German-Russian Workshop

Wear: physical backgrounds and numerical simulation

Technical University Berlin
5-7 April 2006

Location
The Workshop will take place at the TU Berlin, building MS, room MS 107, Einsteinufer 5, D-10587 Berlin (see attached campus plan of the Berlin Technical University).

Conference fee: participants from the industry: 100,- €, participants from universities and speaker: 50,- €, member of TU Berlin: free

Registration
Please return the registration form to the address below as soon as possible but not later than March 25, 2006 (preferably via Fax or E-mail).

Organisation & contact
Prof. Dr. Valentin Popov
TU Berlin
Institute of Mechanics
Sekr. C8-4
Str. des 17. Juni 135
D-10623 Berlin, Germany
Tel: +49 (30) 314 21 480
Fax.: +49 (30) 314 72 575
E-mail: v.popov@tu-berlin.de
http://mechanik.tu-berlin.de/popov

Preliminary program

5. April
9:00-10:00 Guided tour through the Institute of Mechanics (Building M)
10:00 - 12:00 Partial Workshops in small groups
15:00 - 16:00 Registration (Building MS)
16:00 - 18:00 Round table

6. April
8:00 - 8:50 Registration (Building MS)
8:50 - 9:00 opening: Popov V.L.

Chair: Psakhie S.G.
9:00 - 9:40 Popov V.L.
Numerical simulations of wear
TU Berlin, Germany
9:40 - 10:20 Ostermeyer G.P.
Dynamics of Friction and Wear in Contact zones
Technical University Braunschweig, Germany
10:20 - 11:00 Scherge M.
Microscopic and mesoscopic mechanisms of wear
IAVW Antriebstechnik AG, Karlsruhe, Germany
11:00 - 11:20 coffee break
<table>
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<tr>
<th>Time</th>
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| 11:20 - 12:00 | **Chair: Ostermeyer G.P.**  
**Filippov A.E., Popov V.L.**  
**Damage, ageing and wear in rubber**  
*Donetsk, National Academy of Sciences of Ukraine*  
**12:00 - 12:40**  
**Geike T., Popov V.L.,**  
**Reduced description of lubricated contacts with cavitation**  
*TU Berlin, Germany*  
**12:40 - 14:30**  
**lunch**  
**14:30 - 15:10**  
**Daves W.**  
**Modeling of the severe surface deformation produced in a rolling/sliding contact of wheels**  
*Materials Center Leoben, Montanuniversität Leoben, Austria*  
**15:10 - 15:50**  
**Müller M., Ostermeyer G.P.**  
**A 3D-Cellular Automaton simulation of mesoscopic wear mechanisms in brake systems**  
*Technical University Braunschweig, Germany*  
**15:50 - 16:30**  
**Schargott M**  
**Development of surface topography and wear: description with stochastic differential equations**  
*TU Berlin, Germany*  
**16:30 - 16:50**  
**coffee break**  
**16:50 - 17:30**  
**Vittegren V.I.**  
**Kinetics of friction and wear of polymer composites**  
*Russian Academy of Sciences, St.-Petersbourg, Russia*  
**17:30 - 18:10**  
**Dmitriev A.I., Oesterle W., Kloss H.,**  
**Computer-aided modeling of local contact situations in automotive brakes with method of movable cellular automata**  
*Russian Academy of Sciences, Tomsk, Russia; BAM Berlin, Germany*  
**7. April**  
**9:00 - 9:40**  
**Psakhie S.G.**  
**Tribological research at the Institute of Strength and Materials Science**  
*Russian Academy of Sciences, Tomsk, Russia*  
**9:40 - 10:20**  
**Herbrich U.**  
**Numerical simulations of chemical-mechanical polishing (CMP)**  
*TU Berlin*  
**10:20 - 11:00**  
**Urbakh M.**  
**Wear on atomic and nanoscale**  
*Tel Aviv University, Israel*  
**11:00 - 11:20**  
**coffee break**  
**11:20 - 12:00**  
**Chair: Urbakh M.**  
**Ostermeyer G.-P.**  
**Simulations of friction and wear with method of meso particles**  
*Braunschweig University, Germany*  
**12:00 - 12:40**  
**Kulkov S.N.**  
**Wear and friction of transformation-toughened CMC and MMC**  
*Russian Academy of Sciences, Tomsk, Russia*
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<th>Institution</th>
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<tr>
<td>12:40 - 14:30</td>
<td>lunch</td>
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<td>14:30 - 15:10</td>
<td>Chair: Schargott M.</td>
<td>Lazarev V.E.</td>
<td>South Ural State University, Chelyabinsk, Russia</td>
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<td>Thermal simulation of rough tribocontacts</td>
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<td>15:10 - 15:50</td>
<td>Heiß M.</td>
<td>Hierarchical lattice models</td>
<td>TU Berlin, Germany</td>
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<td>16:10 - 16:50</td>
<td>Chair: Urbakh M.</td>
<td>Shilko E.</td>
<td>Russian Academy of Sciences, Tomsk, Russia</td>
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<td>Simulation of wear in rubber with the method of movable cellular automata</td>
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<td>16:50 - 17:10</td>
<td>Putzar G.</td>
<td>Tribospectroscopical studies of friction procesces</td>
<td>TU Berlin, Germany</td>
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<td>17:10 - 17:20</td>
<td>Closing</td>
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Registration Form

