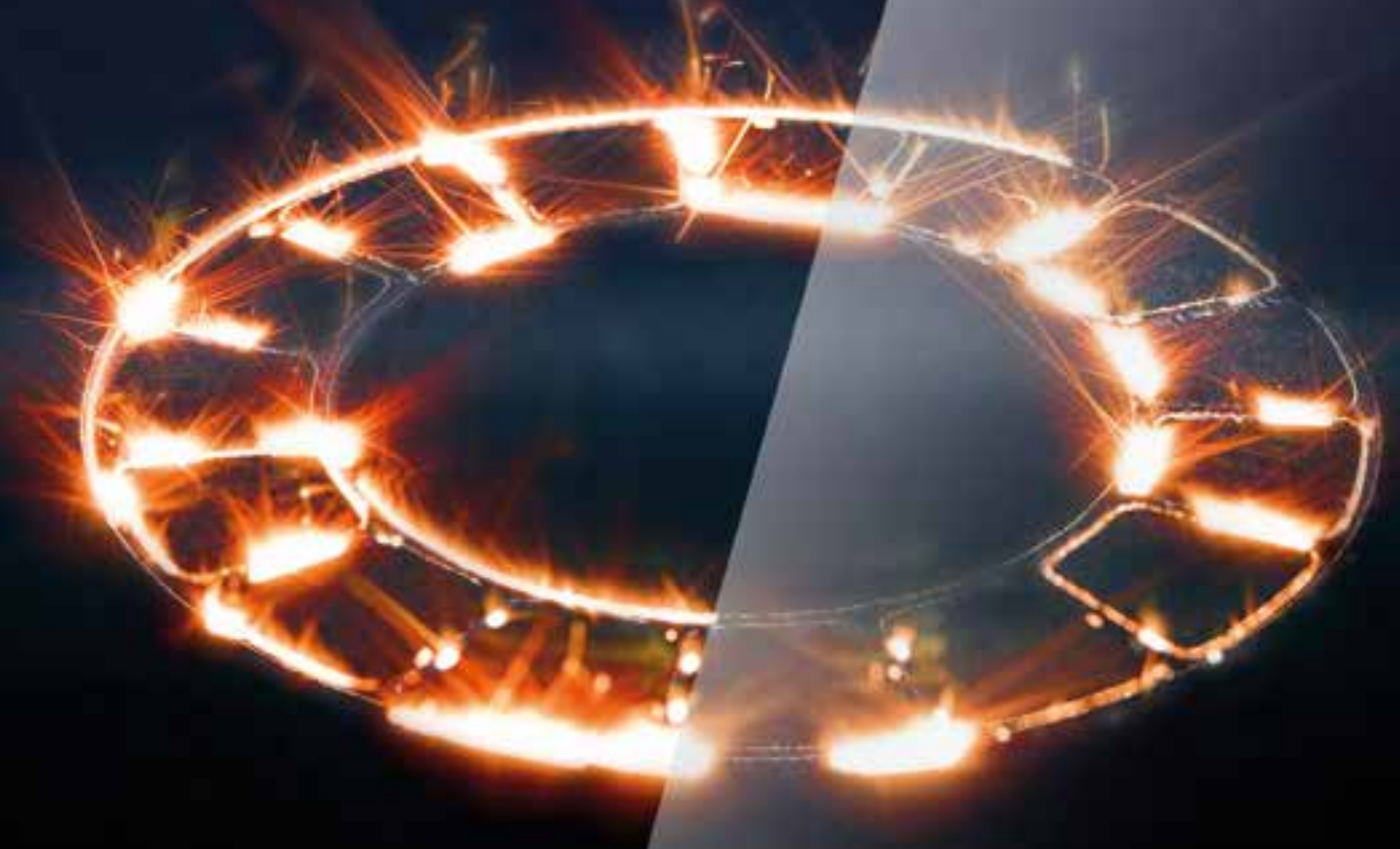


Metal Additive Manufacturing Conference

*Industrial perspectives
in Additive Technologies*

November 21-23, 2018
WKO, Austria



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THE AUSTRIAN SOCIETY FOR
METALLURGY AND MATERIALS

Metal Additive Manufacturing Conference 2018

Wednesday 21 November 2018 - Friday 23 November 2018

**Wirtschaftskammer Österreich
Programme**

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Wednesday 21 November 2018

Registration - (12:30-13:30)

