

8th Pacific Rim Conference on Rheology



Report of Contributions

Contribution ID: 5

Type: **Oral Presentation**

KEYNOTE: Nonlinear Rheology of Concentrated Poly(vinyl alcohol)/Borax Aqueous Solution

Thursday 18 May 2023 10:30 (40 minutes)

Authors: Ms ZHANG, Yanjie (Changchun institute of applied chemistry chinese academy of science); CHEN, Quan (Changchun Institute of Applied Chemistry, Chinese Academy of Science); Prof. WATANABE, Hiroshi (Institute for Chemical Research)

Presenter: CHEN, Quan (Changchun Institute of Applied Chemistry, Chinese Academy of Science)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 6

Type: **Oral Presentation**

KEYNOTE: Rheology modification of polymeric networks via loop threading

Thursday 18 May 2023 10:30 (40 minutes)

Author: VLASSOPOULOS, Dimitris (FORTH and University of Crete)

Presenter: VLASSOPOULOS, Dimitris (FORTH and University of Crete)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 7

Type: **Oral Presentation**

RHEOLOGICAL BEHAVIOR OF MATURE FINE TAILINGS

Wednesday 17 May 2023 11:30 (20 minutes)

Author: Mr MALMIR, Amir (The University of British Columbia)

Co-authors: Mr PIETTE, Jourdain (The University of British Columbia); Prof. HATZIKIRIAKOS, Savvas G. (The University of British Columbia)

Presenter: Mr MALMIR, Amir (The University of British Columbia)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 8

Type: **Oral Presentation**

ADVANCED POLYMER RHEOLOGY BASED ON RHEO-OPTICAL TOOLS AND A DUAL MOTOR DEVICE

Thursday 18 May 2023 14:00 (20 minutes)

Author: LAEUGER, Joerg (Anton Paar Germany)

Presenter: LAEUGER, Joerg (Anton Paar Germany)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: 9

Type: **Oral Presentation**

DEVELOPMENT OF COMPOSITE VIA SECONDARY POLYMER-INDUCED PARTICLE AGGREGATION AND DESTRUCTION OF ITS PARTICLE AGGREGATION DURING 3D PRINTING

Friday 19 May 2023 11:10 (20 minutes)

Author: HONG, JOUNG SOOK

Co-authors: KIM, Ji Hwan; AHN, Kyung Hyun

Presenter: HONG, JOUNG SOOK

Session Classification: Industrial Rheology in Polymer Processing

Track Classification: General Symposia: Industrial Rheology in Polymer Processing

Contribution ID: 10

Type: **Oral Presentation**

Displacement flows of shear thinning fluids in a vertical annulus

Tuesday 16 May 2023 11:50 (20 minutes)

Author: ZHANG, Ruizi (University of British Columbia)

Co-author: FRIGAARD, Ian (University of British Columbia)

Presenter: ZHANG, Ruizi (University of British Columbia)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 11

Type: **Oral Presentation**

How morphological and rheological properties of PLA/MWCNT nanocomposites are affected by molecular weight, stereo configuration of PLA, and processing

Tuesday 16 May 2023 16:30 (20 minutes)

Authors: Prof. HEUZEY, Marie-Claude (Center for High Performance Polymer and Composite systems (CREPEC), Department of Chemical Engineering, Polytechnique Montréal, Montreal, Québec, H3T 1J4, Canada); Dr MOHAMMADI, Mojtaba (Center for High Performance Polymer and Composite systems (CREPEC), Department of Chemical Engineering, Polytechnique Montréal, Montreal, Québec, H3T 1J4, Canada); Prof. CARREAU, Pierre (Center for High Performance Polymer and Composite systems (CREPEC), Department of Chemical Engineering, Polytechnique Montréal, Montreal, Québec, H3T 1J4, Canada)

Presenter: Prof. CARREAU, Pierre (Center for High Performance Polymer and Composite systems (CREPEC), Department of Chemical Engineering, Polytechnique Montréal, Montreal, Québec, H3T 1J4, Canada)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 12

Type: **Oral Presentation**

KEYNOTE: Modular material properties in bimodal blends of amine functionalized polyolefins

Friday 19 May 2023 10:30 (40 minutes)

Author: YAVITT, Benjamin (University of Cincinnati)

Co-authors: GILMOUR, Damon (A2O Advanced Materials); SCHAFER, Laurel (The University of British Columbia); HATZIKIRIAKOS, Savvas (The University of British Columbia); ZHANG, Ziyue (The University of British Columbia)

Presenter: YAVITT, Benjamin (University of Cincinnati)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: 13

Type: **Oral Presentation**

KEYNOTE: Rheology of active colloids: motility-induced shear-thickening

Tuesday 16 May 2023 16:10 (40 minutes)

Author: LÖWEN, Hartmut

Co-authors: BAYRAM, A. Gülce; BIANCOFIORE, Luca; SCHWARZENDAHL, Fabian J.

Presenter: LÖWEN, Hartmut

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 14

Type: **Oral Presentation**

Primitive chain network simulations for non-linear rheology of monodisperse polystyrene melts with friction change and violation of the fluctuation-dissipation theorem.

Wednesday 17 May 2023 15:00 (20 minutes)

Authors: Prof. IANNIRUBERTO, Giovanni (University of Naples); Prof. MARRUCCI, Giuseppe (University of Naples); Prof. WAGNER, Manfred (Berlin Institute of Technology); Prof. MASUBUCHI, Yuichi (Nagoya University)

Presenter: Prof. MASUBUCHI, Yuichi (Nagoya University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 15

Type: **Oral Presentation**

Effect of viscosity contrast in structure -rheology relationship in sheared lamellar mesophase in 3-D

Wednesday 17 May 2023 15:20 (20 minutes)

Author: PAL, Arkaprava (IISc Bangalore)

Co-author: Dr KUMARAN, Viswanathan (IISc Bangalore)

Presenter: PAL, Arkaprava (IISc Bangalore)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 16

Type: **Oral Presentation**

RHEO-DIELECTRIC BEHAVIOR OF UNENTANGLED POLY (BUTADIENE OXIDE) UNDER STEADY SHEAR

Wednesday 17 May 2023 16:10 (20 minutes)

Author: Dr MATSUMIYA, Yumi (ICR, Kyoto University)

Co-authors: WATANABE, Horshi (Institute for Chemical Research); Dr SATO, Takshi (ICR, Kyoto University); CHEN, quan (Changchun institute of applied chemistry chinese academy of science)

Presenter: Dr MATSUMIYA, Yumi (ICR, Kyoto University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 17

Type: **Oral Presentation**

Have you ever listened to the sound of the fluid?

Thursday 18 May 2023 11:50 (20 minutes)

Author: Prof. AHN, Kyung Hyun (Seoul National University)

Co-authors: Dr JIN, Howon; Mr KANG, Seunghoon

Presenter: Prof. AHN, Kyung Hyun (Seoul National University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 18

Type: **Oral Presentation**

Compatibilized polylactide/polyamide 11 (PLA/PA11) blends containing multiwall carbon nanotubes: morphology, rheology, electrical and mechanical properties

Tuesday 16 May 2023 16:50 (20 minutes)

Author: Ms MOUSAVI, Zeinab (Centre for High performance Polymer and Composite Systems (CREPEC), Chemical Engineering Department, Polytechnique Montreal, Montreal, Quebec H3T 1J4, Canada)

Co-authors: HEUZEY, Marie-Claude (Center for High Performance Polymer and Composite systems (CREPEC), Department of Chemical Engineering, Polytechnique Montréal, Montreal, Québec, H3T 1J4, Canada); CARREAU, Pierre (Center for High Performance Polymer and Composite systems (CREPEC), Department of Chemical Engineering, Polytechnique Montréal, Montreal, Québec, H3T 1J4, Canada)

Presenter: Ms MOUSAVI, Zeinab (Centre for High performance Polymer and Composite Systems (CREPEC), Chemical Engineering Department, Polytechnique Montreal, Montreal, Quebec H3T 1J4, Canada)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 20

Type: **Oral Presentation**

Effect of salt concentration and flow rate on clogging dynamics in the single micro-pore

Thursday 18 May 2023 14:00 (20 minutes)

Author: KIM, Dae Yeon (Seoul National University (SNU))

Co-authors: Prof. JUNG, Seon Yeop (Dankook University); Mr LEE, Young Jin (Seoul National University); Prof. AHN, Kyung Hyun (Seoul National University)

Presenter: KIM, Dae Yeon (Seoul National University (SNU))

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 21

Type: **Poster Presentation**

Rheology and Drag Reduction and Engineering Applications of Novel Oil-phase Suspended Polyacrylamide Slicker water Fracturing Fluids

Tuesday 16 May 2023 21:20 (20 minutes)

Authors: Mr YANG, Li (Petrochina Research Institute of Exploration and Development); Mr LU, Yongjun (Petrochina Research Institute of Exploration and Development)

Presenter: Mr LU, Yongjun (Petrochina Research Institute of Exploration and Development)

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 22

Type: **Oral Presentation**

EFFECTS OF GELATION CONCENTRATION ON CYCLIC DEFORMATION BEHAVIOR OF POLYSACCHARIDE HYDROGELS

Tuesday 16 May 2023 14:40 (20 minutes)

Author: HORINAKA, Jun-ichi

Co-authors: Mr OGAWA, Souma (Kyoto University); Mr TAKAGAKI, Hiroshi (Kyoto University); Mr TANAKA, Tomoya (Kyoto University); Prof. TAKIGAWA, Toshikazu (Kyoto University)

Presenter: HORINAKA, Jun-ichi

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 23

Type: **Oral Presentation**

Shear-triggered Coalescence

Thursday 18 May 2023 11:30 (20 minutes)

Author: MASHAYEKHI, Alireza (University of British Columbia)

Co-authors: Ms VAZQUEZ, Coralie (Chimie ParisTech); Prof. FROSTAD, John (University of British Columbia)

Presenter: MASHAYEKHI, Alireza (University of British Columbia)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: 25

Type: **Oral Presentation**

NONLINEAR RHEOLOGY OF ENTANGLED WORMLIKE MICELLES: A SLIP-SPRING SIMULATION STUDY

Thursday 18 May 2023 11:30 (20 minutes)

Author: Dr SATO, Takeshi (Institute for Chemical Research, Kyoto University)

Co-author: Prof. LARSON, Ronald (Department of Chemical Engineering, University of Michigan)

Presenter: Dr SATO, Takeshi (Institute for Chemical Research, Kyoto University)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 26

Type: **Oral Presentation**

FLOW OF A WORMLIKE MICELLAR SOLUTION OVER A LONG CAVITY

Thursday 18 May 2023 10:50 (20 minutes)

Authors: Prof. SHEN, Amy Q. (Okinawa Institute of Science and Technology Graduate University); Mr HILLEBRAND, Fabian (Okinawa Institute of Science and Technology Graduate University); Dr HAWARD, Simon J. (Okinawa Institute of Science and Technology Graduate University); Dr VARCHANIS, Stylianos (Okinawa Institute of Science and Technology Graduate University)

Presenter: Mr HILLEBRAND, Fabian (Okinawa Institute of Science and Technology Graduate University)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 28

Type: **Oral Presentation**

Poroelastic Modelling Reveals The Cooperation Between Two Mechanisms For Albuminuria

Tuesday 16 May 2023 10:30 (20 minutes)

Authors: XU, Zelai (University of British Columbia); Prof. YUE, Pengtao (Virginia Tech); Prof. FENG, James (University of British Columbia)

Presenter: XU, Zelai (University of British Columbia)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 29

Type: **Oral Presentation**

Hystereses In One-dimensional Compression Of A Poroelastic Hydrogel

Thursday 18 May 2023 11:10 (20 minutes)

Authors: XU, Zelai (University of British Columbia); YUE, Pengtao (Virginia Tech); FENG, James (University of British Columbia)

Presenter: XU, Zelai (University of British Columbia)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 30

Type: **Oral Presentation**

KEYNOTE: COMPUTATIONAL ROD CLIMBING AND DIPPING DEPENDENT UPON NORMAL STRESSES

Wednesday 17 May 2023 14:00 (40 minutes)

Author: KWON, Youngdon

Presenter: KWON, Youngdon

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 31

Type: **Oral Presentation**

Hydrodynamics and rheology of fluctuating, semiflexible, inextensible, and slender filaments in Stokes flow

Tuesday 16 May 2023 10:50 (20 minutes)

Authors: Prof. DONEV, Aleksandar (Courant Institute, New York University); Dr MAXIAN, Ondrej (Courant Institute, New York University); Prof. SPRINKLE, Brennan (Colorado School of Mines)

Presenter: Prof. DONEV, Aleksandar (Courant Institute, New York University)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 32

Type: **Oral Presentation**

WHY IS THE PYANE EFFECT MISSING HIGHER HARMONICS?

