

IEEE Transactions on Terahertz Science & Technology Best Paper Award

Recognizes, on an annual basis, the most significant contribution in a paper published in the IEEE Transactions on Terahertz Science and Technology.

Thomas Kürner, Ralf-Peter Braun, Guillaume Ducournau, Uwe Hellrung, Akihito Hirata, Shintaro Hisatake, Laurenz John, Bo Kum Jung, Ingmar Kallfass, Tetsuya Kawanishi, Keitarou Kondou, Yigal Leiba, Bruce Napier, Ran Timar, Alexandre Renaud, Peter Schlegel, Pascal Szriftgiser, Axel Tessmann, Dominik Wrana, For the outstanding/impactful paper entitled, “THz Communications and the Demonstration in the ThoR–Backhaul Link,” *IEEE Transactions on Terahertz Science and Technology*, vol. 14, no. 5, pp. 554-567, September 2024

Thomas Kürner

Thomas Kürner (Fellow IEEE) received his Dipl.-Ing. degree in Electrical Engineering in 1990, and his Dr.-Ing. degree in 1993, both from University of Karlsruhe. From 1994 to 2003, he was with the radio network planning department at the headquarters of the GSM 1800 and UMTS operator E-Plus Mobilfunk GmbH & Co KG, Düsseldorf, where he was team manager radio network planning support responsible for radio network planning tools, algorithms, processes and parameters. Since 2003 he is Full University Professor for Mobile Radio Systems at the Technische Universität Braunschweig. In 2012 he was a guest lecturer at Dublin City University within the Telecommunications Graduate Initiative in Ireland. Currently he is chairing the IEEE 802.15 Standing Committee THz and the ETSI Industrial Specification Group THz and the IEEE AP-S Technical Committee on Propagation, Scattering and channel Characterization. He was the project coordinator of the H2020-EU-Japan project ThoR (“TeraHertz end-to-end wireless systems supporting ultra-high data Rate applications”) and was Coordinator of the German DFG-Research Unit FOR 2863 Meteracom (“Metrology for THz Communications”). In 2019 and 2022 he received the Neal-Shephard Award of the IEEE Vehicular Technology Society (VTS) and also in 2022 the Best Teacher Award of the European School on Antennas and Propagation (ESoA).



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Ralf-Peter Braun

Dr. Ralf-Peter Braun holds an MS (1985) and PhD (1995) in Electrical Engineering from TU Berlin. After 14 years at the Heinrich-Hertz-Institute, he joined Deutsche Telekom in 1997 and Orbit GmbH in 2022. He has over 40 years of experience in optical, mm-wave, and THz transmission systems, network architectures, control, service, and test networks, with active contributions to MEF and IEEE 802.3 standardization. He initiated the nationwide German SASER R&D TestNet (2010) and currently leads Quantum Communication Networking activities, building the German QTFC (Quantum, Time & Frequency, Classical) infrastructure toward a future Quantum Internet.



Guillaume Ducournau

G. Ducournau is Professor at the Institute of Electronics, Microelectronics and Nanotechnology (IEMN), UMR-CNRS 8520, University of Lille, France. He is the Leader of the THz wireless communications activity with IEMN using optoelectronic THz photomixers, electronic receivers, THz instrumentation, and millimeter-wave (mm-wave) characterization. He worked on several European projects as THOR H2020 as well as in TIMES (6G SNS). He received the 2020 ISAP BEST PAPER award. He is coordinating the SYSTERA project (France 2030 programs, PEPR 'Future Networks') for sub-THz bands communications. He has authored or co-authored more than 250 publications in peer-reviewed international journals or peer-reviewed conferences proceedings.



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Uwe Hellrung

Uwe Hellrung is with the Institut für Nachrichtentechnik at Technische Universität Braunschweig since 1989. In 1996 he received the master craftsman's certificate and since 1997 he is the head of the precision mechanical workshop at Institut für Nachrichtentechnik. Among his tasks are planning and construction of mechanical platforms and assemblies used in numerous research projects at the institute.



Laurenz John

Laurenz John received the Master of Science degree and Ph.D. in Electrical Engineering from the Karlsruhe Institute of Technology, Karlsruhe, Germany, in 2016 and 2021, respectively.

From 2017 to 2025, he was a Project Leader and Senior RF Design Engineer with Fraunhofer IAF, Freiburg, Germany, working on IC and package design for wireless applications at mm-wave and THz frequencies. Since 2025, he has been a System Architect/Technical Lead for Radar & Space at TRUMPF Hüttinger Microwave, Stutensee, Germany.



