

# NanoGoa

## Nanoscale Effects in Macrotribology

7-12 January 2018

# GOA

Sponsors



ETH zürich

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TRIBOLOGY  
LETTERS



Anton Paar



swissuniversities

Sunday / 07-01-2018

18:00		PRE-DINNER DRINKS
19:30		WELCOME DINNER

Monday / 08-01-2018

08:30-09:30	<b>Kathryn J. Wahl</b>	Revealing barnacle bioadhesion secrets through in situ interface science
09:30-10:00	Anand Jagota	How dislocations in shape-complementary soft interfaces control friction and adhesion
10:00-10:30	Prashant Pendyala	Correlation between adhesion and friction of nanotopographical interactions under varied physico-chemical conditions
10:30-11:00	COFFEE	
11:00-11:30	Mohammad Divandari	It's all about topology: Evolution of polymer brushes and their performance
11:30-12:00	Shivprasad Patil	Rheology of nanoconfined water using novel techniques
12:00-12:30	R. Sahli	Anisotropic contact reduction under shear in rough soft rubber interface
12:30-14:00	LUNCH	
14:00-15:00	<b>Rowena Crockett</b>	Friction and wear of kinetic art
15:00-15:30	Andrew J. Gellman	Alloy corrosion across complex composition spaces: $Al_xCr_yFe_zNi_{1-x-y-z}$ in dry and humid air
15:30-16:30	POSTER PRESENTATION / COFFEE	
16:30-17:00	Sophia A. Rodrigues	Creating polysaccharide-protein complexes to control aqueous lubrication
17:00-17:30	Kartik S. Pondicherry	Mouthfeel and tribology
17:30-18:00	Gopakumar Parameswaran	Micro topographic features in an Al-Steel tribosystem and its influence on sliding friction in an oil based lubricated sliding experiment

Tuesday/09-01-2018

08:30-09:30	<b>D. Mazuyer</b>	Microscopic and macroscopic aspects of lubrication regimes transitions
09:30-10:00	Alexander M. Smith	On the superlubricity of alkanes confined to molecular films
10:00-11:00	POSTER SESSION / COFFEE	
11:00-11:30	Kenji Sunahara	Shear behavior of engine oil additives under nanoconfinement
11:30-12:00	N. Nomedede-Martyr	Towards green lubrication: Study of tribological properties of moringa oil added with graphite as additives for lubricants
12:00-12:30	Deepak Kumar	Tribological and rheological behaviour of nano-composite grease
12:30-14:00	LUNCH	
14:00-15:00	<b>Namrata Gundiah</b>	Mechanics of cutting by insects
15:00-15:30	R. Simič	Exploring hydrogel surfaces and their mechanical properties
15:30-16:00	POSTER SESSION / COFFEE	
16:00-17:00	<b>Nitya Nand Gosvami</b>	In Situ Method for Nanoscale Tribology of Lubricated Contacts
17:00-17:30	Juliette Cayer-Barrioz	The effect of unsaturation on friction at the molecular scale
17:30-18:00	Koji Miyake	New insight on the molecular behavior at the friction interface from in-situ measurement using infrared-visible sum-frequency generation spectroscopy
18:00-18:30	P. Sudharshan Phani	Wide dynamic range 2-D nanoindentation: Friction and partial slip at contacts
19:30	BANQUET	

Wednesday/10-01-2018

08:30-09:30	<b>Srinivasan Chandrasekar</b>	Stability of surface plastic flow in sheardeformation of metals
09:30-10:00	Narayan K. Sundaram	Modeling complex plastic flows in metal tribosystem
10:00-10:30	Arkadeep Kumar	On the wear of diamond abrasives and effecton surface of silicon wafers
10:30-11:00	POSTER SESSION / COFFEE	
11:00-11:30	A. Arcifa	Adsorption of water at the SiO <sub>x</sub> / ionic liquid interface: Consequences for friction and wear.
11:30-12:00	Keiichi Narita	Applied to automobile transmission fluids
12:00-12:30	A. Dorgham	Atomic force microscopy rheological and textural mapping of P-based antiwear tribo films
12:30-14:00	LUNCH	
14:00	SOCIAL EVENT and SIGHT SEEING	

Thursday/11-01-2018

08:30-09:30	<b>Mark Robbins</b>	Elastohydrodynamic lubrication and the glass transition: Linking experiment and simulations at high rates and pressures
09:30-10:00	Meyer Ernst	Sliding of polymeric chains and graphene nanoribbons on Au(111)
10:00-11:00	POSTER SESSION / COFFEE	
11:00-11:30	Ganapathy Ayappa	Using molecular dynamics simulations to determine the presence of glassy states in confined fluids
11:30-12:00	Günther Krämer	Dynamic shear properties of ionic and nonpolar lubricants in nanometer confinement
12:00-12:30	Sylvain Hemette	Rubber-Ice friction mechanisms: Multi-physical and multi-scale approach
12:30-14:00	LUNCH	

14:00-15:00	<b>Roland Bennewitz</b>	Fingertip friction
15:00-15:30	Mark Rutland	Feeling smooth: Perception, skin tribology and chemistry
15:30-16:30	POSTER SESSION / COFFEE	
16:30-17:00	Marina Ruths	Effects of 3D surface patterning on the tribology of human stratum corneum and the topology of a polyurethane skin surface model
17:00-17:30	Anwasha Sarkar	Ultra-low friction coefficients generated using protein microgel properties

**Friday/12-01-2018**

08:30-09:30	<b>M. S. Bobji</b>	Surface texture and friction
09:30-10:00	Yasuhisa Ando	Mesoscale friction measurement of heirarchical patterns by raster scanning
10:00-10:30	Prabakaran Saravanan	Nanoscale origins to macroscale low friction of polyethylenimine / molybdenum disulphide (PEI/MoS <sub>2</sub> ) films in nitrogen environments
10:30-11:00	COFFEE	
11:00-11:30	Sean O'Shea	Flatplate AFM
11:30-12:00	H.Kawakatsu	Colour atomic force microscopy - tip and relaxation issues
12:00-12:30	Praveena Manimunda	Quantitative nanoscale friction and wear characterization: An in situ SEM and Raman spectroscopic study
12:30-14:00	LUNCH	