

2nd Int. Symposium "Additive Manufacturing" (ISAM 2017)

February 8 - 9, 2017, International Congress Center Dresden

Wednesday, Feb 8, 2017

8:15 Registration

Opening Day I

Chair: Christoph Leyens, Fraunhofer IWS Dresden

9:00 Welcome and opening
Christoph Leyens
Fraunhofer IWS Dresden, Germany

9:20 NASA marshall space flight center additive manufacturing - rocket engines and in space manufacturing
Raymond Clinton
NASA Marshall Space Flight Center, USA

9:50 AM engineering: from disruptive AM design to bionic smart factory 4.0
Claus Emmelman
LZN Laser Zentrum Nord GmbH, Germany

10:20 Coffee break with technical exhibition

Materials and testing

Chair: Martina Zimmermann, Fraunhofer IWS Dresden

11:00 Recent advances in SLM material development for medical application
Stefan Kaierle
Laser Zentrum Hannover e.V. (LZH), Germany

11:20 Strategies and development of Fe-based alloys for tooling applications tuned for SLM processing
Maurizio Vedani
Politecnico Di Milano, Italy

11:40 Last minute change:
Advanced manufacturing capabilities using hybrid additive manufacturing technologies
Frank Brückner
Fraunhofer IWS Dresden, Germany

12:00 xBeam 3D Metal Printing – the new opportunities with the new AM technology
Dmytro Kovalchuk
JSC NVO Chervona Hvilya, Ukraine

12:20 Lunch break with technical exhibition

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Advanced processing and technologies I

Chair: Christoph Leyens, Fraunhofer IWS Dresden

- 13:40 Preparation of micro-metallic wire for the high resolution additive manufacturing
Min-Ha Lee
Korea Institute of Industrial Technology (KITECH), Republic of Korea
- 14:00 Last minute change:
Electron beam melting - current trends in materials
Patrik Ohlдин
Amable Consulting, Sweden
- 14:20 DCAM - Offline programming for additive metal manufacturing
Andreas Schroeder
S.K.M. Informatik GmbH, Germany
- 14:40 Simulation based pre-processing for additive manufacturing: new methods and practical applications
Vasily Ploshikhin
University of Bremen, Germany

15:00 World Café

- Topics:
- socio-economic factors in AM
 - qualification / education
 - profitability / cost effectiveness
 - design
 - quality control and assurance
 - materials
 - interfaces for production
 - post-processing

16:30 Poster Session

17:30 Time for hotel check-in

19:00 Evening reception at Swissôtel Dresden

Opening talk: The practical use of additive manufacturing of precious metals in the jewellery industry
Frank Cooper
Birmingham School of Jewellery, UK

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Opening Day II

Chair: Anja Techel, Fraunhofer IWS Dresden

- 9:00 Resource efficiency assessment of a hybrid system for titanium components
Dimiter Dimitrov
Stellenbosch University, South Africa
- 9:30 Multifunctional additive manufacturing: 3D deposition of functional materials for the additive manufacture of smart devices
Richard Hague
University of Nottingham, UK
- 10:00 Presentation of the World Café outcomes
Christoph Leyens
Fraunhofer IWS Dresden, Germany
- 10:30 Coffee break with technical exhibition

Advanced processing and technologies II

Chair: Elena Lopez, Fraunhofer IWS Dresden

- 11:10 Additive manufacturing with diode laser – comparison between powder and wire
Sörn Ocylok
Laserline GmbH, Germany
- 11:30 Fundamental studies on LAM
Alexander Kaplan
Luleå University of Technology, Sweden
- 11:50 Selective electron beam melting - a powder bed based additive manufacturing technology for high performance materials
Carolin Körner
University of Erlangen-Nuremberg, Germany
- 12:10 Technological aspects of AM processes applied in aviation industry
Edward Chlebus
Wroclaw University of Science and Technology, Poland
- 12:30 Lunch break with technical exhibition

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Process control and quality

Chair: Vasily Ploshikhin, University of Bremen

- 13:40 Sensor and process control equipment for fabrication of AM parts
Sandro Mehner
Fraunhofer USA - Center for Laser Applications CLA, USA
- 14:00 Additive manufacturing: From R&D to space hardware
Johannes Gumpinger
The European Space Agency - ESTEC, The Netherlands
- 14:20 Low cost powders for additive manufacturing
Hans Söderhjelm
Höganäs AB, Sweden
- 14:40 Reactive material re-use with powder-bed laser fusion
Geoff McFarland
Renishaw plc, UK
- 15:00 Coffee break with technical exhibition

Applications

Chair: Frank Brückner, Fraunhofer IWS Dresden

- 15:30 Additive manufacturing applied to space propulsion parts for next generation
Ariane launcher
Fabian Riss
Airbus Safran Launchers GmbH, Germany
- 15:50 Multi-material systems in aircraft engines
Björn Ulrichsohn
Rolls-Royce Deutschland Ltd. & Co. KG, Germany
- 16:10 New AM applications for gas turbine technologies
Sebastian Piegert, Siemens AG, Germany
- 16:30 Electron beam additive manufacturing for large scaled parts
Bernd Baufeld
Nuclear AMRC, University of Sheffield, UK
- 16:50 Concluding remarks
Christoph Leyens
Fraunhofer IWS Dresden, Germany
- 17:00 End of the conference