International Metal Additive Manufacturing Symposium

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METAL AMS
Let's share innovations

Program

Wednesday, April 13th

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8:30-09:00

Opening Statement
Philippe Lubineau, *Director R&D Programs, Cetim, France*

9:00-9:30

Design of aluminum alloys for additive manufacturing
María Teresa Pérez Prado, *Senior Scientist, IMDEA, Spain*

9:30-9:50

Titanium powders for AM and 3D printing
Marc Thomas, *Metal AM Engineer, ONERA/DMAS/ GIS, France*

9:50-10:10

Development of tool steel on Binder jetting technologies: Sintering overview and Comparison of material properties
Christophe Reynaud, *Metal AM Engineer, Cetim, France*

10:10-10:30

Microstructural investigation of new aluminium alloys designed for L-PBF
Guilhem Martin, *Associate professor, SIMaP / Initiative 3D, France*

10:30-11:00

Coffee Break

11:00-11:20

Innovative powder superalloys designed for AM and for use at high temperatures in turbine applications
Adeline Riou, *Global Sales Manager - Metal Powders, Aubert & Duval, France*
Solange Vivès, *Technical Support Engineer, Aubert & Duval, France*

11:20-11:50

Manipulation of microstructures and properties during LPBF
Christian Leinenbach, *Researcher, EMPA, Switzerland*

11:50-12:10

Some current trends in additive manufactured microstructures
Jean-Jacques Blandin, *Researcher, SIMaP / UGA / Initiative 3D, France*

12:10-12h30

Microstructures genesis by LPBF and mechanical properties of 316 L stainless steel
Anis Hor, *Scientific Officer, Institut Clément Ader / Addim Alliance, France*

12:30-14:00

Lunch

14:00-14:20

Microstructure, Strength, Toughness And Fatigue Properties Of Cobalt-free Martensitic Stainless Steels Manufactured By L-PBF
Xavier Boulnat, *Researcher, MATEIS / Initiative 3D, France*

14:20-14:40

Influence of a second lasing strategy on the microstructure, tensile and fracture toughness properties of Hastelloy X parts manufactured by laser powder bed fusion
Clément Keller, *Professor ENIT / Addim Alliance, France*

14:40-15:00

A Design of Experiments approach to increase LPBF productivity on aeronautical applications
Jean-Baptiste Devillers, *Engineer, Airbus Atlantic, France*

15:00-15:30

Multi-physics and multi-scale modelling of metal AM processes with focus on L-PBF and DED
Jesper Hattel, *Professor, DTU, Denmark*

15:30-16:00

Coffee Break

16:00-16:20

Thermomechanical simulation for additive manufacturing at part scale
Yancheng Zhang, *Associate Professor, Cemef / MINES ParisTech / GIS, France*

16:20-16:40

Physics based and data-driven modelling enabling fast and accurate simulation of AM processes
Nicola Hacoët, *Researcher, ENSAM / GIS, France*

16:40-17:00

Advances in melt pool simulation for L-DED and WAAM processes
Muriel Carin, *University Professor, Univ. Bretagne Sud / GDR, France*

17:00-17:20

Material Deposition Machine Programmer, a new role for your organization
Christophe Eschenbrenner, *3DExperience Marketplace sales expert, Dassault Systems, France*

17:20-17:40

Some applications of topology optimization to the design of mechanical structures built by additive manufacturing techniques.
Grégoire Allaire, *Professor, CMAP, Ecole Polytechnique / GIS, France*

17:40-18:30

End of conferences

18:45-22:30

Cocktail dinner

Legend: Materials AM Process Post-Processing Design & Applications

2202-036

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8:30-09:00

Understanding and improving laser-material interactions in LPBF through imaging and modelling
Ioannis Bitharas, *Researcher, Heriot Watt University, Scottland*

9:00-9:20

Physical analysis, process monitoring and new developments on the LPBF process
Patrice Peyre, *Researcher, ENSAM / GIS and AFH, France*

9:20-9:40

Recent developments on monitoring solutions for DED processes, Towards a closed loop control of the processes
Nicolas Tardif, *Researcher, LAMCOS / INSA Lyon / Initiative 3D, France*
Nicolas Beraud, *Researcher, G-SCOP, France*

9:40-10:00

Optimization of mechanical part's quality based on a manufacturing strategy in WAAM process
Xavier Lorang, *R&D Project manager and additive manufacturing leader, IRT SystemX / AFH, France*

10:00-10:20

L-PBF process monitoring
Benjamin Vayre, *R&D Manager, Add-up, France*

10:20-10:50

Coffee Break

10:50-11:10

Progress on L-PBF instrumentation and prospects for in-situ monitoring
Florian Le Bourdais, *Research engineer in non-destructive testing, CEA List /AFH, France*

11:10-11:30

In situ monitoring of melt pool for Wire Arc AM
Cyril Bordreuil, *Researcher, Univ. Montpellier / Addim Alliance, France*

11:30-11:50

Improving the corrosion properties of the 17-4PH martensitic stainless steel using additive manufacturing process – focus on laser beam melted specimens
Adrien Barroux, *Researcher, Cetim, France*

11:50-12:10

Impact of heat treatments on alloy IN718 produced

by SLM process

Bertrand Max, *Research Engineer, IRT Saint Exupéry / Addim Alliance, France*

12:10-13:50

Lunch

13:50-14:10

Mechanical and thermal treatment for additive manufactured components optimization
Christophe Desrayaud, *Researcher, LGF / Mines STE / Initiative 3D, France*

14:10-14:30

A first industrial feedback for the management of surface and internal states of WAAM made components
Guillaume Rückert, *Senior expert in Metallic Materials Manufacturing, Naval Group, France*

14:30-15:00

How Design for AM has Created New Product Design Opportunities
Ian Campbell, *Emeritus Professor of Computer Aided Product Design, Loughborough Univ., United Kingdom*

15:00-15:20

Effect of process induced defects on the fatigue behavior of AS7G06 alloy obtained by SLM process
Benoit Tranchand, *Research Engineer, IRT / Addim Alliance, France*

15:20-15:50

Coffee Break

15:50-16:10

Fatigue behavior of lattices structures obtained by AM
Nicolas Saintier, *Professor at Arts et Métiers Institute of technology, Co-director GIS HEAD, I2M / Arts et Métiers ParisTech /Addim Alliance, France*

16:10-16:30

Decarbonization acceleration through AM
Clara Moriconi, *Numerical Methods & Tools Manager, Safran, France*

16:30-16:50

Application of L-PBF technology to heat pipes production through optimization of process parameters
Luis Suárez Ríos, *Responsible of Strategy and Business development for Advanced Manufacturing, IDONIAL, Spain*

16:50-17:10

Closing Statement
Philippe Lubineau, *Director R&D Programs, Cetim, France*

17:10

End of Metal AMS

Legend: Materials AM Process Post-Processing Design & Applications

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