tea</i>
15:30	Marco Sauer Moser (PoreLab, NTNU) Seeking minimum entropy production for flow-field patterns and their geometries in fuel cells
16:10	<i>End</i>