

DIMECC

FAME
Finnish Additive Manufacturing Ecosystem

LUT
University

FAME Symposium

Industrializing Research in Additive
Manufacturing

20-21 May Hosted at

2026 LUT University

Morning sessions, room 2310

8.15-9.00	Arrival and coffee
9.00-9.15	Opening the FAME Symposium , Sini Metsä-Kortelainen & Eetu Holstein, Dimecc Oy and welcome to LUT University , Aki Mikkola
9.15-9.55	Keynote 1: Additive Manufacturing for Critical Infrastructure: From Regulatory Room Hesitation to Born-to-be-Qualified Components , Benjamin Regener, NuclearIQ Solutions LLC
9.55-10.40	Session 1: Qualification and Performance of AM Materials in Energy and Nuclear Applications <ul style="list-style-type: none"> • Jukka Mononen, Radiation and Nuclear Safety Authority (STUK), AM products for nuclear energy in Finland • Shaafi Shaikh, EOS Finland Oy, Development of Additively Manufactured INCONEL 718 for Oil and Gas Applications
10.40-11.10	Break & Posters

Parallel sessions, room 2310

Parallel sessions, room 1314

11.10-11.55	Session 2: Advanced Metal AM for Energy and Marine Applications: Materials, Processes and Performance <ul style="list-style-type: none"> • Francesco Trevisan, Wärtsilä Finland Oy, LPBF of 42CrMo4 Nitriding steel in Wärtsilä • Atharv Agarwal, LUT University, Advanced manufacturing of tungsten for nuclear fusion applications using selective laser deposition: microstructure and properties 	11.10-11.55	Session 3: Sustainable Metal AM: Life Cycle Assessment and Resource Efficiency <ul style="list-style-type: none"> • Tuomas Puttonen, Aalto University, PBF-LB/M resource efficiency and EOS M290 system instrumentation to collect build-specific life cycle inventory data • Erik Haapa, University of Turku, Life cycle cost and environmental assessment of Directed Energy Deposition repair: sensitivity analysis across materials and process parameters
11.55-12.55	Lunch Break	11.55-12.55	Lunch Break
12.55-13.40	Panel discussion: What is holding back the Energy Industry from adopting Additive Manufacturing? Moderator: Juho Raukola, Wärtsilä , with Jukka Mononen, STUK, Paula Kainu, EOS , and Benjamin Regner, NuclearIQ Solutions LLC	12.55-14.00	Session 5: AI-Driven Design and Engineering: From Early-Stage Decisions to High-Performance Computing <ul style="list-style-type: none"> • Alejandro Carcel Lopez, Cognitive Design Systems, Cognitive Design: Deterministic AI Beyond Generative Design, Cognitive Design Systems • Eric Coatanea, Tampere University, Automatic early detection and correction of industrial design and manufacturing flaws – REINFORCE • Jyrki Savolainen, CSC - IT Center for Science, LUMI Supercomputer offers world-class high-performance computing services for Additive Manufacturing
13:40-14:10	Session 4: The State of Additive Manufacturing: Industry Trends, Policy and Global Outlook <ul style="list-style-type: none"> • Johannes Gartner, TU Delft, Politics Meets Production: The Future of Additive Manufacturing in the EU • Sascha Wenzler, Mesago Messe Frankfurt GmbH, Global Overview on the Current State of the AM Industry – from the Perspective of Formnext 		
14.10-14.40	Coffee Break	14.00-14.30	Coffee Break
14.40-15.45	Session 7: Hands-On Additive Manufacturing: Lessons from Industry <ul style="list-style-type: none"> • Joonatan Huhtala, Konecranes, From Casting to Additive Manufacturing: Redesign and Validation of a Rope Guide Component • Roope Lavinen, John Deere Forestry, Serial production costs, benefits and mistakes what to avoid in FDM printing • Tommy Enlund, Wärtsilä Finland Oy, Experimental fatigue endurance testing of a high-torque wrench tool made by metal Additive manufacturing 	14.30-15.35	Session 6: Advanced Process Control in Metal AM: AI, Atmospheres and Scalable Manufacturing <ul style="list-style-type: none"> • Xinyi Yin, Aalto University, AI-based Defect Detection and Localization in LPBF • Antoine Queguineur, Tampere University, Innovative manufacturing head dedicated to large scale metal additive manufacturing • Alexander Angré, Linde Gas, The Critical Role of Industrial Gases Throughout the AM Value Chain

Afternoon session, room 2310

15.45-16.15	Design challenge and closing remarks with Mika Mustakangas, Patria Oyj
18.00-22.00	Symposium dinner cruise

