

Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab Microelectronics Germany (2023)

- Basavaraju, H., Borggreve, D., Vanselow, F., Isa, E.N., Maurer, L. (2023): A 0.8-V Fully Differential Amplifier with 80-dB DC Gain and 8-GHz GBW in 22-nm FDSOI CMOS Technology. In: Proceedings - IEEE International Symposium on Circuits and Systems (Conference Paper). DOI:10.1109/IS-CAS46773.2023.10181961. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167705183&doi=10.1109%2fISCAS46773.2023.10181961&partnerID=40&md5=81c32c738252e6ba777fd77f86050c17>
- Maiwald, T., Li, T., Hotopan, G.-R., Kolb, K., Disch, K., Potschka, J., Haag, A., Dietz, M., Debaille, B., Zwick, T., Aufinger, K., Ferling, D., Weigel, R., Visweswaran, A. (2023): A Review of Integrated Systems and Components for 6G Wireless Communication in the D-Band. In: Proceedings of the IEEE (Article). DOI:10.1109/JPROC.2023.3240127. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149361742&doi=10.1109%2fJPROC.2023.3240127&partnerID=40&md5=060a4e5e659bbd56691872632b2147e9>
- Bruckner, S., Kolpak, J., Michler, F., Shanin, N., Schober, R., Hagelauer, A., Weigel, R., Gasner, H., Winkler, J., Eskofier, B.M., Vossiek, M. (2023): A Wireless Joint Communication and Localization EMG-Sensing Concept for Movement Disorder Assessment. In: IEEE Journal of Electromagnetics, RF and Microwaves in Medicine and Biology (Article). DOI:10.1109/JERM.2023.3321974. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174843243&doi=10.1109%2fJERM.2023.3321974&partnerID=40&md5=6bc97640ff05d8671141bdba08326987>
- Xu, P., Flandre, D., Bol, D. (2023): Analysis and Design of RF Energy-Harvesting Systems With Impedance-Aware Rectifier Sizing. In: IEEE Transactions on Circuits and Systems II: Express Briefs (Article). DOI:10.1109/TCSII.2022.3171470. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85129453279&doi=10.1109%2fTCSII.2022.3171470&partnerID=40&md5=f6ee02e0cda5a418dacab8d3611ffc77>
- Michler, F., Kolpak, J., Scheiner, B., Weigel, R., Hagelauer, A. (2023): Characterization of a Flexible Polymer-Based Substrate Material for RF Applications. In: IEEE Radio and Wireless Symposium, RWS (Conference Paper). DOI:10.1109/RWS55624.2023.10046309. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149340860&doi=10.1109%2fRWS55624.2023.10046309&partnerID=40&md5=6dbc8f2d8a15a6d103e60a22870e8c47>
- Prouvée, J., Mangraviti, G., Debaille, B., Wambacq, P., Borggreve, D., Ciocoveanu, R., Fredriksson, H., Paliwal, P., Tillman, F., Terlemez, H., Dündar, B., Pinon, V., Hasbani, F., Ferret, A., Dehos, C., Hamani, A., Martineau, B., Morche, D. (2023): Digital beamforming transceiver design in 22 nm FDSOI technology for 39 Ghz 5G access. In: Technologies Enabling Future Mobile Connectivity and Sensing (Book Chapter). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172789694&partnerID=40&md5=73e6273c9f91d3a12fed6a396b6ae03>
- Hagelauer, A., Ruby, R., Inoue, S., Plessky, V., Hashimoto, K.-Y., Nakagawa, R., Verdu, J., Paco, P.D., Mortazawi, A., Piazza, G., Schaffer, Z., Yen, E.T.-T., Forster, T., Tag, A. (2023): From Microwave Acoustic Filters to Millimeter-Wave Operation and New Applications. In: IEEE Journal of Micro-

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

waves (Article). DOI:10.1109/JMW.2022.3226415. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178510979&doi=10.1109%2fJMW.2022.3226415&partnerID=40&md5=8e662c57b9b67841ecfdb5fbce5485a>

- Carlowitz, C., Dietz, M. (2023): Integrated Front-End Approaches for Wireless 100 Gb/s and Beyond: Enabling Efficient Ultra-High Speed Wireless Communication Systems. In: IEEE Microwave Magazine (Article). DOI:10.1109/MMM.2023.3277360. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165509267&doi=10.1109%2fMMM.2023.3277360&partnerID=40&md5=070b4f5bed94bbf2c70455209b6afc51>
- Hagelauer, A., Maune, H. (2023): International Conference on Microwave Acoustics & Mechanics [Conference Reports]. In: IEEE Microwave Magazine (Conference Paper). DOI:10.1109/MMM.2022.3220100. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85147139305&doi=10.1109%2fMMM.2022.3220100&partnerID=40&md5=9b63aa247b48fc5b0ee05f99a3b1c0cb>
- Dorn, C., Depold, A., Lurz, F., Hagelauer, A. (2023): Low-cost Software-Defined Radio System with Deterministic RX to TX Delay Using Timestamps. In: 2023 IEEE Topical Conference on Wireless Sensors and Sensor Networks, WiSNeT 2023 (Conference Paper). DOI:10.1109/WiSNeT56959.2023.10046235. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149421103&doi=10.1109%2fWiSNeT56959.2023.10046235&partnerID=40&md5=8f79ee3f9d623b2d04ef8553472cad13>
- Dorn, C., Kurin, T., Gabsteiger, J., Lurz, F., Hagelauer, A. (2023): Low-Cost, High-Stability Arbitrary Clock Source Using Software GNSS Drift Correction. In: 4th IEEE MTT-S Latin America Microwave Conference, LAMC 2023 - Proceedings (Conference Paper). DOI:10.1109/LAMC59011.2023.10375610. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85183587132&doi=10.1109%2fLAMC59011.2023.10375610&partnerID=40&md5=1bad61b2fb3fa17163350b1903a753c6>
- Dorn, C., Depold, A., Kurin, T., Lurz, F., Hagelauer, A. (2023): Low-Power Smart Selective LTE Jammer for Search and Rescue Applications using Software-Defined Radio. In: 2023 IEEE Wireless and Microwave Technology Conference, WAMICON 2023 (Conference Paper). DOI:10.1109/WAMICON57636.2023.10124912. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85160952457&doi=10.1109%2fWAMICON57636.2023.10124912&partnerID=40&md5=f5feae496e62ec4bd2350a628397b1cd>
- Forster, T., Mayer, M., Chauhan, V., Mayer, E., Ebner, T., Wagner, K.C., Mayer, A.P., Hagelauer, A. (2023): Nonlinear Finite Element Calculations of Layered SAW Resonators. In: IEEE Transactions on Ultrasonics, Ferroelectrics, and Frequency Control (Article). DOI:10.1109/TUFFC.2023.3242068. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85148669244&doi=10.1109%2fTUFFC.2023.3242068&partnerID=40&md5=8b7e001f0b3d1ca769e3dd9983285c1b>
- Shanin, N., Hagelauer, A., Cottatellucci, L., Schober, R. (2023): Optimal Energy Signal Design for Multiuser MISO WPCNs With Non-Linear Energy Harvesting Circuits. In: IEEE Transactions on Communications (Article). DOI:10.1109/TCOMM.2023.3257379. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85151371668&doi=10.1109%2fTCOMM.2023.3257379&partnerID=40&md5=3138b2e3648dbb85f348d9092f04cc7c>
- Debaillie, B., Brunier, F., Morche, D., Isa, E.N., Craninckx, J. (2023): Preface. In: Technologies Enabling Future Mobile Connectivity and Sensing (Editorial). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172777502&partnerID=40&md5=0e0b937b31960e18e455de3bae1a4aa0>
- Gonzalez, M., Xu, P., Dekimpe, R., Schramme, M., Stupia, I., Pirson, T., Bol, D. (2023): Technical and Ecological Limits of 2.45-GHz Wireless Power Transfer for Battery-Less Sensors. In: IEEE Internet

