**OpP3D – A CORNET PROJECT**

3D printing of metallic parts by powder bed techniques use dedicated powders in different materials. Those powders have defined characteristics that will influence the parts manufacturing process as well as the final parts properties such as mechanical strength or electrical conductivity. This workshop will answer the following questions:

> Is it possible to improve the final performances of the produced parts by modifying the raw materials (powders) characteristics?

> What are the available techniques to modify those powders?

> How to optimise the process reliability and efficiency by choosing the right composition of powders and the right process parameters?

The workshop will present the state of the art in terms of additive manufacturing processes and raw materials, but also the latest developments obtained during a European project called OpP3D. The results of this project will be presented at the workshop by the four scientific partners.

### REGISTRATION

<table>
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<th>Time</th>
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<tr>
<td>10.00</td>
<td>Introduction</td>
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<tr>
<td>10.30–10.40</td>
<td>Additive manufacturing and OpP3D: Technical challenges and project aims</td>
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### 1st Presentation 10.40–11.10 + 10’ discussion

**Indutherm** | Powder production for additive manufacturing

### 2nd Presentation 11.20–11.50 + 10’ discussion

**Unicorn Engineering** | Electric motor construction: new possibilities offered by 3D printed copper coils

### LUNCH BREAK 12.00–13.00

### 3rd Presentation 13.00–13.30 + 10’ discussion

**MateriaNova** | Powder treatment by the magnetron sputtering technique and applications

### 4th Presentation 13.40–14.10 + 10’ discussion

**Fraunhofer UMSICHT** | Non-metallic coatings on Cu powders from liquid, gaseous and vapor phase media

### 5th Presentation 14.20–14.50 + 10’ discussion

**sirris** | 3D-printed parts and process reliability: Development approach on metallic powders thematic

### 6th Presentation 15.00–15.30 + 10’ discussion

**fem** | Processability of Cu and Cu-alloys with laser beam melting: Influence of powder coating and alloying elements

### 7th Presentation 15.40–16.00 + 10’ discussion

Needs for materials in powder bed based additive manufacturing: Introducing the OpP3D follow-up project

### GET TOGETHER 16.15–17.00

### GET YOUR TICKET TODAY

Registration is possible by email until April 20th, 2018:

gerhard.wolf@umsicht.fraunhofer.de | www.umsicht-suro.fraunhofer.de

Registration fee per person: 50 €

Further information is available on request and after registration

### LOCATION

**fem**

Katharinenstraße 17
73525 Schwäbisch Gmünd
Germany

### HOTEL

Hotel rooms for an overnight stay can be booked under special conditions (booking code »fem-17«) at the **Hotel am Remspark**, Remspark 1, 73525 Schwäbisch Gmünd, Telephone +49 7171 7988200
The fem, Research Institute for Precious Metals and Metal Chemistry in Schwäbisch Gmünd, deals with various issues of material and surface technology. We are specialized in precious metals and galvanic surface treatment. Other priorities are corrosion, analytics, light metals and coating layers, physical and chemical layer depositions, material physics as well as material and layer characterization.

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Fraunhofer Institute for Environmental, Safety, and Energy Technology: Our know-how covers technical innovations in the fields of environmental, material, process and energy technology. Our objective is the advancement of sustainable economies, environmentally friendly technologies and innovative approaches. Our wish: to improve the standard of living and to promote the innovation capacity of the economy.

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To ensure their growth, businesses develop new products, directly brought about by technological innovations, on an ongoing basis. These innovations are the fruit of long years of research led by the university sphere. Strengthened by its internationally-recognised expertise, the University of Mons in Belgium has created MateriaNova, a unique-in-Europe research and development centre. Its specialty? The development of innovative materials.

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Sirris helps companies develop, test and effectively implement technological innovations. In working with our experts, you will tap their knowledge and experience, while using our high-tech infrastructure to explore the full range of possibilities offered by new technologies. This will help you make the right technological choices and rapidly turn your innovations into marketable products and services.

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THE RESEARCH WAS CONDUCTED IN COOPERATION WITH THE FOLLOWING INDUSTRIAL PARTNERS

Indutherm Gießtechnologie GmbH, Walzbachtal/Germany
NMD New Materials Development GmbH, Laufen-Leobendorf/Germany
Ard Sauter GmbH, Hornberg-Niederwasser/Germany
3D-LASER GbR, Kirchheim unter Teck/Germany
HMW Hauner Metallische Werkstoffe, Röttenbach/Germany
Unicorn Engineering GmbH, Schwäbisch Gmünd/Germany
Ionics SA, Liers/Belgium
Advanced Coating SA, Liege/Belgium
Laser Coating Diamond Technology, Marcinelle/Belgium
Euro Heat PIPE SA, Nivelles/Belgium
ADDIPARTS sprl, Mons/Belgium
SAGITA SA, Wandre/Belgium
Any-shape SA, Gosselies/Belgium
Diarotech, Gilly/Belgium
Hoganas SA, Ath/Belgium
Calyos SA, Nivelles/Belgium
Geonx SA, Gosselies/Belgium

THIS WORK WAS FUNDED BY THE PUBLIC SERVICE OF WALLONIA AND BY THE GERMAN MINISTRY FOR ECONOMICS AND ENERGY BASED ON A DECISION OF THE GERMAN BUNDESTAG VIA THE AIF-IGF PROGRAM (NO 161 EN), AS PART OF A TRANSNATIONAL CORNET OVERALL PROJECT