Opening - Julius Raab Saal (13:30-15:00)

time	[id] title	presenter
13:30	[67] Opening	
14:00	[61] Challenges of Additive Manufacturing in High Performance Markets	Mr. SEIDEL, Stefan Dr. ROTPART, Michael
14:30	[22] Results and Conclusions on metallic materials made by AM within the Austrian leader project "addmanu"	Prof. BUCHMAYR, Bruno

Powder Production & Characterization - Saal 7 (15:00-15:40)

time	[id] title	presenter
15:00	[19] The World Market for Metal Powders & Steels, Status Quo and Outlook	Mr. BLITZ, Benedikt
15:20	[59] Powder Production technologies	Dr. WALLNER, Stefan

Process Optimization & Control (I) - Julius Raab Saal (15:00-15:40)

time	[id] title	presenter
15:00	[4] Influence of various gases and gas mixtures during laser beam melting	EFFINGER, Markus
15:20	[17] Effect of shielding gas flow rate on oxidation behavior and mechanical property in laser metal deposition	Mr. EO, DURIM

Powder Production & Characterization (II) - Saal 7 (16:10-17:10)

time	[id] title	presenter
16:10	[46] Advances in maraging steels for Additive Manufacturing	Mr. ZUNKO, Horst
16:30	[58] Microstructure investigation of Powders for Additive Manufacturing	Dr. ALBU, Mihaela
16:50	[68] The Evolution of Residual Stress during Plasma Transfer Arc (PTA) cladding for Additive Manufacturing (AM) of Metal Alloys	Mr. MOZTARZADEH, Hadi

Process Optimization & Control (II) - Julius Raab Saal (16:10-17:50)

time	[id] title	presenter
16:10	[12] Thermoelectric Magnetohydrodynamics in Additive Manufacturing	Mr. GAN, Teddy
16:30	[2] Measurement of Thermophysical Properties of Molten Metals for Process Modeling of Metal Additive Manufacturing	Prof. LEE, Jonghyun
16:50	[26] A New Method For Describing The Morphology Of Powder Layers in Direct Laser Melting	Mr. MITTERLEHNER, Marco
17:10	[62] Comparison and validation of tools for Simulation Aided Additive Manufacturing	Mr. SEMBDNER, Philipp
17:30	[14] Investigation of the Correlation between Signal Characteristics of Photodiode-Based Melt Pool Monitoring and Part Quality in Laser Beam Melting of AISi10Mg	Ms. ROSENKRANZ, Claudia

Related Processes (I) - Saal 7 (17:10-17:50)

time	[id]	title	presenter
17:10	[5]	Lithography-based additive manufacturing of functional metal components	Dr. MITTERAMSKOGLER, Gerald
17:30	[52]	Fabrication of Metal Parts by Fused Layer Modeling	KATSCHNIG, Matthias

Thursday 22 November 2018

Keynote (I) - Julius Raab Saal (09:00-09:30)

time	[id] title	presenter
09:00	[29] Additive Manufacturing for digital dentistry	Prof. STAMPFL, Jurgen

Known Materials & Characteristics (I) - Julius Raab Saal (09:30-10:30)

time	[id] title	presenter
09:30	[7] Microstructure, passivity and corrosion behaviour of 316L stainless steel elaborated by selective laser melting (SLM)	VIGNAL, Vincent
09:50	[18] Inclusion evolution in 316L stainless steel via laser metal deposition process	Prof. CHO, Jung-Wook
10:10	[28] High temperature tribological behaviour of AISI 316L produced by SLM technique.	Dr. LANZUTTI, Alex

