

# POLSKI DZIEŃ MATERII MIĘKKIEJ I MIKROREOLOGII

Łódź, 19 czerwca 2017

Warsztaty reologiczne

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## Tribology on MCR Tribometers from Anton Paar

### Agenda:

09:00 – 09:30	Introduction to Tribology
09:30 – 11:00	MCR Tribometers and their advantages (Extended Stribeck Curves, Limiting Friction, Wear Tests, etc.)
11:00 – 11:15	Break
11:15 – 12:30	Application based examples
12:30 – 13:30	Lunch
13:30 – 14:30	Introduction to DMTA on MCR
14:30 – 15:00	Hands-on with Tribology and DMTA
15:00 – 15:15	Break
15:15 – 17:30	Hands-on with Tribology and DMTA

Tribology is the science dealing with interacting surfaces in relative motion. In this seminar, we will be dealing with the basics of Tribology covering the terminology, different test profiles – “extended” Stribeck curves, limiting friction, wear tests, etc. - along with some practical and application oriented examples where Tribology has been utmost useful. We will also discuss shortly about the unique possibilities the MCR Tribometer has to offer to characterize a range of tribosystems with a single setup. In the second half of this workshop, there will be a practical session wherein, the participants can get hands-on experience on the test setups.

The DMTA session will cover the basics of DMTA along with an overview of the different accessories and test methodologies. DMTA describes the mechanical properties of solids, amongst others as a function of the temperature. Since solid polymers (plastics) show a prominent loss modulus, they are of special interest for DMTA. DMTA measurements can be carried out with different types of loads. Highest sensitivity can be reached especially with torsional load. Thanks to the history in rheology, Anton Paar instruments have a very high performance in terms of small deformation and low loads. This enables a very sensitive detection of relevant parameters such as the glass transition temperatures of polymer composite materials.