

IEEE Microwave Magazine Best Paper Award

*Recognizes, on an annual basis, the most significant contribution
in a paper published in the IEEE Microwave Magazine.*

Farid Medjdoub, Keisuke Shinohara, Fabian Thome, Jeong-sun Moon, Eduardo Chumbes, Matthew T. Guidry, Umesh Mishra, Enrico Zanoni, Matteo Meneghini, Gaudenzio Meneghesso, James W. Pomeroy, Terirama Thingujam, Martin Kuball — For the outstanding/impactful paper entitled, "Emerging GaN Technologies for Next-Generation Millimeter-Wave Applications," *IEEE Microwave Magazine*, October 2024

Farid Medjdoub

Farid Medjdoub is a CNRS senior scientist and leads the research group WIND focused on wide bandgap material and devices at IEMN in France. He received his Ph.D. in Electrical engineering from the University of Lille in 2004. Then, he moved to the University of Ulm in Germany as a research associate before joining IMEC as a senior scientist in 2008. His research interests are the design, fabrication, characterization, and simulation of innovative wide bandgap devices. Multiple state-of-the-art results have been realized in the frame of his work. Among others, world record thermal stability up to 1000°C for a field effect transistor, best combination of cut-off frequency / breakdown voltage or highest lateral GaN-on-silicon breakdown voltage using a local substrate removal have been achieved. He is author and co-author of more than 250 papers in this field. He holds several patents deriving from his research. He has been leading the Nitride power electronic activities within the French national network called GaNexT starting from 2019.



Keisuke Shinohara

Keisuke Shinohara received the Ph.D. degree in Solid State Physics from Osaka University, Japan in 1998. He is a Principal Scientist at Teledyne Scientific Company, where he leads R&D on GaN-based devices for RF and power electronics applications, and related product development. He has published >140 technical papers and international conference proceedings, including >50 invited talks and 3 book chapters. He holds 25 patents in this technical field. He served on the technical committee of international conferences including IEDM, DRC, IWN, ICNS, CS MANTECH, CSW, IPRM, LEC, and TWHM. He was a chair of the IEEE MTT-S Technical Committee on Microwave and Millimeter-wave Solid State Devices (TC-9) during 2024-2025 and continues to serve on the committee.



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Fabian Thome

Fabian Thome received the Ph.D. degree from the University of Freiburg, Germany, in 2020.

In 2010, he joined Fraunhofer IAF, Germany. Since 2023, he has been the Head of a design team and Deputy of the High Frequency Electronics Business Unit. His current research interests include InGaAs and GaN HEMT technologies and linear and nonlinear semiconductor devices and MMICs.

Dr. Thome was a recipient of the 2023 IEEE Tatsou Itoh Award and a co-recipient of the 2023 EuMIC Conference Prize. In 2024, Dr. Thome received the Advanced Practice Paper Award at IMS2024. Dr. Thome is a member of MTT-S TC-11.



Jeong-sun Moon

Dr. Jeong-Sun Moon is a Principal Scientist at HRL Laboratories, Malibu, CA, and a Fellow of IEEE. He has been with HRL since 2000 and has been a PI for numerous contracts from DARPA, ONR, USG, JPL, and NASA. Before joining the HRL, he worked at the Sandia National Laboratories. He received the 2014 George Abraham Outstanding Paper Award from the Government Microcircuit Applications and Critical Technology Conference (GOMACTech), and the NASA SPACE ACT Board Award in 2009. He published three book chapters authored or co-authored more than 200 papers, and holds 30 patents, and served as an Editor of a top-notch IEEE journal, Electron Device Letters. At HRL, his research focuses on emerging materials, high-speed devices, RF circuits, and electro-optical applications.

He also gave numerous invited conference and workshop presentations and tutorials/ short courses. His work was featured in various magazines including IEEE Spectrum, Compound Semiconductor, NASA Tech Briefs, Microwave Journal, and MIT Technology Review. He served on the Program Committee for the Device Research Conference. He is a member of the Technical Program Committee of the Microwave Theory and Techniques Society (MTT-S).



