

**ISAM 2019 –
3RD INTERNATIONAL SYMPOSIUM
ON ADDITIVE MANUFACTURING**
TACKLING THE MATERIALS AND PROCESSING CHALLENGES

PROGRAM
JANUARY 29–31, 2019



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Additive Manufacturing is gaining great attention for industrial applications, e.g. in aerospace and space, medical, energy, automotive, tooling and mechanical engineering industry. However, knowledge-based approaches are needed to enlarge the confidence in product quality. This requires an in-depth understanding of the materials, processing and system technologies. ISAM 2019 is providing a platform for scientific and technical exchange across various aspects of AM. Internationally renowned experts are presenting new development trends in the field and address current challenges. Do not miss the chance to participate in this exceptional event.

Sincerely,

Prof. Dr. Christoph Leyens

Conference chairman

Director Fraunhofer IWS Dresden
and Chair of Materials Engineering,
TU Dresden

Prof. Dr. Frank Brückner

Business Unit Manager
"Additive Manufacturing
and Printing" Fraunhofer IWS

Tuesday, January 29, 2019



- 16:00 Registration
- 16:30 Welcome & Introduction
*Christoph Leyens / Frank Brückner, Fraunhofer IWS
Dresden, Germany*
- 16:45 Additive manufacturing – business transformation with digital impact
Andreas Stapelmann, thyssenkrupp AG, Germany
- 17:00 Digital Factory @FIT – Industrial Additive Manufacturing
Carl Fruth, FIT AG, Germany
- 17:15 Latest AM technology and solutions for real applications
Takashi Ishide, Mitsubishi Heavy Industries, Ltd., Japan
- 17:30 We Print to Drive: AM for Mobility
Stefanie Brickwede, Mobility goes Additive, Deutsche Bahn AG, Germany
- 17:45 Corporate Management in Additive Manufacturing: Is an ‚Additive Manufacturer‘ Certification the Way to Go?
Christoph Blanc, TÜV Süd, Germany
- 18.00 Metal Additive Manufacturing Process Technology of Medical Applications in South Korea
Chang-Woo Lee, KITECH, Korea

- 18:15 Refreshment Break
- 18:30 Panel Discussion
*Moderation: Stefanie Brickwede, Mobility goes Additive,
Deutsche Bahn AG, Germany*
- 19:30 Open Lab and Networking
*Get Connected with the AM community at
Additive Manufacturing Center Dresden (AMCD)*



Venue: Fraunhofer IWS
Winterbergstraße 28, 01277 Dresden

Wednesday, January 30, 2019



8:15 Registration

Opening Day 1

9:00 Welcome and Opening

Christoph Leyens, Fraunhofer IWS Dresden, TU Dresden, Germany

9:20 Keynote: Laser-Material Interactions in Metal Additive Manufacturing

Ibo Matthews, Lawrence Livermore National Laboratory, USA

9:50 Keynote: I AM SIEMENS – Industrialized Additive Manufacturing by Siemens

Ingomar Kelbassa, Siemens AG, Germany

10:20 Coffee break with Technical Exhibition

Advanced Processing and Technologies

11:00 Wire-feed Additive Manufacturing of Ti 6Al-4V Components by Rapid Plasma Deposition (RPD™) at High Deposition Rate

Pedro Almeida, Norsk Titanium, Norway

11:20 Design and Manufacture of Lattice Structures using Renishaw AM machines

Kenneth Nai, Renishaw PLC, UK

11:40 Combination of Dispense and AM Technologies for Increased Functionality

Lukas Stepien, Fraunhofer IWS Dresden, Germany

12:00 Open Source Electron Beam Powder Bed Fusion for Materials R&D

Patrick Ohldin, Freemelt, Sweden

12:20 Lunch Break with Technical Exhibition

13:30 **ISAM Elevator Pitch Contest**14:15 **Poster Session with Coffee****Materials and Testing**

15:20 Opportunities and Chances of AM with new Kind of Automotive-Approach Based on a Hood-Hinge

Eric Klemp, Voestalpine Additive Manufacturing Center GmbH, Germany

15:40 X-Ray and CT as a Tool for Quality Assurance and Process Optimization in 3D printing

Philip Sperling, Yxlon International GmbH, Germany

16:00 Non-destructive Investigation of Strain by Neutron Diffraction

Helmut Schober, ILL Grenoble, France

16:20 Characterization of L-PBF Machines – Lack of Fusion Indication through Ultrasonic Inspection

Sebastian Rott, MTU Aero Engines, Germany

16:40 Microstructure and Mechanical Properties of LBM-Printed Ti/Nb/(Ta) Biomedical Alloys