Tuesday 16 May 2023 17:10 (20 minutes)

Author: Prof. WANG, Xiaorong (Tongji University)

Presenter: Prof. WANG, Xiaorong (Tongji University)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 33

Type: **Oral Presentation**

Quantifying the Enhancement Effect of Strain Induced Crystallization on Tearing Energy by Edge Crack Test Method

Wednesday 17 May 2023 14:20 (20 minutes)

Author: TSUNODA, Katsuhiko

Co-author: Prof. URAYAMA, Kenji (Kyoto University)

Presenter: TSUNODA, Katsuhiko

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 34

Type: **Oral Presentation**

Z-SHAPED DEJAMMING PHASE DIAGRAM OF COLLOIDAL GELS

Wednesday 17 May 2023 17:30 (20 minutes)

Authors: Mr XIA, Bin (Tongji University); Mr LI, Shoubo; Prof. WANG, Xiaorong (Tongji University)

Presenter: Mr XIA, Bin (Tongji University)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 36

Type: **Oral Presentation**

REVEALING THE CORRELATION BETWEEN STRAIN-INDUCED CRYSTALLIZATION AND LOCAL STRAIN FIELD AROUND THE CRACK-TIP OF NATURAL RUBBER

Wednesday 17 May 2023 14:40 (20 minutes)

Authors: Dr MAI, Thanh-Tam (Kyoto University, Kyoto, Japan); YASUI, Tomohiro (Kyoto Institute of Technology, Kyoto, Japan); TANAKA, Ruito (Kyoto Institute of Technology, Kyoto, Japan); MA-SUNAGA, Hiroyasu (Spring-8, Hyogo, Japan); KABE, Taizo (Spring-8, Hyogo, Japan); TSUNODA, Katsuhiko (Bridgestone Corporation, Tokyo, Japan); SAKURAI, Shinichi (Kyoto Institute of Technology, Kyoto, Japan); URAYAMA, Kenji (Kyoto University, Kyoto, Japan)

Presenter: Dr MAI, Thanh-Tam (Kyoto University, Kyoto, Japan)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 37

Type: **Oral Presentation**

COUPLING A IONIC SURFACTANT AND A DRUG SALT: EQUILIBRIUM CHARACTERISTIC PARAMETERS & STRAIN HARDENING IN START-UP FLOW

Thursday 18 May 2023 11:50 (20 minutes)

Author: Prof. GRIZZUTI, Nino (Università degli Studi di Napoli Federico II)

Co-authors: Prof. PASQUINO, Rossana (Università degli Studi di Napoli Federico II); Ms CUSANO, Ilaria (Università degli Studi di Napoli Federico II); Prof. DANINO, Dganit (Russell Berrie Nanotechnology Institute, Technion)

Presenter: Prof. GRIZZUTI, Nino (Università degli Studi di Napoli Federico II)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 38

Type: **Oral Presentation**

Flow-induced structural change of cathode slurry during storage and its mechanism

Wednesday 17 May 2023 14:40 (20 minutes)

Authors: Mr PARK, Jeong Hoon (School of Chemical and Biological Engineering, Institute of Chemical Processes, Seoul National University, Seoul 08826, Korea); Prof. AHN, Kyung Hyun (School of Chemical and Biological Engineering, Institute of Chemical Processes, Seoul National University, Seoul 08826, Korea)

Presenter: Mr PARK, Jeong Hoon (School of Chemical and Biological Engineering, Institute of Chemical Processes, Seoul National University, Seoul 08826, Korea)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 39

Type: **Oral Presentation**

DIVERCITY IN STRAIN-INDUCED CRYSTALLIZATION OF NATURAL RUBBER BY BIAXIAL ELONGATION

Wednesday 17 May 2023 15:20 (20 minutes)

Author: SAKURAI, Shinichi

Co-authors: TAKAGI, Hideaki; TSUNODA, Katsuhiko; Prof. URAYAMA, Kenji; SHIMIZU, NOBU-TAKA; IGARASHI, Noriyuki; Mr TANAKA, Ruito; Mr YASUI, Tomohiro; KITAMURA, Yuji

Presenter: SAKURAI, Shinichi

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 40

Type: **Oral Presentation**

KEYNOTE: Bioprinting of collagen hydrogels in supported gel environment

Tuesday 16 May 2023 14:00 (40 minutes)

Author: Prof. BOLUK, Yaman (University of Alberta)

Co-authors: Prof. ADESIDA, Adetola (University of Alberta); Dr LAN, Xiaoyi (University of Alberta)

Presenter: Prof. BOLUK, Yaman (University of Alberta)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 43

Type: **Oral Presentation**

KEYNOTE: RESPONSE OF BLOCK COPOLYMER ELECTROLYTES TO IONIC CURRENT

Wednesday 17 May 2023 10:30 (40 minutes)

Author: BALSARA, Nitash P. (UC Berkeley)

Presenter: BALSARA, Nitash P. (UC Berkeley)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 44

Type: **Oral Presentation**

TRIBOLOGY AND RHEOLOGY OF HYALURONIC ACID BASED CELLULOSE NANOCRYSTAL SUSPENSIONS

Tuesday 16 May 2023 11:10 (20 minutes)

Author: BOSE, Akshai

Co-authors: Dr ZAKANI, Behzad; Prof. GRECOV, Dana

Presenter: BOSE, Akshai

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 45

Type: **Oral Presentation**

Cluster formations of terminal groups of polyisoprenes in natural rubbers: Molecular dynamics simulation study

Wednesday 17 May 2023 15:00 (20 minutes)

Authors: Dr DIXIT, Mayank (Kyoto University); Dr TAKASHI, Taniguchi (Department of Chemical Engineering, Graduate school of engineering, Kyoto University)

Presenter: Dr TAKASHI, Taniguchi (Department of Chemical Engineering, Graduate school of engineering, Kyoto University)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 46

Type: **Oral Presentation**

The effect of surface viscosity on droplet breakup and relaxation under extensional flow

Thursday 18 May 2023 14:40 (20 minutes)

Authors: Prof. NARSIMHAN, Vivek (Davidson School of Chemical Engineering Purdue University); Ms SINGH, Natasha (Davidson School of Chemical Engineering Purdue University)

Presenter: Prof. NARSIMHAN, Vivek (Davidson School of Chemical Engineering Purdue University)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: 47

Type: **Oral Presentation**

Nano Rheology of Glassy Materials using Dielectric Molecular Probe

Wednesday 17 May 2023 11:30 (20 minutes)

Author: INOUE, Tadashi (Osaka University)

Co-authors: Prof. URAKAWA, Osamu (Osaka University); Prof. NOBUKAWA, Shogo (Nagoya Institute for Technology)

Presenter: INOUE, Tadashi (Osaka University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 48

Type: **Oral Presentation**

Simulation of Competition between Reaction and Relaxation in Gelation Kinetics

Wednesday 17 May 2023 14:00 (20 minutes)

Author: UNEYAMA, Takashi (Nagoya University)

Presenter: UNEYAMA, Takashi (Nagoya University)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 49

Type: **Oral Presentation**

DIFFUSION OF LIPID NANOPARTICLES THROUGH AIRWAY MUCUS

Tuesday 16 May 2023 16:30 (20 minutes)

Authors: ROKHFOROUZ, Mohammad Reza (UBC Chemical and Biological Engineering); TAFECH, Belal; LEUNG, Jerry; CULLIS, Pieter; SIN, Don D; HEDTRICH, Sarah; FENG, James (University of British Columbia)

Presenter: ROKHFOROUZ, Mohammad Reza (UBC Chemical and Biological Engineering)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 50

Type: **Oral Presentation**

COMPARISON OF VISCOELASTIC AND DIELECTRIC PROPERTIES OF TYPE-A CHAIN: EXPERIMENTAL ATTEMPT FOR DEEPER UNDERSTANDING OF POLYMER RHEOLOGY

*Wednesday 17 May 2023 09:00 (1 hour)***Abstract:**

Viscoelastic and dielectric properties of type-A chains differently average the same chain dynamics, so that comparison of those properties resolves some details of this dynamics in a purely experimental way. Some examples of this comparison are presented in the talk.

Bio:

Hiroshi Watanabe started his academic career as Assistant Professor in 1983 in Osaka University, Japan. He moved to Institute for Chemical Research, Kyoto University, Japan, as Associate Professor in 1994, and was promoted to Professor in 2003. In 2022, he retired from Kyoto University but is still active as Emeritus Professor of Kyoto University and Visiting Professor of Changchun Institute of Applied Chemistry, Chinese Academy of Sciences. His research interest has been placed on dynamics and rheology of various softmatters that include polymers, suspensions, and emulsions. He combined several experimental methods, for example, rheological, dielectric, and small angle scattering methods, to reveal physical factors underlying the dynamic behavior of softmatters, for example, the entanglement loosening process of polymers wherein the length and time scales can be consistently coarse-grained. Professor Watanabe has received many awards for his outstanding contributions to the science of Rheology including the Bingham medal of the Society of Rheology in 2015.

Author: WATANABE, Hiroshi**Presenter:** WATANABE, Hiroshi**Session Classification:** Plenary Presentations**Track Classification:** Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 51

Type: **Oral Presentation**

GAS PROPAGATION THROUGH POROUS MEDIA FILLED WITH YIELD-STRESS FLUID

Thursday 18 May 2023 14:00 (20 minutes)

Author: POURZAHEDI, Ali

Co-author: FRIGAARD, Ian (University of British Columbia)

Presenter: POURZAHEDI, Ali

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 52

Type: **Oral Presentation**

RHEOLOGICAL CHARACTERIZATION OF SUSPENSIONS GENERATED FROM COPPER ORES OF VARYING MINERALOGICAL FEATURES AT GRINDING CONDITIONS

Friday 19 May 2023 10:30 (20 minutes)

Authors: GUTIERREZ, Leopoldo (Universidad de Concepción, Department of Metallurgical Engineering); Dr GUTIERREZ, Leopoldo (Universidad de Concepción, Department of Metallurgical Engineering)

Co-authors: Dr RAMIREZ, Andrés (Universidad de Concepción, Department of Metallurgical Engineering); Dr ECHEVERRY, Luver (Universidad de Concepción, Department of Metallurgical Engineering)

Presenters: GUTIERREZ, Leopoldo (Universidad de Concepción, Department of Metallurgical Engineering); Dr GUTIERREZ, Leopoldo (Universidad de Concepción, Department of Metallurgical Engineering)

Session Classification: Rheology in the Mining Industry

Track Classification: General Symposia: Rheology in the Mining Industry

Contribution ID: 53

Type: **Oral Presentation**

DENSITAXIS OF SWIMMING MICROORGANISMS

Tuesday 16 May 2023 16:50 (20 minutes)

Author: SHAIK, Vaseem (University of British Columbia)

Co-author: ELFRING, Gwynn (University of British Columbia)

Presenter: SHAIK, Vaseem (University of British Columbia)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 54

Type: **Oral Presentation**

Star-polymer-DNA gels showing predictable stress relaxation behavior

Thursday 18 May 2023 14:20 (20 minutes)

Author: LI, Xiang (Hokkaido University)

Co-authors: Mr OHIRA, Masashi (The University of Tokyo); Prof. SHIBAYAMA, Mitsuhiro (CROSS); Prof. SAKAI, Takamasa (The University of Tokyo)

Presenter: LI, Xiang (Hokkaido University)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 55

Type: **Oral Presentation**

KEYNOTE: Normal stresses at the yielding point

Tuesday 16 May 2023 16:10 (40 minutes)

Authors: Ms ROCHINHA, Tatiana (PUC-Rio); Dr VARGES, Priscilla (PUC-Rio); Prof. DE SOUZA MENDES, Paulo (PUC-Rio)

Presenter: Prof. DE SOUZA MENDES, Paulo (PUC-Rio)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 56

Type: **Oral Presentation**

KEYNOTE: The Role of Rolling Resistance in the Rheology of Wizarding Quidditch Ball Suspensions

Tuesday 16 May 2023 14:00 (40 minutes)

Authors: Prof. KOCH, Donald (Cornell University); Dr D'AMBROSIO, Enzo (Cornell University); HORMOZI, Sarah (Cornell University)

Presenter: HORMOZI, Sarah (Cornell University)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 57

Type: **Plenary Talk**

Coating process for battery electrode

*Wednesday 17 May 2023 12:50 (1 hour)***Abstract:**

For next-generation electronics systems and devices, such as flexible displays and energy harvesting (or storage) devices, high performance, versatility, and flexibility are frequently necessary. A film, which is often a polymer or soft substrate with numerous layers of electrically conductive, semiconducting, and insulating materials superimposed on it, is a key component of these devices. These layers can be created using a variety of coating techniques. The continuous liquid coating technique, a kind of roll-to-roll process, is one of them and is widely acknowledged as an appealing way to generate affordable, high-throughput, and large-area coated layers. The coating liquid may exhibit complex rheological characteristics if it contains a variety of particles, additives (such a binder), and solvents. The main challenges in this process are how to regulate flows inside large manufacturing equipment to regulate microscopic properties, such as thickness homogeneity, particle microstructures inside coated layers, etc. Such problems require an understanding of the physical or chemical phenomena underlying them from a fundamental engineering perspective. Such knowledge might be beneficial for the process' analysis and design. For instance, while analyzing complex film formation flow in various types of applicators, such as slot die, roll, and spray, the rheological characteristics of a coating liquid must be taken into consideration. To help with the design of the drying machine, a microstructures index or indication must also be created. In this talk, various research initiatives to address these coating difficulties, including flows inside pipe systems and coating machines, will be shown. Some elements of these coating issues will also be highlighted.

