

# Swiss Tribology Symposium

Tuesday, August 22, 2023



# Swiss Tribology Symposium 2023

At the Swiss Tribology Symposium, experts from industry and universities will present current topics and developments in the fields of friction, lubrication and wear.

After three years, the Swiss Tribology Symposium 2023 will once again be held as an attendance event. The event offers an excellent opportunity to network with players in the field of Tribology.

## Swiss Tribology

The Swiss Tribology Association was established to serve the members and associate members who have designated their interest to the science & technology of Tribology. In Tribology, the analysis of wear, friction, lubrication phenomena and the application of such principles to mechanical design, product development, manufacturing processes & machine operation are investigated. The Swiss Tribology provides national and international forum for researchers from industry and academia to discuss the latest developments in Tribology.

Tribology covers almost every aspect of our daily lives. It is the underpinning science and technology which has the potential to impact positively on all aspects of our health, wealth and quality of life, including how we generate and conserve energy, reduce friction and wear, and preserve our environment. The purpose of Swiss Tribology is to encourage a cooperative exchange of ideas in Tribology between the industrial & academic communities, also to identify & promote opportunities for research & development in Tribology.

## IMPE Institute of Materials and Process Engineering

The IMPE Institute of Materials and Process Engineering at the ZHAW School of Engineering has extensive expertise in materials science and process engineering. Their combination enables the development of innovative materials, coatings, manufacturing methods, processes and systems. The activities of the approximately 50 employees focus on the main research & development areas:

- High performance materials
- Advanced processing and joining technologies
- Innovative surface technologies
- Sustainable process engineering

Within the research group 'Metallic Materials', the IMPE deals in particular with

- Tribology
- Process improvement
- Additive manufacturing
- Innovative welding processes
- Mechanical testing of materials
- Analysis and assessment of failure mechanisms

# Conference Programme 2023

08.30	<b>Reception, Welcome Coffee</b>
09.00	<b>Welcome and Presentation IMPE</b> Dr. Rene Radis, Head of IMPE, ZHAW School of Engineering
09.10	<b>Welcome and Opening Swiss Tribology Symposium</b> Dr. Rowena Crockett, President of Swiss Tribology
09.15	<b>In-situ Extreme Micromechanics for Tribology Applications</b> Dr. Renato Pero, Alemnis AG
09.45	<b>Upscaling of Component Performance based on Tribological Model Test Data and Software as a Service</b> Dr. Ulrike Cihak, Franz Pirker, AC <sup>2</sup> T Research
10.15	<b>Coffee Break</b>
10.45	<b>High Temperature Tribology of Inconel Alloy with B<sub>4</sub>C Reinforcement Manufactured by Plasma Arc Deposition</b> Jiri Nohava, Anton Paar TriTec SA
11.15	<b>Advanced Mechanical Characterization of Thin Films and Surfaces by Tribology and Scratch Testing Combined with 3D Profilometry</b> Philippe Kempe, Rtec-Instruments SA
11.45	<b>Lunch Break</b>
13.30	<b>Development of a Digital Twin Through Simulation of PVD/PACVD Coatings for both Dry and Lubricated Conditions</b> Dr. Emanuel Tack, Vincent Hoffmann, Nick Bierwisch Oerlikon Surface Solutions AG, TriboTechnologies GmbH, SIO
14.00	<b>Tribology in the Age of Big Data</b> Dr. Nick Garabedian, KIT Karlsruhe
14.30	<b>Coffee Break</b>
15.00	<b>Friction Management in Wheel-Rail Contact</b> Roland Müller, RAILplus AG
15.30	<b>Wear Mechanism on Components under Industrial Load Collectives</b> Christof Scherrer, ZHAW School of Engineering
16.00	<b>Apéro / Laboratory Tour</b>

**Event location** ZHAW School of Engineering  
Building TN, room TN E0.58  
Technikumstrasse 9  
8400 Winterthur

**Participation fee** incl. lunch, coffee breaks and apéro  
250 CHF Non-members of Swiss Tribology  
150 CHF University staff and members of Swiss Tribology  
50 CHF Students

**Registration and information** <https://swisstriology.ch/>  
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**Registration deadline** August 15, 2023

### Situation map