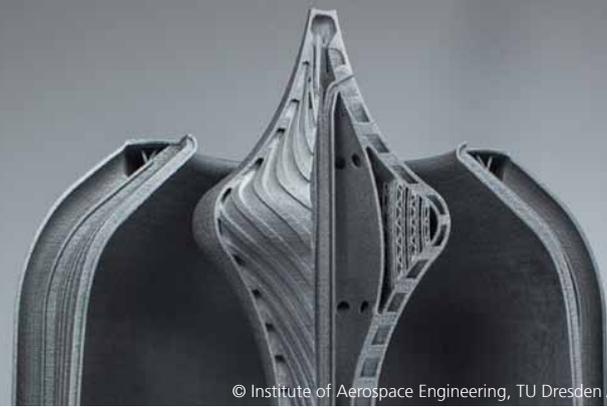
*Markus Weinmann, H.C. Starck Tantalum and Niobium GmbH, Germany*18:30 **Evening Reception**

Opening talk:

Powderbased 3D food printing technologies

*Martijn Noort, Wageningen University, The Netherlands*Venue: Kasematten – Historic Casemate Vault
Bruehlscher Garten 4 , 01067 Dresden

Thursday, January 31, 2019



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8:30 Registration

Opening Day 2

- 9:00 Best Poster and Best Elevator Pitch Awards
- 9:10 Keynote: Materials for Additive Manufacturing
David Bourell, The University of Texas, Austin, USA
- 9:40 Keynote: Laser Additive Manufacturing of Metals – Opportunity to Promote High-End Manufacturing Ability in China
Xiaoyan Zeng, HUST, China
- 10:10 Keynote: Process Development, Alloy Development and Qualification in Selective Laser Melting Process
Xinhua Wu, Monash University, Australia
- 10:40 Coffee Break with Technical Exhibition

Pre- and Post-processing

- 11:10 Structural Optimization – Releasing the Potential of AM in the Design Process
Anthony McLoughlin, Altair, Germany
- 11:30 Powder for Additive manufacturing
Sven Bengtsson, Höganäs AB, Sweden
- 11:50 Co-sintering of Zirconia/Steel Material Hybrids – Requirements, Processing, and Characterization
Tassilo Moritz, Fraunhofer IKTS, Germany
- 12:10 CFD Modelling Advances in Additive Manufacturing
Amir Isfahani, Flow Science, USA
- 12:30 Lunch Break with Technical Exhibition

Process Control and Quality

- 13:40 Laser Metal Deposition and 3D Printing – New Sensor Concepts for LMD and Innovative System Technology for Additive Processes with Wire
Markus Kogel-Hollacher/Niklas Weckenmann, Precitec GmbH & Co. KG, Germany
- 14:00 Digital Additive Manufacturing
Mirko Riede, Fraunhofer IWS Dresden, Germany
- 14:20 Prediction of Metal Powder Evolution in AM Production and its Impact on the Potential for Confident Reuse of Material
Neil Harrison, LPW Technology Ltd, UK
- 14:40 Process- and Condition Monitoring in Additive Manufacturing based on Laser Deposition Welding
Holger Perfahl, SAUER GmbH, Germany
- 15:00 Coffee Break with Technical Exhibition

Venue: International Congress Center
Ostra-Ufer 2, 01067 Dresden



ORGANIZATION

Applications

- 15:30 Implementation of Conformal Cooling in Additive Manufactured Injection Mould Inserts – A Case Study
Chen-Nan Sun, Singapore Institute of Manufacturing Technology (SIMTech), Singapore
- 15:50 Micro Sully Jet Erosion Assessment for Additive Manufacturing Products
Masahiro Onoi, Metal Technology Co. Ltd., Japan
- 16:10 Qualification Route of SLM Additive Manufacturing for Aerospace Applications
Katja Schmidtke, Airbus, Germany
- 16:30 The Build-up Welding Method with Extremely Low Distortion for the Steam Turbine Blade
Takeshi Ishikawa, Sumitomo Heavy Industry High Matex, Japan
- 16:50 Closing Plenary Talk: Addi(c)tive Manufacturing at ESA: Materials and Processes as Enabling Solutions for Space Missions
Laurent Pambaguian, ESA – European Space Agency, The Netherlands
- 17:20 Concluding Remarks and Farewell
Christoph Leyens, Fraunhofer IWS Dresden, TU Dresden Germany

CONFERENCE FEE¹

Symposium (two-days-ticket) ²	520 €
Symposium (one-day-ticket) ²	360 €
Business Forum	120 €
Evening Reception	60 € (+ VAT)

¹ Payable on receipt of the invoice

² The fee includes the conference documents and refreshments.

Registration deadline: January 14, 2019

Conference language

English

Accommodation

We have arranged call allocations in selected hotels. Please visit our website for further informations.

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Conference Website

www.isam.network

EXHIBITORS

The symposium will be accompanied by a technical exhibition. The following companies and institutions will present their latest achievements:

