

Wetting Dynamics: Time schedule

Left column: room A

Right column: room B

Monday	
10:15 – 10:30	Welcome D. Vollmer
10:30 – 11:15	Wilhelm Barthlott: Biological superhydrophobic surfaces C. Tropea
11:20 – 12:30	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Soft surfaces C. Tropea</p> <p>Dufresne (virt): When contact lines disappear, wetting ridges fade away</p> <p>Pham (virt), Cai, Skabeev: Soft wetting on swollen elastomers: fluid separation and network deformation</p> <p>Wong, Hauer, Naga, Kaltbeitzel, Baumli, Berger, D’Acunzi, Vollmer, Butt : Adaptive wetting of polydimethylsiloxane</p> </div> <div style="width: 45%;"> <p>Superhydrophobicity H.-J. Butt</p> <p>Rofman (virt), Dehe, Frumkin, Hardt, Bercovici: Intermediate states of wetting on hierarchical superhydrophobic surfaces</p> <p>Milionis, Li, Yap, Poulikakos: Superhemophobic and hemostatic composites for wound healing</p> <p>Donati, Lam, Milionis, Sharma, Tripathy, Zendeli, Poulikakos: Using carbon nanofiber composites for prolonged jumping dropwise condensation performance</p> </div> </div>
12:30 – 13:30	Lunch
13:30 – 15:00	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Slippery surfaces – characteristics G. McHale</p> <p>Varanasi (virt): Controlling wetting dynamics and transport properties via engineered interfaces</p> <p>Vollmer: Lubricant impregnated surfaces – recent progress</p> <p>Wells (virt): Ledesma-Aguilar, McHale, Launay, Ruiz-Gutierrez, Orme, Armstrong, Barrio-Zhang, Guan, Kusumaatmaja, Sadullah: Droplet control on lubricant impregnated slippery surfaces</p> </div> <div style="width: 45%;"> <p>Nanostructured surfaces: heat transfer P. Stephan</p> <p>Tiwari (virt): Nanoengineering surfaces at scale for energy-water-environment-health nexus</p> <p>Ledesma-Aguilar (virt), Ewetola, Pradas: Droplet evaporation on smooth chemical patterns</p> <p>Lam, Sharma, Milionis, Eghlidi, Poulikakos: Enhanced condensate removal on hydrophobic microgrooves</p> <p>Breitenbach, Schmidt, Roisman, Tropea: Drop impact onto a hot aluminum surface, nanostructured by a femtosecond laser</p> </div> </div>
15:00 – 15:30	Coffee break
15:30 – 16:10	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Slippery surfaces – wetting ridge E. Bonaccorso</p> <p>Nath (virt), Quere: Spreading of water on a liquid-infused solid</p> <p>Lakshman (virt), Tewes, Snoeijer, Lohse: Viscous thin film deformations under bouncing drop</p> </div> <div style="width: 45%;"> <p>Spreading P. Huber</p> <p>Anritter, Gambaryan-Roisman, Stephan: Spreading of pre-heated, surfactant-laden droplets with temperature dependent viscosity on a cool substrate</p> <p>Venzmer: Superspreading – Has the mystery been unraveled?</p> </div> </div>
16:10 – 16:55	Dieter Bothe (virt): Kinematic of wetting – impact on continuum modelling and simulations E. Bonaccorso
17:00 – 18:30	Poster flash presentations and virtual and on-site poster session F. Mugele
18:30 – 19:30	Dinner
19:30 – 20:30	Poster session & virtual meetings
20:30 – 21:30	Drinks & posters & discussions
Tuesday	
9:00 – 9:45	Uwe Thiele: Gradient dynamics description for droplets of simple and complex liquids S. Aland
9:50 – 11:20	<div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>Slippery surfaces- applications J. Gutmann</p> </div> <div style="width: 45%;"> <p>Forces at 3-phase contact line S. Aland</p> </div> </div>

	<p>Vega-Sánchez, Peppou-Chapman, Zhu, Neto (virt): Drag reduction and boundary slip at silicone oil-water interfaces</p> <p>Levkin (virt): Patterned lubricant-infused surfaces: preparation and applications</p> <p>Donadei (virt), Koivuluoto, Sarlin, Vuoristo: The role of wetting on the icephobicity of thermally sprayed polymer coatings</p> <p>Bottone, Donadei, Niemelä-Anttonen, Koivuluoto, Seeger: Ice adhesion on slippery and superhydrophobic coral-like silicone nanofilament coatings</p>	<p>Oettel, Empting, Klopotek: Film growth in the lattice gas: dynamic layering transitions</p> <p>Hartmann, Thiele: Gradient dynamics for drops on polymer brushes: modeling and numerical experiments</p> <p>Sega, Giri: Generalized intrinsic maps of moving contact lines</p> <p>Kubochkin, Gambaryan: Influence of surface forces and droplet size on wetting and spreading</p>
11:20 – 11:45	Coffee break	
11:45– 12:45	<p>Impact & evaporation S. Hardt</p> <p>Antonini (virt), Blanken, Saleem, Thoraval: Impact of compound drops: the role of self-lubrication</p> <p>Diddens, Li, Segers, Wijshoff, Versluis, Lohse: Evaporating droplets on oil-wetted surfaces: Suppression of the coffee-stain effect</p>	<p>Elastic surfaces, theory G. Auernhammer</p> <p>Beck (virt), Kummer: A high order method for three-phase problems: combining contact line models and elastic solids</p> <p>Henkel, Snoeijer, Thiele: Simple gradient dynamics model for drops on elastic substrates</p> <p>Aland, Mokbel, Auerbach: Numerical simulation of wetting dynamics on viscoelastic substrates</p>
12:45 – 14:00	Lunch	
14:00 – 14:45	Gareth McKinley (virt) : Dynamic wetting recovery of plastrons and frictional drag reduction K. Harth	
14:50 – 16:10	<p>Coalescence of drop K. Harth</p> <p>Hartmann, Schür, Hardt: Electrostatic repulsion between sessile droplets on liquid infused surfaces in a homogeneous electric field</p> <p>Xie (virt), Hack, Tewes, Snoeijer, Harting: Coalescence and capillary interactions of droplets on a liquid film</p> <p>Tewes (virt), Hack, Datt, Xie, Harth, Harting, Snoeijer: Self-similar coalescence of liquid lenses</p> <p>Hartmann, Fricke (virt), Weimar, Gründing, Maric, Bothe, Hardt: Breakup dynamics of capillary bridges on hydrophobic stripes</p>	<p>Dynamic CA and adaptive wetting T. Willers</p> <p>Fernandez-Toledano, Blake, de Coninck (virt): Velocity-dependence of both real and apparent contact angles in dynamic wetting using MD</p> <p>Li, Silge, Koynov, Berger, Butt: How fast a copolymer surface adapts with water</p> <p>Schubotz, Uhlmann, Fery, Sommer, Auernhammer: Memory effects in polymer brushes showing co-nonsolvency effects</p>
16:10 – 16:30	Coffee	
16:30 – 17:10	<p>Omniphobic surfaces A. Milionis</p> <p>Golovin (virt), Khatir, Zhao: Omniphobicity on any surface</p> <p>Shabaniyan (virt), Khatir, Nisar, Golovin: Rational design of perfluorocarbon-free oleophobic textiles</p>	<p>Friction force T. Willers</p> <p>Saal, Straub, Butt, Berger: Pinning force of a droplet at defects</p> <p>Naga, Kaltbeitzel, Wong, Hauer, Butt, Vollmer: How a drop removes a particle from a surface</p>
17:10 – 18:00	Challenges in wetting: onsite and virtual + virtual meetings C. Tropea & E. Bonaccorso	
18:00 – 19:00	Dinner	
19:00 – 20:00	Evening lecture by Bjorn Stevens: D. Vollmer	
	How an understanding of water (in the atmosphere) paces understanding of climate and climate change	
20:00 – 21:30	Drinks and discussion	

