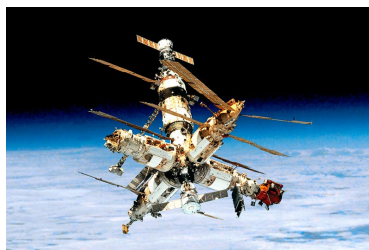


German-Russian Workshop

Tribology in aerospace applications: damping, wear and structural dynamics in aerospace systems

Technische Universität Berlin

October 6-8, 2014



Organizers

Prof. Dr. Valentin Popov, Prof. Dr. Sergey Psakhie, and A. Chernyavsky

Objectives

Dynamics and tribological problems are of high relevance for aerospace structures. As examples may be mentioned: 1) un-folding systems for antenna designs of spaceships: Drives, gears, cylindrical and ball bearing, orientation systems; 2) development of systems for solar panels for spacecraft "Progress" and modules of the International Space Station. In these systems, structural dynamics and tribological problems are closely interrelated. For the description and optimization of such systems theoretical and experimental investigations of the structural dynamics in the context of the mechanics of tribological interfaces taking into account the material behavior under high vacuum and partly even in extreme temperatures are required. The workshop will have an interdisciplinary character. Of interest are issues at the interfaces between structural dynamics, contact mechanics, material science, friction, wear, modeling and simulation. An important issue is the coupling of simulation methods of different scales.

Topics

- Materials science aspects of tribology
- Discrete element and molecular dynamics
- Method of Dimensionality Reduction
- Coupling simulation methods of different scales
- Tribology at low temperatures
- Polymer materials for friction systems in vacuum technology
- System dynamics and tribology: needs of aerospace technologies
- Further related topics

Call for papers

If you are interested in the participation, please submit an abstract in English not later than August 26, 2014 (preferably by e-mail).

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