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Bo Kum Jung

Bo Kum Jung was born in Busan, South Korea, in 1991. He received the B.E. degree in electrical engineering from Inha University, Incheon, South Korea, in 2015, and the M.Sc. and Dr.-Ing. degrees in electrical engineering from Technische Universität Braunschweig, Braunschweig, Germany, in 2019 and 2025, respectively. Since 2019, he has been a Research Associate with the Institute for Communications Technology, Technische Universität Braunschweig, Braunschweig, Germany. He will join the Faculty of Science and Technology, Waseda University, Tokyo, Japan, as a Junior Researcher in April 2026. His research interests include system-level simulation of mobile communication systems, sub-millimeter-wave channel measurements, and channel modeling using ray-tracing techniques. His current research focuses on high-data-rate terahertz (THz) communication in complex propagation environments and its impact on reliable communication in realistic scenarios.



Bruce Napier

Bruce Napier was awarded a B.Sc. (Physics; 1. Hons) from Loughborough University of Technology in 1993. His doctoral research (Ph.D. 1998, De Montfort University, UK) investigated the writing of ultra-long Bragg gratings in optical fibre for dispersion compensation. He worked at Nortel Networks as research engineer on multiplexing components (Harlow, UK) and then on integrated components (Paignton, UK) and at Gooch and Housego developing its photonic packaging business unit. Since 2008 he has worked on the management and administration of collaborative research projects, especially EU projects, at Vivid Components Germany.



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Ran Timar

Ran Timar received the B.Sc. degree in electrical engineering from the Technion University, Haifa, Israel, in 1996. He held the position of Director of PHY Systems at Siklu Communications until its recent acquisition by Ceragon Networks, where he now serves as a Group Leader for PHY Systems. With extensive practical experience in the design of antennas, radar, and communication systems, his expertise lies particularly in the millimeter-wave band. Over the last years, he has led the development of numerous successful radar and communication products in the industry.



Alexandre Renau

Alexandre Renau, received the Diplome d'ingénieur degree in electrical engineering from Polytech Lille (Lille University Graduate School of Engineers), Villeneuve d'Ascq, France, in 2022. Since 2022, he is working towards the Ph.D. degree, covering the topics of design and qualification of flexible waveguides operating in the submillimeter frequency bands, up to 220 GHz. His current research interests include waveguides and their transitions for applications up to 220 GHz. Mr. Renau is a member of the Institute of Electronics, Microelectronics and Nanotechnology (IEMN). He participated in the H2020 EU-Japan ThoR Project, dedicated to the development of km-range super-heterodyne THz transmission systems, especially on the system-level.



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Peter Schlegel

Peter Schlegel received his diploma in electrical engineering (Dipl.-Ing.) from the Technische Universität (TU) Braunschweig, Braunschweig, Germany in 1994. He is currently a research assistant at the Institut für Nachrichtentechnik at the TU Braunschweig. In addition to several smaller projects, he was active in the DVB-T and DVB-T2 technical planning group for northern Germany. His current research interests focus on visible light communication and THz communication. He also works as an IT manager and system administrator and is responsible for the measurement technology at the Institut für Nachrichtentechnik at TU Braunschweig.



Axel Tessmann

Axel Tessmann received the Dipl.Ing. and Dr.Ing. degrees in electrical engineering from the University of Karlsruhe, Karlsruhe, Germany, in 1997 and 2006, respectively. In 1997, he joined the Microelectronics Department, Fraunhofer Institute for Applied Solid State Physics (IAF), Freiburg, Germany, where he is involved in the development of monolithically integrated circuits and subsystems for high-resolution imaging systems and high-data-rate wireless communication links. He is currently the Group Manager of the Millimeter-Wave Packaging and Subsystem Group, Fraunhofer IAF.



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Dominik Wrana

Dominik Wrana received the M.Sc. degree in electrical engineering from Reutlingen University, Reutlingen, Germany, in 2019. Since 2019, he has been a Research and Teaching Assistant with the Institute of Robust Power Semiconductor Systems, University of Stuttgart, Stuttgart, Germany. His research focuses on system-to-circuit-level engineering for ultrabroadband wireless communications systems operating at millimeter- and submillimeter-wave frequencies. He is involved in the design and characterization of monolithic integrated circuits as well as system-level performance analysis and optimization.



Akihito Hirata, Shintaro Hisatake, Ingmar Kallfass, Tetsuya Kawanishi, Keitarou Kondou, Yigal Leiba, Pascal Szriftgiser

No photo or bio available at time of publication.