Program

1st International Symposium Materials Science and Technology of Additive Manufacturing

MSTAM

DAY 1

12:00 - 13:00	Registration and Lunch
Tuesday *05/27*	**Opening and Keynote Lectures** *Chairman: Volker Thum, Airbus Bremen, Germany*
13:00 - 13:20	Welcome and Introduction: Potentials of Bremen as a R&D-site for Additive Manufacturing *Prof. Dr. Vasily Ploshikhin, Airbus endowed chair ISEMP, University of Bremen, Germany*
13:20 - 13:45	**Keynote:** On the way to Additive Layer Manufacturing: Chances and challenges for the future industrial production *Peter Sander, Emerging Technologies & Concepts, Airbus, Germany*
13:45 - 14:10	**Keynote:** Additive Manufacturing: state of the art and future trends *Prof. Dr. Paulo Bártolo, Centre for Rapid and Sustainable Product Development, Leiria, Portugal*
14:10 - 14:35	**Keynote:** Additive Manufacturing in Airbus Group: state of the art and challenges *Dr. Claudio Dalle Donne, Airbus Group Innovations, Germany*
14:35 - 15:05	Networking and Exhibition Break
Session 1	**Modern Technological Trends and Challenges** *Chairman: Prof. Stewart Williams, Cranfield University, UK*
15:05 - 15:25	Multi-beam Selective Laser Melting: High process efficiency and high temperature applications *Daniel Alberts, SLM Solutions GmbH, Germany*
15:25 - 15:45	Opening new dimensions: laser cusing of extra large metallic parts *Jens Henzler, Hofmann industrial prototyping, Germany*
15:45 - 16:05	Additive Manufacturing with EBM - the route to production *Patrik Ohldin, Arcam, Sweden*
16:05 - 16:25	Process and design challenges of Selective Laser Melting in aerospace applications *Dr. Wilhelm Meiners, Fraunhofer ILT, Aachen, Germany*
16:25 - 16:55	Networking and Exhibition Break
Session 2	**Emerging AM Technologies** *Chairman: Pascal Vermeer, Airbus Defence and Space, Germany*
16:55 - 17:20	**Keynote:** Large scale additive manufacture using the WAAM process *Prof. Stewart Williams, Cranfield University, UK*
17:20 - 17:40	New possibilities for additive manufacturing: hybrid process of direct laser deposition and milling *Friedemann Lell, SAUER GmbH, Germany*
17:40 - 18:00	Plate press brazing for production of large metallic tools *Dr. Andrey Prihodovsky, Neue Materialien Bayreuth GmbH, Germany*
19:00 - 22:00	**Get-together** (Atlantic Hotel Bremen Airport)

