

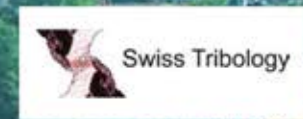
Swiss-Japanese Tribology Meeting 2014
Energy Savings through Tribology
8 – 10 September 2014
ETH Zurich, Switzerland

Program

150



Anniversary of Diplomatic Relations
between Switzerland and Japan
日本・スイス国交樹立記念



Program

The following is the program for the Swiss-Japanese Tribology Meeting, to be held in Zurich from 8th-10th September 2014.

The meeting will cover many aspects of tribology, such as determining friction on the nanoscale, surface analysis, surface modification for improved friction, and wear properties, as well as computer modelling of tribological systems. Academic and industrial researchers working in the fields of wear, friction and lubrication are welcome to participate in the meeting.

Registration and Fees

Titles for posters can be submitted until 25. August.
Registration is available via <http://www.swisstriology.ch> or directly at <http://www.swisstriology.ch/SwissJapanese2014/>

Full fees 600 SFr

Student fees 150 SFr

(Fees include the banquet for registered participants: extra tickets can be obtained for 80 SFr)

Welcome Party

A welcome party will take place in the evening of 7th September at the ETH main building Dozentenfoyer (HG).

The meeting will be held in room NO C 60, the entrance being on the Clausiusstrasse.

