Tribology and Material Mechanical Properties Characterization Workshop

June 11-12, 2026 @ Twente University, Netherlands

BRUKER

UNIVERSITY OF TWENTE.

Agenda – Thursday, 11 June at UT Horst, Collegezaal NH209

8:30 - 9:00	**Registration and Coffee**
9:00 - 9:05	**Welcome Address** *Dr. Sergey Lemeshko, Bruker Nederland*
9:05 - 9:25	**How can we face new tribology challenges? Latest developments on electrical measurements and friction materials screening tests.** *Dr. Mohamadou Diew, Bruker Tribology corporate scientist*
9:30 - 9:50	**Particle Generation in Tribological Systems** *Prof. Matthijn de Rooij, University of Twente*
09:55 -10:15	**Testing Brake Pad Performance According to the SAE J2522 on a Benchtop Tribolab** *Dr. Frank Diedering, Teijin Aramid*
10:20 -10:40	**Sandwiching Salts: A Nanocrystal Layer for Friction and Wear Control.** *Dr. Bart Weber, ARCNL*
10:40-11:10	**Coffee Break**
11:10-11:30	**Scratch resistance study on advanced coatings** *Liam Fouquet, University of Twente*
11:35 -11:55	**Thin films mechanical properties characterization with latest developments in Bruker- Hysitron nanoindenters.** *Dr. Ude Hangen, Bruker Applications Manager Europe*
12:00 -12:20	**Surface metrology on wear trucks: measurements, reporting use for modeling.** *Dr. Udo Volz, Bruker Application Engineer Europe*
12:20-13:30	**Lunch Break (to be served at lecture room)**

Participants will split into 3 teams A, B, C, each team will attend the same practical session at its time slot, so everyone will get the same information at each of stations one after another.

13:30-14:30 **1st Practical Session**

Team A: Tribology by UMT Tribolab **at lab WH111**

- *Stribeck approach on lubricated test*
- *Tribology behaviour performance using reciprocating test*
- *Scratch characterization of thin film*

Team B: Nanomechanical properties with Nanoindenter Hysitron TI Premier II **at lab WH113**

- *Quasistatic instrumental indentation for hardness and modulus test*
- *Accelerated properties mapping*
- *SPM imaging mode*
- *CMX (Continuous Measurement Test) on thin films*
- *NanoDMA capabilities, Understanding the differences between CMX and NanoDMA dynamic modes and their respective advantages*

Team C: Surface metrology with WLI profilometer ContourX-500 **in WH113**

- *Sub nanometer surface roughness and flatness to comply with ISO standards*
- *Accurate acquisition of a large area surfaces*
- *Wear track analysis, extracting important data for its application in modelling*

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14:30-14:45	**Change practical session station**
14:45-15:45	**Begin of the 2nd Practical Session**
	Team C: Tribology at lab WH111
	Team A: Nanomechanical at lab WH113
	Team B: Surface metrology at lab WH113
15:45-16:00	**Change practical session station**
16:00-17:00	**Begin of the 3rd Practical Session**
	Team B: Tribology at lab WH111
	Team C: Nanomechanical at lab WH113
	Team A: Surface metrology at lab WH113
17:00 - 18:00	**Get Together with Drinks and Snacks**

* if you are interested in particular samples using UMT Tribolab or Nanoindenter, please contact sergey.lemeshko@bruker.com in advance so we can discuss possibilities, samples prep and time slot.

UMT Tribolab
The most versatile tribology system ever designed

Hysitron TI Premier II
Flexible instrumented indenter for evolving nanomechanical testing needs

ContourX-500
Fully automated benchtop surface profilometer

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Agenda – Friday, 12 June

Practical Hands-on Training Sessions, 12 June

3 practical sessions running in parallel at different instruments located in lab and lecture room:
Attendees to select and join group at one of instruments.

9:00-12:30	**Tribology at WH111** Possibility for testing samples from attendees at specific conditions
9:00-12:30	**Nanoindentation at WH113** Possibility of testing samples from attendees at specific conditions
9:00-12:30	**Surface profilometry at WH113** Possibility of testing samples from attendees at specific conditions
12:30	**End of workshop**

Venue

University of Twente
Horst, Collegezaal NH209
Drienerlolaan 5 Enschede, The Netherlands

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The workshop is free of charge and spaces are limited, so please register to secure your place!