

CRC 926 „Microscale Morphology of Component Surfaces (MICOS)“

Surfaces have a significant influence of component function and lifetime. In an interdisciplinary cooperation between mechanical engineering, process engineering as well as surface physics CRC 926 investigates the scientific fundamentals of the creation, characterization and application of component surfaces with specific functionality. The research activities are focussed on processes and methods on the microscale. The morphology of component surfaces is defined by its geometrical shape (topography) as well as its physical and chemical properties.

Project Leaders

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Registration

Please register until February 24th, 2021 at www.sfb926.de/registration
The conference is free of charge.

Contact

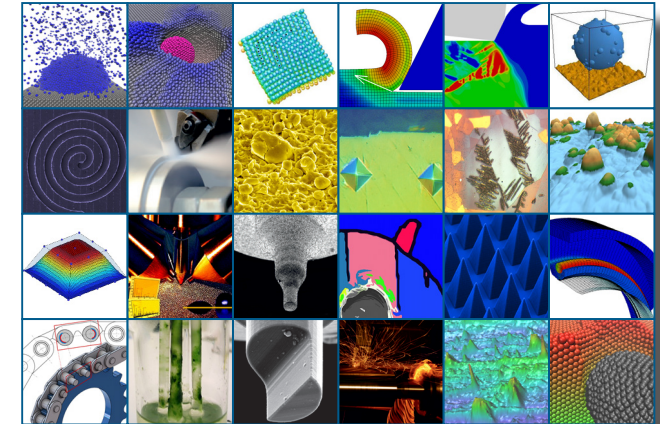
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MICOS 2021 will take place as a virtual conference. You will receive the access data by email after your registration.



International Conference on Microscale Morphology of Component Surfaces MICOS 2021

March 3-4th, 2021



Wednesday, March 3rd, 2021

10:30 H. Hasse (SFB 926)
Welcome

Session I: Microstructured surfaces in bioprocess engineering

10:40-11:30 S. Antonyuk, J. C. Aurich,
G. v. Freymann (SFB 926)
Manufacturing of micro-structured surfaces
for bioprocess engineering

11:30-12:20 C. Ziegler, R. Ulber (SFB 926)
Application of micro-structured surfaces in
bioprocess engineering

12:20-13:20 Lunch break

Session II: Wetting of component surfaces

13:20-14:10 J. M. Kolinski (EPFL, Lausanne, CH)
Air mediated contact beneath an impacting
droplet

14:10-15:00 F. Diewald (SFB 926),
K. Langenbach (Universität Innsbruck, A)
Multiscale modeling and simulation of
wetting of component surfaces

15:00-15:30 Coffee break

Session III: Particles at component surfaces

15:30-16:20 S. Luding (Universiteit Twente, NL)
About particles & molecules and their
contacts with surfaces. From micro via meso
to macro scale.

16:20-16:45 K. de Payrebrune (SFB 926)
Dynamical aspects of particles in a
tribotechnical system

16:45-17:10 C. Schönecker (SFB 926)
Flow of soft deformable particles with
surface influence

17:10-18:30 Online social event

Thursday, March 4th, 2021

Session IV: Roughness standards

08:30-09:20 R. Meeß (PTB, Braunschweig)
Manufacturing for metrology: Artefacts and
standards made in Germany's National
Metrology Institute PTB

09:20-10:10 B. Kirsch, G. v. Freymann,
J. Seewig (SFB 926)
Model-based design of areal material
measures and their manufacturing via
cutting and additive manufacturing

10:10-10:40 Coffee break

Session V: Influence of surface morphology on component fatigue

10:40-11:30 T. Niendorf (Universität Kassel)
Tailoring surface properties for
enhancement of the fatigue performance
of metals

11:30-12:20 M. Smaga (SFB 926)
Influence of surface morphology on the
fatigue behavior of metastable Fe-based
materials

12:20-13:20 Lunch break

Session VI: Influence of surface morphology on component friction and wear

13:20-14:10 M. Wöppermann
(SEW – Eurodrive, Bruchsal)
Component surfaces in practice

14:10-15:00 B. Sauer (SFB 926)
The effect of the component surface on
the function of components

15:00 Concluding remarks