

A two-day course in **DESIGN FOR METAL ADDITIVE MANUFACTURING**

The Austrian Society for Metallurgy and Materials (ASMET) arranges a 2-day course in Design for Metal Additive Manufacturing in collaboration with some of the globally recognized experts/lecturers. The course will be held in Örebro, Sweden, directly after the 4th Metal Additive Manufacturing Conference (MAMC 2019) which will be held in the same city (www.mamc2019.org).

(This course is NOT included in MAMC 2019 but it is held directly after the conference.)

Date: 28-29 November 2019
Place: Örebro, Sweden
Contents: See the next page
Registration fee: €490
Registration: Contact
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Lecturers:



Dr. Bruno Hribernik
*Austrian Society for
Metallurgy and Materials
(ASMET)*
Executive Member of the
Managing Board



Professor Jürgen Stampfl
*Vienna University of Technology
Austria*
Professor for Materials and Additive
Manufacturing Technologies



Professor Olaf Diegel
*The University of Auckland
New Zealand*
Head of the
Creative Design and Additive
Manufacturing Laboratory



Professor Nader Asnafi
*Örebro University
Sweden*
Professor of Mechanical Engineering
(with special focus on
digitalization and sustainability)

Contents

- ☑ Introduction to Design for Additive Manufacturing (DfAM).
- ☑ Benefits of AM, how AM is being applied, and how certain parts can be designed for AM.
- ☑ Thought processes behind DfAM, AM design optimization and an exercise.
- ☑ Designing topology-optimized parts for AM and creating light-weight parts using software. Workflow of topology optimization, setting up multiple load-cases, and using the generated ideas to produce a final design.
- ☑ When does it make sense, or not make sense, to use AM for production quantities? What determines AM costs and can we design to minimize the costs?
- ☑ Specific issues and guidelines around designing for metal AM, including anisotropy, process constraints, general guidelines related to wall thicknesses, hole sizes, tolerances, angles, etc. Close look at metal AM post-processing and material properties.
- ☑ Transformation into a field with a lattice structure, optimization of the lattice structure, and an exercise.
- ☑ Design to reduce the residual stresses, redesign of a metal AM part in order to minimize the potential residual stress that would cause distortion.
- ☑ AM beyond direct part production: Dental applications, industrial tools for injection-molding, sheet-metal forming, cutting and drilling, extrusion, jigs and fixtures, etc. Adding fixtures to parts to ease mounting on CNC machines for more efficient post-processing.
- ☑ AM in the future: Looking at where AM and design software tools are headed in the future and the implications they will have on DfAM.

Who should attend?

This is a specialized course for engineers and designers who will be designing parts for AM and who have some basic experience of CAD. The course contains hands-on practical exercises in DfAM.

The course will be useful both for engineers that are new to AM, but also to engineers who need more specialized knowledge in terms of designing for AM.

It will also be useful to technical and managerial personnel in industry with an interest in AM and who wish to gain a better understanding of AM and trends in the field.

Schedule

This 2-day course will take place 28 – 29 November 2019, in Örebro, Sweden. Day 1 (Nov 28) starts at 8:30 and ends at 16:30. Day 2 (Nov 29) starts at 8:30 and ends at 14:45.

Registration

Registration deadline is September 1st, 2019, and the course fee must be paid as soon as possible but no later than September 15, 2019.