Bio: Jaewook Nam is an Associate Professor in the Department of Chemical and Biological Engineering at the Institute of Chemical Processes, Seoul National University in Korea. Dr. Nam performs creative research to understand microscale flow phenomena through experiment, theory, and computation to design a high-performance film production. He received his BSc in 2000, MSc in 2004; and his PhD from the University of Minnesota in 2009. He completed his postdoctoral research in the Department of Chemical and Biomolecular Engineering at Rice University.

Author: NAM, Jaewook (Seoul National University)

Presenter: NAM, Jaewook (Seoul National University)

Session Classification: Plenary Presentations

Track Classification: Plenaries: Plenary Talk

Contribution ID: 58

Type: **Oral Presentation**

Phantom chain simulations for tetra and tri-branched networks

Wednesday 17 May 2023 16:50 (20 minutes)

Authors: Prof. MASUBUCHI, Yuichi (Nagoya University); DOI, Yuya (Nagoya University); Dr ISHIDA, Takato (Nagoya University); SAKUMICHI, Naoyuki; SAKAI, Takamasa (The University of Tokyo); Prof. KOICHI, Mayumi (The University of Tokyo); UNEYAMA, Takashi (Nagoya University)

Presenter: Prof. MASUBUCHI, Yuichi (Nagoya University)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 59

Type: **Oral Presentation**

Linear Viscoelastic Properties of Comb-Shaped Ring Polystyrenes

Friday 19 May 2023 11:10 (20 minutes)

Author: DOI, Yuya (Nagoya University)

Presenter: DOI, Yuya (Nagoya University)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: **60**

Type: **Oral Presentation**

UNIVERSALITY OF POLYMER MELTS

Wednesday 17 May 2023 15:20 (20 minutes)

Author: Prof. LIU, Chen-Yang (Institute of Chemistry, the Chinese Academy of Sciences)

Presenter: CHEN, quan (Changchun institute of applied chemistry chinese academy of science)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 61

Type: **Oral Presentation**

Experimental Validation of Viscosity Homogenization Treatment System for Waste Plastic Recycling

Friday 19 May 2023 10:50 (20 minutes)

Author: Mr ENDO, Hiroki (Dept. of Mechanical Engineering, Nagaoka University of Technology)

Co-authors: Dr TAKEHARU, Isaki (Polymers and Composite Materials Lab., R&D Center, Mitsui Chemicals, Inc.); Mr YAMAMOTO, Takeru (Dept. of Mechanical Engineering, Nagaoka University of Technology); Prof. TAKAHASHI, Tsutomu (Dept. of Mechanical Engineering, Nagaoka University of Technology); Dr SATO, Yasunori (Dept. of Mechanical Engineering, Nagaoka University of Technology)

Presenter: Mr ENDO, Hiroki (Dept. of Mechanical Engineering, Nagaoka University of Technology)

Session Classification: Industrial Rheology in Polymer Processing

Track Classification: General Symposia: Industrial Rheology in Polymer Processing

Contribution ID: 62

Type: **Oral Presentation**

Alignment of wormlike micelles under shear flow: Comparison with polymers

Wednesday 17 May 2023 14:40 (20 minutes)

Author: KOIDE, Yusuke (Osaka University)

Co-author: Prof. GOTO, Susumu (Osaka University)

Presenter: KOIDE, Yusuke (Osaka University)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 63

Type: **Oral Presentation**

Negative energy elasticity in polymer gel elasticity

Wednesday 17 May 2023 17:10 (20 minutes)

Author: SAKAI, Takamasa (The University of Tokyo)

Co-author: Dr SAKUMICHI, Naoyuki (The University of Tokyo)

Presenter: SAKAI, Takamasa (The University of Tokyo)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 64

Type: **Oral Presentation**

Rheological effects on purely-elastic flow asymmetries in the cross-slot geometry

Thursday 18 May 2023 10:30 (20 minutes)

Author: YOKOKOJI, Arisa (Okinawa Institute of Science and Technology, Okinawa, Japan)

Co-authors: Dr VARCHANIS, Stylianos (Okinawa Institute of Science and Technology, Okinawa, Japan); Prof. SHEN, Amy (Okinawa Institute of Science and Technology, Okinawa, Japan); Dr HAWARD, Simon (Okinawa Institute of Science and Technology, Okinawa, Japan)

Presenter: YOKOKOJI, Arisa (Okinawa Institute of Science and Technology, Okinawa, Japan)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 65

Type: **Oral Presentation**

RHEOLOGICAL AND CONDUCTIVE PROPERTIES OF INJECTION- AND COMPRESSION-MOLDED CARBON NANOTUBE POLYMER COMPOSITES

Tuesday 16 May 2023 11:10 (20 minutes)

Authors: OSELI, Alen; TOMKOVIĆ, Tanja; HATZIKIRIAKOS, Savvas; SLEMENIK PERŠE, Lidija

Presenter: SLEMENIK PERŠE, Lidija

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 66

Type: **Oral Presentation**

EFFECTS OF CHANNEL LENGTH IN EXPANSION PARTS ON FLOW REGIMES OF POLYMER SOLUTION IN CONSECUTIVE ABRUPT CONTRACTION-EXPANSION CHANNELS

Thursday 18 May 2023 11:10 (20 minutes)

Author: Prof. HIDEIMA, Ruri (Kobe University)

Co-authors: Mr NAKAMURA, Yuta (Kobe University); Prof. LEQUEUX, Francois (ESPCI Paris); Prof. SUZUKI, Hiroshi (Kobe University)

Presenter: Prof. HIDEIMA, Ruri (Kobe University)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 67

Type: **Oral Presentation**

KEYNOTE: Effect of local relaxation time on drag reduction in turbulent boundary layer flow of viscoelastic fluids

Friday 19 May 2023 10:30 (40 minutes)

Author: Prof. TAMANO, Shinji (Nagoya Institute of Technology)

Co-authors: Mr OSAWA, Hiromi (Nagoya Institute of Technology); Dr MUTO, Masakazu (Nagoya Institute of Technology)

Presenter: Prof. TAMANO, Shinji (Nagoya Institute of Technology)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 68

Type: **Oral Presentation**

JNNFM Walters Award Lecture: Viscoplastic Fingers and Fractures in a Hele-Shaw Cell

Thursday 18 May 2023 09:00 (1 hour)

Abstract:

Radial displacement flows of viscoplastic fluid in a Hele-Shaw cell can give rise to a range of instabilities. Theoretically, the viscoplastic version of the Saffman-Taylor interfacial instability [1] is predicted to occur when the yield-stress fluid is displaced by a Newtonian one. The interface is expected to remain stable, however, if the yield-stress fluid displaces the Newtonian one [2,3]. Experiments using an aqueous suspension of Carbopol show that the Saffman-Taylor instability is observed when the Carbopol is displaced by either air or an immiscible oil, and no instabilities are observed when the displacement is the other way around. However, when water is used in the displacement experiments, other instabilities appear that take the form of localized fractures of the Carbopol over the sections of the interface that are under tension. The fractures arise in both the stable and unstable Saffman-Taylor configurations, leading to a rich range of patterns within the Hele-Shaw cell.

Supported by these experimental observations, we argue that this pattern formation results from the solid-mechanical-like failure of the Carbopol gel. In particular, the fractures result from a reduction of the effective fracture toughness of the suspension when placed in contact with water, also observed in the spreading of Carbopol gravity currents into a shallow layer of water [5].

REFERENCES

1. Saffman P.G., Taylor G.I. The penetration of a fluid into a porous medium or Hele-Shaw cell containing a more viscous liquid, *Proc. Roy. Soc. A*, 245, (1242) 312-329, 1958.
2. Ball T.V., Balmforth N.J., Dufresne A.P. Viscoplastic fingers and fractures in a Hele-Shaw cell, *J. Non-Newton. Fluid Mech.*, 289, 104492, 2021.
3. Coussot P. Saffman-Taylor instability in yield-stress fluids, *J. Fluid Mech.*, 380, 363-376, 1999.
4. Sayag R., Worster M.G. Instability of radially spreading extensional flows. Part 2: Theoretical analysis, *J. Fluid Mech.*, 881, 739-771, 2019.
5. Ball T.V., Balmforth N.J., Dufresne A.P., Morris S.W. Fracture patterns in viscoplastic gravity currents, *J. Fluid Mech.*, 934, A31, 2022.

About the JNNFM Walters Award Prize.

Bio:

Thomasina Ball is a Warwick Zeeman Lecturer and Leverhulme Early Career Fellow in the Mathematics Institute. Dr. Ball uses theoretical and experimental techniques to understand non-Newtonian fluid dynamics and fluid-structure interactions with applications to geophysical phenomena. She received her MMath in 2015, and PhD from the University of Cambridge, U.K., in 2019. She completed her postdoctoral studies in Department of Mathematics at the University of British Columbia under the supervision of Prof. Neil Balmforth who is jointly awarded the JNNFM Walters Award Prize.

Authors: BALL, Thomasina (University of Warwick); BALMFORTH, Neil (University of British Columbia)

Presenter: BALL, Thomasina (University of Warwick)

Session Classification: Plenary Presentations

Track Classification: Plenaries: Plenary Talk

Contribution ID: 69

Type: **Oral Presentation**

UNIVERSAL DIFFUSION OF DENDRIMERS IN SEMIDILUTE SOLUTIONS OF LINEAR POLYMERS

Thursday 18 May 2023 14:20 (20 minutes)

Authors: Ms MARIYA, Silpa (IITB-Monash Research Academy, Powai, Mumbai); Dr BARR, Jeremy (School of Biological Sciences, Monash University); Prof. SUNTHAR, P (Department of Chemical Engineering, Indian Institute of Technology, Mumbai); JAGADEESHAN, Ravi (Department of Chemical and Biological Engineering, Monash University)

Presenter: JAGADEESHAN, Ravi (Department of Chemical and Biological Engineering, Monash University)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: 70

Type: **Oral Presentation**

TENDON FASCICLE-INSPIRED COLLAGEN MULTIFILAMENT BUNDLE PRODUCED BY MULTI-PIN CONTACT DRAWING OF AN AQUEOUS COLLAGEN-POLYETHYLENE OXIDE SOLUTION

Tuesday 16 May 2023 15:00 (20 minutes)

Authors: Dr YAGHOUBI, Hessameddin (Department of Physics & Atmospheric Science, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada and School of Biomedical Engineering, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada); Prof. FRAMPTON, John (School of Biomedical Engineering, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada and Department of Biochemistry & Molecular Biology, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada); Prof. KREPLAK, Laurent (Department of Physics & Atmospheric Science, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada and School of Biomedical Engineering, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada)

Presenter: Dr YAGHOUBI, Hessameddin (Department of Physics & Atmospheric Science, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada and School of Biomedical Engineering, Dalhousie University, Halifax, Nova Scotia, B3H 4R2, Canada)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 71

Type: **Oral Presentation**

STUDY OF THE STABILITY OF ELECTRICAL AND RHEOLOGICAL PROPERTIES OF ELECTRICALLY CONDUCTIVE COMPOSITES WITH CO-CONTINUOUS MORPHOLOGY

Tuesday 16 May 2023 10:30 (20 minutes)

Author: Ms STRUGOVA, Daria (École de technologie supérieure, Montréal, Québec H3C 1K3, Canada)

Co-authors: Prof. DAVID, Eric (École de technologie supérieure, Montréal, Québec H3C 1K3, Canada); Prof. DEMARQUETTE, Nicole (École de technologie supérieure, Montréal, Québec H3C 1K3, Canada)

Presenter: Ms STRUGOVA, Daria (École de technologie supérieure, Montréal, Québec H3C 1K3, Canada)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 72

Type: **Oral Presentation**

Hydrodynamic interactions of active matter near boundaries

Tuesday 16 May 2023 17:10 (20 minutes)

Author: ABTAHI, Seyed Arman

Co-author: ELFRING, Gwynn (University of British Columbia)

Presenter: ABTAHI, Seyed Arman

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 73

Type: **Oral Presentation**

Molecular Dynamics Simulations for Viscosity Growth and Conformations of Unentangled Polymers under Shear Flow

Wednesday 17 May 2023 17:10 (20 minutes)

Author: UNEYAMA, Takashi (Nagoya University)

Co-authors: Prof. SEARLES, Debra (The University of Queensland); Dr WANG, Mingchao (The University of Queensland); Dr SANDERSON, Stephen (The University of Queensland)

Presenter: UNEYAMA, Takashi (Nagoya University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 74

Type: **Oral Presentation**

KEYNOTE: Psychorheology: toward understanding how we experience viscous and viscoelastic materials

Wednesday 17 May 2023 16:10 (40 minutes)

Authors: Dr MARTIN, Jeffrey (Johnson & Johnson Consumer Inc.); Dr JOGAN, Matjaz (Ethicon Endo-Surgery); Dr ROGERS, Simon (University of Illinois at Urbana-Champaign)

Co-author: BURGESSON, Eric (University of Illinois at Urbana-Champaign)

Presenter: Dr MARTIN, Jeffrey (Johnson & Johnson Consumer Inc.)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 75

Type: **Plenary Talk**

What we learn about yielding from recovery rheology

*Tuesday 16 May 2023 09:00 (1 hour)***Abstract:**

Yield stress fluids are often thought about in a piecewise manner as behaving like elastic solids below the yield stress and like generalized Newtonian liquids above it. Accurate determination of the yield stress is therefore crucial to understanding and predicting the behaviour of yield stress fluids such as inks for 3D printing, foods and cosmetics, muds and soils, and many industrially and biologically relevant materials. Despite the centrality of the yield stress concept, there exist multiple methods by which researchers determine 'the' yield stress, and they can provide values that are orders of magnitude apart. Such discrepancies have even led to some asking the question of whether the yield stress exists at all.