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

of Things Journal (Article). DOI:10.1109/JIOT.2023.3263976. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85153329724&doi=10.1109%2fJIOT.2023.3263976&partnerID=40&md5=f6f92703c0ce0ef4a99e22faa3c5f147>

- Debaillie, B., Brunier, F., Morche, D., Isa, E.N., Craninckx, J. (2023): Technologies enabling future mobile connectivity and sensing. In: Technologies Enabling Future Mobile Connectivity and Sensing (Book). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172773164&partnerID=40&md5=7af3d2be56d21b48673bbb018d7bfe75>
- Rolfes, I., Barowski, J., Hagelauer, A. (2023): Welcome to the 53rd european microwave conference. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Editorial). DOI:10.23919/EuMIC58042.2023.10288637. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177162754&doi=10.23919%2fEuMIC58042.2023.10288637&partnerID=40&md5=c36dd1206bc9dc16323ab763012eeaa9>
- Schroeder, D., Hedayat, C., Goelden, F., Kuhn, H. (2023): Broadband Far-Field Estimation of a Spherical Dipole Using Near-Field Scanning Data Up to 1 GHz. In: 2023 Smart Systems Integration Conference and Exhibition, SSI 2023 (Conference Paper). DOI:10.1109/SSI58917.2023.10387959. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184825704&doi=10.1109%2fSSI58917.2023.10387959&partnerID=40&md5=369dfa5d1028e522aa361951f8032269>
- Lange, S., Hilleringmann, U., Hedayat, C., Kuhn, H., Forstner, J. (2023): Characterization of Various Environmental Influences on the Inductive Localization. In: IEEE Conference on Antenna Measurements and Applications, CAMA (Conference Paper). DOI:10.1109/CAMA57522.2023.10352780. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182268859&doi=10.1109%2fCAMA57522.2023.10352780&partnerID=40&md5=004f31a1c7ef08b49c80d7a7d89dacfc>
- Hofmann, C., Kroll, M., Panhale, S., Wiemer, M., Kunke, A., Hiller, K., Kuhn, H. (2023): Inductive heating based on VHF-ISM radio band frequencies as technology platform for efficient heating of metallic micro-scaled bonding layers in MEMS packaging. In: 2023 IEEE International Magnetic Conference - Short Papers, INTERMAG Short Papers 2023 - Proceedings (Conference Paper). DOI:10.1109/INTERMAGShortPapers58606.2023.10228241. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172731135&doi=10.1109%2fINTERMAGShortPapers58606.2023.10228241&partnerID=40&md5=096acf56bedaed00c853ab814b087607>
- Hofmann, C., Kroll, M., Panhale, S., Wiemer, M., Kunke, A., Hiller, K., Kuhn, H. (2023): Inductive Heating Based on VHF-ISM Radio Band Frequencies as Technology Platform for Efficient Heating of Metallic Micro-Scaled Bonding Layers in MEMS Packaging. In: IEEE Transactions on Magnetics (Article). DOI:10.1109/TMAG.2023.3286208. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162681807&doi=10.1109%2fTMAG.2023.3286208&partnerID=40&md5=8d60451fe7544c8a1ad771e81e33689d>
- Yazdani, H., Graff, A., Simon-Najasek, M., Altmann, F., Brunner, F., Ostermay, I., Chevtchenko, S., Würfl, J. (2023): Analysis of Mechanical Strain in AlGaIn/GaN HFETs. In: Physica Status Solidi (A) Applications and Materials Science (Article). DOI:10.1002/pssa.202200683. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85146726285&doi=10.1002%2fpssa.202200683&partnerID=40&md5=ed0e6467eb3f49b6d01cf606924fa712>
- Jain, M., Kretschmer, S., Höflich, K., Lopes, J.M.J., Krasheninnikov, A.V. (2023): Atomistic Simulations of Defects Production under Ion Irradiation in Epitaxial Graphene on SiC. In: Physica Status Solidi - Rapid Research Letters (Article). DOI:10.1002/pssr.202200292. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141206418&doi=10.1002%2fpssr.202200292&partnerID=40&md5=2998ea8b87b79a7de02e398a4637433c>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Yacoub, H., Rausch, M., Stölmacker, C., Dorner, R., Hossain, M., Ostermay, I., Moule, T., Wietstruck, M., Knigge, S., Kruger, O., Heinrich, W. (2023): Heterointegration of mm-Wave InP-HBT Power Amplifier Chiplelets on SiGe-BiCMOS Chip. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10289026. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177225800&doi=10.23919%2fEuMIC58042.2023.10289026&partnerID=40&md5=9b4e4a2c87bd85395e4367303ceefcec>
- Beleniotis, P., Zervos, C., Schnieder, F., Rudolph, M. (2023): Dynamic RDModeling by Exploiting Gate Current Dependency of Virtual Gate Effect. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288955. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177209548&doi=10.23919%2fEuMIC58042.2023.10288955&partnerID=40&md5=4723b6dc2b4f5f27d7982dbe31f6eb05>
- Zervos, C., Beleniotis, P., Krause, S., Ritter, D., Rudolph, M. (2023): The role of gate leakage on surface-related current collapse in AlGaIn/GaN HEMTs. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10289036. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177185188&doi=10.23919%2fEuMIC58042.2023.10289036&partnerID=40&md5=d95a69f8d99e070768cb67850bc6ec>
- Mengozzi, M., Gibiino, G.P., Angelotti, A.M., Florian, C., Santarelli, A., Schulze, C., Bengtsson, O. (2023): Modulated-Input Control and Linearization of a Multi-Port Millimeter-Wave PA by VNA-based Calibrated Wideband Measurements. In: 101st ARFTG Microwave Measurement Conference: Challenges in Complex Measurement Environments, ARFTG 2023 (Conference Paper). DOI:10.1109/ARFTG57476.2023.10279176. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85175949176&doi=10.1109%2fARFTG57476.2023.10279176&partnerID=40&md5=0d6591289af4b8fe116348521925e7ae>
- Tsarapkin, A., Rgensen, S.J., Feichtner, T., Mackosz, K., Deinhart, V., Utke, I., Reich, S., Flich, K.H. (2023): Double helical plasmonic antennas for enhanced chiroptical interactions. In: International Conference on Metamaterials, Photonic Crystals and Plasmonics (Conference Paper). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174629666&partnerID=40&md5=c4eb36ab9becf8845483e5a44b5b1e45>
- Nusler, D., Grimm, A., Heinrich, W., Chartier, S., Fischer, G., Friederich, F. (2023): Terahertz technologies for non destructive testing. In: 2023 6th International Workshop on Mobile Terahertz Systems, IWMTS 2023 (Conference Paper). DOI:10.1109/IWMTS58186.2023.10207858. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169437723&doi=10.1109%2fIWMTS58186.2023.10207858&partnerID=40&md5=d0d7b6819230e441f9381183325176a2>
- Rausch, M., Wietstruck, M., Stölmacker, C., Doerner, R., Fischer, G., Thies, A., Knigge, S., Yacoub, H., Heinrich, W. (2023): Broadband Hetero-Integration of InP Chiplelets on SiGe BiCMOS for mm-Wave MMICs up to 325GHz. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10188164. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168561402&doi=10.1109%2fIMS37964.2023.10188164&partnerID=40&md5=5fc04635b558464073a8506176d6519e>
- Mitterhuber, L., Leitgeb, V., Krainz, M., Strauss, R., Kaden, T., Treidel, E.B., Brunner, F., Huber, C., Kraker, E. (2023): Thermal management of vertical GaN transistors. In: 2023 24th International Conference on Thermal, Mechanical and Multi-Physics Simulation and Experiments in Microelectronics and Microsystems, EuroSimE 2023 (Conference Paper). DOI:10.1109/EuroSimE56861.2023.10100765. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85158156151&doi=10.1109%2fEuroSimE56861.2023.10100765&partnerID=40&md5=4815b09fc393607a278bee1a5c361c69