Wednesday		
9:00 – 9:45	Elisabeth Charlaix (virt): Wetting/dewetting in nanopores	R. Seemann
9:50 – 10:40	Porous material R. Seemann Berg (virt) , Armstrong, McClure: Wetting dynamics in complex geometries – from a geometric function in porous media to a generalized description of wetting Rücker , Garfi, Savalusce, Krevor, Georgiadis, Luckham: Assessment of nano-scale fluid films along the rough internal surface of porous rocks using AFM	Drop manipulation: stretch + switch U. Thiele Almeida, Almeida, Zumer, Godinho (virt) : Liquid crystalline droplets as sensors for microfibers Smith-Manschott (virt) , Xu, Heyden, Bain, Dufresne, Style: Droplets wet anisotropically on soft, stretched substrates
10:40 – 11:10	Coffee	
11:10 – 12:30	Liquid flow H.-J. Butt Signorelli , Kaltbeitzel, Sharifi-Aghili, Lakshman, Baumli, Bertran, Vollmer: Stability of oil impregnated micropillar arrays under aqueous flow De Soete (virt) , Verneuil, Talini, Lequeux, Levant, Passade-Boupat: Pickering droplet flow through a constriction Gerlach (virt) , Tropea: Rivulet rise in corners, static and dynamic cases Rostami , Auernhammer: Lucas-Washburn equation applies for four phase contact point	Drop manipulation: stretch + switch I. Roisman Stieneker , Gurevich, Topp, Heuer: Dynamics of droplets on switchable prestructured substrates McHale , Edwards, Ruiz-Gutiérrez, Newton, Wells, Ledesma-Aguilar, Brown: Switchable wetting to define and control liquid shapes and instabilities Hardt , Hartmann, Schür: Surface Taylor cones Wu, Mendel, v. d. Ende, Mugele : Energy harvesting from drop impact onto pre-charged hydrophobic surfaces
12:30 – 14:00	Lunch	
14:00 – 15:50	Anisotropic liquids M. Oettel Kondic (virt) , Lam, Cummings: How defects of the director field influence instability of thin nematic films? Thijssen (virt) , Metselaar, Yeomans, Shendruk, Doostmohammadi: Control of active nematics through friction Hardoüin, Hughes (virt) , Doostmohammadi, Laurent, Lopez-Leon, Yeomans, Ignés-Mullol, Sagués: Reconfigurable flows and defect landscape of confined active nematics Orlandini (virt) , Koivuluoto, Vuoristo: Icephobic Slippery lubricant infused porous surfaces self-assembled generated by organogel composite Laroche , Bottone, Bonaccuso: Measurement of ice adhesion strength on lubricant infused surfaces by thermal contraction	High velocity T. Gambaryan-Roisman Brumm , Weber, Sauer, Dörsam: Forced dynamic wetting using gravure printing: Scaling behavior of pattern formation. Diehl , Ulbrich: Optimization of doctor blading Bruhin (virt) , Hussong, Roisman: Cavitation phenomena during liquid bridge stretching Fedorets, Dombrovsky, Bormashenko (virt) , Nosonovsky: Levitating clusters of water droplets: physics, mathematics, chemical engineering and biology
15:50	General announcements U. Thiele, D. Vollmer, C. Tropea	
16:00 – 16:30	Coffee and farewell	

Color Code:

1. Flexible, adaptive, switchable or responsive surfaces
2. Lubricant impregnated surfaces
3. Mass and heat transport, incl. evaporation
4. Multiphase flow
5. Wetting fundamentals
6. Superhydrophobicity

Poster contributions

Authors	Titel	Institution
Hegner , Wong, Vollmer	Air bubble bursting on superamphiphobic hierarchical structures	MPI for Polymer Research, Mainz
Zhao (virt) , Khandoker, Golovin	Non-fluorinated omniphobic paper with ultralow contact angle hysteresis	University of British Columbia
Khandoker , Golovin	Statistical wettability analysis of randomly textured surfaces	University of British Columbia
Jeon (virt) , Karpitschka	Liquid-liquid phase separation in contact with deformable surfaces	MPI for Dynamics and Self-Organization
Praße , Kornhuber, Voit, Weber	Influence of combined electrical and electrolytic stress on the hydrophobicity of PDMS based-model systems with tunable network structure	Hochschule Zittau/Görlitz, IPFDresden, TU Dresden
Hauer , Wong, Donadei, Kondic, Vollmer	How frost forms and grows on lubricated surfaces	MPIP, Tampere University, New Jersey Institute of Technology
Nekoonam (virt) , Mayoussi, Kick, Helmer	Functionalization of porous polymer foam fluoropor by photobleaching towards photoswitchable surfaces	Univ. of Freiburg i. Br.
Topp , Stieneker, Heuer, Gurevich	Droplets on switchable surfaces: a simulation study	WWU Münster
Laroche , Naga, Bonaccorso, Vollmer	Method for measuring droplet friction force on surfaces using a commercial goniometer	Airbus, TU Darmstadt, MPIP
Shiri , Peschka, Wagner, Seemann	Instability of interfaces in two-layer liquid polymer systems	Univ. of Saarland, Weierstrass Inst., Berlin
El-Khalil Remini , Schmeller, Peschka, Seemann, Wagner	Dewetting of viscous liquids on viscoelastic substrates	University of Saarland, Weierstrass-Inst., Berlin
Peschka (virt) , Gnann, Giacomelli, Heltai	Modeling and simulation of wetting and dewetting with dynamic contact angles	Weierstrass-Inst., Berlin, Delft Univ. of Tech., Sapienza Univ. of Rome, Scuola Inter. Superiore di Studi Avanzati, Trieste
Seiler, Rettenmaier, Roisman, Tropea	Dynamics of aerodynamically forced wetting	TU Darmstadt
Schweikert (virt) , Zimmermann, Sielaff, Stephan	On local heat transfer during forced dewetting of superheated capillary grooves	TU Darmstadt
Heinz (virt) , Stephan, Gambaryan-Roisman	Ethanol drop spreading, imbibition and evaporation on nanofiber coatings	TU Darmstadt
Gallardo , Huber	The interplay of spreading and imbibition of water droplets at nanoporous surfaces	Hamburg Univ. of Technology, DESY
Badr , Schmid	Dissipative particle dynamics simulations of wetting on polymer brushes: Determination of fundamental characteristics	Institute of Physics, Johannes Gutenberg University Mainz