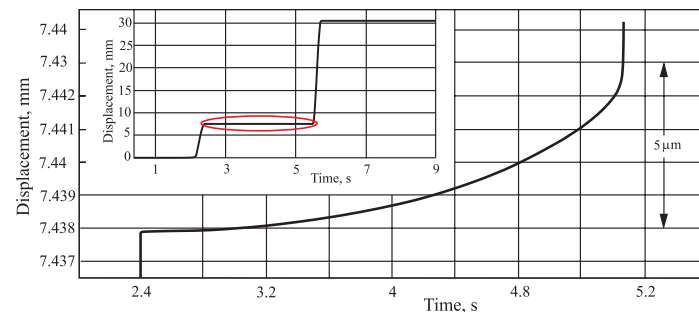




## German-Russian Workshop Precursors of tribological instabilities and earthquakes prediction

Berlin University of Technology

01. - 04. November 2010



### Organization & contact

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## 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).

## Preliminary Program

### November 1st

15:00 - 16:00 Registration

16.00 – 17.00 Round Table

### November 2nd

8:30 - 9:00 Registration

9:00 - 9:10 Opening: *Popov V.L.*

*Chair: Rosenau M.*

9:10 - 9:30 Popov V.L.

**Earthquakes and friction**

*Institute of Mechanics, TU Berlin, Germany*

9:30 - 10:10 Grzemba B., Popov V., Starcevic J., Dmitriev A., Shilko E., Cagtay F.

**Accelerating creep as a precursor of stick-slip-instabilities and the problem of prediction of earthquakes**

*Institute of Mechanics, TU Berlin, Germany*

10:10 - 10:30 coffee break

*Chair: Popov V.L.*

10:30 - 11:10 Rosenau M., Oncken O.

**Earthquake potential of creeping faults: Inferences from laboratory-scale fault models**

*Deutsches GeoForschungsZentrum, Potsdam, Germany*

11:10 - 11:50 Ostermeyer G.-P.

**Acoustic emission preceding a stick-slip-instability**

*Technical University Braunschweig, Germany*

11:50-12:00 photo

12:00 - 13:30 lunch

*Chair: Kocharyan G.*

13:30 – 14:10 Miller S.

**Identification of the high pressure fluid source driving the L'aquila earthquake sequence**

*Geodynamics, University of Bonn, Germany*

14:10 – 14:50 Hatano T., Narteau C., Shebalin P.

**Avalanche statistics in athermal particulate systems under shear**

*University of Tokyo, Japan*

14:50 – 15:30 Zschau J.

**Earthquake Early Warning Systems**

*Deutsches GeoForschungsZentrum, Potsdam, Germany*

15:30 – 15:50 coffee break

*Chair: Miller S.*

15:50 – 16:30 Kocharyan G.G., Pavlov D.V.

**Instability Triggering due to Low Amplitude Seismic Loads**

*Institute for Dynamics of Geospheres, Russian Academy of Sciences Moscow, Russia*

16:30 - 17:10 Okunev V., Zeigarnik V., Novikov V., Klyuchkin V.

**Stick-Slip Behavior of Simulated Fault Gouge Under Electromagnetic and Dynamic Impacts at the Spring-Block Facility**

*Institute for Dynamics of Geospheres, Russian Academy of Sciences Moscow, Russia*

17:10 - 17:50 Psakhie S., Dobretsov N.L., Ruzhich V.V., Popov V.L., Shil'ko E.V., Granin N.G., Timofeev V.Yu., Astafurov S.V., Dimaki A.V., Starchevich Ya.  
**Ice cover of Lake Baikal as a model for studying tectonic processes in the Earth's crust**  
*Institute of Strength Physics and Material Science, Russian Academy of Sciences Tomsk, Russia*

### **November 3rd**

8:30 - 9:00 Registration  
*Chair: Filippov A.*

9:00 - 9:40 Sobolev S.V.  
**Role of geological time-scale friction softening in plate tectonics**  
*Deutsches GeoForschungsZentrum, Potsdam, Germany*

9:40 - 10:20 Filippov A.E., Popov V.L., Psakhie S.G.  
**Correlated impacts vs. dynamic chaos, or provoking of the earthquakes instead of their prediction**  
*Donetsk, National Academy of Sciences of Ukraine*

10:20 - 10:40 coffee break  
*Chair: Sobolev S.V..*

10:40 - 11:20 Dimaki A., Shilko E.V., Astafurov S.V., Psakhie S.G.  
**Experimental study of seismic noise on the ice cover of Baikal Lake, the interconnection between seismic noises and dynamic motions of ice plates**  
*Institute of Strength Physics and Material Science, Russian Academy of Sciences Tomsk, Russia*

