

Rapid.Tech + FabCon 3.D

25-27 June 2019

Messe Erfurt

Rethinking design processes

Design forum at Rapid.Tech + FabCon 3.D will discuss the changing approaches to development processes

(Erfurt, 16 April 2019). Additive manufacturing (AM) enables developers and design engineers to rethink their design processes. But in order to take full advantage of the new freedoms it opens up, a whole new approach is needed. The latest concepts in this area from the worlds of science and research will be discussed at the Design forum on 25 June 2019, the opening day of the three-day Rapid.Tech + FabCon 3.D event, now in its 16th year at Messe Erfurt.

"The forum will focus on the appropriate methods, systems and specialist knowledge required to take advantage of the potential of AM-compatible design. We will be demonstrating some of them using practical examples from the automotive and aerospace industries. The forum will also explore how we can combine additive and conventional approaches effectively," explains Dr Guido Adam, Head of Development at SLM specialists DMG MORI REALIZER GmbH, and the man responsible for selecting the content for the forum.

One important factor when it comes to utilising the benefits of AM is cost-effectiveness. Until now, it has been difficult to assess costs until the design has been completed. But scientists at Technische Universität Dresden have now developed a method that can be used to estimate the potential and cost of additively manufactured components at a very early stage in the product development process. This quantitative method will be presented at the forum by Michael Süß. Sebastian Kuschmitz of Technische Universität Braunschweig will demonstrate additive manufacturing principles that can be used to support component design in practical industrial situations.

The conditions and strategies associated with the additive manufacture of lightweight gearwheels for the automotive industry will be discussed by Matthias Schmitt from the Fraunhofer Research Institution for Casting, Composite and Processing Technology IGC in Augsburg. Robin Willner of the Fraunhofer Institute for Material and Beam Technology IWS in Dresden will explore the options for topology optimisation in aerospace components made using additive processes.

The use of surface treatments in selective laser melting (SLM) will be covered by Enno Garrelts from the University of Stuttgart. His talk will demonstrate how designers can prepare the surface topographies of SLM components and possible applications for these components that do not require further processing steps. David Kessing of the University of Wuppertal will explore concepts that ensure the efficient adhesion of plastic geometries created by AM to injection-moulded base units in FDM processes. And Hanna Siebert of Technische Universität Darmstadt will discuss the development of a process for manufacturing fine mesh structures using layering technology.

The exceptional quality of the forum is not least due to the double-blind reviews undertaken as part of the talk selection process. Reviewers assess submissions solely on their technical merit, without knowing who the author is. This year saw a total of 30 candidates competing for the seven speaking slots.



The Design forum is one of 14 sector-specific forums on the conference programme for Rapid.Tech + FabCon 3.D. Three forums – Software & Processes, Plastics, and Standardization & EHS – are appearing on the agenda for the first time. Alongside these new additions, the programme will once again feature the established forums on Automotive Industry; Aviation; Contract Additive Manufacturing; 3D Printed Electronics & Functions; Medical, Dental and Orthopaedic Technology; Tool, Mould & Jig Construction; Metal; and Law. As in previous years, a session by the Fraunhofer Additive Manufacturing Alliance and the two-day AM Science forum are further highlights on the agenda. Overall, over the three days of the conference, there will be more than 100 lectures presenting the latest developments, trends and findings relating to additive technologies and applications in theory and practice.

The 3D Printing Conference and the redesigned presentation spaces and networking opportunities at the exhibition will also help attendees to share their knowledge and experiences and to build and maintain their networks.

For their 16th edition, Rapid.Tech + FabCon 3.D are yet again expecting over 200 exhibitors from Germany and abroad, as well as more than 5,000 international trade visitors and conference delegates.

Further information: www.rapidtech-fabcon.com

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