- vom Bögel, G., Vossiek, M., Wietfeld, C., Haferkamp, M., Häger, S., Sezgin, A., Weimer, M., Thill, R., Sivadevuni, S.S., Böcker, S., Pohl, N., Wessel, J., Braun, T.T., Kögel, T., Geiß, J. (2023): 6GEM Perspective on Joint Communication and Sensing. In: WSA and SCC 2023 - 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding (Conference Paper). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166950253&partnerID=40&md5=8daaebe9da20f44e0cdd5d8432913a5f>
- Romstadt, J., Zaben, A., Papurcu, H., Stadler, P., Welling, T., Aufinger, K., Pohl, N. (2023): A 117.5-155-GHz SiGe $\times 12$ Frequency Multiplier Chain With Push-Push Doublers and a Gilbert Cell-Based Tripler. In: IEEE Journal of Solid-State Circuits (Article). DOI:10.1109/JSSC.2023.3284600. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163539783&doi=10.1109%2fJSSC.2023.3284600&partnerID=40&md5=0e0cae3ce71bec96670b72eb191eb5bf>
- Welling, T., Romstadt, J., Vogelsang, F., Aufinger, K., Pohl, N. (2023): A 365-410 GHz Push-Push Frequency Doubler with Driving Stage in SiGe BiCMOS. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288719. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177223231&doi=10.23919%2fEuMIC58042.2023.10288719&partnerID=40&md5=1309741442ef8ccc5945e47aea0df49e>
- Romstadt, J., Welling, T., Vogelsang, F., Yildirim, M.A., Aufinger, K., Pohl, N. (2023): A 377-416 GHz Push-Push Frequency Doubler with Driving Stage and Transformer-Based Mode Separation in SiGe BiCMOS. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10311042. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179515073&doi=10.1109%2fBCICTS54660.2023.10311042&partnerID=40&md5=179c8b7d1ff3a75efdd38b8ba20b5f5d>
- Dedovic, M., Vogelsang, F., Papurcu, H., Aufinger, K., Pohl, N. (2023): A 61-187.2-GHz Traveling Wave Push-Push Frequency Doubler in a 130 nm SiGe:C BiCMOS Technology with 101.7% Fractional Bandwidth. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10310975. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179524182&doi=10.1109%2fBCICTS54660.2023.10310975&partnerID=40&md5=7777388c1693aa021a43e16a562c972f>
- Starke, D., Thomas, S., Bredendiek, C., Aufinger, K., Pohl, N. (2023): A 67 GHz High Output Power QVCO with 9.9 % Efficiency and Improved Phase Noise in a 130 nm SiGe:C Technology. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10187951. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168547880&doi=10.1109%2fIMS37964.2023.10187951&partnerID=40&md5=18b860ce3ef86bd14a69a223179b8164>
- Kraus, I., Knapp, H., Reiter, D., Pohl, N. (2023): A Compact 140-GHz Radar MMIC with I/Q Downconverter in SiGe BiCMOS Technology. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10188091. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168553178&doi=10.1109%2fIMS37964.2023.10188091&partnerID=40&md5=f21d560f2f682f2227f09ddd9b4f8608>
- Starke, D., Bott, J., Vogelsang, F., Sievert, B., Barowski, J., Schulz, C., Rucker, H., Rennings, A., Erni, D., Rolfes, I., Pohl, N. (2023): A compact and fully integrated FMCW radar transceiver combined with a dielectric lens. In: International Journal of Microwave and Wireless Technologies (Article).