In this work we study a series of yield stress fluids using recovery rheology concepts, where strain is decomposed into recoverable and unrecoverable components, and present evidence that yielding takes place gradually over a wider range of stresses than previously thought. It is shown that the overshoot in the loss modulus that has often been used as a measure of yielding is due to the acquisition of unrecoverable strain. It's shown how these measurements led to the development of a model that describes spatially heterogeneous yielding in a mean-field manner and how accurately this model predicts the rheology of simple yield stress fluids.

In more complex materials, responses are observed with two overshoots in the loss modulus, a phenomenon often referred to as "double yielding". It is shown that these dual features are really a combination of two distinct processes, only one of which is yielding. New protocols inspired by recovery concepts are also used to show that small amounts of flow occur below the yield stress determined by a Herschel-Bulkley fit to steady-shear flow measurements in a predictable manner as a function of stress amplitude, angular frequency, and applied stress phase angle. Relations are presented that show how these measures can be used to determine the contribution to the loss modulus from unrecoverable plastic deformations, providing some of the same information as the full iteratively performed recovery tests, but in a fraction of the time.

Recovery rheology therefore adds nuance to our understanding of yield stress fluids by highlighting the continuous nature of yielding and providing a general set of methods by which reliable and consistent yielding information can be rapidly obtained.

Bio: Simon A. Rogers is an Associate Professor in the Department of Chemical and Biomolecular Engineering, University of Illinois at Urbana-Champaign, USA. Dr. Rogers uses experimental and computational tools to understand and model advanced colloidal, polymeric, and self-assembled materials. He received his BSc in 2001, BSc (Hons) in 2002; and his PhD from Victoria University of Wellington in New Zealand in 2011. He completed his postdoctoral research at the Foundation for Research and Technology in Crete, the Jülich Research Center in Germany, and the Center for Neutron Research at the University of Delaware.

Author: ROGERS, Simon (University of Illinois at Urbana-Champaign)

Presenter: ROGERS, Simon (University of Illinois at Urbana-Champaign)

Session Classification: Plenary Presentations

Track Classification: Plenaries: Plenary Talk

Contribution ID: 76

Type: **Oral Presentation**

DRIFT FLUX MODELING OF GAS RELEASE IN OIL SAND TAILING PONDS

Wednesday 17 May 2023 10:30 (20 minutes)

Authors: FRIGAARD, Ian (University of British Columbia); Dr DANESHI, Masoud (University of British Columbia); HAJIEGHRARY, Omid (University of British Columbia)

Presenter: HAJIEGHRARY, Omid (University of British Columbia)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 77

Type: **Oral Presentation**

Damping of surface waves by a floating viscoplastic plate

Thursday 18 May 2023 15:00 (20 minutes)

Authors: WANG, Xuemeng (University of British Columbia); Prof. BALMFORTH, Neil (University of British Columbia)

Presenter: WANG, Xuemeng (University of British Columbia)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 78

Type: **Oral Presentation**

Simulation study of unentangled polymers under fast flow

Wednesday 17 May 2023 16:50 (20 minutes)

Author: TAKIMOTO, Jun-ichi

Co-author: Prof. SUKUMARAN, Sathish (Yamagata University)

Presenter: TAKIMOTO, Jun-ichi

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 79

Type: **Oral Presentation**

Relating elastoinertial turbulence to the phenomenology of polymer drag reduction

Friday 19 May 2023 11:30 (20 minutes)

Authors: Dr ZHU, Lu (McMaster University); XI, Li (McMaster University)

Presenter: XI, Li (McMaster University)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 80

Type: **Oral Presentation**

EFFECT OF INORGANIC FILLER ON RHEOLOGICAL PROPERTIES AND MORPHOLOGY OF POLYLACTIC ACID(PLA)/LOW-DENSITY POLYETHYLENE(LDPE) BLENDS

Tuesday 16 May 2023 17:30 (20 minutes)

Author: KIM, Min Chan (Pusan National University (Republic of Korea))

Co-author: Prof. HYUN, Kyu (Pusan National University (Republic of Korea))

Presenter: KIM, Min Chan (Pusan National University (Republic of Korea))

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 81

Type: **Oral Presentation**

KEYNOTE: Relationships between viscoelastic relaxation and network connectivity in transient networks with well-controlled network structures

Wednesday 17 May 2023 16:10 (40 minutes)

Author: KATASHIMA, Takuya (The University of Tokyo)

Co-authors: Dr NAITO, Mitsuru (The University of Tokyo); Prof. NAGATOISHI, Satoru (The University of Tokyo); Prof. MIYATA, Kanjiro (The University of Tokyo); Prof. TSUMOTO, Kouhei (The University of Tokyo); Prof. CHUNG, Ung-il (The University of Tokyo); Prof. SAKAI, Takamasa (The University of Tokyo)

Presenter: KATASHIMA, Takuya (The University of Tokyo)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 82

Type: **Oral Presentation**

The Effect of the Solvent Dielectric Constant on the Conformation and Dynamics of Polyelectrolytes in Solution

Thursday 18 May 2023 14:40 (20 minutes)

Author: MATSUMOTO, Atsushi (University of Fukui)

Co-authors: Mr OSADA, Hiroto (University of Fukui); Mr UKAI, Ryosuke (University of Fukui); Prof. SUGIHARA, Shinji (University of Fukui); Prof. MAEDA, Yasushi (University of Fukui)

Presenter: MATSUMOTO, Atsushi (University of Fukui)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: 83

Type: **Oral Presentation**

ANALYSIS OF OPERATING LIMITS OF VACUUM-ASSISTED SLOT DIE COATING OF HERSCHEL-BULKLEY FLUIDS

Friday 19 May 2023 11:30 (20 minutes)

Authors: LEE, Myungjae; Mr SHIN, Kyoung-hun

Co-author: NAM, Jaewook (Seoul National University)

Presenter: LEE, Myungjae

Session Classification: Industrial Rheology in Polymer Processing

Track Classification: General Symposia: Industrial Rheology in Polymer Processing

Contribution ID: 84

Type: **Oral Presentation**

Modelling drop mobility on lubricated surfaces using a ternary free energy lattice Boltzmann algorithm

Wednesday 17 May 2023 16:50 (20 minutes)

Author: Dr OROZCO-FUENTES, Sirio (Northumbria University)

Co-author: Dr SEMPREBON, Ciro (Northumbria University)

Presenter: Dr OROZCO-FUENTES, Sirio (Northumbria University)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 85

Type: **Poster Presentation**

IMPACT OF EXTENT OF DIGESTION ON THE SHEAR RHEOLOGICAL BEHAVIOUR OF ANAEROBIC DIGESTED SLUDGE

Tuesday 16 May 2023 21:40 (20 minutes)

Author: Mr DAS, Tanmoy (RMIT University, Australia)

Co-authors: Dr USHER, Shane (The University of Melbourne); Prof. BATSTONE, Damien (The University of Queensland); Dr STICKLAND, Anthony (The University of Melbourne); Prof. ESHTIAGHI, Nicky (RMIT University, Australia)

Presenter: Prof. ESHTIAGHI, Nicky (RMIT University, Australia)

Session Classification: Poster Session

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 86

Type: **Oral Presentation**

KEYNOTE: Role of network compressibility on the complex conductivity of structured polyelectrolyte hydrogels

Wednesday 17 May 2023 10:30 (40 minutes)

Author: HILL, Reghan (McGill University)

Presenter: HILL, Reghan (McGill University)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 87

Type: **Oral Presentation**

Universal Equation of State of Osmotic Pressure for Polymer Gels

Wednesday 17 May 2023 17:30 (20 minutes)

Author: Mr YASUDA, Takashi (The University of Tokyo, Japan)

Co-authors: Dr SAKUMICHI, Naoyuki (The University of Tokyo, Japan); Prof. SAKAI, Takamasa (The University of Tokyo, Japan)

Presenter: Mr YASUDA, Takashi (The University of Tokyo, Japan)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 88

Type: **Oral Presentation**

SAXS, SANS and Spectroscopy Study on High Tunability of a Block Copolymer by Strongly Selective Solvents

Thursday 18 May 2023 15:00 (20 minutes)

Author: Prof. OKAMOTO, Shigeru (Nagoya Institute of Technology)

Co-author: Dr MATSUSHITA, Akifumi (Nagoya Institute of Technology)

Presenter: Prof. OKAMOTO, Shigeru (Nagoya Institute of Technology)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 90

Type: **Plenary Talk**

Substrate colonization by an emulsion drop prior to spreading

*Friday 19 May 2023 09:00 (1 hour)***Abstract:**

In classical wetting, the spreading of an emulsion drop on a surface is preceded by the formation of a bridge connecting the drop and the surface across the sandwiched film of the suspending medium. However, this widely accepted mechanism ignores the finite solubility of the drop phase in the medium. We present experimental evidence of a new wetting mechanism, whereby the drop dissolves in the medium, and nucleates on the surface as islands that grow with time. Island growth is predicated upon a reduction in solubility near the contact line due to attractive interactions between the drop and the surface, overcoming Ostwald ripening. Ultimately, wetting is manifested as a coalescence event between the parent drop and one of the islands, which can result in significantly large critical film heights and short hydrodynamic drainage times prior to wetting. This discovery has broad relevance in areas such as froth flotation, liquid-infused surfaces, multiphase flows and microfluidics.

Bio:

Arun Ramchandran is an Associate Professor in the Department of Chemical Engineering and Applied Chemistry at the University of Toronto. Dr. Ramchandran focuses on generating fundamental understanding in the area of suspensions of rigid and deformable particles through experiment, theory, and computation. He received his BSc in 2001 and his PhD from the University of Notre Dame in 2007. He completed his postdoctoral research in the Department of Chemical Engineering at the University of California, Santa Barbara.

Author: RAMACHANDRAN, Arun (University of Toronto)**Presenter:** RAMACHANDRAN, Arun (University of Toronto)**Session Classification:** Plenary Presentations**Track Classification:** Plenaries: Plenary Talk

Contribution ID: 91

Type: **Oral Presentation**

RHEOLOGY OF BIOCOMPOSITES

Tuesday 16 May 2023 16:10 (20 minutes)

Authors: Ms CAMPOS DE BOMFIM, Anne Shayenne (UENSP); RODRIGUE, Denis

Presenter: RODRIGUE, Denis

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 92

Type: **Oral Presentation**

DEFYING GRAVITY: THE FLUID MECHANICS OF OFF-BOTTOM PLUG PLACEMENT

Wednesday 17 May 2023 11:10 (20 minutes)

Author: KARIMFAZLI, Ida (Department of Mechanical, Industrial and Aerospace Engineering, Concordia University, 1515 St. Catherine W., Montreal, QC, H3G 2W1, Canada)

Co-author: GHAZAL, Abdallah

Presenter: KARIMFAZLI, Ida (Department of Mechanical, Industrial and Aerospace Engineering, Concordia University, 1515 St. Catherine W., Montreal, QC, H3G 2W1, Canada)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 97

Type: **Oral Presentation**

An algebraic thixotropic elasto-viscoplastic model for describing pre-yielding and post-yielding behaviour

Tuesday 16 May 2023 17:30 (20 minutes)

Author: KUMAR, Lalit (Indian institute of Technology Bombay)

Presenter: KUMAR, Lalit (Indian institute of Technology Bombay)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 98

Type: **Poster Presentation**

ADVANCES IN CONE-PLATE RHEOMETERS FOR BUSY LABS

Tuesday 16 May 2023 19:00 (3 hours)

Author: MOONAY, David

Presenter: MOONAY, David

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 99

Type: **Oral Presentation**

Reversal motion of E-coli bacteria in nematic liquid crystals

Tuesday 16 May 2023 16:10 (20 minutes)

Author: Dr GORAL, Martyna (Department of Mathematics, UBC, Vancouver, Canada and PMMH lab, ESPCI-PSL Paris, France)

Co-authors: LOPEZ-LEON, Teresa (CNRS and ESPCI-PSL Paris, France); Prof. CLEMENT, Eric (Universite Paris-Cite and ESPCI-PSL Paris, France); Prof. LINDNER, Anke (Universite Paris-Cite and ESPCI-PSL Paris, France)

Presenter: Dr GORAL, Martyna (Department of Mathematics, UBC, Vancouver, Canada and PMMH lab, ESPCI-PSL Paris, France)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 100

