

Workshop “Microstructural Characterization and Quality Assurance”

Hosts:

Prof. Dr.-Ing. Frank Mücklich

(Saarland University, Steinbeis Material Engineering Center Saarland)

and

Prof. Dr.-Ing. Hans-Georg Herrmann

Prof. Dr.-Ing. Bernd Valeske

(Fraunhofer Institute for Nondestructive Testing)

Saarland University, Campus Saarbrücken
3rd April 2014, 13:00 – 18:30, **Building D3.3**

4th April 2014, 09:00 – 13:00, **Fraunhofer IZFP**

We are happy to welcome you to our workshop “**Microstructural Characterization and Quality Assurance**”, bringing together **researchers, enterprises and experts** from the *Greater Region*.

The **two-day workshop** will take place on 3rd and 4th April 2014. The **workshop language** will be **English**.

DRAFT AGENDA

Thursday
03/04/2014
13:00 – 13:15

Microstructural Characterization (Building D3.3)

- Welcome **Prof. Dr. Uwe Hartmann** (Vice-president for European and international affairs, Saarland University)
- Welcome, context and objectives of the meeting
Prof. Dr.-Ing. Frank Mücklich (Saarland University & Material Engineering Center Saarland)
Prof. Dr.-Ing. Bernd Valeske & Prof. Dr. Hans-Georg Herrmann (Fraunhofer Institute for Nondestructive Testing)

13:15 – 14:30

Presentations:

- *3D Microstructure Analysis on the Micro, Nano and Atomic*

Scale

(Prof. Dr.-Ing. Frank Mücklich, Saarland University & Material Engineering Center Saarland)

- *Advances in SIMS Technology at the Nanometer Scale: Recent Developments, Future Trends and Correlative Microscopy* (Dr. Tom Wirtz, The Centre de Recherche Public - Gabriel Lippmann)
- *Morphologies, crystallographic structures and electronic structures of oxides nanolayers investigated by TEM and EELS* (Dr. Stéphanie Bruyere, University of Lorraine)

14:30 – 14:45

- Coffee break -

14:45 – 16:30

Presentations:

- *Characterization of heterogeneous fiber and foam structures regarding fluid permeation by means of 3D microtomography* (Dr.-Ing. Kilian Schmidt/M. Sc. Albert Hellmann/ Prof. Dr.-Ing. Siegfried Ripperger, TU Kaiserslautern)
- *Accurate 3D microstructure characterisation of porous materials by X-ray microtomography: a need for advanced and specialised image processing tools* (Dr. Erwan Plougonven, Prof. Dr. Dominique Toye, Prof. Dr. Ir. Angélique Léonard, University of Liège)
- *3D material characterization with sub-nm resolution using atom probe tomography* (Hisham Aboulfadl, Prof. Dr.-Ing. Frank Mücklich, Saarland University)
- *Application of Surface and Thin Film Analytical Techniques to Material Problems in a Service Laboratory* (Prof. Dr. Michael Kopnarski, Institute for Surface and Thin Film Analysis (IFOS), Kaiserslautern)

16:30 – 17:00

- Coffee break -

17:00 – 18:30

LabTalk at the Chair of Functional Materials at Saarland University:

- Metallographic Serial Sectioning
- Focused Ion Beam Tomography
- Atom Probe Tomography

19:00 – 22:00

Workshop dinner and discussion on possible common projects
(Stiefelbräu, Am Stiefel 2, St. Johanner Markt 66111 Saarbrücken)

Friday
04/04/2014
09:00 – 09:15

Nondestructive Testing (Fraunhofer IZFP)

Welcome **Prof. Dr.-Ing. Bernd Valeske**
(Fraunhofer Institute for Nondestructive Testing)

09:15 – 11:00

Presentations on State-of-the-Art NDT:

- *Advanced NDT Applications for Quality Control in the Life Cycle of Automotive Components*
(Prof. Dr. Bernd Valeske, Fraunhofer IZFP)
- *Nondestructive Testing and Evaluation for Characterization of Materials*
(Dr. Jochen Kurz, Fraunhofer IZFP)
- *Ultrasonic Testing for Nondestructive Characterization of Adhesive Bondings*
(PD Dr.-Ing. Ute Rabe, Fraunhofer IZFP)
- *Simulation-Based Ultrasonic Inspection of Complex Materials and Components*
(PD Dr. Martin Spies/Dipl.-Ing. Hans Rieder/M.Sc. Alexander Dillhöfer, Fraunhofer ITWM, Kaiserslautern)

11:00 – 11:30

- **Coffee break** -

11:30 – 13:00

LabTalk at the Fraunhofer Institute for Nondestructive Testing
Discussion on possible common projects
Conclusion and next steps

Since the number of participants is limited, we kindly ask you to **register** here (<http://www.uni-kl.de/universitaet/verwaltung/eu-referat/uni-gr/workshop/registration/>) for this free workshop until **27/03/2014**

Please do not hesitate to contact us by e-mail, if you have any further questions:
a.floren@con.uni-saarland.de.

The workshop belongs to a series of workshops organized by the “**University of the Greater Region – UniGR**” in cooperation with the Interreg IVA-Project “**intermatGR**”. Additional information about UniGR is available on www.uni-gr.eu or by contacting your local UniGR Officer at Saarland University (n.ickert@ugr.uni-saarland.de), University of Liège (c.lebaron@ulg.ac.be), University of Luxembourg (kristina.hondrila@uni.lu), University of Lorraine (charlotte.tavernier@univ-lorraine.fr), University of Kaiserslautern (florian-daniel.weber@verw.uni-kl.de) or Trier University (vieten@uni-trier.de). For more information about intermatGR please visit our web page: <http://intermat-gr.eu/>.