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

DOI:10.1017/S1759078723001368. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179723569&doi=10.1017%2fS1759078723001368&partnerID=40&md5=7b6a614043caffd059410ad59df8528f>

- Romstadt, J., Hauptmeier, S., Braun, T.T., Zaben, A., Krüner, M., Aufinger, K., Barowski, J., Pohl, N. (2023): A D-Band Vector Network Analyzer Extension Module Based on a SiGe Reflectometer MMIC. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10188062. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168560894&doi=10.1109%2fIMS37964.2023.10188062&partnerID=40&md5=1bb5a51bac4787d7ca3e970fbd3b30ab>
- Schoepfel, J., Rucker, H., Pohl, N. (2023): A Differential SiGe HBT Doherty Power Amplifier for Automotive Radar at 79 GHz. In: 2023 IEEE 23rd Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2023 (Conference Paper). DOI:10.1109/SiRF56960.2023.10046275. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149395971&doi=10.1109%2fSiRF56960.2023.10046275&partnerID=40&md5=edd1daa929df65e8007b1328c5c16886>
- Krylova, O., Schopf, J., Aufinger, K., Pohl, N. (2023): A High Linearity SiGe D-Band Diode Ring Mixer. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10310845. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179513236&doi=10.1109%2fBCICTS54660.2023.10310845&partnerID=40&md5=0b44b4f35e4f05ca2ce05738f02772c6>
- Bredendiek, C., Kueppers, S., Aufinger, K., Pohl, N. (2023): A Ku- and Ka-Band Dual-Band Signal Source SiGe MMIC Realization by Using Wideband SPDT Switches. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288997. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177172315&doi=10.23919%2fEuMIC58042.2023.10288997&partnerID=40&md5=66961220f9976210452434f6ee18080c>
- Guha, S., Ahmed, F., Conde, M.H. (2023): A Novel Approach for Solving MPI for Multi-Target ToF Imaging using Subdivision-based Nested Compressed Sensing. In: European Signal Processing Conference (Conference Paper). DOI:10.23919/EUSIPCO58844.2023.10289807. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178364835&doi=10.23919%2fEUSIPCO58844.2023.10289807&partnerID=40&md5=a1adf77199ea9b2ebf659578a0ec4a55>
- Braun, T.T., Van Delden, M., Bredendiek, C., Schoepfel, J., Hauptmeier, S., Shillue, W., Musch, T., Pohl, N. (2023): A phase-locked loop with a jitter of 50 fs for astronomy applications. In: International Journal of Microwave and Wireless Technologies (Article). DOI:10.1017/S1759078722001386. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168542829&doi=10.1017%2fS1759078722001386&partnerID=40&md5=89d78b7d1a169d39c7dc1f86ab8c57e0>
- Wittemeier, J., Pohl, N. (2023): A SiGe-Based D-Band Vector Modulator for PMCW Radar Applications. In: 2023 6th International Workshop on Mobile Terahertz Systems, IWMTS 2023 (Conference Paper). DOI:10.1109/IWMTS58186.2023.10207857. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169474754&doi=10.1109%2fIWMTS58186.2023.10207857&partnerID=40&md5=b6eb4244c0f3a6b1f145580c91e68a95>
- Papurcu, H., Romstadt, J., Hansen, S., Krebs, C., Aufinger, K., Pohl, N. (2023): A Wideband Four-Channel SiGe D-Band Transceiver MMIC For TDM MIMO FMCW Radar. In: 2023 IEEE 23rd Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2023 (Conference Paper). DOI:10.1109/SiRF56960.2023.10046260. Link: <https://www.scopus.com/inward/record.uri?eid=2->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

s2.0-85149372086&doi=10.1109%2fSiRF56960.2023.10046260&part-
nerID=40&md5=7a912782e517c8e325396c7f7cc07612

- Tessmann, A., Leuther, A., Thome, F., John, L., Gashi, B., Massler, H., Saam, A., Chartier, S. (2023): Advanced mHEMT Technologies for Use in Radar, Communication and Meteorological Applications. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10310734. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179518633&doi=10.1109%2fBCICTS54660.2023.10310734&partnerID=40&md5=b07046f91c565474cab1a66f2edac8dc>
- Francois, G., Al-Bassam, A., Eckroth, T.M., Heberling, D. (2023): All-Dielectric Artificial Magnetic Conductor at Millimeter-Wave Frequencies. In: IEEE Antennas and Propagation Society, AP-S International Symposium (Digest) (Conference Paper). DOI:10.1109/USNC-URSI52151.2023.10238331. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172414517&doi=10.1109%2fUSNC-URSI52151.2023.10238331&partnerID=40&md5=345a8346d869aea3fe45aaac010a8e57>
- Bathelt, A. (2023): An Approach to Consensus-Based Time Synchronization Based on Dynamic Consensus. In: IEEE Control Systems Letters (Article). DOI:10.1109/LCSYS.2023.3326770. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85176323749&doi=10.1109%2fLCSYS.2023.3326770&partnerID=40&md5=c319d178d303722fa8f8be86e8ca13364>
- Domínguez, E.M., Caris, M., Henke, D., Sieger, S., Janssen, D., Saam, A., Bonvin, F., Wellig, P. (2023): Applications and level-2 products with the dual-baseline and linear-dual polarimetric MI-RANDA35 airborne SAR system. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2678527. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177888465&doi=10.1117%2f12.2678527&partnerID=40&md5=0a1508f5c55d71ded98190de4ad3326f>
- Springer, J., Oispuu, M., Koch, W., Knott, P. (2023): Array Calibration Using Neural Networks. In: 2023 IEEE 9th International Workshop on Computational Advances in Multi-Sensor Adaptive Processing, CAMSAP 2023 (Conference Paper). DOI:10.1109/CAMSAP58249.2023.10403479. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85185007911&doi=10.1109%2fCAMSAP58249.2023.10403479&partnerID=40&md5=fe3308078e233b81b50b40893723156d>
- Qosja, D., Wagner, S., Bruggenwirth, S. (2023): Benchmarking Convolutional Neural Network Backbones for Target Classification in SAR. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RadarConf2351548.2023.10149802. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163720807&doi=10.1109%2fRadarConf2351548.2023.10149802&partnerID=40&md5=e0391de0fc52c1b6cd29bc25ed8d11b6>
- Reher, F., Jansen, H., Heberling, D. (2023): Bistatic Measurements of Binary Reconfigurable Intelligent Surfaces in a CATR. In: 45th Annual Meeting and Symposium of the Antenna Measurement Techniques Association, AMTA 2023 - Proceedings (Conference Paper). DOI:10.23919/AMTA58553.2023.10293443. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178275941&doi=10.23919%2fAMTA58553.2023.10293443&partnerID=40&md5=a66a808235345d05fec2978e8e244c2f>
- Greiff, C., Mateos-Núñez, D., Simoni, R., González-Huici, M., Kruse, S., Scheytt, J.C., Kolk, K., Höller, C., Kurz, H.G., Meinecke, M.-M., Gisder, T. (2023): Calibration of Large Coherent MIMO Radar Arrays: Channel Imbalances and 3D Antenna Positions. In: Proceedings International Radar Symposium (Conference Paper). DOI:10.23919/IRS57608.2023.10172475. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85166246313&doi=10.23919%2fIRS57608.2023.10172475&part-
nerID=40&md5=59231fd158b2ed3f6e12429f2fc10096

