

# BIOPHYSICS OF POLYMERS, MEMBRANES, GELS, COLLOIDS, AND CELLS WORKSHOP

Celje, June 6-7 2024

## PROGRAM

The program consists of selected standalone presentations and presentations grouped into three dedicated sessions:

- i. *Nodes*: Summary of work at the main units of the program
- ii. *Students*: Brief presentations of work of PhD students
- iii. *Highlights*: Outstanding papers published since January 2022

Thursday June 6	
9.00-9.30	Primož Zihelr (IJS): Overview of research program P1-0055 in period 2022-2024
9.30-10.00	<b>Nodes</b> Jure Derganc (UL): Research at Institute of Biophysics
10.00-10.30	<b>Nodes</b> Egon Pavlica (UNG): Research at University of Nova Gorica
10.30-11.00	coffee break
11.00-11.30	<b>Nodes</b> Matej Kanduč (IJS): Research at Jožef Stefan Institute
11.30-11.45	Fabio Staniscia (IJS): Adsorption in sessile droplets
11.45-12.00	<b>Students</b> Marin Šako (IJS): Organic matter under tension
12.00-12.15	<b>Students</b> Fran Ivan Vrban (UL FMF): Many-body effects in suspensions of deformable colloids
12.15-14.00	lunch break
14.00-14.20	<b>Highlights</b> Matej Krajnc (IJS): Wrinkling instability in unsupported epithelial sheets
14.20-14.35	<b>Students</b> Urška Andrenšek (IJS): Elasticity theory of supported epithelial tissues
14.35-14.50	<b>Students</b> Urban Železnik (IJS): Mechanics of cell aggregates as models of tumors and tumor spheroids
14.50-15.05	<b>Students</b> Lija Fajdiga (UL MF): Deformability cytometry of Jurkat cells for anti-cancer cell immunotherapy
15.05-15.20	Darin Lah (UL MF): Artificial intelligence for cell classification
15.20-15.35	<b>Students</b> Tadeja Snedec (UL MF): Transcriptomic and mechanistic analysis of effects of metformin and 2DG on anchorage-independent growth in triple negative breast cancer
15.35-15.50	<b>Students</b> Domen Vaupotič (IJS): RNA as a branched polymer

15.50-16.15	coffee break
16.15-17.00	Primož Ziherl (IJS): Delo znotraj Zakona o znanstvenoraziskovalni in inovacijski dejavnosti (ZZrID) – v slovenščini
19.00	dinner
<b>Friday June 7</b>	
9.00-9.30	<b>Nodes</b> Marko Marhl (UM): Research at University of Maribor
9.30-9.50	<b>Highlights</b> Nataša Vaupotič (UM): Ferroelectric nematic-isotropic liquid critical end point
9.50-10.10	<b>Highlights</b> Egon Pavlica (UNG): Conjugated polymer mesocrystals with structural and optoelectronic coherence and anisotropy in three dimensions
10.10-10.30	<b>Highlights</b> Mojca Mally (UL): An oomycete NLP cytolysin forms transient small pores in lipid membranes
10.30-11.00	coffee break
11.00-11.30	Anže Rapoš Božič (IJS): Open science
11.30-12.15	Saša Svetina (IJS): Two stories: About the pre-history of our program and Conformational states of oligomeric proteins
12.30	lunch

**Language:** All presentations are in English.

**Venue:** Tehnopark Celje (Gubčeva ulica 1, Celje).

**Food:** Refreshments during coffee breaks will be provided and covered by the organizer; also covered will be dinner on June 6 (Lalu Bistro, Trg celjskih knezov 3). We ask everybody to arrange lunches on June 6 and 7 by themselves.

**Lodging:** We ask everybody to make lodging arrangements by themselves. Location-wise the most convenient option is the Hotel Evropa (Krekov trg 4).