NanoPaInt: Strong nanoparticle interactions in dense suspensions
Marie Skłodowska – Curie ITN Network

Technische Universität Darmstadt | Alarich-Weiss-Str. 10 | 64289 Darmstadt

nanoPaInt (http://nanopaint-itn.eu/) **Training School**
"Fundamentals and Modelling in Colloids and Interface Science"

Darmstadt, June 20-24, 2022

Open for external participants on Monday, June 20th, and Tuesday, June 21st

Schedule

June 20 (Monday)

8:30 Registration
9:00 Introduction to nanoPaInt Research and Training program and overview of the Training School (*Gambaryan-Roisman*)
9:45 Surface tension and wetting phenomena, part 1 (*Roisman*)
10:30 Coffee break
11:00 Surface tension and wetting phenomena, part 2 (*Roisman*)
11:45 Introduction to surface forces (*Kappl*)
12:30 Lunch
13:30 Surface forces and interactions between particles (*Kappl*)
14:15 Hydrodynamics and transport processes at the interfaces (*Nepomnyashchy*)
15:00 Coffee break
15:30 Films and drops: evaporation and pattern formation (*Gambaryan-Roisman*)
16:15 Wetting agents and superspreading (*Venzmer*)
17:00 Close of first day with discussion

June 21 (Tuesday)

9:15 Metallic and metal/metal hybrid core-shell nanoparticles: synthesis, stabilization and application (*Pajor-Świerzy*, *Kamyshny*)
10:00 Passive and active drops: Stokes and beyond Stokes flow motions (*Velarde*)
11:00 Coffee break
11:30 Adsorption of surfactants and particles at interfaces (*V. Kovalchuk*)
12:15 Lunch
13:15 Dynamics of monolayers of surfactants and nanoparticles: Fundamentals and techniques (*Rubio*)
14:00 Dynamics of monolayers of surfactants and nanoparticles: Experimental results (*Rubio*)
14:45 Coffee break
15:15 Modelling the hydrodynamics of nanosuspensions: (*N. Kovalchuk*)
16:00 Nanoparticles for diagnostics of flow in microfluidics (*N. Kovalchuk*)
16:45 Close of second day with discussion

European Commission

Lecturers

Apl. Prof. Tatiana Gambaryan-Roisman	Institute of Technical Thermodynamics TU Darmstadt
Dr. Michael Kappl	Max Planck Institute for Polymer Research, Mainz
Dr. Nina Kovalchuk	School of Chemical Engineering University of Birmingham
Dr. Volodymyr I. Kovalchuk	Institute of Biocolloid Chemistry, National Academy of Sciences of Ukraine
Prof. Alexander Nepomnyashchy	Department of Mathematics Technion, Haifa
Dr. Anna Pajor-Świerzy	Soft Matter Nanostructures Instytut Katalizy I Fizykochemii Powierzchni im. J Habera PAN
Apl. Prof. Ilia Roisman	Institute for Fluid Mechanics and Aerodynamics TU Darmstadt
Prof. Ramon G. Rubio	Química Física I, Facultad de Química Instituto Pluridisciplinar Universidad Complutense de Madrid
Prof. Manuel G. Velarde	Química Física I, Facultad de Química Instituto Pluridisciplinar Universidad Complutense de Madrid
Dr. Joachim Venzmer	Evonik Operations GmbH