

Registration

Herewith I register for the Dresden Airport Seminar, November 5-6, 2008. As a registered participant I may present a poster.

Fees have to be paid via bank transfer on invoice (check below):

- 400.00 € (2 day participation, incl. evening at the Dresden Transport Museum)
- 250.00 € (1 day participation, November 5, incl. evening at the Dresden Transport Museum)
- 250.00 € (1 day participation, November 6)
- 150.00 € discount on prices above. I am member of DGZfP Technical Committee Structural Health Monitoring, resp. NDT in Aviation.
- I intend to present a poster.

My requested participation in the accompanying exhibition is subject to final confirmation (check below).

- 300.00 € (confirmed exhibit)

I accept that there will be no refunds for cancellation received after October 25, 2008..

Name:
First Name / Title:
Phone: Fax:
E-mail:
Company / Institution:
Street / PO Box:
Postcode / City:
Country:

Date: Signature:

Please return to: Ms. Martina Reich, Fraunhofer IZFP Dresden, Maria-Reiche-Strasse 2, D-01109 Dresden, martina.reich@izfp-d.fraunhofer.de
Phone: +49 (0) 3 51 / 8 88 15-505, Fax: +49 (0) 3 51 / 8 88 15-509

Hotel accommodations will be available in several price categories.

Accompanying Events and Additional Program

Meetings of DGZfP Technical Committees for Structural Health Monitoring and NDT in Aviation will take place on November 4, 2008, by invitation only.

November 4 Einstein on Tour

Prof. Hanns Ruder (TU Tübingen) visualizes amazing effects from Einstein's world of relativity. How will it look when you travel at the speed of light? Come to this evening get-together at Fraunhofer IZFP Dresden and see! Einstein himself never had such an opportunity. Social hour 5 pm, beginning **6 pm**.

November 5 An Evening at the Dresden Transport Museum (Johanneum)

Mr. Goetz-Ulrich Penzel and Mr. Jochen Werner present the Dresden Transport Museum and speak about "The History and Development of the Aircraft Industry in Saxony." Beginning **6 pm**, conference bus available. For more details please check:

<http://www.verkehrsmuseum-dresden.de>

Conference Location

The seminar will take place on platform two of Dresden Airport terminal, conference center salons Zeppelin and Pegasus. For more details please check:

http://www.dresden-airport.de/en/unser_service/konferenz.html

Fraunhofer IZFP Dresden and DGZfP
present

4th Dresden Airport Seminar

- Final Program -

Structural Health Monitoring (SHM) and its Resources



November 5-6, 2008
Airport Dresden International



Dresden Invites the SHM Community

Sky rocketing prices for energy and raw materials are a clear indication of the limited resources available on our planet. The engineering community has to respond by applying new materials, such as carbon fiber composites, and the enhanced utilization of these rare resources. New design concepts such as the damage tolerance concept are a must. However, saving resources will require continued use of an aging infrastructure, as well.

New maintenance concepts are key factors to guarantee the safety and reliability of our infrastructure in the future. This implies advanced NDE technologies, structural health monitoring by structure integrated wireless sensor networks, and highly reliable electronics. The Dresden Airport Seminar is a platform to discuss the challenging aspects of our future with world leading scientists.

You are invited to attend a series of selected keynote presentations at the Dresden Airport Terminal, to present new technical solutions at the exposition, or to present a poster.

Norbert Meyendorf

Professor, University of Dayton & Technische Universität Dresden, Head of Dresden branch of the Fraunhofer Institute for Non-Destructive Testing IZFP

Program Committee

B. Köhler (Chair; Fraunhofer IZFP-D), W. Göhler (HTS Coswig), W. Hanel (IMA Dresden), W. Hufenbach (TU Dresden), F. Kretzschmar (DGZfP), E. Lindgreen (Air Force Research Lab), N. Meyendorf (Fraunhofer IZFP-D, Head DGZfP TC SHM), E. Schneider (Fraunhofer IZFP, Deputy Head DGZfP NDT in Aviation), H. Speckmann (Airbus), P. Wilcox (University Bristol), Klaus-Jürgen Wolter (TU Dresden), Bernd Michel (Fraunhofer IZM), Peter Cawley (Imperial College)

Keynote Speakers

The organizers appreciate confirmation by the following renowned scientists:

November 5

SHM und NDT for Aircraft

9 AM – 5 PM

- 09:00 Norbert Meyendorf**
Opening
- 09:15 Jan Achenbach**, Professor, Center for Quality Engineering & Failure Prevention, Northwestern University Evanston, Illinois
From NDE with a Q to SHM and Beyond
- 10:00 Victor Giurgiutiu**, Professor in Mechanical Engineering, University of South Carolina, Air Force Office of Scientific Research, Structural Mechanics Program, Arlington
Structural Health Monitoring and NDE - an Air Force Office of Scientific Research Structural Mechanics Perspective
- 10:45 Coffee break
- 11:30 Tony Dunhill**, Company Associate Fellow NDE, Rolls-Royce
NDT for Aerospace Applications: from Dip and Splash to Computer Tomography
- 12:15 Poster session**, incl. invited Marcos Tadeu Pereira, Institute for Technological Research of the State of Sao Paulo, *Laboratory for Testing of New Materials in Aeronautical Structures*
- 13:15 Lunch
- 14:15 Ulrich Berger**, IABG mbH Ottobrunn
Onboard - Structural Health Monitoring using Fibre Optical Sensors and LAMB Waves
- 15:00 Sridhar Krishnaswamy**, Professor, Center for Quality Engineering & Failure Prevention, Northwestern University Evanston, Illinois
Ultrasonic Methods for Intelligent Structural Health Management
- 15:45 Coffee break
- 16:15 Christian Boller**, Director of the Fraunhofer Institute for Non-Destructive Testing Saarbrücken & Dresden, Professor in Non-Destructive Materials Testing and Quality Assurance, Universität des Saarlandes
Structural Health Monitoring in Riveted Lap Joints - A Simple Structure with Significant Challenges

November 6

Reliable Electronics for Aviation

9 AM – 5 PM

- 09:00 Michael Pecht**, Professor in Applied Mathematics, University of Maryland, CALCE Electronic Products and Systems Center
Health Management and Prognostics
- 09:45 Chris Bailey**, Professor, Director of the Computational Mechanics and Reliability Group, University of Greenwich, Old Royal Naval College, School of Computing and Mathematical Sciences
Structural Health Monitoring of Power Electronic Modules in Aviation Systems
- 10:30 Coffee break
- 11:15 Toni Mattila**, Laboratory of Electronics Production Technology, Helsinki University of Technology
Vibration Test of Electronic Packaging – The Effect of Test Temperature on Reliability
- 12:00 Poster session**, incl. final public meeting of Inspect Inline, a project funded by the German Federal Ministry of Education and Research
- 13:00 Lunch
- 14:15 Hans-Jürgen Albrecht**, Professor, Siemens AG, Corporate Technology, Packaging & Assembly, Berlin
Stress Identification in Packages and Consequences Related to the Board Level Reliability
- 15:00 Rainer Dudek**, Fraunhofer Institute for Reliability and Microintegration, Micro Materials Center Chemnitz
Ensuring Thermo-Mechanical Reliability on Micro Scale by Experimentally Assisted Finite Element Analyses
- 15:45 Coffee break
- 16:15 Klaus-Jürgen Wolter**, Professor, Technische Universität Dresden, Electronics Packaging Laboratory
Design for Reliability of Sensor Packages for Structural Health Monitoring

Abstracts will be published in advance under:
<http://www.izfp-d.fraunhofer.de/english/>