- Karamanavis, V., Dirks, H., Fuhrmann, L., Schlichthaber, F., Egli, N., Patzelt, T., Klare, J. (2023): Characterization of deorbiting satellites and space debris with radar. In: Advances in Space Research (Article). DOI:10.1016/j.asr.2023.07.033. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166298670&doi=10.1016%2fj.asr.2023.07.033&partnerID=40&md5=6647662a3dfa3e737b8bfac724a65008>
- Sievert, B., Wittemeier, J., Svejda, J.T., Pohl, N., Erni, D., Rennings, A. (2023): Coaxial Cable-Based Magnetic and Electric Near-Field Probes to Measure On-Chip Components up to 330 GHz. In: IEEE Antennas and Wireless Propagation Letters (Article). DOI:10.1109/LAWP.2023.3291571. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164451262&doi=10.1109%2fLAWP.2023.3291571&partnerID=40&md5=172d33737007600d7ee76681246e4b75>
- Crespi, F.V., Slavov, A., Bok, D., Sandenbergh, S., Knott, P., O'Hagan, D. (2023): Coherency limits and synchronisation of a netted radar system using USRPs as nodes. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RADAR54928.2023.10371165. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182743571&doi=10.1109%2fRADAR54928.2023.10371165&partnerID=40&md5=e32c882c26821c0f8a3c14a302f8a8d2>
- Slavov, A., Crespi, F.V., Sandenbergh, S., Bok, D., O'Hagan, D., Knott, P. (2023): Coherency limits of different transceivers within USRP X310 as a radar node. In: Proceedings International Radar Symposium (Conference Paper). DOI:10.23919/IRS57608.2023.10172420. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166188638&doi=10.23919%2fIRS57608.2023.10172420&partnerID=40&md5=1e6ae17f958ac14bbe7532fcb6d054cf>
- Wittemeier, J., Yildirim, M.A., Pohl, N. (2023): Compact and Digitally Controlled D-Band Vector Modulator for Next-Gen Radar Applications in 130 nm SiGe BiCMOS. In: IEEE Journal of Microwaves (Article). DOI:10.1109/JMW.2023.3250340. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162803123&doi=10.1109%2fJMW.2023.3250340&partnerID=40&md5=f30ab02b3a269474a27be4f5e2568932>
- Mohammadzadeh, S., Hussung, R., Keil, A., Leuchs, S., Krebs, C., Nüßler, D., Seewig, J., Von Freymann, G., Friederich, F. (2023): Compact hand-guided 3D scanning terahertz sensor platforms with 3D-printed aspherical telecentric f- θ lens. In: International Journal of Microwave and Wireless Technologies (Article). DOI:10.1017/S1759078723000259. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169063330&doi=10.1017%2fS1759078723000259&partnerID=40&md5=e700bf83cfb2338a2e6a4909f35d80db>
- Schurwanz, M., Mietzner, J., Herschel, R., Hoehner, P.A. (2023): Compressive Sensing Techniques Applied to a Semi-Circular mmWave MIMO Array. In: Proceedings International Radar Symposium (Conference Paper). DOI:10.23919/IRS57608.2023.10172458. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166265942&doi=10.23919%2fIRS57608.2023.10172458&partnerID=40&md5=ebfae166d7c44c42978eb792c5511860>
- Giovanneschi, F., Ramesh, A.N., Gonzalez Huici, M.A., Altuntac, E. (2023): Convolutional Sparse Coding and Dictionary Learning for Lidar Depth Completion in Automotive Scenarios. In: 2023 Photonics and Electromagnetics Research Symposium, PIERS 2023 - Proceedings (Conference Paper). DOI:10.1109/PIERS59004.2023.10221515. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172002560&doi=10.1109%2fPIERS59004.2023.10221515&partnerID=40&md5=2f03969ce34ad3d97da85ad3c21b7fa1>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Stockel, P., Wallrath, P., Herschel, R., Pohl, N. (2023): Correlation-based Motion Estimation for the Compensation of Horizontal Movements of a Hovering UAV. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/Eu-CAP57121.2023.10133479. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162258958&doi=10.23919%2fEuCAP57121.2023.10133479&partnerID=40&md5=ba1c562c851bc40248e8fb160d67bd47>
- Bosma, D.A., Markiton, P. (2023): Cramer-Rao Lower Bound of Localization of a Moving Target by a Dynamic Multistatic Radar. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289429. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177589637&doi=10.23919%2fEuRAD58043.2023.10289429&partnerID=40&md5=d10fdabc35a73ecd0403fa7601d04f62>
- Abouzaid, S., Jaeschke, T., Kueppers, S., Barowski, J., Pohl, N. (2023): Deep Learning-Based Material Characterization Using FMCW Radar With Open-Set Recognition Technique. In: IEEE Transactions on Microwave Theory and Techniques (Article). DOI:10.1109/TMTT.2023.3276053. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85161020036&doi=10.1109%2fTMTT.2023.3276053&partnerID=40&md5=64c0854decca23c1b400d7cb16921f06>
- Fan, C.-Y., Karakish, A., Wei, M.-D., Negra, R. (2023): Design of a Contactless Vital-Signal Sensor based on Six-Port Technology and Experiment of WiFi Interference. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289463. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177605018&doi=10.23919%2fEuRAD58043.2023.10289463&partnerID=40&md5=169c6ce3661c01917161e674c13e28f0>
- Thomas, S., Shoykhetbrod, A., Pohl, N. (2023): Dielectric frequency filtering lens antennas for radar measurements at 240 GHz. In: International Journal of Microwave and Wireless Technologies (Article). DOI:10.1017/S1759078722001064. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168992604&doi=10.1017%2fS1759078722001064&partnerID=40&md5=315d21028cca4da3c05736544b8170dd>
- Arumugam, R.K., Froehly, A., Herschel, R., Wallrath, P., Pohl, N. (2023): Direction of Arrival Estimation on Sparse Arrays Using Compressive Sensing and MUSIC. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/Eu-CAP57121.2023.10133647. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162231122&doi=10.23919%2fEuCAP57121.2023.10133647&partnerID=40&md5=e197039f46eb4e544f9f969d6f2e52be>
- Hansen, S., Nowok, S., Shoykhetbrod, A., Wickmann, S., Wessel, J., Pohl, N. (2023): Distributed Sensor Network for 3D Tag Localization Using Harmonic Radar at 61/122 GHz ISM Band. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289328. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177603628&doi=10.23919%2fEuRAD58043.2023.10289328&partnerID=40&md5=a1c4bbde9674f139ee81a608f0ed4ea5>
- Crespi, F.V., Sandenbergh, S., O'Hagan, D., Knott, P. (2023): Dynamic Two-way time transfer between moving platforms for netted radar applications. In: Proceedings International Radar Symposium (Conference Paper). DOI:10.23919/IRS57608.2023.10172403. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166215430&doi=10.23919%2fIRS57608.2023.10172403&partnerID=40&md5=4275bf0bb6b4fda29ae1e935f02657b8>
- Johannes, W., Stanko, S., Kallfass, I. (2023): Efficient Joint Broadband Radar and Single Carrier Communication System in Frequency Division Multiplexing for High-Range Applications. In: Proceedings International Radar Symposium (Conference Paper).