Type: **Oral Presentation**

Rheological Evaluation of Polyhydroxyalkanoates (PHAs) through Constitutive Equation Modelling

Tuesday 16 May 2023 15:00 (20 minutes)

Authors: TORABI, Hadis (Toronto Metropolitan University); Prof. ZARRIN, Hadis (Toronto Metropolitan University); BEHZADFAR, Ehsan (Toronto Metropolitan University)

Presenter: BEHZADFAR, Ehsan (Toronto Metropolitan University)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: **101**

Type: **Oral Presentation**

GLASS TRANSITION AND ENTANGLEMENT IN SEMIFLEXIBLE CONJUGATED POLYMER MELTS

Wednesday 17 May 2023 11:10 (20 minutes)

Authors: Dr FENTON, Abigail; Prof. PARISI, Daniele; Prof. GOMEZ, Enrique; COLBY, Ralph; Prof. XIE, Renxuan

Presenter: COLBY, Ralph

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: **102**

Type: **Oral Presentation**

WALL-SLIP EFFECTS ON FLOW RESTART IN A PLUGGED WAXY CRUDE OIL PIPELINE

Tuesday 16 May 2023 14:00 (20 minutes)

Author: Dr SANYAL, Aniruddha (National Institute of Technology Calicut)

Co-authors: Dr KUMAR, Lalit (Indian Institute of Technology Bombay); Mr SHINDE, Sachin (Indian Institute of Technology Bombay)

Presenter: Dr SANYAL, Aniruddha (National Institute of Technology Calicut)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: **103**

Type: **Oral Presentation**

PRACTICAL RHEOMETRY FOR SUSPENSIONS AND OTHER FUN COMPLEX SYSTEMS

Wednesday 17 May 2023 15:00 (20 minutes)

Author: MOONAY, David

Presenter: MOONAY, David

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **104**

Type: **Oral Presentation**

FLOW RESTART MECHANISM IN A MULTIPHASE GELLED PIPELINE

Tuesday 16 May 2023 14:20 (20 minutes)

Author: Dr TIKARIHA, Lomesh (IIT Bombay)

Co-authors: Dr SANYAL, Aniruddha (IIT Bombay); Prof. KUMAR, Lalit (IIT Bombay)

Presenter: Dr TIKARIHA, Lomesh (IIT Bombay)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: **105**

Type: **Oral Presentation**

VISCOELASTIC PROPERTIES OF BIDISPERSE LINEAR POLYMERS UNDER ELONGATIONAL FLOW

Wednesday 17 May 2023 14:00 (20 minutes)

Authors: Prof. EVELYNE, van Ruymbeke (Bio and Soft Matter, UClouvain); Mr ANDRÉ, Alexis (Bio and Soft Matter, UClouvain); Mrs HANNECART, Céline (Bio and Soft Matter, UClouvain)

Presenter: Prof. EVELYNE, van Ruymbeke (Bio and Soft Matter, UClouvain)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: **107**

Type: **Oral Presentation**

KEYNOTE: Shear thickening in dense suspensions of rigid rods

Wednesday 17 May 2023 14:00 (40 minutes)

Authors: PETEKIDIS, George (IESL-FORTH, Crete, Greece); Dr DAS, Mohan (IESL-FORTH, Crete, Greece)

Presenter: PETEKIDIS, George (IESL-FORTH, Crete, Greece)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **108**

Type: **Oral Presentation**

ULTRASOUND EFFECT ON DISPERSION AND DISTRIBUTION OF GRAPHITIC MATERIALS INSIDE DIFFERENT PDMS

Wednesday 17 May 2023 11:10 (20 minutes)

Author: FAVRE, Manon (École de Technologie Supérieure)

Co-authors: Dr HELAL, Emna (École de Technologie Supérieure); Dr KAYDANOVA, Tatiana (NanoXplore Inc); Dr GUTIERREZ, Giovanna (NanoXplore Inc); Dr MOGHIMIAN, Nima (NanoXplore Inc); DAVID, Eric (École de technologie supérieure, Montréal, Québec H3C 1K3, Canada); DEMARQUETTE, Nicole (École de technologie supérieure, Montréal, Québec H3C 1K3, Canada)

Presenter: DEMARQUETTE, Nicole (École de technologie supérieure, Montréal, Québec H3C 1K3, Canada)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: **109**

Type: **Oral Presentation**

Rheology of High Performance Cement-Based Materials For Use in Additive Manufacturing

Tuesday 16 May 2023 15:00 (20 minutes)

Authors: Prof. BULLARD, Jeffrey (Texas A&M University); MARTYS, Nicos (National Institute of Standards and Technology); Dr GEORGE, William (National Institute of Standards and Technology)

Presenter: MARTYS, Nicos (National Institute of Standards and Technology)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 110

Type: **Oral Presentation**

Localization of stirring flows: the effect of the yield stress

Thursday 18 May 2023 14:20 (20 minutes)

Author: DANESHVAR GARMROODI, Mohammad Reza (Concordia University)

Co-author: KARIMFAZLI, Ida (Department of Mechanical, Industrial and Aerospace Engineering, Concordia University, 1515 St. Catherine W., Montreal, QC, H3G 2W1, Canada)

Presenter: DANESHVAR GARMROODI, Mohammad Reza (Concordia University)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 111

Type: **Oral Presentation**

Analysis of pulsatile flows of complex fluids in two-dimensional channels

Wednesday 17 May 2023 17:10 (20 minutes)

Authors: Ms PARK, Nayeon (Seoul National University); Prof. NAM, Jaewook (Seoul National University)

Presenter: Ms PARK, Nayeon (Seoul National University)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 112

Type: **Oral Presentation**

Rheology-Driven Continuous In-Melt Separation of PET/PE Blends and Laminates: A Novel Approach to Recycling

Friday 19 May 2023 10:30 (20 minutes)

Author: MAIA, Joao (Case Western Reserve University)

Co-authors: SCHIRALDI, David (Case Western Reserve University); KONE, Ezra (Case Western Reserve University); GHASSEMI, Hossein (Case Western Reserve University); HAMPTON, Lauren (Case Western Reserve University); VECCHI, Steven (Case Western Reserve University)

Presenter: MAIA, Joao (Case Western Reserve University)

Session Classification: Industrial Rheology in Polymer Processing

Track Classification: General Symposia: Industrial Rheology in Polymer Processing

Contribution ID: 113

Type: **Oral Presentation**

Dual slip-link simulation study on stretch-orientation-induced reduction of friction in bi-disperse blends

Wednesday 17 May 2023 14:20 (20 minutes)

Author: Mr MIYAMOTO, Souta (Kyoto University)

Co-authors: SATO, Takeshi; TANIGUCHI, Takashi (Department of Chemical Engineering, Graduate school of engineering, Kyoto University)

Presenter: TANIGUCHI, Takashi (Department of Chemical Engineering, Graduate school of engineering, Kyoto University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 114

Type: **Oral Presentation**

Time-Strain Separability and Inseparability in Multiaxial Stress Relaxation of Polymer Gels with Permanent and Transient Crosslinks

Thursday 18 May 2023 11:10 (20 minutes)

Author: URAYAMA, Kenji

Co-authors: HARADA, Akira; NAKAHATA, Masaki; TANAKA, Motomu; AOYAMA, Takuma; KIMURA, Takuro; TAKASHIMA, Yoshinori

Presenter: URAYAMA, Kenji

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 115

Type: **Oral Presentation**

INTRIGUING MELTING BEHAVIOR OF THE NATURAL RUBBER CRYSTAL FORMED BY STRAIN-INDUCED CRYSTALLIZATION

Thursday 18 May 2023 11:30 (20 minutes)

Author: SAKURAI, Shinichi

Co-authors: Prof. TAKAGI, Hideaki (High Energy Accelerator Research Organization); Dr TSUNODA, Katsuhiko (Bridgestone); Prof. URAYAMA, Kenji (Kyoto University); Prof. SHIMIZU, Nobutaka (High Energy Accelerator Research Organization); Prof. IGARASHI, Noriyuki (High Energy Accelerator Research Organization); Mr TANAKA, Ruito (Kyoto Institute of Technology); Mr YASUI, Tomohiro (Kyoto Institute of Technology); Dr KITAMURA, Yuji (Bridgestone)

Presenter: SAKURAI, Shinichi

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 116

Type: **Poster Presentation**

EVALUATION OF THE LIQUID HOLDUP IN A STRATIFIED GAS-LIQUID INCLINED PIPELINE ACCORDING TO THE HERSCHEL–BULKLEY FLUID MODEL

Tuesday 16 May 2023 21:40 (20 minutes)

Authors: Prof. XU, Jingyu (Institute of Mechanics, Chinese Academy of Science); Dr HOU, Lintong (Institute of Mechanics, Chinese Academy of Science)

Presenter: Prof. XU, Jingyu (Institute of Mechanics, Chinese Academy of Science)

Session Classification: Poster Session

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 117

Type: **Oral Presentation**

Solving the closure problem for dilute polymer solutions

Wednesday 17 May 2023 17:30 (20 minutes)

Author: KAUSHAL, Shaurya (Jawaharlal Nehru Centre for Advanced Scientific Research)

Co-authors: Prof. SUBRAMANIAN, Ganesh (Jawaharlal Nehru Centre for Advanced Scientific Research); Prof. ANSUMALI, Santosh (Jawaharlal Nehru Centre for Advanced Scientific Research)

Presenter: Prof. ANSUMALI, Santosh (Jawaharlal Nehru Centre for Advanced Scientific Research)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 118

Type: **Oral Presentation**

Improvement of Heat Resistance using Physical Aging in Polystyrene Injection Moldings

Thursday 18 May 2023 15:20 (20 minutes)

Author: Mr TAO, Kosaku (1;Osaka Research Institute of Industrial Science and Technology. 2;Department of Material Science, School of Engineering, University of Shiga Prefecture.)

Co-authors: TAKESHITA, Hiroki (Department of Material Science, School of Engineering, University of Shiga Prefecture); HIRANO, Hiroshi (Osaka Research Institute of Industrial Science and Technology); TOKUMITSU, Katsuhisa (Department of Material Science, School of Engineering, University of Shiga Prefecture); KAGO, Keitaro (Osaka Research Institute of Industrial Science and Technology); YAMADA, Koji (Osaka Research Institute of Industrial Science and Technology); HIGASHI, Seiji (Osaka Research Institute of Industrial Science and Technology); KUWASHIRO, Shiho (Osaka Research Institute of Industrial Science and Technology)

Presenter: Mr TAO, Kosaku (1;Osaka Research Institute of Industrial Science and Technology. 2;Department of Material Science, School of Engineering, University of Shiga Prefecture.)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Industrial Rheology in Polymer Processing

Contribution ID: 119

Type: **Oral Presentation**

EXPERIMENTAL STUDY ON PHASE SEPARATION DYNAMICS OF UNENTANGLED POLYMER BLEND WITH DYNAMIC ASYMMETRY

Wednesday 17 May 2023 16:30 (20 minutes)

Author: Dr SATO, Takeshi (Institute for Chemical Research, Kyoto University, Kyoto, Japan)

Co-authors: Dr MATSUMIYA, Yumi (Institute for Chemical Research, Kyoto University, Kyoto, Japan); Prof. WATANABE, Hiroshi (Institute for Chemical Research, Kyoto University, Kyoto, Japan)

Presenter: Dr SATO, Takeshi (Institute for Chemical Research, Kyoto University, Kyoto, Japan)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 120

Type: **Oral Presentation**

Primary cementing of horizontal wells: laminar displacement flows in obstructed eccentric annuli

Tuesday 16 May 2023 11:10 (20 minutes)

Authors: Ms ALISHAHI, Marzieh (University of British Columbia); MITISHITA, Rodrigo (University of British Columbia); FRIGAARD, Ian (University of British Columbia)

Presenter: Ms ALISHAHI, Marzieh (University of British Columbia)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 121

Type: **Oral Presentation**

Turbulent drag reduction with flexible and rigid polymer solutions: from low to maximum drag reduction

Friday 19 May 2023 11:10 (20 minutes)

Authors: MITISHITA, Rodrigo (University of British Columbia); ELFRING, Gwynn (University of British Columbia); FRIGAARD, Ian (University of British Columbia)

Presenter: MITISHITA, Rodrigo (University of British Columbia)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 122

Type: **Oral Presentation**

Elongation viscosity of a poly(styrene-*b*-2-vinylpyridine) block copolymer forming spherical microphage-separated structure

Wednesday 17 May 2023 14:40 (20 minutes)

Author: DOI, Yuya (Nagoya University)

Co-authors: Mr YAMAKAMI, Shumpei (Nagoya University); UNEYAMA, Takashi (Nagoya University); ISHIDA, Takato (Nagoya University); MASUBUCHI, Yuichi (Nagoya University)

Presenter: DOI, Yuya (Nagoya University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: 123

Type: **Oral Presentation**

EFFECT OF HOMOGENIZATION OF RAW MILK ON THE PHYSICAL PROPERTIES OF AGED CHEESE

Tuesday 16 May 2023 15:20 (20 minutes)

