



**Rapid.Tech (14–16 June 2016), Messe Erfurt**

**13<sup>th</sup> Rapid.Tech – “Electronic Engineering” trade forum debut  
Electronics meets mechanics – 3D electronics printing for  
components manufactured using AM**

*Erfurt, April 2016: Until now, Additive Manufacturing processes and 3D Printing have focused mainly on the manufacture of geometrically complex, mechanical components made of plastic, metal or ceramic. Rapid.Tech’s new “Electronic Engineering” trade forum will for the first time showcase and discuss 3D Printing of electronic components and conductor tracks on any substrate.*

Additive Manufacturing (AM) and 3D Printing make it possible to manufacture complex geometries that cannot be produced with conventional technology, and to integrate different mechanical and thermodynamic functions into components during the development phase. This is why they are among the key technologies for turning global trends such as Industry 4.0, ongoing digitalisation, sustainability and individualisation into reality. AM is already established as a manufacturing technology for mechanical series production components in fields such as aviation and medical technology. The inaugural “Electronic Engineering” trade forum at this year’s Rapid.Tech in Erfurt from 14 to 16 June will go one step further with its high-calibre speakers. Taking place on the third day of the event, it will illustrate current and future developments of the 3D Printing of electronic components and conductor tracks for parts manufactured using AM.

In the first presentation, Robin A. Krüger from LPKF Laser & Electronics AG will give an overview of the most important technologies for the production of MIDs (mechatronic integrated devices). He will also look in detail at laser direct structuring (LDS) and will introduce various LDS-MIDs that have already been produced, taking examples from the consumer electronics, automotive and research sectors. Finally, Krüger will present approaches to combining LDS processes with AM technologies, such as fused deposition modelling (FDM) and selective laser sintering (SLS). Dr Martin Hedges from Neotech AMT GmbH will use his talk to illustrate the current state of technology for integrating electronic functions in 3D printed substrates, which will to



enable electronic systems and components to be manufactured entirely by means of 3D Printing. His presentation will include a solution for 3D Printing of complex formed electronic circuits, antennae, heat sensors and other sensors. It will conclude by providing information on current applications, process scalability and large-scale production. Michael Bisges from Plasma Innovations GmbH will introduce digital direct metallisation as a new approach for circuit boards. This process uses digital design data to enable electrical circuits and conductor tracks to be applied directly and inline to the surface of virtually any material. Aarief Syed-Khaja, Chair of Manufacturing Automation and Production Systems Technology at the University of Erlangen-Nürnberg, will report on an innovative approach to manufacturing ceramic circuit carriers for high temperature electronics using selective laser melting (SLM). "What happens when 3D Printing and conductive inks converge?" This is the question that will be addressed by Simon Fried from Nano Dimension (Israel). He will also give a forward-looking presentation on how 3D Printing in electronics is likely to develop in future years and which parameters will be essential for growth.

Presentations at the new "Electroni Engineering" trade forum, like all lectures at the Rapid.Tech conference, will be simultaneously interpreted (German<>English). The forum is conceived and organised by Professor Jörg Franke, Head of the Department of Manufacturing Automation and Production Systems at the University of Erlangen. The department's research focuses on manufacturing, assembly and 3D Printing of mechatronic products. The member of Rapid.Tech's advisory board is, among others, speaker of the DFG Research Group for Optical Interconnection Technology (3D Printing of optical functions).

The 13th Rapid.Tech international trade show and conference for Additive Manufacturing is also hosting the trade forums "Additive Contract Manufacturing", "3D Metal Printing" and "Automotive Industry" for the first time. The new conference areas, in addition to the well-established trade forums "Medical Technology", "Dental Technology", "Design", "Aviation", "Tools" and "Science" and the User's Conferences, will provide opportunities for intensive professional exchange on specific AM topics. For twelve years, the specialist conference has been the platform used by experts and newcomers to discuss the current state of Additive Manufacturing as well as developing trends. "With the expanded conference programme and the extended,



three-day duration of Rapid.Tech, we are keeping abreast of the latest developments in Additive Manufacturing and 3D Printing,” explained Wieland Kniffka, CEO of Messe Erfurt.

Thanks to its unique combination of trade show and specialist conference, Rapid.Tech in Erfurt is among the world’s foremost events in the field of Additive Manufacturing and 3D Printing. For the fourth time FabCon 3.D, Germany’s 3D Printing fair for semi-professional users and prosumers, will be held in parallel with the event.

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