



Rapid.Tech 3D
17 to 19 May 2022
Messe Erfurt

3D printing enables sustainable manufacturing of intelligent interiors for transport in factory of the future
Rapid.Tech 3D to present new AM developments and applications in the aerospace industry

(Erfurt, 24 March 2022). “3D printing truly proves its superiority when it comes to the sustainable manufacture of intelligent products,” says Bernhard Randerath, who is convinced of the disruptive potential of this key technology. The aeronautical engineering expert has over 30 years' experience in the industry, including as a manager at Lufthansa, Airbus and Etihad. It was under his leadership that Etihad became the first airline to be certified by the European Aviation Safety Agency to use additively manufactured parts. As CEO of the newly established German Emirati-Institute – Technologies 4.0 (GEI), he is overseeing promising collaborations on technology between Germany and the United Arab Emirates (UAE), with projects on aviation and AM applications playing a pioneering role. He will be speaking about these projects at the Rapid.Tech 3D specialist conference in Erfurt, and delivering a keynote address to open the third day of the conference on 19 May 2022.

The focus will be on “Transport interiors of the future”. “Be it planes, cars, trains or ships - modes of transport have similar requirements when it comes to interiors and components that are similar constructed. 3D printing can deliver new designs and functionalities and synergies in parts production for the various transport types. From individual elements to printed cabins, the entire product range can be reproduced - without the need for toolmaking or extensive logistics,” Bernhard Randerath explains. GEI is in the process of turning this vision into reality. “We will be building a factory that will use Industry 4.0 technologies to develop intelligent interiors for the transport of the future, and produce them sustainably. Additive manufacturing will play a major role in this,” says the GEI manager, explaining the German-UAE project. A site is currently being sought in Germany. “We’re looking for a region that is undergoing structural transformation, moving away from coal and towards the industries of the future,” Bernhard Randerath explains, adding that the factory is scheduled to start operations in 2025.

Turnkey certification of components

Like all industrial AM production, the factories of the future will need safe and reliable machines, materials and processes that guarantee consistently high-quality manufacturing. “The use of additive manufacturing is subject to strict regulations, particularly in aviation. The Aviation Forum at Rapid.Tech 3D will be discussing how far we have already progressed along the path to turnkey certification of components. Meeting the requirements for these approvals is a real challenge, but as we will see from examples of practice in industry, good progress has been made,” says Stephan Eelman, providing a glimpse into the Aviation Forum that will follow directly after the keynote address. Stephan Eelman is Vice President Technology and Innovation at aviation parts supplier Deharde, and is overseeing the content of the forum.

Stephan Keil from The Aviation AM Centre, Lars Langhans from FIT AG and Dr. Jürgen Kraus from MTU Aero Engines AG will be among those presenting certified AM production systems for the aerospace industry along with client projects that have already been delivered. Nils Gerlant Veenstra from 3D printing provider



AMbrace in the Netherlands will report on the introduction of secure on-demand production for aerospace components, among other things to reduce aircraft downtimes during repairs.

End-to-end 3D, concluding with manual work? Dr. Thomas Bielefeld from Premium Aerotec will be looking at this issue and explaining how post-processing of topology-optimized bionic structures is working at one of the leading suppliers to the aviation industry.

Vasyl Kashevko from Rocket Factory will be devoting his address to the new and rapidly expanding “New Space” market. This deals with satellite systems for real-time data processing, large numbers of which have to be launched into space, using small rockets known as microlaunchers. AM applications offer great potential to save time and money in the production of these launcher systems.

Other talks will look at new processes and materials for AM applications in aviation, among them robot-assisted additive manufacturing, which opens up new options for the design of cabin components; and new flame-retardant materials for the transport sector that are approved for additive processing. These innovations will be presented by Dr. Jan-Ole Kühn from the ZAL Center of Applied Aeronautical Research and Dr. Matthias Fischer from BASF.

High-calibre specialist programme with innovations from AM application and research

The Rapid.Tech 3D specialist conference will offer further insight into current developments in additive technology, with keynote speeches from Airbus Helicopter, Autodesk, nFrontier, Porsche, Procter & Gamble, Sauber and Toolcraft. The issues will be discussed in greater depth on all three days of the conference in the various trade forums. In addition to Aviation, there will be forums on AM in Construction Engineering & Architecture; Automotive & Mobility; Design; Medical, Dental & Orthopaedic Technology; Software & Processes; Tool, Model and Mould Making, and News from AM. The latest developments in and prospects for AM research and training will be considered in the 3D Printing & Education and AM Science forums. This strand of the programme will include a presentation from the Fraunhofer-Gesellschaft on current results and projects in the field of additive manufacturing.

Detailed information on the keynote speeches and the content of the individual trade forums can be found in the overview of the programme for the Rapid.Tech 3D specialist conference at the following link:

<https://www.rapidtech-3d.com/visitors/congress-programme/>

Big-name exhibitors have already booked their places

The Rapid.Tech 3D exhibition also offers an insight into the latest developments and applications in additive manufacturing. Companies and research institutions such as alphacam, Farsoon Europe, FIT, Fraunhofer, Intamsys, Kaut-Bullinger, Nano Dimension, Oechsler, Stratasys and Trumpf have already booked their stands in Erfurt. There is still time to book exhibition space. More detailed information is available from the following link: <https://www.rapidtech-3d.com/exhibitors/registration-prices/>

Book tickets conveniently online

The Rapid.Tech 3D ticket shop is already open. Tickets to attend the conference on one, two or three days can be booked online at your convenience at:

<https://www.rapidtech-3d.com/ticket/>

Further information: www.rapidtech-3d.com



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