Materials Mechanics Seminar
Summer term 2018: 18th – 22nd June
MPA/IMWF, Pfaffenwaldring 32, 70569 Stuttgart
(MPA HH, 3rd Floor, Room 3.003/3.004)

Monday, 18th June

Chair: Prof. V. Petrova
09:00 - 09:30  Prof. S. Schmauder, Opening remarks
09:30 - 10:00  Mr. K. L. Häußler, Can particular taper parameters influence hip stem taper wear and corrosion?
10:00 - 10:30  Mr. K. Hoes, Virtual Material Tests – Simulation of Filter Media on the Fiber Level
10:30 - 10:50  Coffee break
Chair: Mr. M. Hummel
10:50 - 11:20  Prof. V. Petrova, Thermal fracture of functionally graded materials: a semi-analytical model in application to thermal barrier coatings
11:20 - 11:50  Mr. D. Beinke, Atom probe reconstruction with a locally varying emitter shape
11:50 - 12:30  Open discussion

Tuesday, 19th June

Chair: Dr. P. Weidmann
13:30 - 14:00  Dr. G. Lasko, Simulations of crack propagation in ZrO2-ceramics
14:00 - 14:30  Dr. Y. Schneider, Micro-Meso Morphological Features and Applied Theories for Improved Two-Scale FE Numerical Predictions
14:30 - 15:00  Mr. V. Gusk, Microstructural Investigation of Plasma Sprayed Ceramic Coatings with Peridynamics
15:00 - 15:20  Coffee break
Chair: Dr. P. Binkele
15:20 - 15:50  Ms T. Eisele, Zerstörungsfreie Detektion von oberflächennahen Fehlern in Flachstahlerzeugnissen
15:50 - 16:10  Mr. C. Kohler, TBA
16:10 - 16:40  Mr. Y. Maniar, Molecular dynamics simulations of visco-hardening in beta-tin
16:40 - 17:40  Open discussion

Wednesday, 20th June

Chair: Dr. Y. Schneider
09:00 - 09:30  Mr. S. Kliper, Functional Nanostructured Metal Oxide Hybrid Materials Based on M13 Phages - A Bioinspired Approach
09:30 - 10:00  Mr. M. Salman, Multiscale modelling of nano-clay filled shape memory polymer foams
10:00 - 10:30  Mr. M. Mikota, Numerical determination of morphology/property correlations of polymer blends
10:30 - 10:50  Coffee break
Chair: Mr. S. Sajadi
10:50 - 11:20  Dr. H. Lip, Atomistic simulations of copper based alloys (1,2)
11:20 - 11:50  Dr. S. Hocke, Atomistic simulations of copper based alloys (1,2)
11:50 - 12:00  Ms. M. Korobeynikova, Simulation of CTOD-test for steel plate
12:00 - 13:30  Open discussion

Friday, 22nd June

Chair: Mr. V. Gusk
09:00 - 09:30  Mr. W. Verestek, Towards atomistic potentials for Ni-based superalloys
09:30 - 10:00  Dr. P. Binkele, Simulation of hydrogen in metals
10:00 - 10:30  Mr. M. Hummel, MD simulations on elastic and plastic deformations of aluminum alloys
10:30 - 10:50  Coffee break
Chair: Dr. G. Lasko
10:50 - 11:20  Mr. T. Willerding, Multiscale simulation and phase change
11:20 - 11:50  Dr. P. Weidmann, Residual Stress Determination
11:50 - 12:20  Mr. I. Schäfer, Simulation of bioinspired materials
12:20 - 13:30  Lunch break
Chair: Ms. M. Korobeynikova
13:30 - 14:00  Mr. S. Sajadi, Selective laser melting of lightweight materials
14:00 - 14:30  Mr. D. Rapp, Dislocation interaction with various defects
14:30 - 15:00  Ms. J. Song, TBA
15:00 - 15:20  Coffee Break
Chair: Mr. W. Verestek
15:20 - 15:50  Dr. A. Mora, TBA
15:50 - 17:30  Open discussion

All interested people are invited  gez.: Prof. S. Schmauder, 25th May 2018