

# NRC 2022 Conference Program

## Monday August 8

13:00– 13:30	<b>Registration</b>
13:30– 16:30	<b>Rheology short course</b> Lecture Hall 5
16:00– 16:30	<b>Registration</b>
16:30– 18:00	<b>Welcome reception</b> Foyer of Háskólabíó

# NRC 2022 Conference Program

## Tuesday August 9

	<b>Registration</b>	
From 7:45		
8:15– 8:30	<b>Opening of the conference</b>	
8:30– 9:15	<b>Plenary lecture by Dave Adams</b> Self-assembly of pH-responsive low molecular weight gelators  Lecture Hall 3	
Lecture Hall	<b>Lecture Hall 3</b>	<b>Lecture Hall 4</b>
Sympo- sium	<b>General rheology</b>	<b>Flow instabilities</b>
9:20– 9:40	Chair: A. H. Rabenjaifimanants <b>Mohamed Omran</b> Role of Zeta Potential on Viscosity of Geopolymer Slurries – Influence of Superplasticizers	Chair: Roland Kádár <b>Sajjad Pashazadeh</b> Extrusion instabilities in highly-filled wood fiber biocomposites
9:40– 10:00	<b>Yousefi Oderji Sajjad</b> The Impacts of Superplasticizers on Rheology and Strength of Norite-based Geopolymer Binders	<b>Reza Ghanbari</b> Taylor-Couette stability modes of cellulose nanocrystals suspensions directly from birefringence patterns
10:00– 10:40	<b>Coffee Break</b>	
Sympo- sium	<b>General rheology / Gels</b>	<b>Colloids, suspensions &amp; solutions</b>
10:40– 11:00	Chair: A. H. Rabenjaifimanantsoa <b>Andreas Lutz</b> Performance based characterization of bitumen and mastic using the DSR	Chair: Roland Kádár <b>Victor Nogueira Lima</b> Viscosity and friction pressure measurements of a non-Newtonian fiber suspension
11:00– 11:20	<b>Olli-Ville Laukkanen</b> Interfacial rheology of ultra-low crosslinked and regularly crosslinked pNIPAM microgels	<b>Seyed Ehsan Hadi</b> Viscoelastic properties and shear-induced orientation and relaxation of cellulose nanocrystal and montmorillonite nanoplatelet dispersions
11:20– 11:40	<b>Gustaf Mårtensson</b> Rheological Modification of Liquid Metal Alloys (LMA) for Non-Contact Dispensing	<b>Sylvia Wojno</b> Effect of sulfate content and counterion on rheological properties of cellulose nanocrystal suspensions
11:40– 12:00	<b>Thorri Gunnlaugsson</b> Supramolecular self-assembly structures: The importance of rheology and morphology in understanding their properties and function	<b>Anish Gulati</b> Effect of NaCl on the rheological behaviour of Sodium polystyrene sulfonate (NaPSS) in aqueous solutions
12:00– 13:00	<b>Lunch</b>	
13:00– 14:00	<b>2022 NRS Annual Meeting</b>  Lecture Hall 3	

