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www.cie.bgu.tum.de/Sim-AM2017

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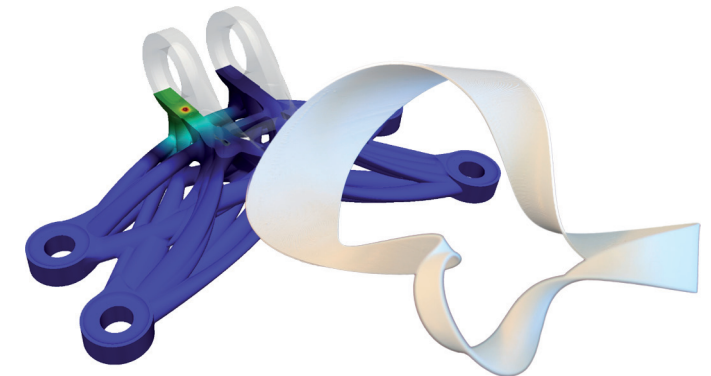
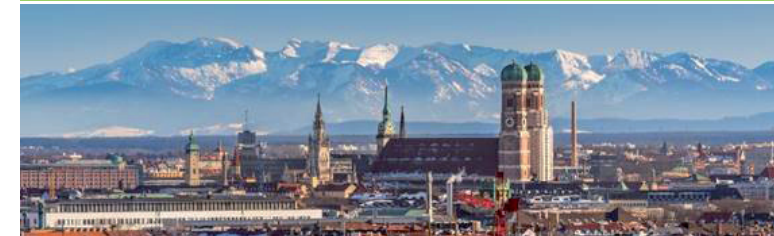


Sim-AM 2017

1st International Conference on
Simulation for Additive Manufacturing

11th - 13th October 2017, Munich, Germany

Location: Institute for Advanced Study,
Technical University of Munich



Introduction

In the past few years additive manufacturing (AM) has evolved to one of the most promising techniques for creating solid structures of virtually any shape. Yet, AM products and processes are often much more complex than those obtained through classical manufacturing techniques, raising new questions for numerical simulations. Applications for AM products range across many fields in engineering, from design models to lightweight components for the automotive or aerospace industry, or to medical applications like patient specific implants. AM processes involve multi-physics and multi-scale phenomena. Whereas relevant spatial scales range over many orders of magnitude, important time scales start at microseconds for physical processes and reach to hours or even days. Physics involved include mechanical, thermal, radiation and phase change problems. And most essential for simulation of AM is validation and verification. Last but not least a lack of appropriate manufacturing technologies hindered for a long time the realization of designs as obtained, e.g. by shape and/or topology optimization. In this regard AM is the ideal technology to transfer innovative design proposals to reality.

Scientific Programme

In the context of AM, the Conference will focus on

- simulation for different AM technologies (fused deposition, laser based methods, ...)
- multi-physics and multi-scale simulation
- material modeling
- shape and topology optimization
- CAD to part chain
- validation and verification
- innovative application and related research areas.

Submission of Contributions

Prospective speakers are invited to submit contributions on topics as described above. Acceptance/rejection letters for the two-page abstracts will be sent according to the schedule.

After the conference, selected authors will be invited to submit a full paper, for inclusion in a special issue of an international journal or in another publication of international relevance.

Not only academic researchers but also those from industry including AM process developers and end users are invited to participate in the Conference.

Fees

	Early bird offer until June 9, 2017	Regular fee
Conference fee	540 Euro	640 Euro
Conference fee for students	400 Euro	480 Euro

ECCOMAS members will have a 5 % reduction on the conference fees.

Registration fees include: Conference proceedings, attendance at all scientific sessions, coffee breaks, lunch, reception and banquet.

ECCOMAS Support

Sim-AM is one of the Thematic Conferences of the European Community on Computational Methods in Applied Sciences (ECCOMAS) www.eccomas.org

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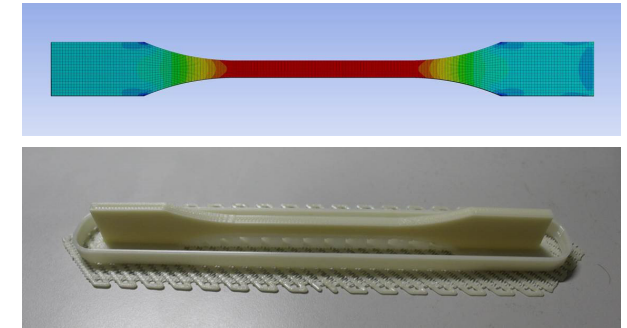
Munich Panorama: © Michael Fleischmann / Fotolia.com

3D strip: Chair for Architecture Informatics (TUM)

Engine bracket:

- CAD model from GrabCAD, designed by Sean Morrissey
- Simulation by Chair for Computation in Engineering (TUM)

Tensile strip and FE analysis: Ferdinando Auricchio (UniPV)



Instructions for Authors

The submission of abstracts and final contributions, as well as the conference registration, should be performed electronically. The first step is the submission of a two-page abstract describing the main features of the work before March 15, 2017. Once registered, in order to modify the information or add/modify the files of the abstracts, it is necessary to log in, in order to avoid double registrations. Authors are asked to send their abstracts as pdf file. Other formats are not accepted by the system.

Please note that scheduling of contributions for oral presentation is conditional upon the acceptance of the two-page abstract in the format suitable for publication and the payment of the corresponding author's conference registration fee during the advance period. The corresponding author should be the presenting author whenever possible. Only one presentation per registration is allowed.