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Eduardo Chumbes

Eduardo M. Chumbes has received his B.S degree in Physics in 1992 from MIT and his Ph. D. degree in Electrical Engineering in 2001 from Cornell University. His interest and background in semiconductor device physics, test and design has led him to join Raytheon right after graduation where he has for the last 25 years participated in several R&D projects focused on developing and advancing Gallium Nitride RF microwave and millimeter-wave microelectronics. He is presently a Technology Fellow at Raytheon and has expanded his interest and research into ultrawide bandgap semiconductors and related devices for optoelectronics, rf and power applications.



Enrico Zanoni

Enrico Zanoni is full professor of Microelectronics at the Department of Information Engineering of the University of Padova since 1993 and an IEEE Life Fellow. He and his group are involved in research on the characterization, modeling and reliability of Gallium Nitride electronic and optoelectronic devices since 1999. At the University of Padova in 1988 he established the microelectronics research group involved in CMOS analog and rf integrated circuit design, CMOS reliability and radiation hardness, compound semiconductor characterization, modeling and reliability, which includes now five full professors, four associate professors, three assistant professors and one technical engineer, plus approximately 30 PhD students, research assistants and post-docs. Various research projects at University of Padova deal with the study of reliability and failure physics of RF and power GaN HEMTs, GaN-based photodetectors, LEDs and lasers. Enrico Zanoni is coauthor of approximately 1000 publications on the modeling and reliability physics of silicon and compound semiconductor devices, more than 100 invited papers and of 4 patents.



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Matteo Meneghini

Matteo Meneghini received his PhD (University of Padova) working on the optimization of GaN-based LED and laser structures. He is now full professor at the Department of Information Engineering at the University of Padova. His main interest is the characterization, reliability and modeling of compound semiconductor devices (LEDs, laser diodes, HEMTs), and optoelectronic components, including solar cells. Within these activities, he has published more than 600 journal and conference proceedings papers. During his activity, he has cooperated and/or co-published with a number of semiconductor companies and research centers. He contributed to several conferences as steering committee member, or program chair, or track chair or committee member (IEEE IRPS, IEEE IEDM, WIPDA, IWN, ICNS, ESREF, ...) and is currently editor of IEEE TED, Electronics Letters, APEX, JJAP. He chaired the IEEE EDS Technical Committee on Compound Semiconductor Devices and Circuits (2022-2025). He is a Fellow of the IEEE. He – together with his colleagues - won several best paper awards at international conferences.



Gaudenzio Meneghesso

He graduated in Electronics Engineering at the University of Padova in 1992 working on the failure mechanism induced by hot-electrons in MESFETs and HEMTs. Since 2011 is with University of Padova as Full Professor. His research interests involve mainly the Electrical characterization, modeling and reliability of microelectronics devices, with particular emphasis on wide bandgap semiconductors. Within these activities he published more than 1000 technical papers (of which more than 100 Invited Papers and 16 best paper awards). Bibliometric indexes (updated February 2026):

- Scopus: Documents: 879, Tot. Citations 19991, h-index: 63
- Google Scholar: Documents: 1300, Tot. Citations 26623, h-index: 76

He has been the Project Coordinator of a European project H2020 – InRel-NPower, and Scientific Coordinator of European project H2020 – GaN4AP - GaN for Advanced Power Applications”. He has been nominated to IEEE Fellow class 2013, with the following citation: “for contributions to the reliability physics of compound semiconductor devices”.



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Terirama Thingujam

Terirama Thingujam is a researcher and engineer specializing in III-V semiconductor devices. Currently serving as a Device Modelling Engineer at Agnit Semiconductor Pvt Ltd, Bengaluru, India. Her work focuses on the modeling and performance analysis of GaN based semiconductor devices such as Algan/gan hemt for high-frequency RF applications. She earned her PhD in Electronics Engineering from Kyungpook National University, South Korea, where her doctoral research pioneered the modeling of GaN vertical nanowire MOSFETs. Prior to her current industrial role, she held positions as a Research Associate at the University of Bristol, UK, where she remains an Honorary Research Associate.



Matthew T. Guidry, Umesh Mishra, James W. Pomeroy, Martin Kuball

No photo or bio available at time of publication.