Organizing Committee

Dr Rowena Crockett, Empa

Prof. Nicholas D. Spencer, ETH Zurich

Prof. Ernst Meyer, University of Basel

Prof. Kazue Kurihara, Tohoku University

Prof. Shigeyuki Mori, Iwate University

Prof. Masabumi Masuko, Tokyo Institute of Technology



Sunday 7. September 19:00 Welcome Party at the ETH Zurich Main Building with registration ETH Zurich, Rämistrasse 101, 8092 Zürich		
Monday 8. September 8:30 Registration in front of room NO C 60, entrance on the Clausiusstrasse 26. 9:15 – 9:30 Welcome address Rowena Crockett, Kazue Kurihara 9:30 – 10:10 Robert I. Taylor (Shell Global Solutions UK) “ <i>Designing Lubricants for Improved Energy Efficiency AND Durability</i> ” 10:10 – 10:30 Takahisa Kato (University of Tokyo) “ <i>Development of Surface Force Analyzer of Ultra-High Accuracy</i> ” 10:30 – 11:00 Coffee Break 11:00 – 11:20 Alberto Rota (Università di Modena e Reggio Emilia) “ <i>Effect of surface nano-structuring on tribology of Si(001)</i> ” 11:20 – 11:40 Kazuyuki Yagi (Kyusyu University) “ <i>In-situ XRD Analysis of Frictional Area during Scuffing of Steel by Synchrotron</i> ” 11:40 – 12:00 Sriharitha Rowthu (Empa) “ <i>Tribological characterizations of mesoporous alumina</i> ” 12:00 – 12:20 Shigeyuki Mori (Iwate University) “ <i>In situ observation of lubricating films by micro-FTIR</i> ”	Tuesday 9. September 9:10 – 9:50 Kazue Kurihara (Tohoku University) “ <i>Resonance shear measurement (RSM) for nano-tribology</i> ” 9:50– 10:10 Ernst Meyer (University of Basel) “ <i>Mechanisms of Energy Dissipation on the Nanometer Scale</i> ” 10:10 – 10:30: Koshi Adachi (Tohoku University) “ <i>Creation of nanointerface for super-low friction</i> ” 10:30 – 11:00 Coffee Break 11:00 – 11:20 Masahiro Tosa (National Institute for Materials Science, NIMS) “ <i>Advanced Zinc Oxide Coatings with Low Friction</i> ” 11:20 – 11:40 Michel Belin (CNRS - LTDS - ECL) “ <i>Characterization of low-friction systems, using the relaxation tribometer - application to “green” lubricants</i> ” 11:40 – 12:00 Yoshitsugu Kimura (University of Tokyo) “ <i>A Revisit to the Adhesion Theory of Friction</i> ”	Wednesday 10. September 9:00 – 9:40 Bernd Gotsmann (IBM Research - Zurich) “ <i>Nanotribology: Kinetic Aspects</i> ” 9:40 – 10:00 Andrea Benassi (Empa) “ <i>Friction, dissipation and sliding motion across phase transitions</i> ” 10:00 – 10:20 Takaya Sato (Tsuruoka National College of Technology) “ <i>Novel low friction systems using ionic liquids</i> ” 10:20 – 10:50 Coffee Break 10:50 – 11:10 Christian Mathis (ETH Zurich) “ <i>Measuring solvent permeability in lubricating polymer-brush coatings</i> ” 11:10 – 11:30 Andrea Arcifa (ETH Zurich) “ <i>Influence of molecular structure and environmental conditions on the ionic liquid-mediated-lubrication of a silica / silicon tribopair</i> ” 11:30 – 11:50 Seido Yarimitsu (Kyushu University) “ <i>Evaluation of friction and wear behavior of artificial hydrogel cartilage</i> ” 11:50 – 12:10 Denis Mazuyer (Ecole Centrale de Lyon) “ <i>Role of soot aggregation on the friction of a lubricated contact</i> ” 12:10 – 12:30 Momoji Kubo (Tohoku University) “ <i>Super-Low Friction Mechanism of Diamond-Like Carbon and Its Related Materials Investigated by Quantum Chemical Molecular Dynamics Simulations</i> ”
12:20 – 14:00 Lunch	12:00 – 13:30 Lunch	12:30 – 14:00 Lunch
14:00 – 14:40 Ken Nakano (Yokohama National University) “ <i>Lubrication with Liquid Crystal: Minimization of Friction at Various Speeds Using Autonomous Control of Its Viscosity</i> ” 14:40 – 15:00 MacDonald Ofune (University of Leeds) “ <i>Tribochemistry of coatings and oil type in reduction of valve train friction and wear</i> ” 15:00 – 15:20 Masabumi Masuko (Tokyo Institute of Technology) “ <i>How the performance of lubricants would be governed by the compatibility between lubricants and surfaces</i> ” 15:20 – 15:40 Hidemitsu Furukawa (Yamagata University) “ <i>Gel Tribology for Innovation</i> ” 15:40 – 16:00 Frederik Wolf (Anton Paar Germany GmbH) “ <i>Novel approach to characterizing static friction</i> ”	13:30 – 14:10 Juliette Cayer-Barrioz (Ecole Centrale de Lyon) “ <i>How to reduce friction in EHL and mixed lubrication: the effect of surface</i> ” 14:10 – 14:30 Hiroyuki Arafune (Tsuruoka College) “ <i>Formation of low frictional sliding interface combining smooth sheets and ionic liquid polymer brushes</i> ” 14:30 – 14:50 Shoufan Cao (EPFL) “ <i>Tribocorrosion modelling in mixed lubrication regime and application to Metal-on-Metal artificial hip joints</i> ” 14:50 – 15:10 Shu Sawai (University of Tokyo) “ <i>Synthesis and tribological study on carbon nano clusters prepared by plasma ion implantation method</i> ” 15:10 – 15:30 Yoshinobu Tsujii (Kyoto University) “ <i>New Architecture of Polymer Brushes Toward Better Lubrication</i> ” 15:30 – 18:00 Poster Session	14:00 – 14:40 Ken Nakajima (Tohoku University) “ <i>Nano-palpation AFM and its application to nano-tribology on soft materials</i> ” 14:40 – 15:00 Manjesh Singh (ETH Zurich) “ <i>MD Simulation of Polymer Brushes based tribology</i> ” 15:00 – 15:20 Chiharu Tadokoro (Tokyo University of Science) “ <i>Measurement Error of Friction Coefficient Generated by Frictional Vibration</i> ” 15:20 Closing comments. Rowena Crockett, Kazue Kurihara 15:20 Transfer to Lab Tour at ETH Hönggerberg, Laboratory for Surface Science and Technology (Prof. N. D. Spencer)
Monday 8. September, 19:00 Conference Dinner in the Weisser Wind, Oberdorfstrasse 20, 8001 Zurich.		