Author: Prof. KANEDA, Isamu (Rakuno Gakuen University)

Co-authors: Ms KANEKO, Sasara (Rakuno Gakuen University); Dr TOCHIHARA, Takashi (Rakuno Gakuen University); Prof. OHNUMA, Masato (Hokkaido University)

Presenter: Prof. KANEDA, Isamu (Rakuno Gakuen University)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 124

Type: **Oral Presentation**

Instabilities in immiscible multi-layer viscous shear flows in the presence of interfacial slip

Thursday 18 May 2023 11:30 (20 minutes)

Author: KATSIAVRIA, Anna (Imperial College London)

Co-author: Prof. PAPAGEORGIOU, Demetrios (Imperial College London)

Presenter: KATSIAVRIA, Anna (Imperial College London)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 125

Type: **Oral Presentation**

Development of Biodegradable and Antiviral Surgical Face Masks from Poly(lactic acid) and Poly(dimethyl siloxane)-based Polyhydroxyurethanes

Tuesday 16 May 2023 15:20 (20 minutes)

Author: Dr YOUNES, Georges (Polytechnique de Montréal)

Co-author: Prof. AJJI, Abdellah (Polytechnique de Montréal)

Presenter: Dr YOUNES, Georges (Polytechnique de Montréal)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 126

Type: **Oral Presentation**

**KEYNOTE: Assessment of Critical Conditions
Required for Effective Hole Cleaning in Horizontal
Wells - Effects of Fluid Rheological Properties and
Near Wall Turbulence on the Particle Removal From
Bed Deposits**

Tuesday 16 May 2023 10:30 (40 minutes)

Author: Dr KURU, Ergun (University of Alberta)

Presenter: Dr KURU, Ergun (University of Alberta)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 127

Type: **Oral Presentation**

Quantifying the effects of fines and clays on mineral tailings dewatering

Friday 19 May 2023 10:50 (20 minutes)

Author: STICKLAND, Anthony (The University of Melbourne)

Co-authors: Mr LUO, Yuxuan (The University of Melbourne); Mr HASSAN, Sajid (The University of Melbourne); Dr EKANAYAKE, Nilanka (The University of Melbourne); Prof. SCALES, Peter (The University of Melbourne)

Presenter: STICKLAND, Anthony (The University of Melbourne)

Session Classification: Rheology in the Mining Industry

Track Classification: General Symposia: Rheology in the Mining Industry

Contribution ID: **128**

Type: **Oral Presentation**

Inertial flow of immersed elastic capsules through a corner

Wednesday 17 May 2023 16:50 (20 minutes)

Author: HUET, Damien

Co-authors: Prof. WACHS, Anthony (University of British Columbia); Dr MORENTE, Antoine (University of British Columbia); Dr GAI, Guodong (University of British Columbia)

Presenter: HUET, Damien

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 129

Type: **Oral Presentation**

INFLUENCES OF SHAPE OF MOLECULAR WEIGHT DISTRIBUTION ON TENSILE PROPERTIES OF POLYETHYLENE SOLIDS

Wednesday 17 May 2023 16:10 (20 minutes)

Author: KIDA, Takumitsu (Japan Advanced Institute of Science and Technology)

Co-authors: Dr TANAKA, Ryo (Hiroshima University); Prof. SHIONO, Takeshi (Hiroshima University); Prof. YAMAGUCHI, Masayuki (Japan Advanced Institute of Science and Technology); Prof. TOKUMITSU, Katsuhisa (The University of Shiga Prefecture)

Presenter: KIDA, Takumitsu (Japan Advanced Institute of Science and Technology)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 130

Type: **Oral Presentation**

FLUID COMPOSITES AS ALTERNATIVES TO SOLID ELECTRICAL COMPONENTS

Wednesday 17 May 2023 11:30 (20 minutes)

Authors: Mr SCHMIDT, Dominik S. (INM-Leibniz Institute for New Materials); Mr LAGO-GARRIDO, Sergio (INM-Leibniz Institute for New Materials); Dr ARORA, Srishti (INM-Leibniz Institute for New Materials); Dr GONZALEZ-GARCIA, Lola (INM-Leibniz Institute for New Materials)

Presenter: Dr GONZALEZ-GARCIA, Lola (INM-Leibniz Institute for New Materials)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 131

Type: **Oral Presentation**

Formulating adhesives with aminated polyolefins for low surface energy substrate

Tuesday 16 May 2023 14:00 (20 minutes)

Authors: ZHANG, Ziyue (The University of British Columbia); YAVITT, Benjamin (University of Cincinnati); Prof. SCHAFER, Laurel (University of British Columbia); HATZIKIRIAKOS, Savvas (The University of British Columbia)

Presenter: ZHANG, Ziyue (The University of British Columbia)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 132

Type: **Oral Presentation**

YIELD AND FLOW IN AGGREGATED PARTICULATE SUSPENSIONS IN WATER

Wednesday 17 May 2023 15:20 (20 minutes)

Author: SCALES, Peter (The University of Melbourne)

Co-authors: Dr STICKLAND, Anthony (The University of Melbourne); TEO, Hui-En (The University of Melbourne); BARMAR-LARSEN, Maria (University of Aalborg); Prof. BUSCALL, Richard; DEKRETSER, Ross (The University of Melbourne); Dr USHER, Shane (The University of Melbourne)

Presenter: Dr STICKLAND, Anthony (The University of Melbourne)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 133

Type: **Oral Presentation**

Oscillatory microfluidic thromboelastograph (micro-TEG) analysis of whole blood coagulation and fibrinolysis

Tuesday 16 May 2023 16:50 (20 minutes)

Author: Prof. SHIN, SeHyun (Korea University)

Presenter: Prof. SHIN, SeHyun (Korea University)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 134

Type: **Oral Presentation**

Modelling high-pressure dewatering rolls for mineral tailings

Friday 19 May 2023 11:10 (20 minutes)

Author: EKANAYAKE, Nilanka (The University of Melbourne)

Co-authors: STICKLAND, Anthony (The University of Melbourne); HARVIE, Dalton (The University of Melbourne); SCALES, Peter (The University of Melbourne); BATTERHAM, Robin (The University of Melbourne); Mr HASSAN, Sajid (The University of Melbourne)

Presenter: EKANAYAKE, Nilanka (The University of Melbourne)

Session Classification: Rheology in the Mining Industry

Track Classification: General Symposia: Rheology in the Mining Industry

Contribution ID: 135

Type: **Oral Presentation**

Should we keep choosing nano-sized particles to kinetically stabilize co-continuous blends?

Tuesday 16 May 2023 10:50 (20 minutes)

Authors: SHAH, Rajas (University of Calgary); Prof. BRYANT, Steven (University of Calgary); Prof. TRIFKOVIC, Milana (University of Calgary)

Presenter: SHAH, Rajas (University of Calgary)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 136

Type: **Oral Presentation**

Adjuvanted silica suspensions: from particles contact properties to rheology

Tuesday 16 May 2023 14:40 (20 minutes)

Author: CHATEAU, Xavier (ENPC, France)

Presenter: CHATEAU, Xavier (ENPC, France)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 137

Type: **Oral Presentation**

Non-Brownian suspensions in pressure-driven flow: numerical simulations with frame-invariant sub-grid corrections

Tuesday 16 May 2023 10:30 (20 minutes)

Author: Dr ORSI, Michel (Levich Institute and Department of Chemical Engineering, CUNY City College of New York, New York, NY 10031, USA)

Co-authors: Dr LOBRY, Laurent (Université Côte d'Azur, CNRS, Institut de Physique de Nice (INPHYNI), France); Dr PETERS, François (Université Côte d'Azur, CNRS, Institut de Physique de Nice (INPHYNI), France)

Presenter: Dr ORSI, Michel (Levich Institute and Department of Chemical Engineering, CUNY City College of New York, New York, NY 10031, USA)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 139

Type: **Oral Presentation**

Application of a robust self-healing experimental protocol for associating polymers

Friday 19 May 2023 11:30 (20 minutes)

Author: Ms MORADINIK, Nafiseh (The University of British Columbia)

Co-author: Prof. HATZIKIRIAKOS, Savvas (The university of british columbia)

Presenter: Ms MORADINIK, Nafiseh (The University of British Columbia)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: 140

Type: **Oral Presentation**

MOLECULAR DYNAMICS SIMULATION OF THE BEHAVIOR OF THIN LUBRICATION FILM

Wednesday 17 May 2023 15:00 (20 minutes)

Authors: LIU, Dongjie; Prof. CHEN, Fei; Prof. WEI, Jinjia

Presenter: LIU, Dongjie

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 142

Type: **Oral Presentation**

FINITE SYSTEM SIZE CORRECTION IN MICRORHEOLOGICAL ANALYSIS UNDER PERIODIC BOUNDARY CONDITIONS : A DIRECT NUMERICAL SIMULATION APPROACH

Tuesday 16 May 2023 10:50 (20 minutes)

Author: Prof. NAKAYAMA, Yasuya (Kyushu University)

Co-authors: Prof. KAJIWARA, Toshihisa (Kyushu University); Dr MATSUOKA, Yuki (Sumitomo Bakelite Co., Ltd.)

Presenter: Prof. NAKAYAMA, Yasuya (Kyushu University)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 143

Type: **Oral Presentation**

OBSERVATION OF FLOW BIREFRENGENCE IN DYNAMIC SQUEEZE FLOW

Thursday 18 May 2023 14:40 (20 minutes)

Authors: KATO, Manabu (National Institute of Technology, Tsuyama College); Prof. TAKAHASHI, Tsutomu (Nagaoka University of Technology)

Co-author: Mr AKAGI, Yutaro (National Institute of Technology, Tsuyama College)

Presenter: KATO, Manabu (National Institute of Technology, Tsuyama College)

Session Classification: Self-assembly and Flow-induced Systems/Gels

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 144

Type: **Poster Presentation**

PREDICTICTING THE RATE OF CEMENT PLUG FAILURE

Tuesday 16 May 2023 21:40 (20 minutes)

Author: CHARABIN, Scott (UBC)

Co-author: Prof. FRIGAARD, Ian (UBC)

Presenter: CHARABIN, Scott (UBC)

Session Classification: Poster Session

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 145

Type: **Oral Presentation**

DYNAMICS AND MIXING OF TRAPPED DROPLETS

Thursday 18 May 2023 15:20 (20 minutes)

Author: ROURE, Gesse (University of Colorado Boulder)

Co-authors: Dr ZINCHENKO, Alexander (University of Colorado Boulder); Dr DAVIS, Robert (University of Colorado Boulder)

Presenter: ROURE, Gesse (University of Colorado Boulder)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: 146

Type: **Oral Presentation**

Continuous Monitoring of Yield Stress and Solid Fraction of a Solid Suspension Using a Microfluidic Yield Rheometer

Tuesday 16 May 2023 16:50 (20 minutes)

Author: Mr KAVISHVAR, Durgesh (University of Toronto)

Co-author: RAMACHANDRAN, Arun (University of Toronto)

Presenter: Mr KAVISHVAR, Durgesh (University of Toronto)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 147

Type: **Oral Presentation**

DYNAMICS OF 2D COLLOIDAL CRYSTALS IN THE PRESENCE OF LOCALIZED INTERNAL STRESSES CREATED BY ACTIVE PARTICLES

Tuesday 16 May 2023 17:30 (20 minutes)

Author: Dr JOHN, Jacob (Department of Chemical and Petroleum Engineering, Schulich School of Engineering, University of Calgary, Canada)

Co-author: Dr NATALE, Giovanniantonio (Department of Chemical and Petroleum Engineering, Schulich School of Engineering, University of Calgary, Canada)

Presenter: Dr JOHN, Jacob (Department of Chemical and Petroleum Engineering, Schulich School of Engineering, University of Calgary, Canada)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 148

Type: **Oral Presentation**

Self-organized cable formation and force transmission in an active vertex model for biological tissues

Tuesday 16 May 2023 11:30 (20 minutes)

Authors: QIU, Mingfeng (Ecole Normale Supérieure); HAKIM, Vincent (Ecole Normale Supérieure); CORSON, Francis (Ecole Normale Supérieure)

Presenter: QIU, Mingfeng (Ecole Normale Supérieure)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 149

Type: **Oral Presentation**

SHAPE MEMORY AND MECHANO-RHEOLOGICAL PROPERTIES OF AMINE CONTAINING POLYETHYLENE/POLYCAPROLACTONE BLEND

Tuesday 16 May 2023 14:40 (20 minutes)

Author: GUSTOWSKI, Jan (University of British Columbia)

Co-authors: YAVITT, Benjamin (University of Cincinnati); SCHAFER, Laurel (University of British Columbia); HATZIKIRIAKOS, Savvas (The University of British Columbia)

Presenter: GUSTOWSKI, Jan (University of British Columbia)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 151

Type: **Oral Presentation**

Thin-film flow of a Bingham fluid over topography with a temperature dependent rheology

Thursday 18 May 2023 14:40 (20 minutes)

Author: MOYERS, Miguel

Presenter: MOYERS, Miguel

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 152

Type: **Oral Presentation**

RHEOLOGY OF FRESH CEMENT PASTE AS AFFECTED BY CELLULOSE NANOFIBRES AND SUPERPLASTICIZER

Wednesday 17 May 2023 10:50 (20 minutes)

