



Rapid.Tech + FabCon 3.D
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Messe Erfurt

Electronics moving into the third dimension
Discussions on the first industrial applications will be held at the 3D Printed Electronics & Functions forum at Rapid.Tech + FabCon 3.D 2019

(Erfurt, 02 May 2019). The combination of additive manufacturing and printed electronics is opening up completely new ways of manufacturing products and components with integrated functionalities. “The specialist term increasingly being used for this is 3D structural electronics. Examples include intelligent user interfaces with 3D-integrated displays or light, such as those found in a car’s interior,” explains Wolfgang Mildner. But the printed-electronics specialist and owner of the technology service provider MSWtech makes it clear that there is still a lot of work to be done before functionally integrated 3D printed electronic products can be manufactured in bulk. “The area is still very new, but research is increasing. Where in previous years we discussed its feasibility in principle, this year’s 3D Printed Electronics & Functions forum will actually highlight the first industrial applications,” continues Mildner. The expert is responsible for curating the content for the forum, which will take place on the opening day of the three-day Rapid.Tech + FabCon 3.D trade fair on 25 June 2019.

In order to manufacture new functionally integrated 3D-printed electronic products, we first need the right technology. Israeli company Nano Dimension is establishing itself as a machinery provider for flexible electronics, such as 3D-printed circuit boards, antennas and electromagnets. In his address, Valentin Storz, EMEA Director at Nano Dimension, will be discussing what developments are already possible in the field, as well as what could be possible in the future. Taufkirchen-based Hensoldt Sensors GmbH, an international leader in the field of security electronics, is one of the first companies to take advantage of the new technology. Jörg Sander, a 3D-printing expert at Hensoldt Sensors, will explain how the company has implemented the new manufacturing technology and what impact it has made.

In the Dutch city of Eindhoven, the Holst Center is working closely with the industry to develop processes for wireless autonomous sensor technologies and flexible electronics. At the conference, Stefan van Waalwijk van Doorn will be presenting a range of manufacturing approaches and use cases for 3D-printed structural electronics. Another leading research institution in this field is the Institute for Factory Automation and Production Systems at the University of Erlangen-Nuremberg. The scientists there have developed a five-axis, multi-material manufacturing system that allows mechatronically integrated assemblies to be produced using additive processes. Markus Ankenbrand will explain how the system is structured, programmed and evaluated.

A talk from Cara Kolb of the Technical University of Munich will explore how the inkjet-printing of electrodes for lithium-ion batteries can improve their performance. The benefits the WLAM process offers with regard to manufacturing custom structures from silicate materials – which are becoming increasingly sought after for applications in the fields of optics, electronics, mechanical engineering and construction – will be detailed by Fabian Fröhlich of Ilmenau University of Technology.

And finally, a talk from Prof Bastian E. Rapp of the NeptunLab at the University of Freiburg will explore the use of the technology in the field of biosciences. He will highlight the range of interdisciplinary applications for micro- and nano-technologies in life sciences, involving additive manufacturing at its highest resolution. Such applications include biological and chemical sensors and novel materials for 3D printing in microfluidics and MEMS prototyping.



The 3D-Printed Electronics & Functions forum is one of 14 sector- and subject-specific forums on the conference programme for Rapid.Tech + FabCon 3.D. Three forums – Software & Processes, Plastics, and Standardization & Occupational Safety – are appearing on the agenda for the first time. Alongside these new additions, the programme will once again feature the established Automotive Industry; Aviation; Contract Additive Manufacturing; Medical, Dental & Orthopaedic Technology; Tool, Mould & Jig Construction; Metal; Design; and Law forums, a session by the Fraunhofer Additive Manufacturing Alliance and the two-day AM Science forum. 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, to be held from 25 to 27 June 2019, 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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