

Workshop about "Recent Trends in Advanced Microstructure Characterization"

April 3rd - 5th

PROGRAM

Venue: Saarland University, Computer Linguistic, Building C 7.4

Sunday, April 2nd

12:00 - 17:00 Social program - Lunch and visit of the Saarschleife natural wonder with its treetop walk and view tower (<http://www.baumwipfelpfad-saarschleife.de/saarschleife-en/>) - Meeting Point for departure: Hotel Motel One / Hotel Leidinger at 12:00

Monday, April 3rd

Topic A: **High throughput and in situ microstructure characterization**
(Chairman Frank Mücklich)

- 13:00 Prof. Dr. Frank Mücklich (Saarland University)
"How to understand 3D-Microstructures in the Micro, Nano and Atomic Scale"
- 13:45 Dr. Simon Zabler (Fraunhofer IIS, Julius-Maximilians-University Würzburg)
"Current and future trends in industrial CT: Towards high-throughput volume analysis of automotive parts"
- 14:30 Coffe Break
- 15:00 Prof. Dr. Christian Motz (Saarland University)
"New insights into plasticity and damage evolution of materials by micro-mechanical testing"
- 15:45 Prof. Dr. Guillermo Requena (German Aerospace Center - RWTH Aachen)
"Exploiting volumetric characterization techniques to re-design Ti-based alloys by additive manufacturing"
- 16:30 End

Tuesday April 4th

Topic B: **Phase transformation - plastic deformation - orientation contrast microscopy**
(Chairman Christian Motz)

- 09:15 Dr. Lionel Germain (Laboratoire the D'Étude des Microstructures et de Mécanique des Matériaux, University of Lorraine)
"Advanced tools to characterize phase transformations"
- 10:00 Dr. Tim Dahmen (German Research Center for Artificial Intelligence)
- 10:45 Coffee break

11:15 Prof. Dr. Peter Felfer (Friedrich-Alexander-Universität Erlangen-Nürnberg)
“Atom probe tomography of nano materials. Status and current developments”

12:00 Lunch Break

13:00 - 16:00 Visits to Institutes at Saarbrücker Campus

Slot 1: DFKI: 13:00 - 15:00 - H. Leonhard / INM: 13:30 - 15:00 - M. Quilitz

Slot 2: IZfP: 15:00 - 16:00 - H.-G. Herrmann / INM: 15:00 - 16:30 - M. Quilitz

16:30 Visit MECS and Pizza/Bier night

Wednesday April 5th

Topic C: **High resolution multiscale microstructure characterization**

(Chairman Guillermo Requena)

09:15 Dr. Stefan Zaeferrer (Max Planck-Institut für Eisenforschung)
„Measurement and observation of elastic stresses and plastic strain phenomena at a local scale using SEM-based diffraction techniques”

10:00 Dr. Timothy Burnett (The University of Manchester)
„Multiscale 3D microstructure analysis through correlation of X-ray computed tomography and focussed ion beam serial sectioning“

10:45 Coffee Break

11:15 Dr. Stephanie Bruyere (Institut Jean Lamoure, University of Lorraine)
„TEM investigations on VO₂ nanolayer for thermal solar cells“

12:00 Lunch break

13:00 Departure to Iron-Works Dillinger Hütte. Meeting Point: Bus Stop Uni-Campus at Saarland University

14:00 Visit of Iron-Works Dillinger Hütte

18:00 Dinner at Gästehaus of Dillinger Hütte