Authors: Dr GONCALVES, JOSE (UNIVERSITY OF ALBERTA); Dr BINDIGANAVILE, VIVEK (UNIVERSITY OF ALBERTA); Dr BOLUK, YAMAN (UNIVERSITY OF ALBERTA)

Co-author: Dr EL-BAKKARI, MOUNIR (UNIVERSITY OF ALBERTA)

Presenter: Dr BINDIGANAVILE, VIVEK (UNIVERSITY OF ALBERTA)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 153

Type: **Oral Presentation**

Lubrication force between two approaching cylinders in a Bingham fluid

Tuesday 16 May 2023 11:10 (20 minutes)

Authors: WACHS, Anthony (University of British Columbia); CHATEAU, Xavier

Presenter: WACHS, Anthony (University of British Columbia)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 154

Type: **Oral Presentation**

KEYNOTE: Squeezing of a concentrated emulsion with surfactant through a periodic porous medium

Thursday 18 May 2023 14:00 (40 minutes)

Author: ZINCHENKO, Alexander (University of Colorado Boulder)

Co-authors: Dr GISSINGER, Jacob (University of Colorado Boulder); Prof. DAVIS, Robert (University of Colorado Boulder)

Presenter: ZINCHENKO, Alexander (University of Colorado Boulder)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: 155

Type: **Oral Presentation**

EXPLORING THE INTERPLAY BETWEEN INTERPARTICLE FORCES, RHEOLOGY, AND TRIBOLOGY IN NANOCCLAY-BASED NANOLUBRICANTS

Tuesday 16 May 2023 15:20 (20 minutes)

Author: MARTÍN ALARCÓN, Leonardo (University of Calgary)

Co-authors: Mr UHRYN, Jackson (University of Calgary); Prof. TRIFKOVIC, Milana (University of Calgary); Prof. EGBERTS, Philip (University of Calgary); Dr SAINI, Vinay (University of Calgary)

Presenter: MARTÍN ALARCÓN, Leonardo (University of Calgary)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 156

Type: **Oral Presentation**

SCALE-DEPENDENT RHEOLOGY OF SYNOVIAL FLUID LUBRICATING MACROMOLECULES

Tuesday 16 May 2023 17:10 (20 minutes)

Author: MARTÍN ALARCÓN, Leonardo (University of Calgary)

Co-authors: Dr GOVEDARICA, Aleksandra (University of Calgary); Prof. JAY, Gregory (Brown University); TRIFKOVIC, Milana (University of Calgary); Prof. EWOLDT, Randy (University of Illinois at Urbana-Champaign); Prof. BRYANT, Steven (University of Calgary); Prof. SCHMIDT, Tannin (University of Connecticut Health Center)

Presenter: MARTÍN ALARCÓN, Leonardo (University of Calgary)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: 157

Type: **Oral Presentation**

LINKING MULTISCALE RHEOLOGY TO PERFORMANCE OF HIERARCHICALLY STRUCTURED PEM FUEL CELL CATALYST LAYER

Wednesday 17 May 2023 16:30 (20 minutes)

Author: LEE, Min-Hyung Markus (University of Calgary)

Co-authors: MARTÍN ALARCÓN, Leonardo (University of Calgary); TRIFKOVIC, Milana (University of Calgary)

Presenter: LEE, Min-Hyung Markus (University of Calgary)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 159

Type: **Oral Presentation**

Cross Flow Filtration of Viscoplastic Suspensions, a Robust Mathematical Model

Tuesday 16 May 2023 11:30 (20 minutes)

Authors: FRIGAARD, Ian (UBC); IZADI, Mahdi; Prof. TAGHAVI, Seyyed Mohammad (Laval University)

Presenter: IZADI, Mahdi

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **160**

Type: **Oral Presentation**

RHEOLOGY OF CORN STOVER SLURRIES UNDERGOING DILUTE-ACID PRETREATMENT

Tuesday 16 May 2023 17:30 (20 minutes)

Authors: Mrs TROXLER, Jessica (Colorado School of Mines); Dr STICKEL, Jonathan (Carbon America); Prof. SAMANIUK, Joseph (Colorado School of Mines); Dr HIMMEL, Mike (National Renewable Energy Laboratory); Dr LI, Yudong (National Renewable Energy Laboratory)

Presenter: Prof. SAMANIUK, Joseph (Colorado School of Mines)

Session Classification: Biomaterials and Biological Systems

Track Classification: General Symposia: Biomaterials and Biological Systems

Contribution ID: **161**

Type: **Oral Presentation**

RECENT ADVANCES IN POLYMER VISCOELASTICITY FROM GENERAL RIGID BEAD-ROD THEORY

Thursday 18 May 2023 15:00 (20 minutes)

Authors: Prof. GIACOMIN, Alan Jeffrey (Queen's University); KANSO, Mona

Presenter: Prof. GIACOMIN, Alan Jeffrey (Queen's University)

Session Classification: Polymer Solutions and Melts

Track Classification: General Symposia: Industrial Rheology in Polymer Processing

Contribution ID: **162**

Type: **Oral Presentation**

Bubbles in Yield Stress Fluids: Link between the Rheology and Stability of Bubbles

Thursday 18 May 2023 10:50 (20 minutes)

Author: DANESHI, Masoud (Department of Mathematics, University of British Columbia)

Co-author: FRIGAARD, Ian (University of British Columbia)

Presenter: DANESHI, Masoud (Department of Mathematics, University of British Columbia)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: 164

Type: **Oral Presentation**

IMPARTING EXTENSIBILITY TO JAMMED COLLOIDAL INKS FOR DIRECT-INK-WRITING PRINTABILITY

Tuesday 16 May 2023 11:50 (20 minutes)

Authors: Dr SAENGOW, Chaimongkol (University of Illinois Urbana-Champaign); Dr SEN, Samya (Stanford University); Dr YUS, Joaquin (University of Illinois Urbana-Champaign); Ms CHANG, Kelly (University of Illinois Urbana-Champaign); Prof. WAGONER JOHNSON, Amy (University of Illinois Urbana-Champaign); Prof. EWOLDT, Randy (University of Illinois Urbana-Champaign)

Presenter: Dr SAENGOW, Chaimongkol (University of Illinois Urbana-Champaign)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 165

Type: **Oral Presentation**

Flow and instability induced by bubbles rising in a two-layer fluid system

Thursday 18 May 2023 15:00 (20 minutes)

Author: ZARE, Marjan (University of British Columbia)

Co-authors: Prof. LAWRENCE, Greg (Department of Civil Engineering, University of British Columbia, Vancouver, BC, Canada); FRIGAARD, Ian (UBC)

Presenter: ZARE, Marjan (University of British Columbia)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: 166

Type: **Oral Presentation**

Controlled Collision of Hele-Shaw Droplets in Extensional Flow Using a Six-Port Microfluidic Device

Thursday 18 May 2023 10:30 (20 minutes)

Authors: RAZZAGHI, Aysan (University of Toronto); Prof. RAMCHANDRAN, Arun (University of Toronto)

Presenter: RAZZAGHI, Aysan (University of Toronto)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: **167**

Type: **Oral Presentation**

Hercshel-Bulkley parameter evaluation of oil-based drilling fluids

Tuesday 16 May 2023 17:10 (20 minutes)

Author: Prof. SAASEN, Arild (University of Stavanger)

Co-author: YTREHUS, Jan David (SINTEF)

Presenter: Prof. SAASEN, Arild (University of Stavanger)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: **168**

Type: **Oral Presentation**

A New Instrument for Interfacial Dilational Rheology

Thursday 18 May 2023 11:50 (20 minutes)

Authors: FROSTAD, John (University of British Columbia); HUANG, Yun-Han (University of British Columbia)

Presenter: HUANG, Yun-Han (University of British Columbia)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: 170

Type: **Poster Presentation**

RHEOLOGICAL METHOD TO INVESTIGATE PSEUDOLAYER COMPRESSION ELASTIC CONSTANT AND THE DYNAMICS OF THE TWIST-BEND NEMATIC LIQUID CRYSTAL

Tuesday 16 May 2023 21:40 (20 minutes)

Authors: Dr JAKUB, Karcz. (Institute of Chemistry, Military University of Technology, Warsaw, Poland.); Dr KULA, Przemyslaw; PRAVEEN KUMAR, mylapalli (University of Hyderabad)

Co-author: Prof. DHARA, Surajit (University of Hyderabad)

Presenter: PRAVEEN KUMAR, mylapalli (University of Hyderabad)

Session Classification: Poster Session

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 172

Type: **Poster Presentation**

EFFECTS OF RELAXATION TIME OF POLYMER SOLUTIONS ON THE SPATIO-TEMPORAL FLUCTUATION IN A TWO-DIMENSIONAL FLOW

Tuesday 16 May 2023 21:40 (20 minutes)

Author: FUKUSHIMA, Kengo

Co-authors: SUZUKI, Hiroshi (Kobe University); HIDEMA, Ruri

Presenter: FUKUSHIMA, Kengo

Session Classification: Poster Session

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 173

Type: **Poster Presentation**

Measuring Transient Extensional Viscosity using Filament Stretching on an ARES G2 Rheometer

Tuesday 16 May 2023 21:40 (20 minutes)

Author: CHEN, Tianhong (TA Instruments - Waters LLC)

Co-author: Prof. MACOSKO, Chris (University of Minnesota)

Presenter: CHEN, Tianhong (TA Instruments - Waters LLC)

Session Classification: Poster Session

Track Classification: General Symposia: Industrial Rheology in Polymer Processing

Contribution ID: 174

Type: **Oral Presentation**

CONFORMATIONAL RELAXATION OF STYRENE-BUTADIENE RUBBERS HAVING A DIFFERENT MICROSTRUCTURE BUT THE SAME COMPOSITION AT HYDROPHILIC AND HYDROPHOBIC INTERFACE

Tuesday 16 May 2023 14:20 (20 minutes)

Author: Mr TANEDA, Hidenobu (Center for Polymer Interface and Molecular Adhesion Science, Kyushu Univeristy)

Co-authors: Mr FUJINO, Kosuke (Department of Applied Chemistry, Kyushu University); Prof. KAWAGUCHI, Daisuke (Center for Polymer Interface and Molecular Adhesion Science Kyushu Univeristy, and Department of Applied Chemistry, Kyushu University); Prof. TANAKA, Keiji (Center for Polymer Interface and Molecular Adhesion Science Kyushu Univeristy, and Department of Applied Chemistry, Kyushu University)

Presenter: Mr TANEDA, Hidenobu (Center for Polymer Interface and Molecular Adhesion Science, Kyushu Univeristy)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 175

Type: **Poster Presentation**

DYNAMIC VISCOELASTICITY AND SPINNING BEHAVIOR OF AN ORGANOGELEATOR, PMDA-R, DISSOLVED IN VARIOUS OILS

Tuesday 16 May 2023 21:40 (20 minutes)

Author: KAIDE, Aya (Yamaguchi University)

Co-author: SAEKI, Takashi (Yamaguchi University)

Presenter: KAIDE, Aya (Yamaguchi University)

Session Classification: Poster Session

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 176

Type: **Poster Presentation**

OPTIMIZATION OF THE DRAG-REDUCING EFFECT BY CONTROLLING THE PREPARATION CONDITIONS OF ADDITIVES

Tuesday 16 May 2023 21:40 (20 minutes)

Author: SAEKI, Takashi (Yamaguchi University)

Co-author: KAIDE, Aya (Yamaguchi University)

Presenter: SAEKI, Takashi (Yamaguchi University)

Session Classification: Poster Session

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 177

Type: **Poster Presentation**

Effect of Asphaltene on the Rheological Properties of Bitumen

Tuesday 16 May 2023 21:40 (20 minutes)

Authors: PIETTE, Jourdain (UBC); Dr XIONG, Ruiying (China University of Petroleum)

Co-authors: Prof. GUO, Jixiang (China University of Petroleum); HATZIKIRIAKOS, Savvas (The University of British Columbia); ZHANG, Ziyue (The University of British Columbia)

Presenter: PIETTE, Jourdain (UBC)

Session Classification: Poster Session

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 178

Type: **Poster Presentation**

INFLUENCE OF VISCOSITY HIERARCHY ON DENSITY-UNSTABLE FLUID-FLUID DISPLACEMENT IN VERTICAL CONCENTRIC ANNULI

Tuesday 16 May 2023 21:40 (20 minutes)

Author: GHORBANI, Maryam (PhD student)

Co-author: Dr SKADSEM, Hans Joakim (Associate professor)

Presenter: GHORBANI, Maryam (PhD student)

Session Classification: Poster Session

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 179

Type: **Oral Presentation**

PREPARATION AND PROPERTIES OF CONDUCTIVE FOAMS VIA HIGH INTERNAL PHASE EMULSION

Thursday 18 May 2023 11:10 (20 minutes)

Author: Prof. LEE, Seong Jae (The University of Suwon)

Co-authors: Mr CHOI, Ho Seong (The University of Suwon); Ms LEE, Song Hee (The University of Suwon)

