

# NRC 2019

Tentative program, changes in timing and sessions may occur

Wednesday August 21

## Rheology Course

8:30–12:00

Lectures in room VDL

## NRC 2019

From 11

Registration open

12:00–  
13:00

Lunch

13:00–  
13:15

Welcome ceremony  
in Runan

13:15–13:55

**Optimal Fourier Transform Rheology for Probing the Linear Viscoelasticity of Gels and Time-Evolving Soft Materials**  
Plenary lecture by Gareth McKinley in Runan

Food and bioscience

General rheology

Lecture  
Hall

Runan

Scaniasalen

14:00–14:20

**Ice cream rheology**  
Fredrik Innings

**Rheology and the evolution of size and shape of 2D nanofillers and their dispersion in a polymer matrix**  
Karolina Gaska

14:20–14:40

Chair: xx

**Rheology of the bolus during pharyngeal transport**  
Waqas Qazi

Chair: xx

**Estimating mechanical rubber properties from moving die rheometer vulcanization curves under consideration of the rubber composition**  
Johannes Steinhaus

14:40–15:00

**Nano-rheometry for food oral processing**  
Mats Stading

**Viscosity control of dense suspension by ultrasound**  
Gustaf Mårtensson

15:00  
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15:30

Coffee Break

15:30–15:50

**Young's Modulus of tumour tissue from an in vivo breast cancer model- effect of treatment with guluronate oligosaccharides**  
Catherine Taylor Nordgård

Chair: Fredrik Innings and Gustaf Mårtensson

**Rheological properties of cellulose ethers and their application in cementitious tile adhesives formulation**  
Fabio Curto and Matteo Monaco

15:50–16:10

Chair: xx

**The role of EPS matrix for complex physical properties of biofilms**  
Santosh Pandit

**Industry workshop**  
Fredrik Innings and Gustaf Mårtensson

16:10–16:30

**Bio-inspired micro-robotic locomotion in the pH dependent mediums**  
Azadeh Jafari

Thursday August 22

		Registration open	
From 8:00			
8:30–9:15	Plenary lecture by Alain Dufresne in Runan		
Lecture Hall	Runan	Scaniaalen	
Symposium	Cellulose systems	General rheology	
9:20–9:40	Chair: xx	Dispersion and percolation of nanocrystalline cellulose in polymers: percolation threshold Christian Carrot	Viscosity of oil based drilling fluids Arild Saasen
9:40–10:00	Chair: xx	Spatial-temporal dynamics of cellulose nanocrystal suspensions in shear via rheology coupled with polarized light visualizations Mina Fazilati	Evaluation of extrudability of Portland cement compositions in function of partial replacement of binder by bauxite residue calcined at different temperatures Cesar de Oliveira Romano
10:00 – 10:30	Coffee Break		
10:30–10:50	Chair: xx	Impact of nanocelluloses on the rheology and microstructure of pectin hydrogels Patricia Lopez-Sanchez	The influence of hemihydrate on the rheological properties of cement paste Rainer Haldenwang
10:50–11:10	Chair: xx	Alignment of crystalline cellulose particles in shear and films Tiina Nypelö	Nonlinear oscillatory shear tests of Pressure Sensitive Adhesives designed for Transdermal Therapeutic Systems Michael Meurer
11:10–11:30	Chair: xx	Adsorption and Rheology of Cellulose Nanocrystals at fluid interfaces Pascal Bertsch	Estimating mechanical rubber properties from moving die rheometer vulcanization curves under consideration of the rubber composition Johannes Steinhaus
11:30–11:50	Chair: xx	Influence of cellulose nanocrystals on the rheological behavior of Portland cement and pure limestone suspensions Fábio A. Cardoso	Percolation from nonlinear 'oddities' in nano-filled polymers Roland Kádár
12:00 – 13:00	Lunch and NRS Annual Business Meeting		
Symposium	Cellulose systems	Rheometry	
13:00–13:45	Plenary lecture by Daniel Söderberg in Runan		
13:50–14:10	Chair: xx	Rheological measurements on surface treated nanocrystalline cellulose: an indispensable toolbox for solving the quest of structure-property relationships Gunnar Westman	Using a dual motor rheometer for advanced rheological testing Jörg Läger
14:10–14:30	Chair: xx	Pipe rheology of microfibrillated cellulose suspensions Antti Koponen	Recent developments in extensional rheology Ole Hassager and Qian Huang
14:30 – 15:00	Coffee Break		
	Cellulose systems	Fluid mechanics	
15:00–15:20	Chair: xx	Microfibrillated cellulose: A novel and renewable rheology modifier for water and/or polar solvent-based systems Katerina Liapis	Mayonnaise rheology Dragana Arlov
15:20–15:40	Chair: xx	Coherent fiber flocs in aqueous fiber suspensions and the effect on viscoelastic properties Agne Swerin	
15:40–16:00	Chair: xx	Rheological properties of aqueous dispersions of bacterial cellulose Igor Makarov	
16:00–17:00	Poster session		
19:00	Conference dinner at Chalmerska Huset		

8:30–9:15	Plenary lecture by Paula Moldenaers in Runan	
Lecture Hall	Runan	Scaniasalen
Symposium	Rheometry	Fluid mechanics
9:20–9:40	<b>Rigid Particle-surface effective adhesions in viscous liquids</b> Yao Lu Chair: xx	<b>Evaporation driven Rayleigh-Taylor instability in aqueous polymer solutions</b> Endre Joachim Mossige Chair: xx
9:40–10:00	<b>Analysis of rheological time series data</b> Sara Mohamed Gaber	<b>Rayleigh - Benard convection of an elasto-viscoplastic fluid</b> Moctar Gueye
10:00 – 10:20	Coffee Break	
10:20–10:40	<b>Novel application of time-resolved rheometry to study physical aging: a case study on bituminous binders</b> Olli-Ville Laukkanen	<b>Description of a Flexible Fibre Model in Viscous Fluid Flow</b> Naser Hamedi
10:40–11:00	<b>Concentric cylinder viscometer flows of Herschel-Bulkley fluids</b> Hans Joakim Skadsem	<b>Influence of low-frequency oscillatory motion on particle settling in non-Newtonian drilling fluids</b> Maduranga Amaratunga
11:00–11:20	<b>The effect of CO<sub>2</sub> loading on the flow behavior of amine water mixtures</b> Lars Erik Øi Chair: xx	<b>Yield stress effects on fluid displacement in an eccentric annulus</b> Steinar Kragset Chair: xx
11:20–11:40	<b>Effect of preparation parameters of zeolite-based pastes on their rheological properties</b> Karla Guerrero	<b>A numerical framework for simulation of swirled adhesive application</b> Simon Ingelsten
11:40–12:00	<b>Real-time rheology and density monitoring of drilling fluids at offshore installations</b> Jan Ove Brevik	<b>A numerical framework for simulation of swirled adhesive application</b> Simon Ingelsten
12:00–12:10	Closing of the NRC 2019 in Runan	
12:10 – 13:00	Lunch	