



Chinese-German Workshop
Science of Wear

Tsinghua University

September 16-20, 2018

Organizers

Prof. Dr. Valentin L. Popov, Dept. of System Dynamics & Friction Physics, TU Berlin

Prof. Dr. Yonggang Meng, State Key Laboratory of Tribology, Tsinghua University

Objectives

Among the basic tribological phenomena of contact, adhesion, friction, lubrication and wear, wear remains the least scientifically understood. At the same time, wear remains one of the most important tribological phenomena in practice, affecting all aspects of our lives and current technologies. Our understanding of the fundamental processes of wear has been improving recently, due to new theoretical approaches, improved experimental techniques and rapidly growing numerical capabilities. It is felt that now it is the right time to revisit the subject of wear intensively, with a special focus on the understanding of physical mechanisms. The workshop "Science of wear" serves to survey the state-of-the-art in the field of wear research and to map out likely developments in the near future. From a technical point of view, three topics will be in the foreground:

- Interaction of plasticity and adhesion during wear
- Use of modern simulation techniques for prediction of wear
- Low wear conditions

Topics

- Interplay of adhesion and plasticity in adhesive wear
- BEM simulations of wear of heterogeneous media
- Wear of functionally graded materials
- Wear particles emission
- Fretting, fatigue, structural damping
- Molecular dynamics simulations of wear
- Wear of artificial joints and implants
- Materials for tribological applications
- Systems with minimal wear
- Third body: modeling and simulations

Call for papers

If you are interested in participation, please submit an abstract in English not later than June 30, 2018 (preferably by e-mail).

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