FRAUNHOFER INSTITUTE FOR PHOTONIC MICROSYSTEMS IPMS

PRESS RELEASE

Dr. habil. Thomas Kämpfe appointed professor at the Technical University of Braunschweig

The Technical University in Braunschweig has appointed Dr. habil. Thomas Kämpfe as professor at the Faculty of Electrical Engineering, Information Technology, and Physics. In this role, Dr. Kämpfe will take over the chair for Neuromorphic Computing. At the Fraunhofer Institute for Photonic Microsystems IPMS, he heads the business unit "IoT/HPC Components and Systems" in the Center Nanoelectronic Technologies. With his expertise, the trained physicist and electrical engineer brings valuable knowledge, particularly in the research areas of microelectronics and in-memory computing.

Dr. habil. Thomas Kämpfe has a versatile research history. In addition to completing his diploma in applied physics with a focus on materials science and nanotechnology in 2011, he earned his Ph.D. in physics in 2016 at the Technical University of Dresden in the fields of nanoelectronics and ferroelectronics. During this time, he was also a research scholar at the University of Colorado and a lecturer in nanotechnology at TU Dresden. He completed his habilitation in 2022 with a research focus on ferroelectric hafnium oxide for in-memory computing and semiconductor development. For his habilitation thesis, Dr. habil. Thomas Kämpfe received the Dresden Excellence Award and the George E. Smith Award in 2023 for his research on the utilization of 28nm FeFET crossbar arrays on 300mm wafers for in-memory development.

Research application in teaching

Dr. habil. Thomas Kämpfe is a renowned figure in his research field due to his active participation in international conferences and the publication of over 200 articles in prestigious journals. His innovative research findings, for example in the area of brain-inspired computing, as well as his experiences as a lecturer, most recently at the Brandenburg University of Technology Cottbus-Senftenberg (BTU), will enrich his teaching as a professor in Neuromorphic Computing at the Technical University of Braunschweig. He will contribute his expertise at the CMOS Design Institute to develop energy-efficient AI transistors using state-of-the-art memory technologies such as FeFET, FRAM, RRAM, and MRAM. The Fraunhofer IPMS warmly congratulates Dr. habil. Thomas Kämpfe on his appointment.

Editor
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About Fraunhofer IPMS

The Fraunhofer Institute for Photonic Microsystems IPMS a leading provider for applied research and development in the fields of photonics, microelectronics and microsystems technology, which are relevant for intelligent industrial solutions, medical technology and mobility. Research focuses on customer-specific miniaturized sensors and actuators, MEMS systems, microdisplays and integrated circuits as well as wireless and wired data communication. Services range from consulting and design to process development and pilot series production. With the Center Nanoelectronic Technologies (CNT), Fraunhofer IPMS offers applied research on 300 mm wafers for microchip producers, suppliers, device manufacturers and R&D partners.

Images

F. l. t. r.: Prof. Dr. Andreas Waag, co-speaker of the Excellence Cluster QuantumFrontiers; Prof. Dr. Manfred Krafczyk, Vice President for Digital Transformation and Sustainability; Prof. Dr. Thomas Kämpfe; Prof. Dr. Patrik Recher, Dean of the Faculty of Electrical Engineering, Information Technology, and Physics.
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In 2023, Prof. Dr. Thomas Kämpfe won the Dresden Excellence Award for his habilitation; seen here with Dresden's Mayor Dirk Hilbert.
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Prof. Dr. Thomas Kämpfe from Fraunhofer IPMS.
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