School of Engineering
Platform Additive Manufacturing

Advances in Additive Manufacturing 2026

Simulation, Hardware & Systems,
Digital & AI Integration

Friday, September 4, 2026

register now!

SWISSMEM

The ZHAW School of Engineering hosts a one-day conference bringing together researchers and industry practitioners to explore current developments and future trends in Additive Manufacturing.

As additive manufacturing technologies have matured beyond prototyping into production environments, the integration of simulation tools, advanced hardware systems, and digital/AI technologies becomes critical for ensuring quality, efficiency, and scalability. The „Advances in AM“ conference addresses these transformative developments through dedicated sessions on a range of topics, including but not limited to:

- **Simulation:** Advanced modelling approaches for design and process optimisation, an improved understanding of the process, and a robust and efficient process
- **Hardware & Systems:** Novel AM equipment, innovative mechanical designs, multi-material systems, and next-generation printing mechanisms
- **Digital & AI Integration:** Digital twins, machine learning for parameter optimisation, closed-loop control, data-driven quality assurance

This event provides a unique platform for knowledge exchange between academic researchers and industrial practitioners, featuring presentations on latest progress, real-world applications, and emerging trends. The conference offers opportunities to connect with peers, discover novel solutions, and shape the future direction of additive manufacturing technology. It will be accompanied by an informative industry exhibition, which offers an opportunity to speak with solution providers relevant to the field of additive manufacturing.

ZHAW Platform Additive Manufacturing
This interdisciplinary platform serves as a central hub for research, development and industrial applications in the field of additive manufacturing. Through modern manufacturing processes, innovative material developments, digital methods, and practical process optimisations, the platform supports companies in the further development and implementation of new additive manufacturing technologies. Every year, members of the platform organise a conference on various key topics.

IMES Institute of Mechanical Systems
Highly loaded mechanical structures are at the core of the applied R&D activities at IMES. In additive manufacturing, our focus is on simulation-driven lightweight design and process optimisation to minimize distortions and residual stresses.

IMS Institute of Mechatronic Systems
At IMS, we develop a wide range of mechatronic systems and robotic solutions. In additive manufacturing, our research focuses on novel printer hardware and advanced slicing strategies to expand process capabilities and overcome existing limitations.

CAI Centre for Artificial Intelligence
The ZHAW Centre for Artificial Intelligence (CAI) is a hub for excellence in applied AI research and application. We focus on human-centric and trustworthy AI research, and on physical AI with applications in advanced manufacturing and various other domains.

Conference Program 2026

08.00 Reception, Coffee

09.00 Welcome
Michael Wüthrich, IMS Institute of Mechatronic Systems,
ZHAW School of Engineering, Winterthur

ZHAW Platform Additive Manufacturing
Prof. Dr. Dirk Penner, IMPE Institute of Materials Processing and Engineering,
ZHAW School of Engineering, Winterthur

Swissmem SAMG
Fabian Tunzini, Swiss Additive Manufacturing Group / cross-ING

09.30 Design for Additive Manufacturing in the Space Industry
Livio Vorburger, Design Engineer, Beyond Gravity, Zurich

10.00 Coffee Break and Industry Exhibition

10.45 Simulation-Driven AM Development: Integrated Workflows at Sauber Technologies
Matthew Jayaraman, Senior Development Engineer, Sauber Technologies, Hinwil

11.15 Understanding and Optimizing Distortion and Residual Stress in AM Parts using Process Simulation
Prof. Dr. Thomas Mayer, IMES Institute of Mechanical Systems,
ZHAW School of Engineering, Winterthur

11.45 Machine Learning for Accelerating High-Fidelity Simulations of PBF-LB/M
Dr. Ehsan Hosseini, Group Leader Integrity of Mechanical Components, Empa, Dübendorf

12.15 Lunch Break and Industry Exhibition

13.45 Barriers and Breakthroughs in FDM Printing
Marcel Ehlers, Brand Ambassador, Prusa Research, Prague CZ

14.15 Overcoming the Challenges of In-House Metal 3D Printing
Stephan Steiner, CEO and Founder, A-Metal, Zurich

14.45 Continuous Rotary Laser Powder Bed Fusion with RAPTURE
Dr. Michael Tucker, Technical Director, ETH, Zurich

15.15 Coffee Break and Industry Exhibition

16.00 End-to-End Digitalization of Thermal Spray Coating Development: From Digital Twin to Fully Automated Image Analysis
Dr. Margarita Bambach, Lab Expert, Oerlikon Metco, Wohlen

16.30 Toward Data-Driven Autonomy in Robotic Additive Manufacturing
Prof. Dr. Alisa Rupenyan, CAI Centre for Artificial Intelligence,
ZHAW School of Engineering, Winterthur

17.00 Industry Exhibition

17.30 Evening Reception with Apéro Riche

Zurich University
of Applied Sciences

School of Engineering
IMES Institute of Mechanical Systems (Link)
IMS Institute of Mechatronic Systems (Link)
CAI Centre for Artificial Intelligence (Link)

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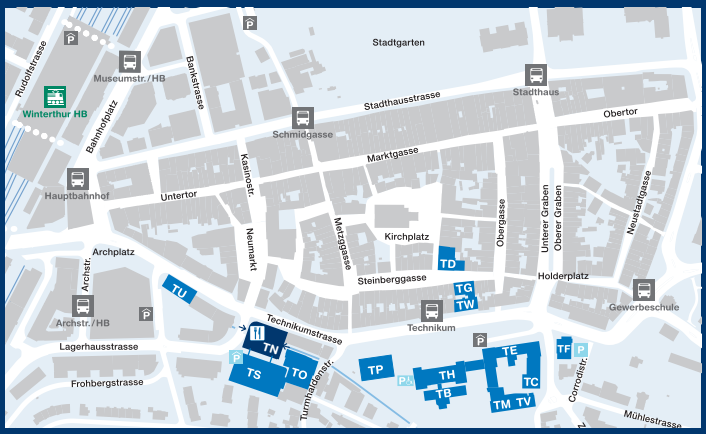
Venue
ZHAW School of Engineering, Technikumstrasse 71, 8400 Winterthur
Registration / Exhibition: Building TN, Room E0.46-54
Lectures: Building TN, Room E0.58

Entry Fee
CHF 180 per Person, incl. meals, **excl. evening reception**
CHF 230 per Person, incl. meals, **incl. evening reception**
Swissmem SAMG members: Discount of CHF 30 on the participation fee

Registration for participants and exhibitors
www.zhaw.ch/imes/am-tagung (Link)

Deadline for registration:
29th August 2026