

Poland-Japan symposium on spatio-temporal self-organization 2022

November 14 and 15, 2022

The symposium will be held as a zoom meeting. The links are given below.

All times are given in JST, that does not change in winter. As far as we know, JST is 8 hours ahead of the winter CET. Deduct 8 hours from the times given below to get CET.

We plan two types of presentations: long (25 minutes + 5 for discussion) and short (10 +5).

----- **The first day: November 14 (Monday)** -----

Date/time: 2022/11/14 04:30 PM Tokyo

<https://us02web.zoom.us/j/84969879001?pwd=c3c1OVFMWUhhGSIZUeGU3QlVJZzlXQT09>

meeting ID: 849 6987 9001 pass: LQ721a

The activity moderated by Jerzy Gorecki

17.00-17.05 Opening of symposium (Jerzy Gorecki)

17.05 -17.35

Presentations from the Nakata Group at Hiroshima University (30 min):

Discussion Leader: Satoshi Nakata (Hiroshima Univ.)

- Mai Yotsumoto (Hiroshima Univ.) "Dynamic responses of a phospholipid molecular layer to odor molecules based on "sniffing"

- Yujin Kubodera (Hiroshima Univ.) "Electrochemical control of chemical wave on a microbead"

17.35 -18.05

Presentations from the Kitahata Group at Chiba University (30 min):

Discussion Leader: Hiroyuki Kitahata (Chiba Univ.) "Overview"

- Hiroaki Ishikawa (Chiba Univ.) "Asymmetric pair motion driven by surface tension gradient and lateral capillary interaction"

- Sayaka Otani (Chiba Univ.) "Deformation dynamics of camphor-paraffin droplets during intermittent motion"

18.05-18.20 own coffee break

18.20-19.05

Presentations on competing interactions from the Research Team on Complex Systems and Chemical Processing of Information ICHF PAN (45 min):

Alina Ciach - "Core-shell particles at fluid interfaces" (25+5)

Marek Litniewski - "Adsorption in mixtures with competing interactions". (10+5)

19.05-19.15 break

19.15-19.45

Presentations from the Sumino Group, Tokyo University of Science (30 min):

Discussion Leader: Yutaka Sumino (Tokyo Univ. of Sci.) "Pattern formation induced by rheological change of medium"

- Kojiro Otoguro (Tokyo Univ. of Sci.) "Pattern dynamics of swelling granular bed under injection of fluid"

- Rinya Miyakawa (Tokyo Univ. of Sci.) "Spontaneous laning of particles immersed in a viscoelastic fluid"

19.45-19.55 break

19.55-20.10

Silvia Holler (Trento University, Italy) - "Droplet chemotaxis: integration with living organisms and system boosting" (10+5)

20.10-20.25

Jitka Cejkova (VSCHT University, Praha, Czechia) - "Self-propelled rotating decanol droplets as the components of liquid robots" (10+5)

20.25-20.55

Presentation from the Research Team Physical chemistry of complex systems, ICHF PAN: Wojciech Gozdz and Horatio Serna - "Collective movement of Vicsek particles in a square array of obstacles" (25+5)

20.55 end of day I, final remarks

----- **The second day: November 15 (Tuesday)** -----

Data/Time: 2022/11/15 04:30 PM Tokyo

<https://us02web.zoom.us/j/88038027581?pwd=OVduVGFYU0RlMkFkORINjZ0YvdkVCdz09>

meeting ID: 880 3802 7581 pass: XdFCp5

The activity moderated by Hiroyuki Kitahata

17.00 – 17.30

Richard Loffler (Trento University, Italy) – "Effect of dyes on self-propelled droplets" (25+5).

17.30 – 18.00

Presentations from the Tanaka Group Hiroshima University (30 min):

Discussion Leader: Shinpei Tanaka (Hiroshima Univ.) "Overview"

- Ayase Kawamura (Hiroshima Univ.) "Self-propulsion of 3-Phenylpropionaldehyde with and without spontaneous surfactant synthesis"

- Chiho Watanabe (Hiroshima Univ.) "Dynamic ordering of co-responsive source-sink droplets"

18.00-18.10 own coffee break

18.10-18.40 Theoretical studies and numerical simulations

Yuki Koyano (Kobe University) "Anomalous diffusion and transport by a reciprocal convective flow" (10+5)

Tomasz Rolinski - Numerical simulations of camphor boat motion (10+5)

18.40-19.10

Presentations from the Suematsu Group – Meiji University, Tokyo (30 min):

Discussion Leader: Nobuhiko J. Suematsu (Meiji Univ.) "Collective Motion of the Self-propelled Belousov-Zhabotinsky Droplets"

- Kodai Kishigami (Meiji Univ.) "Interaction between Self-propelled Droplets depending on Internal Chemical Conditions"

19.10-19.25

- Masakazu Kuze (Meiji University,) "Self-propulsion of deformable Belousov-Zhabotinsky droplets"(10+5)

19.25-19.35 break

19.35-20.20

Agota Toth (Szeged University, Hungary) "From self-propulsion to synchrony of hydrogel beads" (25+5)

Ariel Meyra (La Plata University, Argentina): "Self-assembly of self-propelled magnetic grains" (10+5)

20.20-20.50

Presentations on chemical computing from the Research Team on Complex Systems and Chemical Processing of Information ICHF PAN (30 minutes):

Jerzy Gorecki, "Introduction to computation with a chemical computing medium" (10+5)

Frantisek Muzika - "Influence of magnetic field on Belousov-Zhabotinsky reaction" (10+5)

20.50 -21.00

Open discussion and final remarks (Hiroyuki Kitahata)