11:20 - 12:00 Shalapko Yu.  
**Instability of the nominally fixed frictional contact - the identification of the dynamic stick-slip regime**  
*National Academy of Sciences of Ukraine*

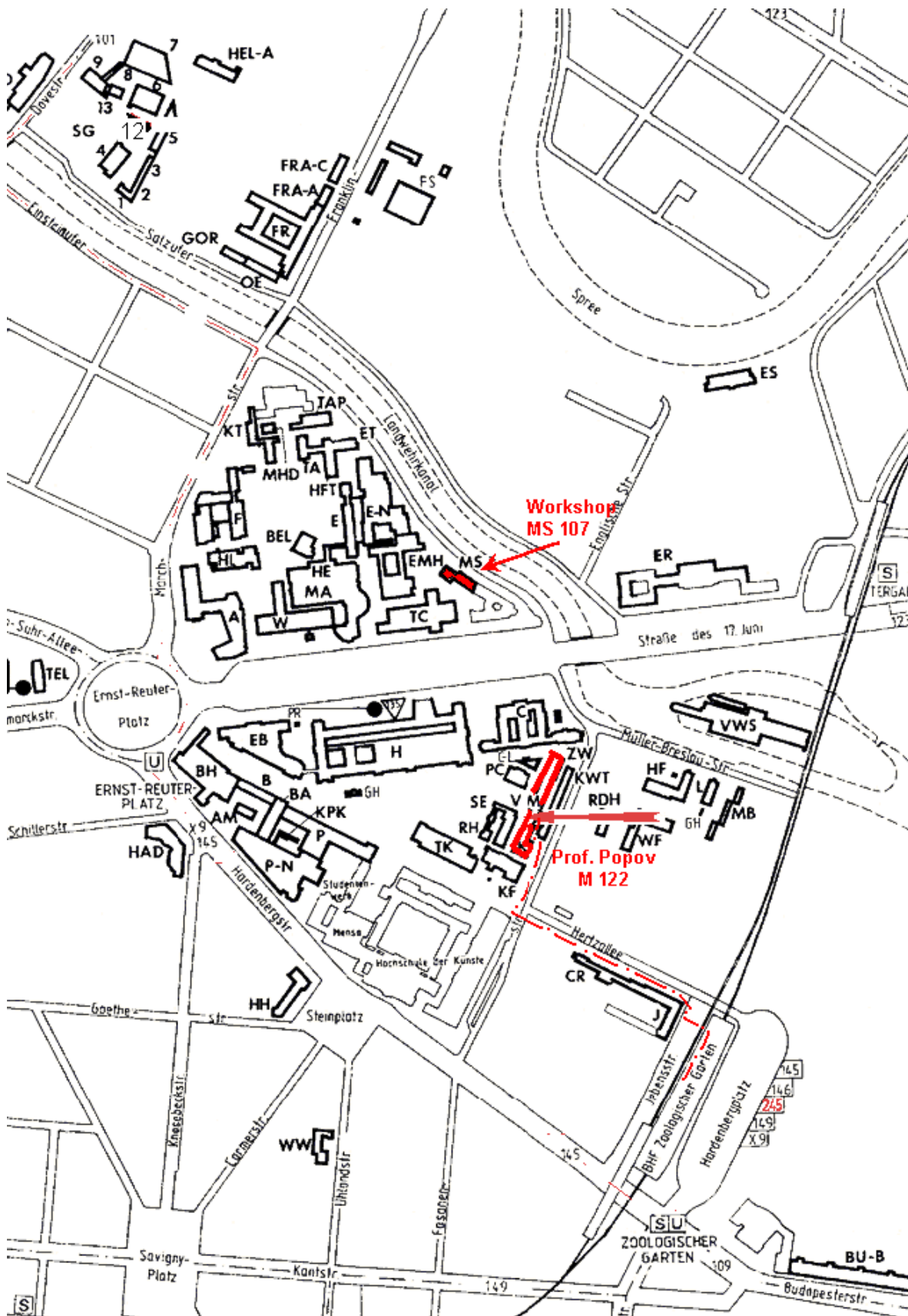
12:00 - 12:40 Vysotsky. E.  
**Geological setting of the 2003 Ms=7.5 Chuya earthquake and co-seismic deformations, Gorny Altai**  
*Russian Academy of Sciences, Novosibirsk, Russia*

12:40 - 12:50 Closing

12:50 - 14:30 lunch

14:30 - 15:30 Guided tour through the Institute of Mechanics

# Campus of the Technical University Berlin



## 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 AirportExpress-Train (approx. 35 min.) or RegionalExpress-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.