



14.-15. Sept. 2022, Fraunhofer IFAM Bremen

3. Workshop Sinter-based Additive Manufacturing

PROGRAM

Including the Tutorial on 13 September

As of July 2022

Venue Workshop

Ringhotel Munte am Stadtwald
Parkallee 299 | 28213 Bremen
Phone +49 421 2202 -0
www.hotel-munte.de

Book your room for this event directly at the hotel and benefit from the reduced Fraunhofer booking rate.

This workshop is designed as an on-site event. All hygiene and distance rules in force at the time of the event are being observed. The venue's hygiene concept and details on the necessary precautionary measures will be provided on request.

The tutorial can also only be booked as an on-site event due to the Lab tour. The number of participants is limited to a maximum of 30 people.

Contact

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www.ifam.fraunhofer.de

Once again, we will discuss the challenges and opportunities for serial production with sinter-based Additive Manufacturing technologies along the value chain. Our international speakers from industry and R&D will provide insight into the latest advancements and industrial implementation of the respective technologies. The workshop program will be supplemented by an expert's panel discussion, a tabletop exhibition and a Component Award.

For newcomers to the subject of sinter-based Additive Manufacturing, we offer an extra tutorial on the fundamentals.

Program Tutorial

Tuesday 13 Sept 2022, Fraunhofer IFAM, Bremen

10.00 - 17.00 including lunch break

Part 1 The Fundamentals

Powder Characteristics: Methods and Standards for Metal Powders – **Binders and Debinding:** Approaches for different SBAM processes – **Sintering:** Fundamentals and Specialties of SBAM processes

Part 2 Processes

Feedstock Printing: Fused Filament Fabrication and extrusion-based processes – **Binder Jetting:** Fraunhofer IFAM's experiences and approaches – **Other Sinter-based Processes:** 3D-Screen Printing, Lithography and other Approaches

Part 3 Interactive sessions

Lab tour – Interactive sessions – wrap-up

Program Workshop Day 1

from 10:00 Registration and coffee

10.15 – 12.00 Sinter-based AM - Introduction

Welcome and Introduction

Dr. Sebastian Hein, Fraunhofer IFAM

»Reality versus potential – How big is the sinter-based AM market?«

Matthias Schmidt-Lehr, AMPower

»Delivering High-Quality Production Metal Binder Jetting Solutions«

Jonah Myerberg, Desktop Metal Inc.

»Sinter based AM – Large scale industrial adoption of Binder Jet Printing (BJT)«

Mukund Nagaraj, Indo-MIM

12.00 – 13.30 Lunch break

13.30 – 14.00 Component Award Presentation

14.00 – 15.30 Binder Jetting - Scale UP!

»Experience in Binder Jetting of vehicle parts«

Alexander Rütjes, Volkswagen AG

»Qualifying parts for MBJ serial production – what we learned from MBJ serial production since 2013«

Christian Lönne, Digital Metal

»Serial Production with Binder Jetting – Opportunities and Challenges«

Dr. Simon Höges, GKN Additive

15.30 – 16.00 Coffee break and exhibition

16.00 – 17.30 Material Development in sinter-based AM

»Process-specific material development in sinter-based Additive Manufacturing«

Dr. Sebastian Hein, Fraunhofer IFAM

»Challenges for addressing a robust Additive Manufacturing process: Binder Jetting development for Invar36 alloy«

Asier Lores, TECNALIA

»How does Fused Granular Fabrication of Ti- and Mg-alloys compare to Metal Injection Moulding?«

Dr. Thomas Ebel, Helmholtz-Zentrum Hereon

19.00 – 22.00 Evening get-together

Program Workshop Day 2

09.00 – 10.30 Binder Jetting - Process Development

»Evaluation of the dimensional repeatability for Metal Binder Jetting: method and results«

Paul Calves & Benoit Verquin, CETIM

»Latest development of Binder jet of Cemented Carbides«

Mikael Schuisky Ph.D., Sandvik Additive Manufacturing

»Building of industrial scale binder jetting operation - lessons learned«

Radoslav Behul, PRINTY

10.30 – 11.15 Coffee break and exhibition

11.15 – 12.00 Panel discussion: The state of industrial implementation of sinter-based AM processes

12.00 – 13.30 Lunch Break

13.30 – 15.00 Enabling Technologies

»Smart Metal Powder Handling Solutions for Additive Manufacturing«

Thomas Ramme, Volkmann

»Sustainability in the Debinding and Sintering Process«

Dr. Ingo Cremer, Cremer Thermoprocessanlagen

»Material characterisation for accurate sintering simulation and validation«

Dr. Kiranmayi Abburi Venkata, SIMUFACT

15.00 – 15.30 Coffee break and exhibition

15.30 – 17:00 Other Sinter-based AM Processes

»Gel Casting – a hybrid process for 3D metal parts«

Dr. Sebastian Riecker, Fraunhofer IFAM Dresden

»Lithography-based Metal Manufacturing (LMM)«

György Harakály, INCUS

»Moldjet Technology«

Ofer ben Zur, Tritone Technologies

Sinter-based AM Component Award

Call for Entries

Additive Manufacturing, like no other production technology, has received immense public attention these last few years, thanks to the potential to change industrial production.

To highlight the many advantages of sinter-based AM at the workshop's tabletop exhibition, we would like to invite all participants to submit sinter-based AM parts for our Component Award competition at the 2022 Sinter-based AM workshop.

The first three winners will receive 5 minutes presentation time during the workshop where they may present their company and their sinter-based AM activities to all attendees.

The winners will also be presented in Fraunhofer IFAM's Social Media accounts and mentioned in all publications that are related to the 2022 workshop.

Terms of participation

Eligible for participation:

All natural persons, companies, institutes or co-operation teams consisting of members from science and commerce who attend the 2022 workshop. Participants must hold the copyrights for their submission(s) and must not violate existing rights of third parties.

Each participant can submit a maximum of three components.

Participation is free of charge.

Criteria

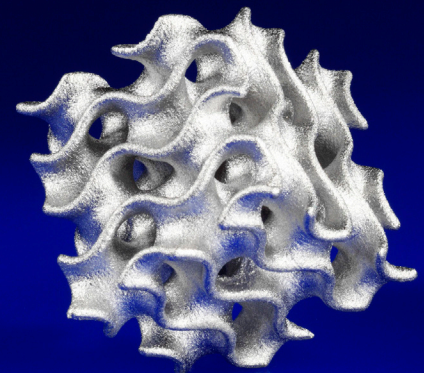
- Material
- Design
- Economical aspects
- Application

Deadline for entries

In order to participate in the competition, the components must be shipped to:

Fraunhofer IFAM
Claus Aumund-Kopp
Wiener Strasse 12
28359 Bremen, Germany

prior to Wednesday, 31st August. Please fill out a separate entry form for each submitted component.



Component Award 2022