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

DOI:10.23919/IRS57608.2023.10172460. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166174613&doi=10.23919%2fIRS57608.2023.10172460&partnerID=40&md5=20f5de563c8e688a63cb13d45d78d511>

- Jansen, H., Moch, R., Heberling, D. (2023): Electrical Alignment Technique for Offset-Mounted and Arbitrarily Oriented AUTs in a Robot-Based mm-Wave Antenna Test System. In: 45th Annual Meeting and Symposium of the Antenna Measurement Techniques Association, AMTA 2023 - Proceedings (Conference Paper). DOI:10.23919/AMTA58553.2023.10293297. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178309704&doi=10.23919%2fAMTA58553.2023.10293297&partnerID=40&md5=6c38523d790b1c0efa7e8718d7295a07>
- Nagesh, S., Anghel, A., Ender, J. (2023): Elevation Profile Estimation for Single Pass Bi-Static SAR Tomography Using Compressed Sensing. In: International Geoscience and Remote Sensing Symposium (IGARSS) (Conference Paper). DOI:10.1109/IGARSS52108.2023.10282952. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178387754&doi=10.1109%2fIGARSS52108.2023.10282952&partnerID=40&md5=e8b47dcdbb0d21427258663d87de8968>
- Scholl, S., Wagner, S. (2023): End-to-End Recognition of Interleaved Radar Emitters from the Spectrogram. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289566. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177603116&doi=10.23919%2fEuRAD58043.2023.10289566&partnerID=40&md5=c5587a0bdf2006e2f999d0d260efe4a1>
- Harms, S., El-Arnauti, G., Saalman, O., Frohlich, A. (2023): Evaluation of a Novel Commercial Beamforming Integrated Circuit for a Ka-band AESA Radar Application. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289148. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177574455&doi=10.23919%2fEuRAD58043.2023.10289148&partnerID=40&md5=e1c52654894d90b3d439649e879ea2ce>
- Ta, T.T.J., Schiffarth, A.-M., Heberling, D. (2023): Evaluation of the Influence of the Measuring Person on the Assessment of Mobile Radio Exposure with an Isotropic Measurement Probe. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133092. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162235263&doi=10.23919%2fEuCAP57121.2023.10133092&partnerID=40&md5=b6f8f1462cc0bd5bb750aabf7c9f5190>
- Al-Bassam, A., Heberling, D., Caloz, C. (2023): Exceptional Point Perspective of Periodic Leaky-Wave Antennas. In: IEEE Antennas and Propagation Society, AP-S International Symposium (Digest) (Conference Paper). DOI:10.1109/USNC-URSI52151.2023.10237628. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172420852&doi=10.1109%2fUSNC-URSI52151.2023.10237628&partnerID=40&md5=7499c89b7221055cfbd9aee2e1d2ac4>
- Blazquez-Garcia, R., Cristallini, D., Ummenhofer, M., Seidel, V., Heckenbach, J., O'Hagan, D. (2023): Experimental comparison of Starlink and OneWeb signals for passive radar. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RadarConf2351548.2023.10149580. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163773651&doi=10.1109%2fRadarConf2351548.2023.10149580&partnerID=40&md5=bb2ec13ce41833e5e9710fac0be86f4a>
- Iqbal, M.A., Anghel, A., Datcu, M., Bathelt, A., Sieger, S. (2023): Exploiting Inverse SAR Images and Dual-Pol Decomposition for the Estimation of Tree Scattering Properties. In: International Geoscience and Remote Sensing Symposium (IGARSS) (Conference Paper).

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

DOI:10.1109/IGARSS52108.2023.10283004. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178353483&doi=10.1109%2fIGARSS52108.2023.10283004&partnerID=40&md5=e93d546b71ef7fb2c9c848e813013369>