		Gels		Rheometry
14:00– 14:20	Chair: Mats Stading	<b>Hengzhi Ruan</b> Development and rheological characterization of a new hydrogel inspired by mussels	Chair: Olli-Ville Laukkanen	<b>Lucas Volpi</b> Effects of non-Newtonian viscosity and suspended particles on torque measurements in rotational viscometry
14:20– 14:40		<b>Sreejith Sudhakaran Jayabhavan</b> Tuning the Gel Strength in Multi-component Supramolecular Gels Based on Enantiomers		<b>Neda Olsen</b> In-line characterization of cement slurry - towards automated cementing operation
14:40– 15:00		<b>Jahanzaib Mazhar</b> Analysis of Gelling properties of Drilling Fluid and Improved Modelling of Gelling Behavior		<b>Roland Kádár</b> Are birefringence patterns in optically active dispersions and shear stress nonlinearities related?
15:00– 15:30	<b>Coffee Break</b>			
		Modelling and simulations		Multiphase and other complex fluid flows
15:30– 15:50	Chair: Mats Stading	<b>Zakiyeh Yousefian</b> Orientational arrest in dense suspensions of elliptical particles under oscillatory shear flows	Chair: Olli-Ville Laukkanen	<b>Kasra Amini</b> Experimental Investigation on Particle-Laden Flows of Viscoelastic Fluids in Micro-Channels Using Optical Coherence Tomography
15:50– 16:10		<b>Jon Elvar Wallevik</b> Utilizing Large Industrial Mixer As A Rheometer - Computational Analysis Using Openfoam		<b>Andrianifaliana Herimonja Rabenjafimanantsoa</b> The Rising of Taylor Bubble at the Inception to an Annulus
16:10– 16:30		<b>Ases Mishra</b> Thixotropic Modelling of Yield Stress Fluids		<b>Yao Zhang</b> Visualization and Experimental Investigation of Miscible Non-Newtonian Fluid Displacement in a Vertical Channel
16:30– 17:30	<b>Poster session</b> Foyer of Háskólabíó			
19:00–	<b>Conference dinner</b> Hotel Natura			

# NRC 2022 Conference Program

## Wednesday August 10

From 8:00	<b>Registration</b>	
8:20– 9:15	<b>Carl Klason Rheology Award lecture by Sami Hietala</b> Rheology of stimuli-responsive polymers  Lecture Hall 3	
Lecture Hall	<b>Lecture Hall 3</b>	<b>Lecture Hall 4</b>
Sympo- sium	<b>Food and bio-rheology</b>	<b>Polymers &amp; composites</b>
9:20– 9:40	Chair: Johanna Andersson <b>Nathaniel Hendrik</b> Tempering in a rheometer: thermal and shear histories effects on the flow behaviour of dark chocolate	Chair: Krishna K. Damodaran <b>Tomas Plachy</b> Influence of filler and processing conditions on structure and rheological properties of polypropylene composites
9:40– 10:00	Chair: Johanna Andersson <b>Even Gausemel</b> Improving sampling of dry Whey Protein Concentrate using a sample splitter	Chair: Krishna K. Damodaran <b>Alexandra Aulova</b> Orientation of Graphene Nanoplatelets in a Capillary Flow of Polyethylene: Effect of Polymer Topology and Molecular Weight
10:00– 10:40	<b>Coffee Break</b>	
Sympo- sium	<b>Food and bio-rheology</b>	<b>Polymers &amp; composites / General rheology</b>
10:40– 11:00	Chair: Johanna Andersson <b>Milan Kracalik</b> Rheology of cerebrospinal fluid using novel analysis approach	Chair: Krishna K. Damodaran <b>Angelica Avella</b> Effect of crosslinking on rheological behaviour of reactively melt processed cellulose/polyesters biocomposites
11:00– 11:20	Chair: Johanna Andersson <b>Gerald Fuller</b> Viscoelastic Response of Mucus Above Living Bronchial Epithelial Cells	Chair: Krishna K. Damodaran <b>Martin Tress</b> Transient polymer networks: connection of bond lifetime, stress relaxation & phase separation
11:20– 11:40	Chair: Johanna Andersson <b>Mats Stading</b> Nano-rheometry for non-invasive monitoring of texture during food oral processing	Chair: Krishna K. Damodaran <b>Viney Ghai</b> Role of Rheology on the Magnetic Field Orientation of Graphene Nanosheets in Polymers
11:40– 12:00	Chair: Johanna Andersson <b>Astrid Ahlinder</b> Increasing the visual appeal of food for dysphagia patents using 3D printing and rheology, in addition to improving the timbal formulation using dietary fibres whilst retaining an appropriate texture	Chair: Krishna K. Damodaran <b>Ian Frigaard</b> Plug cementing: a puzzle for rheology and flow
12:00– 12:15	<b>Closing of the conference</b>  Lecture Hall 3	
12:15 –	<b>Lunch</b>	