



Okinawa Institute of Science and Technology  
Graduate University

## **Mini-Symposium: Flow and Instability of Self-Assembled Systems**

**Day 1:** 12<sup>th</sup> September 2018 (location: C209, Level C, Center bldg.)

9:00-9:20 Opening remarks by Amy Shen

9:20-9:35 Opening remarks by Dr. Mary Collins (Dean of Research, OIST)

**Session 1: Flow-induced Structuring and Instability** (chair: Simon Haward, OIST)

9:40-10:40 Tom McLeish, University of York, UK

Title: **“Flow-induced demixing instabilities of viscoelastic multicomponent fluids”**

10:40-11:00 Coffee break

11:00-11:30 Charley Schaefer, University of York, UK

Title: **“Flow-induced self-assembly of natural silk”**

11:30-13:30 Lunch (closed) and campus tour

**Session 2: Wormlike Micelles I** (chair: Amy Shen, OIST)

13:30-14:30 Yujun Feng, Sichuan University, China

Title: **“Flow instability of wormlike micelles as rheology modifiers”**

14:30-15:30 Tadashi Inoue, Osaka University, Japan

Title: **“A rheo-optical study on flow-induced structure of wormlike micellar solutions”**

15:30-15:45 Coffee break

15:45-16:45 Michael Cromer, Rochester Institute of Technology, USA

Title: **“Microfluidics and wormlike micelles: Predicting elastic instabilities and secondary flows”**

16:45-17:45 Simon Haward, OIST, Japan

Title: **“Flow and instability of wormlike micellar solutions around microfluidic cylinders”**

18:00-20:00 Dinner (closed) at Restaurant Sakae

**Day 2:** 13<sup>th</sup> September 2018 (location: C209, Level C, Center bldg.)

**Session 1: Vortical Flows** (chair: Manuel Alves, FEUP, Portugal)

9:15-10:15 Ruri Hidema, Kobe University, Japan

Title: **“Vortex deformation in two-dimensional turbulent flows of drag-reducing polymer solutions”**

10:15-10:45 San To Chan (PhD student), OIST, Japan

Title: **“Microscopic investigation of vortex breakdown in a dividing T-junction flow”**

10:45-11:00 Coffee break

11:00-11:30 Noa Burshtein (PhD student), OIST, Japan

Title: **“Inertioelastic flow instability at a stagnation point”**

11:30-12:45 Lunch (closed)

**Session 2: Wormlike Micelles II** (chair: Pouyan Boukany, TU Delft, Netherlands)

12:45-13:45 Jordi Ortin, University of Barcelona, Spain

Title: **“Instability of oscillatory pipe flow of wormlike micellar solutions”**

13:45-14:00 Coffee break

14:00-15:00 Paul Salipante, NIST, USA

Title: **“Flow instabilities of wormlike micelle solutions in microfluidics”**

15:00-18:30 Free time/excursion (Cape Zanpa, Okashi Goten Sweet Factory, Yomitan Pottery Village).

19:00-21:00 Dinner (closed) at Restaurant Hama no ya

**Day 3:** 14<sup>th</sup> September 2018 (location: C209, Level C, Center bldg.)

**Session 1: Microfluidic Flows** (chair Tom McLeish, University of York, UK)

9:30-10:30 Manuel Alves, FEUP, Portugal

Title: **“Numerical simulation of flow and instabilities of complex fluids at microscale”**

10:30-10:45 Coffee Break

10:45-11:45 Chen-Li Sun, National Taiwan University, Taiwan

Title: **“On the locomotion of planktonic microorganisms in a microfluidic environment”**

11:45-13:15 Lunch (closed)

**Session 2: Polymer Solutions** (chair: Ruri Hidema, Kobe University, Japan)

13:15-13:45 Atsushi Matsumoto, OIST, Japan

Title: **“Solution rheology of polymerized ionic liquids in an ionic liquid solution”**

13:45-14:00 Coffee break

14:00-15:00 Pouyan Boukany, TU Delft, Netherlands

Title: **“Microscopic origin of the elastic instabilities during flow of polymer solutions”**

15:00-18:30 Free time

19:00-21:00 Dinner (Closed) at Restaurant Tamu