- Panhuber, R. (2023): Fast, Efficient, and Viable Compressed Sensing, Low-Rank, and Robust Principle Component Analysis Algorithms for Radar Signal Processing. In: Remote Sensing (Article). DOI:10.3390/rs15082216. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85156177825&doi=10.3390%2frs15082216&partnerID=40&md5=1f8513ca8cd69f60eeca74b82b525768>
- Froehly, A., Thapaliya, B., Herschel, R., Wallrath, P. (2023): FFT Based Angle Detection of Fiber Glass Layers. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289602. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177582489&doi=10.23919%2fEuRAD58043.2023.10289602&partnerID=40&md5=c8304421b5b87940884a36f965887937>
- Abouzaid, S., Nothelle, L., Jaeschke, T., Pohl, N. (2023): Fine Hand Gesture Recognition Using D-band FMCW Radar. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289591. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177598456&doi=10.23919%2fEuRAD58043.2023.10289591&partnerID=40&md5=fdd2c6235b13c9dd6052bb06758debe4>
- Berens, P., Walterscheid, I., Saalman, O., El-Arnauti, G. (2023): First multi-channel results of the airborne SAR/GMTI sensor PAMIR-Ka. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RADAR54928.2023.10371182. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182745952&doi=10.1109%2fRADAR54928.2023.10371182&partnerID=40&md5=15f729a70109c830c110913617cbde8f>
- Ummenhofer, M., Seidel, V., Heckenbach, J., Blazquez-Garcia, R., Cristallini, D. (2023): First Results of DVB-S Based Passive Polarimetric Measurements of micro-Doppler Signatures of a Helicopter. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RADAR54928.2023.10371029. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182740164&doi=10.1109%2fRADAR54928.2023.10371029&partnerID=40&md5=a0b75934a222328798b7f88e3a1666ea>
- Starke, D., Vogelsang, F., Wittemeier, J., Bredendiek, C., Aufinger, K., Pohl, N. (2023): Fully Differential 90 GHz and 180 GHz Signal Sources With Tuning Ranges of 24.1 GHz and 51.7 GHz in 90 nm SiGe-BiCMOS. In: 2023 6th International Workshop on Mobile Terahertz Systems, IWMTS 2023 (Conference Paper). DOI:10.1109/IWMTS58186.2023.10207849. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169449662&doi=10.1109%2fIWMTS58186.2023.10207849&partnerID=40&md5=61ab4b3c2486b1797121efba6210789e>
- Saillant, S., Bok, D., Molinie, J.-P., Leventis, A., Samczynski, P., Brouard, P., Saverino, A.L., Capria, A., Paichard, Y. (2023): iFURTHER Project - A Cognitive Network of HF Radars for Europe Defence. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RADAR54928.2023.10371074. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182734074&doi=10.1109%2fRADAR54928.2023.10371074&partnerID=40&md5=37855431151f2b174e1cc892b2ade803>
- Nübler, D., Leuchs, S., Krebs, C. (2023): Imaging radar systems for non-destructive material testing An overview of the state of the art, the limitations and the opportunities of radar technology.. In: Optical Characterization of Materials (Conference Paper). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85153106572&partnerID=40&md5=c8c39dc508c1fc8a453065204ed0f32e>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Nüßler, Dirk; Leuchs, Sven; Krebs, Christian (2023): Imaging radar systems for non-destructive material testing. An overview of the state of the art, the limitations and the opportunities of radar technology. In: OCM 2023, Optical Characterization of Materials. Conference Proceedings (Conference Paper). DOI: . Link: <https://publica.fraunhofer.de/entities/publication/e6d931d7-cf8f-434f-9442-158d80e7bd12/details>
- Scholl, S., Bruggenwirth, S. (2023): Incremental Deinterleaving of Radar Emitters. In: IEEE Aerospace and Electronic Systems Magazine (Article). DOI:10.1109/MAES.2023.3268020. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159661339&doi=10.1109%2fMAES.2023.3268020&partnerID=40&md5=a4c65aa94bb9927706d509bcaf3abe17>
- Stockel, P., Wallrath, P., Herschel, R., Pohl, N. (2023): Interference Free Vital Sign Extraction with Radar Using a Signal Fusion Approach. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289569. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177546303&doi=10.23919%2fEuRAD58043.2023.10289569&partnerID=40&md5=1e67975bfb94978a0c95fa2abe343615>
- Springer, J., Oispuu, M., Koch, W., Knott, P. (2023): Joint Emitter Localization and Calibration for Moving Array Sensors. In: IEEE International Conference on Multisensor Fusion and Integration for Intelligent Systems (Conference Paper). DOI:10.1109/SDF-MFI59545.2023.10361497. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182403812&doi=10.1109%2fSDF-MFI59545.2023.10361497&partnerID=40&md5=8860d59b07622558aca14c13f6bc4524>
- Weiß, M. (2023): Joint Radar and Communication System employing an adapted linear frequency modulated chirp combination. In: Proceedings International Radar Symposium (Conference Paper). DOI:10.23919/IRS57608.2023.10172463. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166241530&doi=10.23919%2fIRS57608.2023.10172463&partnerID=40&md5=46e3d147aad6433cdf3577882678fb0>
- Cristallini, D., Blazquez-Garcia, R., O'Hagan, D. (2023): K-space signal occupancy of Starlink signals and their applications in passive radar imaging. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RadarConf2351548.2023.10149748. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163776581&doi=10.1109%2fRadarConf2351548.2023.10149748&partnerID=40&md5=eeb6408faacafc9bfbdfac5f6b70a81e>
- Salzburg, C.G., Hofinger, J., Bertuch, T., Lee, S., Schüssler, F., Kwon, A. (2023): Metal-Coated 3D-Printed Waveguide Antenna for 77 GHz Automotive Radar Applications. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133774. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162207771&doi=10.23919%2fEuCAP57121.2023.10133774&partnerID=40&md5=74fae23a76f3afbadb086feb119be9cb>
- Baqué, R., Vignaud, L., Wasik, V., Castet, N., Herschel, R., Cetinkaya, H., Brandes, T. (2023): MIC: Microwave Imaging Curtain for Dynamic and Automatic Detection of Weapons and Explosive Belts. In: Sensors (Article). DOI:10.3390/s23239531. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179139295&doi=10.3390%2fs23239531&partnerID=40&md5=ececd7cd98e56243def56d248cdd16>
- Stockel, P., Wallrath, P., Herschel, R., Pohl, N. (2023): Motion Compensation in Six Degrees of Freedom for a MIMO Radar Mounted on a Hovering UAV. In: IEEE Transactions on Aerospace and Electronic Systems (Article). DOI:10.1109/TAES.2023.3266181. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85153351986&doi=10.1109%2fTAES.2023.3266181&partnerID=40&md5=650d0c42c60e28e26402252813c452d9>
- Santi, F., Pisciotto, I., Pastina, D., Cristallini, D. (2023): Multi-angle DVB-S based passive ISAR sensitivity to target motion estimation errors. In: Proceedings of the IEEE Radar Conference (Conference

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

Paper). DOI:10.1109/RadarConf2351548.2023.10149548. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163710776&doi=10.1109%2fRadarConf2351548.2023.10149548&partnerID=40&md5=67e9563796baad93174123206df70139>