Related Processes (II) - Saal 7 (09:30-10:30)

time	[id] title	presenter
09:30	[31] Material Extrusion with filaments for the production of metal parts and feedstocks therefore	Dr. KUKLA, Christian
09:50	[47] Filament Metal Printing: Sintered metal parts based on FFF with reinforced feedstock	Mr. KITZMANTEL, Michael
10:10	[48] XL Multi-Material AM using an economic Blown Powder Process	Dr. NEUBAUER, Erich

Known Materials & Characteristics (II) - Julius Raab Saal (11:00-12:20)

time	[id] title	presenter
11:00	[40] Influence of inclination angle on the microstructure and roughness of downskin of 3D-printed 316L powder	Dr. SKALON, Mateusz
11:20	[38] Material Properties of a Laser Cladded and HIP'ed Aerospace Component	Mr. HOLM, Mads
11:40	[42] Corrosion behaviour of AM 316L stainless steel	Prof. ANDREATTA, Francesco
12:00	[8] Investigations on the microstructure and mechanical properties of gas atomized hot work tool steels manufactured by selective laser melting using powder bed preheating.	Mr. GIEDENBACHER, Jochen

Related Processes (II): Related Processes (II) - Saal 7 (11:00-11:20)

time	[id] title	presenter
11:00	[63] Laser Metal Deposition (LMD) as a complementary technology to Selective Laser Melting (SLM)	Mr. GÖRGL, Richard

Known Materials & Characteristics (III) - Saal 7 (11:20-12:20)

time	[id] title	presenter
11:20	[51] On the formation of process-induced defects in H13 tool steel processed by Laser Beam Melting	Mr. XIA, Fengchen

11:40	[44] Feasibility Investigation of High Speed Steel for Laser Powder Bed Fusion with preheating system	Ms. SAEWE, Jasmin
12:00	[27] Laser Beam Melting of H13 tool steel	Mr. WU, Liang

Keynote (II) - Julius Raab Saal (14:00-14:30)

time	[id] title	presenter
14:00	[65] Digital Photonic Production along the lines of Industry 4.0	Prof. POPRAWE, Reinhart

Known Materials & Characteristics (III): Known Materials & Characteristics (III) - Saal 7 (14:30-14:50)

time	[id] title	presenter
14:30	[24] Directional dependence of plastic and fracture behaviour of AM processed steel under multiaxial loading conditions.	Mr. MAŠEK, Martin

New Materials (I) - Julius Raab Saal (14:30-15:30)

time	[id] title	presenter
14:30	[10] Influence of heat treatment and HIP on precipitation hardening of intermetallic-reinforced stainless tool steel manufactured by laser powder bed fusion	Mr. ÅSBERG, Mikael Dr. MARTIN VILARDELL, Anna
14:50	[69] The explanation to why Additive Manufacturing is an industrial revolution	Mr. SJÖSTRÖM, Johnny
15:10	[20] Surface modification of AM produced stainless tool steels for plastic moulding towards enhanced tribological performance and corrosion resistance	Dr. OIKONOMOU, Christos

Application (I) - Saal 7 (14:50-15:30)

time	[id] title	presenter
14:50	[9] Industrial Solutions for Additive Manufacturing	Mr. NACHTIGALL, Frank
15:10	[13] Additive Manufacturing Technique to Produce Dies for High-Pressure Die Casting	Prof. MATTAR, Taha

Application (II) - Saal 7 (16:00-17:00)

time	[id] title	presenter
16:00	[23] The Application of Powder Rheology for AM Powders	Mr. PANZL, Gerhard
16:20	[54] Comparison of additive and conventional manufactured injection molding inserts	Mr. MITTERLEHNER, Thomas
16:40	[21] 3D Metal Printing from an Industrial Perspective – Product Design, Production and Business Models	Prof. ASNAFI, Nader

New Materials (II) - Julius Raab Saal (16:00-17:40)

time	[id] title	presenter
16:00	[25] Precipitation kinetics during non-linear heat treatment in Laser Additive Manufacturing	Mr. BAJAJ, Priyanshu