DAY 2

Wednesday *05/28*	**Opening and Keynote Lectures** *Chairman: Prof. Dr. Vasily Ploshikhin, University of Bremen, Germany*
09:00 - 09:25	**Keynote:** AM Factory - From bionic design to quality assurance *Prof. Dr. Claus Emmelmann, Laser Zentrum Nord, University of Hamburg, Germany*
09:25 - 09:50	**Keynote:** Moving frontiers by combining additive and subtractive laser manufacturing: selective laser melting, erosion and remelting *Prof. Dr. Ir. Jean-Pierre G. Kruth, Catholic University of Leuven, Belgium*
09:50 - 10:15	**Keynote:** Topology optimization, lightweight design for AM and functionality integration *Dr. Steffen Beyer, Airbus Defence and Space, Germany*
10:15 - 12:00	Exhibition / Excursion to Airbus Defence and Space site Bremen
12:00 - 13:00	Lunch
Session 3	**Numerical Simulation** *Chairman: Prof. Dr. Ir. Jean-Pierre G. Kruth, Catholic University of Leuven, Belgium*
13:00 - 13:25	**Keynote:** Simulation of selective beam melting on the powder scale: mechanisms and process strategies *Prof. Dr. Carolin Körner, University Erlangen-Nürnberg, Germany*
13:25 - 13:45	Fast numerical predictions of residual stress and distortion of AM parts *Nils Keller, ISEMP, University of Bremen, Germany*
13:45 - 14:05	Simulation and material properties of selective laser melting cellular parts *Prof. Dr. George Lampeas, University of Patras, Greece*
