

# Event at a glance

## Workshop Venue:

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.

## Tutorial Venue:

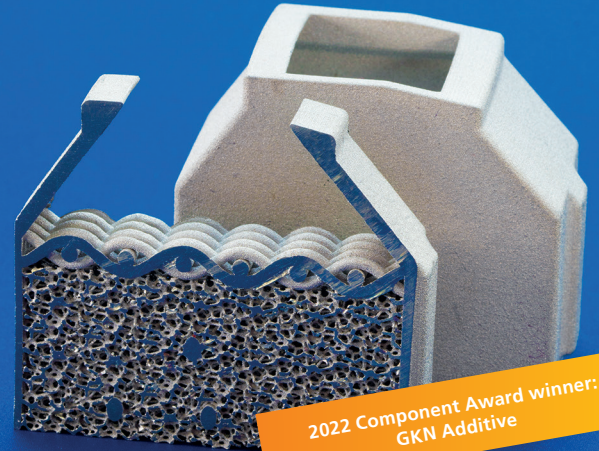
Fraunhofer Institute for Manufacturing Technology and  
Advanced Materials IFAM  
Wiener Strasse 12 | 28359 Bremen  
www.ifam.fraunhofer.de

The number of participants for the tutorial is limited to a maximum of 30 people.

## Contact

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claus.aumund-kopp@ifam.  
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Fraunhofer IFAM  
Wiener Strasse 12  
28359 Bremen  
www.ifam.fraunhofer.de



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12.-14. Sept. 2023, Fraunhofer IFAM Bremen

# 4. Workshop Sinter-based Additive Manufacturing + Tutorial

Now for the fourth time we will present and discuss with you 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

12 Sept 2023, Fraunhofer IFAM

### 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



The must-attend event  
of the year 2023 for sinter-  
based AM users«

## Program Workshop Day 1

13 Sept 2023, Hotel Munte, Bremen

from 10:00 Registration and coffee

10:15 – 11:45 Sinter-based AM Introduction

### Welcome and Introduction

Dr. Sebastian Hein, Fraunhofer IFAM

### »Addressable Market for Sinter-based AM«

Bastian Barthel, AMPOWER

### »Printed to Sintered - A »How to« on Debind and Sinter Technology«

Stefan Joens, Elnik Systems LLC

11:45 - 13:15 Lunch Break

13:15 - 14:00 Component Award Presentation

14:00 - 15:30 Binder Jetting - Lightweight Materials

### »Aluminium metal binder jetting technology and its applications«

Takafumi Sasaki, Ricoh Company Ltd

### »Towards production scale metal binder jetting of reactive metals«

Pierre-Victor Sabatier, Desktop Metal

### »Sinter-based AM of aluminum alloys«

Matteo Zanon, KYMERA International

**15:30 - 16:00 Coffee Break and Exhibition**

**16:00 - 17:30 Hardware for Binder Jetting**

**»Role of gases during the value chain of Binder Jetting Technology«**

Kai Zissel, Linde GmbH

**»Post-sintering heat treatments of H13 tool steel produced through binder jetting«**

Fredrik Berg Lissel, Markforged

**»Development of MBJ equipment for the efficient production of a high number of metal parts«**

Guillermo Sanchez, Triditive Additive Manufacturing

**19.00 – 22.00 Evening Get-together**

## Program Workshop Day 2

14 Sept 2023, Hotel Munte, Bremen

**09.00 – 10.30 Material and Process Development**

**»Manufacturing of Highly Stressed Powertrain Components Throughout Metal Binder Jetting«**

Gerrit Hellenbrand, WZL der RWTH Aachen

**»Industrial metal binder jetting - potentials in the field of high-speed steels / HSS«**

Dr.-Ing. Patrick Koenen, GKN Additive Manufacturing

**»Fine gas atomised powder for sinter based AM technologies«**

Dr. Paul Davies, Sandvik Osprey Ltd

**10.30 – 11.15 Coffee Break and Exhibition**

**11.15 – 12.00 Panel discussion: Implementation of Sinter-based AM**

**12.00 – 13.30 Lunch Break**

**13.30 – 15.00 Further Sinter-based Processes**

**»Recent advances of Lithography-based Metal Manufacturing (LMM)«**

Denise Mödder, Incus GmbH

**»Consistency in metal part production with ColdMetalFusion«**

Christian Staudigel, Headmade Materials GmbH

**»FAST/SPS : New Industrial Post-process for Full Densification of 3D Complex Shape from Additive Manufacturing«**

Arnaud Fregeac, NORIMAT Group

**15.00 – 15.30 Coffee Break and Exhibition**

**15.30 – 17:00 Supporting Analytics**

**»IR-Spectroscopy as an efficient tool for low impurities in debinding«**

Dr.-Ing. Johannes Trapp, Fraunhofer IFAM Dresden

**»Moisture in AM powder feedstock: Impact and monitoring«**

Louis-Philippe Lefebvre, National Research Council Canada

**»Additional analytical tools for a deeper look into the metal binder jet printing process«**

Dr. Sebastian Hein, Fraunhofer IFAM

# 2023 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 2023 Sinter-based AM workshop.

The first three winners will each receive 10 minutes presentation time on the second day of 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 news releases that are related to the 2023 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 2023 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.
- Entry forms for participation are available as download on the workshop's registration website or upon request from Claus Aumund-Kopp.

## Criteria

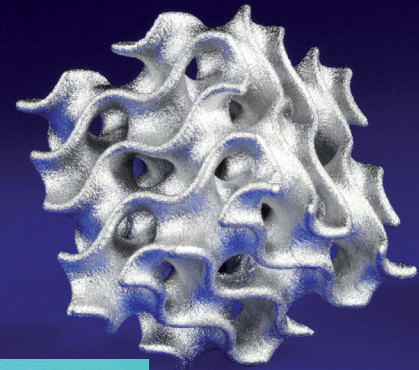
- Material
- Design
- Economical aspects
- Application

## 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 Tuesday, 1 August 2023. Please fill out a separate entry form for each submitted component.



Component Award 2023