DIMECC

FAME
Finnish Additive Manufacturing Ecosystem

LUT University

FAME Symposium

Industrializing Research in Additive Manufacturing

20-21 May 2026

Hosted at LUT University

Program Day 1 Wed 20

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** • **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** • **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** • **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** • **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** • **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** • **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** • **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**

Program Day 2 Thu 21

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** • **Sauli Eloranta, VTT,** New Defence Opportunities for Additive Manufacturing • **Janne Uusisuo, NESA**, A brief introduction to NESA (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** • **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
12:25-13:25	Lunch Break

Parallel sessions, room 2310		Parallel sessions, room 1314	
13:25-14:30	**Session 10: Next-Generation AM Materials: Predictive Design and Multi-Material Innovation** • **John Aristeidakis, Thermo-Calc Solutions AB**, Accelerating AM material innovation with CALPHAD-based ICME tools • **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** • 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** • **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** • **Björn Backman, Quintus Technologies AB**, Latest Developments in the Use of HIP for Additive Manufacturing • **Minna Heikinheimo, Tampere University of Applied Sciences**, Towards opening new markets and create competitive edge for Finnish companies through Additive Manufacturing Post processes Automation and cost reduction

Closing session, room 2310	
15.45-16.00	**Closing words and end of the symposium**

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

Cognitive Design Systems, CSC – IT Center for Science, HAMK, LUT, and Oerlikon.

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