14:05 - 14:25	Chaining of thermo-mechanical and machining processes: prediction of residual stresses and distortions on large industrial components *Dr. Laurent D'Alvise, GeonX S.A., Belgium*
14:25 - 14:55	Networking and Exhibition Break
Session 4	**Materials Behavior** *Chairman: Dr. Steffen Beyer, Airbus Defence and Space*
14:55 - 15:20	**Keynote:** Selective laser melting of multi-material systems *Prof. Dr. Frank Vollertsen, BIAS, Germany*
15:20 - 15:40	Complex SLM parts made of nickel-based alloys *Juan Isaza, Fraunhofer IFAM, Germany*
15:40 - 16:00	Microstructure and mechanical properties of aerospace AM parts *Dr. Nils Stelzer, Aerospace & Advanced Composites GmbH, Austria*
16:00 - 16:30	Networking and Exhibition Break
Session 5	**Testing and Qualification** *Chairman: Prof. Dr. Frank Vollertsen, BIAS, Germany*
16:30 - 16:55	**Keynote:** New process, new challenges: ALM qualification issues *Dr. Michal Vorel, Airbus Defence and Space, Germany*
16:55 - 17:15	Process monitoring, defect detection and process documentation for Additive Layer Manufact *Dr. Johannes Gumpinger, FOTEC Forschungs- und Technologietransfer GmbH, Austria*
17:15 - 17:35	Quality aspects and diagnostics of AM production *Arne Neff, Laser Zentrum Nord, University of Hamburg, Germany*
17:35 - 17:45	Closing Remarks / Symposium End

05/27 - 05/28

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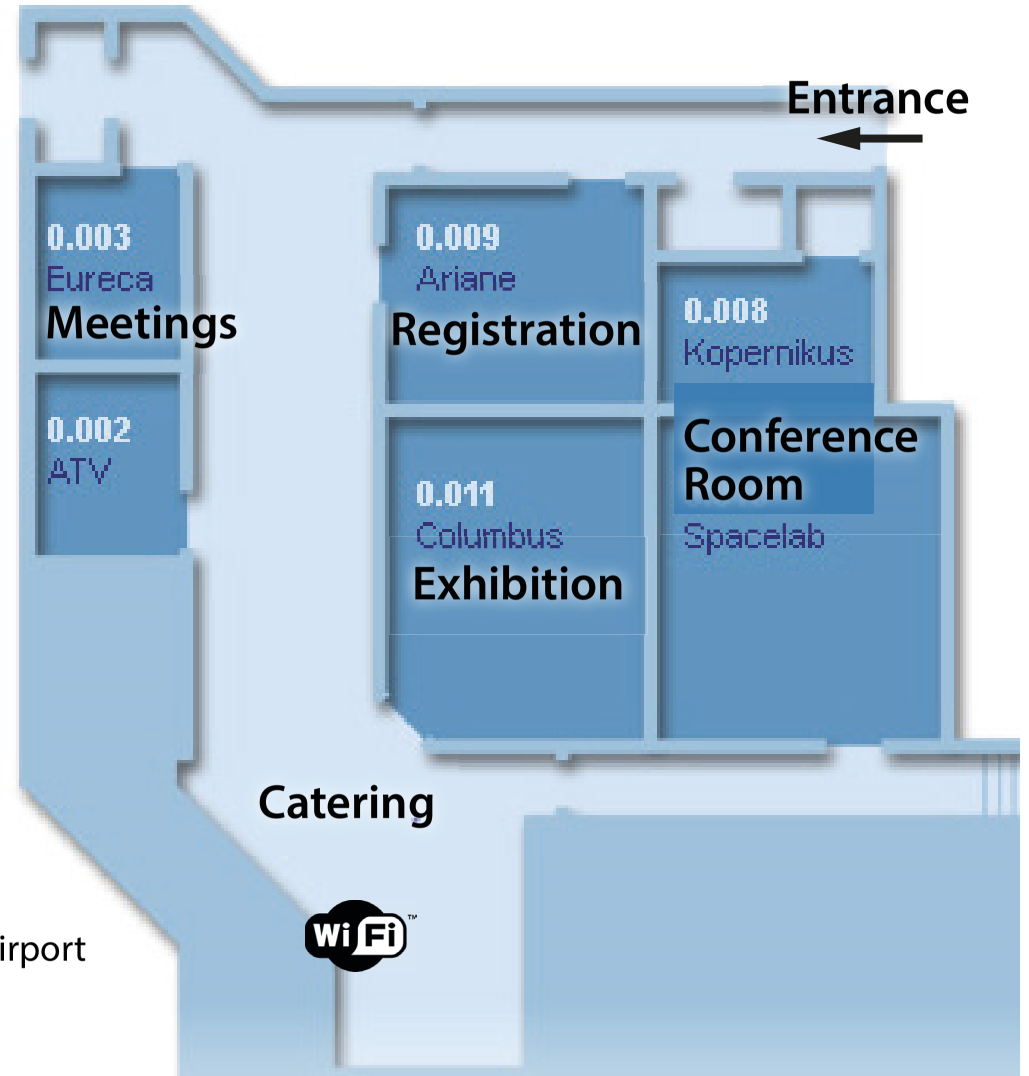
27th 28th MAY 2014