German-Russian Workshop

Wear: physical backgrounds and numerical simulation

Technical University Berlin

5-7 April 2006

First Name _______________________________________________________________________________

Middle Name _____________________________________________________________________________

Last Name _______________________________________________________________________________

Title  ☐ Prof.  ☐ Dr.  ☐ Mr.  ☐ Ms.

Position _________________________________________________________________________________

Organization _____________________________________________________________________________

Country _________________________________________________________________________________

City ___________________________________Postal code________________________________________

Mail Address _____________________________________________________________________________

Telephone ________________________________Fax ____________________________________________

E-mail ___________________________________________________________________________________

I plan to participate at:
✓ Round table on 05.04.06  ☐ Sessions on 06.04.05  ☐ Sessions on 07.04.06  ☐ Guided tour through the Institute of Mechanics on 05.04.06

Conference fee:

- participants from the industry: 100,- €
- participants from universities and speaker: 50,- €
- member of TU Berlin: free

☐ I will transfer the conference fee to the account:  ☐ I will pay the conference fee on registration

V. Popov, Sonderkonto/Sondermittel
Postbank Berlin
BLZ: 100 100 10
Kontonummer: 823 570 104

IBAN: DE 66 1001 0010 0823 5701 04
SWIFT-Code (BIC): PBNKDEFF100
Workshop Wear
MS 107
Prof. Wear M 122
The Way to the Institute of Mechanics

By Air

- International Airport Berlin-Tegel
  - By taxi (approx. 15 min.);
  - By Airport-Express-Bus Transfer-Line X9 (approx. 25 min.) or
    by City-bus Line 109 (approx. 45 min.) to the stop
    "Zoologischer Garten" and then as described from train station
    "Berlin-Zoo" to the IfM.
- International Airport Berlin-Schönefeld
  - By taxi (approx. 45 min.);
  - By Airport-Express-Train (approx. 35 min.) or Regional-Express-
    Train (approx. 40 min.) to the stop "Zoologischer Garten" and
    then as described from train station "Berlin-Zoo" to the IfM.
  - By S-Bahn Line S9 (approx. 60 min.) to the stop "Zoologischer
    Garten" and then as described from train station "Berlin-Zoo" to
    the IfM.
- International Airport Berlin-Tempelhof
  - By taxi (approx. 30 min.);
  - By Underground Line U6 and Line U2 (approx. 45 min.) to the
    stop "Zoologischer Garten" and then as described from train
    station "Berlin-Zoo" to the IfM.

By Train

- Train Station "Berlin-Zoo"
  - By taxi (approx. 10 min.);
  - On foot (approx. 10 min.) via Jebensstraße, Hertzallee,
    crossing the Fasanenstrasse and entering the campus, then
    turn right to the building "Gebäude M".

By Car

- From the direction of Hannover, Leipzig, Nürnberg:
  - take the motorway A115 (Avus) to Charlottenburg A100, exit
    "Spandauer Damm", turn right into and follow "Otto-Suhr-Allee"
    until you reach the circle "Ernst-Reuther Platz", take the third
    exit "Straße des 17. Juni", keep straight right to enter the
    campus.
- From Northern Europe, direction Hamburg, Rostock:
  - take the motorway A111 to Charlottenburg A100, exit
    "Spandauer Damm", turn left into and follow "Otto-Suhr-Allee"
    until you reach the circle "Ernst-Reuther Platz", take the third
    exit "Straße des 17. Juni", keep straight right to enter the
    campus.