16:20	[39] Influence of the powder characteristics on the final properties of powder-bed laser additively oxide dispersion strengthened (ODS) Fe-14Cr steel parts	Ms. VASQUEZ, Elodie
16:40	[37] Designing a novel Fe-Ni-Al-Ti Maraging steel tailor-made for Laser Metal Deposition	Mr. KÜRNSTEINER, Philipp
17:00	[41] Process and Alloy Design for In-Situ Precipitation Strengthening of Al-Sc Alloys During Laser Metal Deposition	Mr. KÜRNSTEINER, Philipp
17:20	[43] Surface multifunctionality for enhancing friction and wear performance of 3D printed lightweight components using technology hybrids	Dr. RODRIGUEZ RIPOLL, Manel

Business Models & Engineering - Saal 7 (17:00-17:40)

time	[id] title	presenter
17:00	[30] Value Engineering for 3D metal printing and best practise in Design & engineering	Dr. NINAUS, Manfred
17:20	[55] The benefit of the integrated processes in additive manufacturing	RYBARZ, Andreas

Friday 23 November 2018

Keynote (III) - Julius Raab Saal (09:00-09:30)

time	[id] title	presenter
09:00	[66] Generative Design – Nature as Blueprint	Mr. PIRKLBAUER, Peter

New Materials (III) - Julius Raab Saal (09:30-10:30)

time	[id] title	presenter
09:30	[15] Laser Powder Bed Fusion of Advanced High Strength Steels – Modification of Deformation Mechanisms by Increasing Stacking Fault Energy	Mr. EWALD, Simon
09:50	[16] Formation Quality, Mechanical Properties and Processing Behavior of Pure Zinc (Zn) Metal Parts Produced by Laserbased Manufacturing for Biodegradable Implants	Mr. VOSHAGE, Maximilian
10:10	[33] Additive Manufacturing of NdFeB Permanent Magnets by Selective Laser Melting	Mr. GÖRTLER, Michael

Postprocessing (I) - Saal 7 (09:30-10:30)

time	[id] title	presenter
09:30	[53] Surface Finishing for 3D-printed metal parts: from support structure removal to corrosion protection	Dr. HANSAL, Wolfgang
09:50	[6] Post Processing of Metal Parts Made by Additive Manufacturing	Mr. NUTAL, Nicolas
10:10	[3] Anodizing of Additive Manufactured Aluminium Alloys: Challenges	Dr. REVILLA, Reynier

New Materials (IV) - Julius Raab Saal (11:00-12:40)

time	[id] title	presenter
11:00	[60] Laser Additive Manufacturing of Niobium Silicide-Based High Temperature Materials	Prof. DONG, Hongbiao
11:20	[35] The effect of alloying elements and post-processing on additive manufactured Nb silicide-based alloys	Mr. FEITOSA, Leandro
11:40	[56] Recent developments of light alloy precursor material for additively manufactured ultra-lightweight parts	Mr. GRADINGER, Rudolf
12:00	[49] Preliminary study of the processing parameters effect on the microstructure and properties of titanium grade 5 specimens fabricated via Additive Manufacturing	Prof. MONTEALEGRE-MELÉNDEZ, Isabel
12:20	[64] New product solutions by using WAAM as a new technology in AM	Mr. EMMERLING, Philip

Postprocessing (II) - Saal 7 (11:00-12:00)

time	[id] title	presenter
11:00	[11] Surface Engineering for parts made by additive manufacturing	Mr. GSCHIEL, Harald
11:20	[34] Effect of Surface Mechanical Attrition Treatment (SMAT) on the mechanical properties of AISI 316L processed by Selective Laser Melting (SLM)	Mr. PORTELLA, Quentin
11:40	[45] Hot Isostatic Pressing with Integrated Heat Treatment	Ms. BOHRT, Stephanie

Design - Saal 7 (12:00-12:40)

time	[id] title	presenter
12:00	[36] Additive Manufacturing of Micro Lattice Structures at the Resolution Limit of the Selective Laser Melting Process	Mr. GÖRTLER, Michael
12:20	[70] Design Methology for Selective Laser Melting of Obsolete Pressure Fittings	Mr. SERJOUEI, Ahmad