Presenter: Prof. LEE, Seong Jae (The University of Suwon)

Session Classification: Emulsions, Foams and Bubbles

Track Classification: General Symposia: Emulsions and Foams

Contribution ID: **180**

Type: **Poster Presentation**

Microrheology of Polyelectrolyte Solutions in the Semidilute Entangled Regime

Tuesday 16 May 2023 21:40 (20 minutes)

Author: MATSUMOTO, Atsushi (University of Fukui)

Co-authors: SHEN, Amy Q. (Okinawa Institute of Science and Technology Graduate University); Dr ZHANG, Chi (University of Fribourg); Prof. SCHEFFOLD, Frank (University of Fribourg)

Presenter: MATSUMOTO, Atsushi (University of Fukui)

Session Classification: Poster Session

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: **181**

Type: **Poster Presentation**

DEVELOPMENT OF EXTENSIONAL RHEOMETER USING PARALLEL DISK RING

Tuesday 16 May 2023 21:40 (20 minutes)

Author: Mr MINEYAMA, Yukihiro (National Institute of Technology, Tsuyama College, Advanced Mechanical and Control System Engineering Course)

Co-authors: KATO, Manabu (National Institute of Technology, Tsuyama College); TAKAHASHI, Tsutomu (Dept. of Mechanical Engineering, Nagaoka University of Technology)

Presenter: Mr MINEYAMA, Yukihiro (National Institute of Technology, Tsuyama College, Advanced Mechanical and Control System Engineering Course)

Session Classification: Poster Session

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: **182**

Type: **Poster Presentation**

EFFECT OF THE TEMPERATURE ON THE RHEOLOGICAL BEHAVIORS OF LITHIUM-ION BATTERIES ANODE SLURRY

Tuesday 16 May 2023 19:40 (20 minutes)

Authors: Prof. PARK, Jun Dong (Sookmyung Women's University); 김, 예슬 (Sookmyung Women's University)

Presenter: 김, 예슬 (Sookmyung Women's University)

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 183

Type: **Poster Presentation**

Rheological differences in anode slurries caused by shape difference between natural and synthetic graphite

Tuesday 16 May 2023 20:00 (20 minutes)

Authors: PARK, Jun Dong (Sookmyung Women's University); KIM, Yeeun (Sookmyung Women's University)

Presenter: KIM, Yeeun (Sookmyung Women's University)

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **184**

Type: **Poster Presentation**

TWO-STEP YIELDING BEHAVIOR OF CONCENTRATED LITHIUM-ION BATTERY ANODE SLURRY

Tuesday 16 May 2023 20:20 (20 minutes)

Authors: Ms KIM, Yeseul (Sookmyung Women's University); PARK, Jun Dong (Sookmyung Women's University)

Co-authors: Mr PARK, Jeong Hoon (Seoul National University); Prof. AHN, Kyung Hyun (Seoul National University)

Presenter: PARK, Jun Dong (Sookmyung Women's University)

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: 185

Type: **Poster Presentation**

EFFECT OF CARBON NANOTUBES (CNTs) DISPERSITY IN AG/POLYDIMETHYLSILOXAN (PDMS) COMPOSITE CONDUCTORS

Tuesday 16 May 2023 21:40 (20 minutes)

Authors: Dr KIM, Byoung Soo (Korea institute of ceramic engineering & technology); JEONG, EunHui; Prof. PARK, Jun Dong (Sookmyung women's university)

Presenter: JEONG, EunHui

Session Classification: Poster Session

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: **186**

Type: **Poster Presentation**

JAMMING MECHANISMS OF DILUTE FIBRE SUSPENSIONS UNDER DEAD-END AND CROSS-FLOW CONDITIONS

Tuesday 16 May 2023 20:40 (20 minutes)

Author: Mr VILLALBA CHEHAB, Miguel Esteban (The University of British Columbia)

Co-authors: DANESHI, Masoud (Department of Mathematics, University of British Columbia); Dr MARTINEZ, Mark (The University of British Columbia)

Presenter: Mr VILLALBA CHEHAB, Miguel Esteban (The University of British Columbia)

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **187**

Type: **Poster Presentation**

Rheology and Self-Assembly of Carboxylated Cellulose Nanocrystals

Tuesday 16 May 2023 21:40 (20 minutes)

Authors: ZAKANI, Behzad (Department of Chemical and Biological Engineering, University of British Columbia); GRECOV, Dana (Department of Mechanical Engineering, University of British Columbia); CRANSTON, Emily (Department of Chemical and Biological Engineering, University of British Columbia); Ms HALLMAN, Madeleine (Department of Chemical and Biological Engineering, University of British Columbia)

Presenter: Ms HALLMAN, Madeleine (Department of Chemical and Biological Engineering, University of British Columbia)

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **188**

Type: **Poster Presentation**

Gelatinization of Individual Starch Granules

Tuesday 16 May 2023 21:40 (20 minutes)

Authors: CHEON, James; FROSTAD, John (University of British Columbia); MO, Lanxin (University of British Columbia)

Presenter: MO, Lanxin (University of British Columbia)

Session Classification: Poster Session

Track Classification: General Symposia: Polymer Solutions and Melts

Contribution ID: **189**

Type: **Poster Presentation**

Diagnosing the state of the battery slurries using a machine learning technique

Tuesday 16 May 2023 21:00 (20 minutes)

Authors: KANG, Seunghoon; JIN, Howon

Co-author: AHN, Kyung Hyun

Presenter: KANG, Seunghoon

Session Classification: Poster Session

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **190**

Type: **Poster Presentation**

Active Particles Crossing Sharp Viscosity Gradients

Tuesday 16 May 2023 19:00 (20 minutes)

Author: GONG, Jiahao

Co-authors: Prof. ELFRING, Gwynn (University of British Columbia); Dr SHAIK, Vaseem (University of British Columbia)

Presenter: GONG, Jiahao

Session Classification: Poster Session

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 191

Type: **Poster Presentation**

Deformational Vorticity in Constitutive Equations: The Co-Rigid Rotational Maxwell Model

Tuesday 16 May 2023 21:40 (20 minutes)

Author: MISCHEL, Cody

Presenter: MISCHEL, Cody

Session Classification: Poster Session

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 192

Type: **Oral Presentation**

Influence of fluid type in the transition from spray to roping in hydrocyclones

Friday 19 May 2023 11:30 (20 minutes)

Authors: Mr REYES, Daniel (University of Concepción); BETANCOURT, Fernando (University of Concepción); Dr CORNEJO, Pablo (University of Concepción)

Presenter: BETANCOURT, Fernando (University of Concepción)

Session Classification: Rheology in the Mining Industry

Track Classification: General Symposia: Rheology in the Mining Industry

Contribution ID: **193**

Type: **Oral Presentation**

THE RHEOLOGICAL PROPERTIES OF HOT MELT ADHESIVES DOPED WITH CARBON NANOTUBES

Wednesday 17 May 2023 11:50 (20 minutes)

Author: Dr LATKO-DURALEK, Paulina (Warsaw University of Technology)

Presenter: Dr LATKO-DURALEK, Paulina (Warsaw University of Technology)

Session Classification: Blends, Composites and Nanocomposites

Track Classification: General Symposia: Blends, Composites and Nanocomposites

Contribution ID: 194

Type: **Oral Presentation**

Cementing displacement flows of shear-thinning fluids in horizontal wells, with and without casing rotation

Tuesday 16 May 2023 11:30 (20 minutes)

Authors: Dr RENTERIA, Alondra (UBC, Mechanical Engineering); FRIGAARD, Ian (University of British Columbia)

Presenter: Dr RENTERIA, Alondra (UBC, Mechanical Engineering)

Session Classification: Rheology in the Oil and Gas Industry

Track Classification: General Symposia: Rheology in the Oil and Gas Industry

Contribution ID: 195

Type: **Poster Presentation**

Capillary imbibition in a diverging flexible channel

Tuesday 16 May 2023 21:40 (20 minutes)

Author: BOUDINA, Mouad (University of British Columbia)

Co-author: Prof. ELFRING, Gwynn (University of British Columbia)

Presenter: BOUDINA, Mouad (University of British Columbia)

Session Classification: Poster Session

Track Classification: General Symposia: Self-assembly and Flow-induced Systems and Gels

Contribution ID: 196

Type: **Oral Presentation**

Slip Behaviour and Thixotropy of Kaolinite and Mature Fines Tailings

Wednesday 17 May 2023 17:10 (20 minutes)

Authors: PIETTE, Jourdain (UBC); HATZIKIRIAKOS, Savvas (The University of British Columbia)

Presenter: PIETTE, Jourdain (UBC)

Session Classification: Suspensions and Colloids

Track Classification: General Symposia: Suspensions and Colloids

Contribution ID: **197**

Type: **Oral Presentation**

Profile of Hiroshi Watanabe

Wednesday 17 May 2023 11:50 (20 minutes)

Presenters: INOUE, Tadashi (Osaka University); Dr MATSUMIYA, Yumi (ICR, Kyoto University)

Session Classification: Hiroshi Watanabe –Honorary Symposium

Track Classification: Special Symposia: Hiroshi Watanabe –Honorary Symposium

Contribution ID: **198**

Type: **Oral Presentation**

EFFECT OF ULTRASOUND FIELDS ON ASPHALTENE-LADEN W/O INTERFACES: A MICRORHEOLOGY APPROACH

Thursday 18 May 2023 11:50 (20 minutes)

Author: KHALESI MOGHADDAM, Razie (university of calgary)

Co-authors: Mr NATALE, Giovanniantonio (university of calgary); Mr YARRANTON, Harvey (university of calgary)

Presenter: KHALESI MOGHADDAM, Razie (university of calgary)

Session Classification: Non-Newtonian Fluid Mechanics and Stability

Track Classification: General Symposia: Non-Newtonian Fluid Mechanics and Stability

Contribution ID: 199

Type: Plenary Talk

SLUDGE RHEOLOGY AND ITS APPLICATIONS IN SLUDGE TREATMENT PROCESSES

*Tuesday 16 May 2023 12:50 (1 hour)***Abstract:**

Sludge rheology is important for the design and operation of sludge treatment processes in terms of process optimisation and maintenance cost reduction. Sludge rheology has a significant impact on the performance of pumps, anaerobic digesters, dewaterability equipment, mixers, and heat exchangers.

A large portion of the total energy consumption in any sludge treatment plants is used for pumping sludge within the treatment processes. The efficient operation of sludge pumps requires an accurate calculation of friction losses for which sludge rheological parameters is an important parameter. Rheological parameters change as composition changes due to season, origin and treatment process. Furthermore, the type of selected rheological model and data fitting process impact on the pressure drop calculation. A validated pressure drops calculation toolkit was developed with up to 10% errors against actual data collected both at industrial scale and a pilot plant of sludge pumping system in a range of solid concentrations of sludge.

Anaerobic digesters are used to treat sludge and produce biogas. The rheology of the sludge can affect the digestion process, as it can impact the ability of microorganisms to break down the organic matter in the sludge. Sludge with high viscosity may have a lower biodegradability, resulting in a longer retention time within the digester, which can increase the size and cost of the digester. Additionally, the rheology of the sludge can impact the efficiency of the mixing within the digester, affecting the biogas production and overall treatment performance. The impact of the extent of digestion in terms of the volatile solids destruction on rheological properties in semi-continuous pilot digesters is also presented. Experimental results from this study indicate that higher volatile solids destruction leads to increased difficulty to flow and dewater. Since rheological behaviour is interlinked with chemical organic content (COD) of sludge, On-line rheometers can be used to monitor this process performance indicator (COD) rather than conducting offline time consuming chemical tests.

There is still much to be learned about the complex interactions between different components in sludge, and that new measurement techniques will be needed to improve our understanding of sludge rheology and its applications in sludge treatment processes.

Bio:

Nicky ESHTIAGHI is a Professor of Chemical Engineering at RMIT University, an Engineers Australia (EA) Fellow and Chartered Engineer, a Fellow of the Higher Education Academy (FHEA, UK), and an Editor in Chemical Engineering Research and Design Journal (Q1, Elsevier). She was the President of Australian Society of Rheology (2020-2022). She leads Sustainable Waste Processing Laboratories which investigates the flow behaviour of solid residue (sludge) from wastewater treatment plants with the aim of optimizing the energy efficiency of processes in sludge treatment lines. She has extensive research experience in process optimisation, biomass pretreatment, anaerobic digestion, biomass to hydrochar and biofuels conversion technology, and circular economy.

Author: ESHTIAGHI, Nicky (RMIT University)**Presenter:** ESHTIAGHI, Nicky (RMIT University)

Session Classification: Plenary Presentations

Track Classification: Plenaries: Plenary Talk

Contribution ID: 200

Type: **Poster Presentation**

Dynamical behavior of an aqueous foam in a liquid-filled Hele-Shaw cell

Tuesday 16 May 2023 19:00 (3 hours)

Authors: BARARPOUR, Fatemeh; GATES, Ian D.; HEJAZI, S. Hossein

Presenter: BARARPOUR, Fatemeh

Session Classification: Poster Session

Track Classification: Poster Session: Poster Session