WLAN

WLAN is available for free, but a credit card is needed for an additional registration at the hot spot terminal.



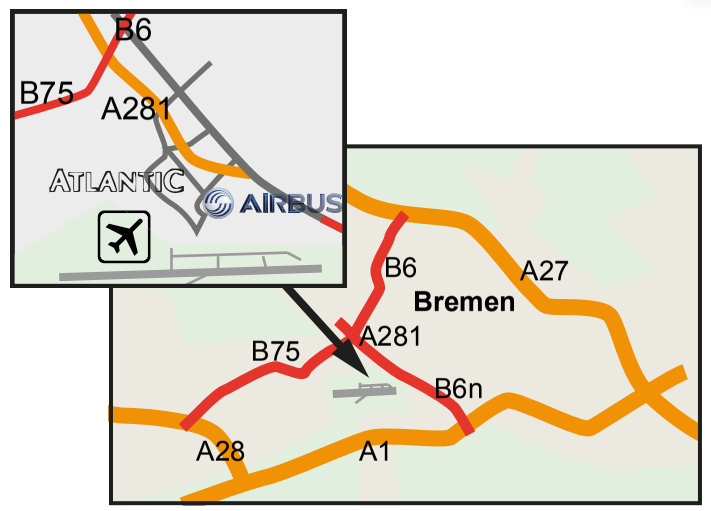
Locations

Astrium Conference Center
Airbus Allee 1
28199 Bremen
Germany

Tram station (line 6): Bremen Airport

Restaurant BLIXX

Atlantic Hotel Bremen Airport
Flughafenallee 26
28199 Bremen



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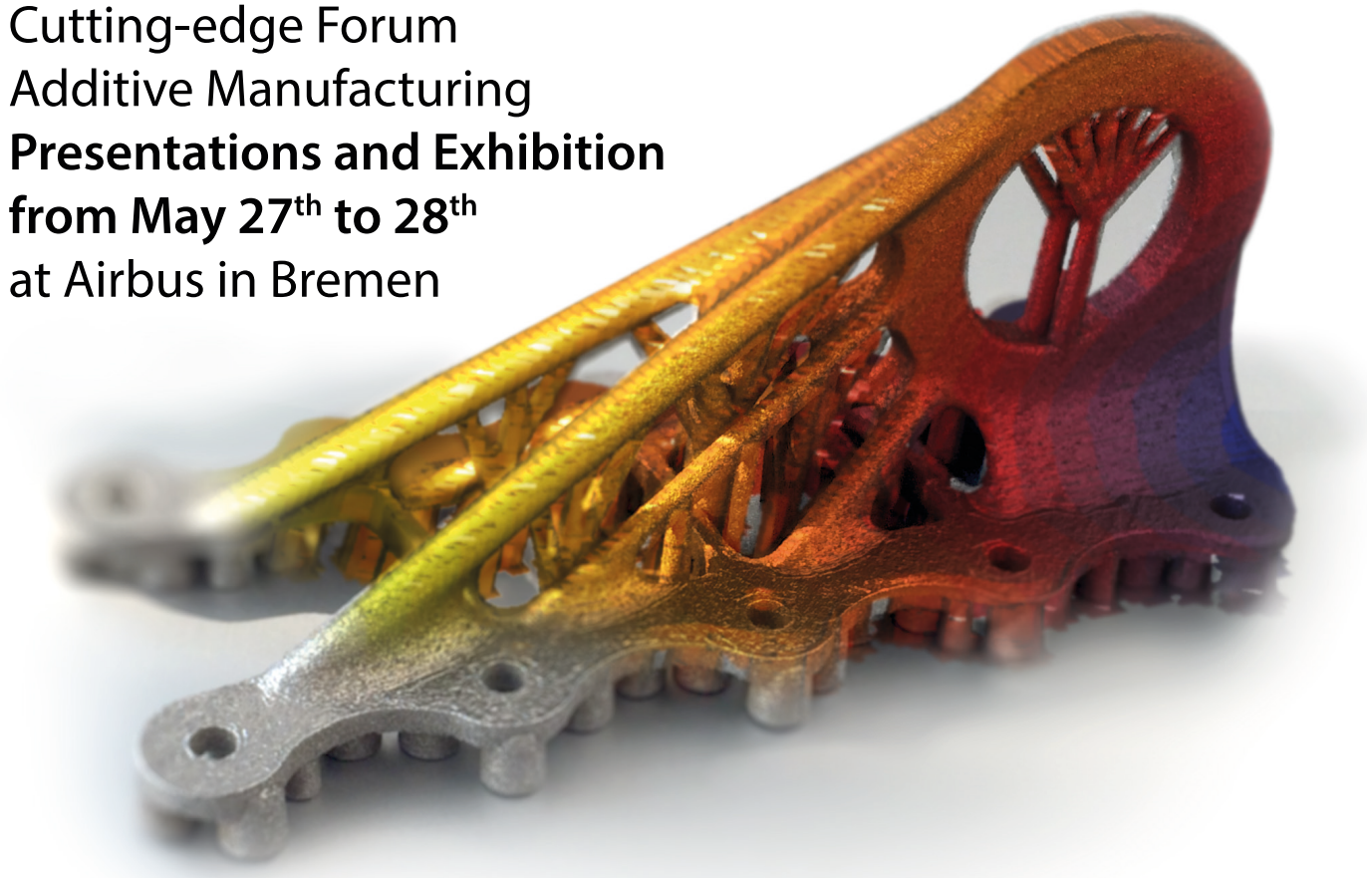
27th 28th MAY 2014

1st International
Cutting-edge Forum
Additive Manufacturing
Presentations and Exhibition
from May 27th to 28th
at Airbus in Bremen



Airbus Endowed Chair for Integrative Simulation and Engineering of Materials and Processes ISEMP

Universität Bremen*

*EXCELLENT. An Excellence Initiative Success Story

IWT Stiftung Insitut für Werkstofftechnik Bremen

AIRBUS

DVS VERBAND

bias Bremer Institut für angewandte Strahltechnik

WFB Wirtschaftsförderung Bremen GmbH Wir schaffen Perspektiven

Fraunhofer IFAM

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