Morning sessions, room 2310

8:30-9:00	Arrival and coffee
9.00-9.05	Opening of Day 2
9.05-9.45	Keynote 2: From legacy geometry to additive manufacturing: the redesign of a hawk jet trainer bracket, Mika Vaskelainen, Patria Oyj
9.45-10.30	Session 8: Additive Manufacturing for Resilience and Security of Supply <ul style="list-style-type: none"> • Sauli Eloranta, VTT, New Defence Opportunities for Additive Manufacturing • Janne Uusisuo, NESAs, A brief introduction to NESAs (National Emergency Supply agency), the potential of AM in preparedness and security of supply
10:30-11:00	Break & Posters
11:00-11:40	Industry Pioneer Talk: How to help Industrialization of Metal AM, Olli Nyrhilä, Developer of the DMLS (PBF-LB/M) process
11:40-12:25	Session 9: Applying Additive Manufacturing in Maritime Industry <ul style="list-style-type: none"> • Giuseppe Sarago, Fincantieri, Additive Manufacturing in Shipbuilding & Systems - Turning problems and ideas in opportunity for faster growth • Mikael Parvikoski, RMC Finland, DED-Arc additive manufacturing used in ship beam-to-pillar connection
12:25-13:35	Lunch Break

Parallel sessions, room 2310

Parallel sessions, room 1314

13:35-14:30	Session 10: Next-Generation AM Materials: Predictive Design and Multi-Material Innovation <ul style="list-style-type: none"> • Ville Laitinen, LUT University, Development of laser powder bed fusion fabricated Ni-Mn-Ga magnetic shape memory alloys for actuator applications • Erik Haapa, University of Turku, Porosity control in CuCrZr-316L multi-material PBF-LB/M: Simulation guided process optimization 	13:30-14:30	LUT AM Laboratory Tours <ul style="list-style-type: none"> • Laser laboratory • AM laboratory • Steel Structures laboratory • Welding laboratory with live WAAM-demo included
14:30-15:00	Coffee Break	14:30-15:00	Coffee Break
15:00-15:45	Session 11: Additive Manufacturing in Practice: Reverse Engineering and Performance Optimization <ul style="list-style-type: none"> • Markku Lindqvist, Delva Oy, Reverse engineering and additive manufacturing of engine housing • Lucas Mikkonen, Wärtsilä Finland Oy, Feasibility of an LPBF Gyroid-Structured Oil Cooler: Performance Optimization and Cost Trade-Offs 	15:00-15:40	Session 12. Post-Processing in Additive Manufacturing: Quality, Automation and Industrial Scale-Up <ul style="list-style-type: none"> • Björn Backman, Quintus Technologies AB, Latest Developments in the Use of HIP for Additive Manufacturing • Minna Heikinheimo, Tampere University of Applied Sciences, Inserting Sustainability into Additive Manufacturing: Industry Perspectives on Challenges and Possibilities

Closing session, room 2310

15.45-16.00	Closing words and end of the symposium
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List of Posters

- **Ramin Mahmoudi**, Additively Manufactured Photopolymer Mold Inserts for Low-Volume Micro-Injection Molding, Aalto University
- **Tero Haapakoski**, Commissioning a Data-Driven WLAM Platform: Integrating Robotic Metal AM into a Connected Fieldlab Ecosystem, Tampere University of Applied Sciences
- **Shahriar Balani**, Numerical simulation for weld gap prediction of large structures: comparison between different modelling approaches, Tampere University
- **Mubashir Rafique**, FROM WASTE TO WORTH: DEVELOPING UNDERUTILIZED NATURAL FIBRE'S-BASED COMPOSITES AS 3D PRINTING FEEDSTOCK, Centria University of Applied Sciences
- **Tejas Gundgire**, Surface integrity enhancement in laser powder bed fusion built 316L steel components by post treatment, Tampere University
- **Di Wu**, Image segmentation based online contact-tip-to-workpiece distance control system for wire arc additive manufacturing, Tampere University
- **Vesa Tepponen**, Development of co-axial laser and wire based directed energy deposition system, LUT University
- **Suraj Panicker**, Trajectory of DED-arc research at Tampere University, Tampere University
- **Muhammad Hassan Maqsood**, Influence of Functionally Graded Wall Thickness on the Thermo-Hydraulic Performance of LPBF Manufactured Gyroid TPMS Lattice Heat Exchangers, LUT University

List of Exhibitors

- We're pleased to welcome the following exhibitors to the FAME Symposium: Cognitive Design Systems, CSC – IT Center for Science, HAMK, LUT, and Oerlikon.
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