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Prof. Liang Zhou

School of Electronic Information and Electrical Engineering
Shanghai Jiao Tong University, China

**"Heterogeneous 3-D Integration of
a Millimeter-wave Transceiver module"**

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|----------------|---|
| Datum: | 09.06.2020 |
| Zeit: | 16:00 -17:00 Uhr (UTC+2) |
| Online: | Zoom Meeting (click here to join) |

Kontakt:

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Hints: the online meeting invitation will be send out by email in case of
any changes. Please **sign up in advance** (E-mail: cheng.yang@tuhh.de)



EMC Distinguished Lecture by Prof. Liang Zhou

Heterogeneous 3-D Integration of a Millimeter-wave Transceiver module

Abstract: three-dimensional integrated design technology can provide a single standard electronic system with multiple functions and is the most important method to enhance the technical performance of modern ICs and expand their capabilities. 3-D ICs based on system in package will significantly improve the RF performance of a transceiver by integrating the system-on-chip made by different materials, such as GaAs, silicon, or even GaN semiconductors. A transceiver can accommodate digital, analog, millimeter-wave, and other circuits, as well as a large number of miniaturization of passive components embedded in a multilayer substrate. Thus, the integration can be achieved through a 3-D multifunctional circuit. In this talk, Heterogeneous chip integration and physical compatibility, Miniature and high-performance passive components with integration methodology, as well as Thermal management and reliability issues using multi-physics methods are demonstrated. 30 GHz and 94 GHz heterogeneous Integration transceivers will be presented.



EMC Distinguished Lecture by Prof. Liang Zhou

Heterogeneous 3-D Integration of a Millimeter-wave Transceiver module

Biography: **Prof. Liang Zhou** received his Ph.D. degree in electrical engineering from the University of York, UK, in 2005. From 2005 to 2006, he was a Senior RF Engineer with Motorola INC where he involved in power amplifier design for the next generation of base station transceivers. Since May 2006, he joined the Key Laboratory of Ministry of Education of Design and Electromagnetic Compatibility of High-Speed Electronic Systems, Shanghai Jiao Tong University, Shanghai. He is currently a full professor. He has been a research fellow with the Institute for Electronics Engineering (LTE) of the Friedrich-Alexander-University Erlangen-Nurnberg, Germany, granted by the Alexander von Humboldt-Stiftung, Germany, in 2017, and a visiting scholar with the Massachusetts Institute of Technology, Cambridge, U.S.A, in 2007. He is the IEEE EMC society Shanghai Chapter Chair. His main research interests include system on packaging (SOP) design and modeling, EMC and High Power Microwave (HPM) protection of communication platforms, and multi-physics and its application.

Dr. Zhou was the recipient of National Science Fund for Excellent Young Scholars in 2018, Alexander von Humboldt (AvH) research fellowship in 2016, APEMC Young Scientist Award in 2016, the Research Grant of the Okawa Foundation (Japan) in 2016, the International Union of Radio Science (URSI) Young Scientist Award in 2014, the best paper awards of Cross Strait Quad-Regional Radio Wireless Conference (CSQRWC) in 2014, and the National Science and Technology Advancement Award of China in 2012.