- Arif, M.H., Guth, A., Wei, M.-D., Heberling, D., Negra, R. (2023): Multibeam Metasurface Antenna Based on a Single Substrate Layer and One Feeding Port for Millimetre Wave Applications. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290517. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177586997&doi=10.23919%2fEuMC58039.2023.10290517&partnerID=40&md5=561f51dc6c825e48e2120fe7fca32809>
- Blazquez-Garcia, R., Cristallini, D., Ummenhofer, M., Seidel, V., Heckenbach, J., O'Hagan, D. (2023): Multichannel Passive Radar Demonstrator Based on Starlink Satellite Signals for Persistent Bistatic SAR Interferometry. In: International Geoscience and Remote Sensing Symposium (IGARSS) (Conference Paper). DOI:10.1109/IGARSS52108.2023.10283270. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178013050&doi=10.1109%2fIGARSS52108.2023.10283270&partnerID=40&md5=217139ebd5416e13917442e1197042f4>
- Vogel, Sönke; Täschner, Kerstin; Schepers, Maurice; Weyer, Sara (2023): Multi-Sensor-integrierte adaptive Scheinwerfer für robuste Fahrerassistenzsysteme. In: ATZ-Elektronik (Article). DOI:10.1007/s35658-023-1524-y. Link: <https://publica.fraunhofer.de/entities/publication/56ca384d-715b-4ffe-b8f9-bddca5a96e13/details>
- Philipp, D., Stoja, E., Konstandin, S., Bertuch, T., Müller, J., Schmidt, M.V., Günther, M. (2023): On the design, control, and AI-driven optimization of reconfigurable metamaterials for Magnetic Resonance Imaging. In: International Conference on Metamaterials, Photonic Crystals and Plasmonics (Conference Paper). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174569080&partnerID=40&md5=68a294e2dcef2d58231326198e4324be>
- Schilling, L.-M., Bornkessel, C., Schiffarth, A.-M., Heberling, D., Hein, M.A. (2023): Optimized Assessment Procedure for Maximal RF Exposure to 5G Massive MIMO Base Stations in Non-Line-of-Sight Scenarios - Part 1: Theoretical and Numerical Investigations. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133658. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162251772&doi=10.23919%2fEuCAP57121.2023.10133658&partnerID=40&md5=3bdd15a64bd83907da723a379ff9da3b>
- Schiffarth, A.-M., Schilling, L.-M., Bornkessel, C., Hein, M., Heberling, D. (2023): Optimized Assessment Procedure for Maximal RF Exposure to 5G Massive MIMO Base Stations in Non-Line-of-Sight Scenarios - Part 2: Verification by Field Measurements. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133149. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162207190&doi=10.23919%2fEuCAP57121.2023.10133149&partnerID=40&md5=c637cbad593a89eb5922daa97b13bbdb>
- Walterscheid, I., Berens, P., Caris, M. (2023): Potentials of multi-aspect and multi-frequency radar imaging illustrated by experimental results in Ka- and W-band. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RADAR54928.2023.10371052. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182745585&doi=10.1109%2fRADAR54928.2023.10371052&partnerID=40&md5=bf177d3fdb5b5ba0f88e15a68c27cd8f>
- Muller, T., Durst, S., Marquardt, P., Bruggenwirth, S. (2023): Quality of Service Based Radar Resource Management for Navigation and Positioning. In: 2023 IEEE/ION Position, Location and Navigation Symposium, PLANS 2023 (Conference Paper). DOI:10.1109/PLANS53410.2023.10140094. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85162887922&doi=10.1109%2fPLANS53410.2023.10140094&part-
nerID=40&md5=72ff016f8ec0068b3167bd5c802e7ead

- Muller, T., Durst, S., Marquardt, P., Bruggenwirth, S. (2023): Quality of service based radar resource management for synchronisation problems. In: 2023 IEEE Topical Conference on Wireless Sensors and Sensor Networks, WiSNeT 2023 (Conference Paper). DOI:10.1109/WiSNeT56959.2023.10046264. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149402990&doi=10.1109%2fWiSNeT56959.2023.10046264&partnerID=40&md5=eb6c1a180211597065767bc4fcd0c86b>
- Muckermann, N., Barowski, J., Pohl, N. (2023): Quasioptical Fresnel-based lens antenna with frequency-steerable focal length for millimeter wave radars. In: International Journal of Microwave and Wireless Technologies (Article). DOI:10.1017/S1759078723001472. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182237078&doi=10.1017%2fS1759078723001472&partnerID=40&md5=7d768b44d07dd7260498603fd9adead1>
- Guha, S., Bathelt, A., Conde, M.H., Ender, J. (2023): Radar Band Fusion Using Frame-Based Compressed Sensing. In: IEEE Journal on Selected Topics in Signal Processing (Article). DOI:10.1109/JSTSP.2022.3220403. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141549696&doi=10.1109%2fJSTSP.2022.3220403&partnerID=40&md5=8bfd61db16f623c29d496e3d50195cbe>
- Bathelt, A., Thill, R. (2023): Radar-sensing based on non-contiguous OFDM signals using Compressed Sensing. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289155. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172377260&doi=10.23919%2fEuRAD58043.2023.10289155&partnerID=40&md5=0ac910541cbc7991fb743d802c459811>
- Stoja, E., Philipp, D., Konstandin, S., Jenne, J., Bertuch, T., Gunther, M. (2023): Reconfigurable Metasurfaces and new Imaging Paradigms in Magnetic Resonance Imaging. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10132982. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162233180&doi=10.23919%2fEuCAP57121.2023.10132982&partnerID=40&md5=fffc828c37d2fbd2f08152abc23df263>
- Barth, K., Bruggenwirth, S. (2023): Reinforcement Learning Approach for a Cognitive Framework for Classification. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RadarConf2351548.2023.10149571. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163785299&doi=10.1109%2fRadarConf2351548.2023.10149571&partnerID=40&md5=f87199acf942c3c5f73488c780459517>
- Markiton, P., Cristallini, D. (2023): Results of Dual-Polarimetric Airborne Passive Radar. In: Proceedings of the IEEE Radar Conference (Conference Paper). DOI:10.1109/RADAR54928.2023.10371045. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182725990&doi=10.1109%2fRADAR54928.2023.10371045&partnerID=40&md5=bee59089c7aab9bd905011c48c1ee331>
- Thyagarajan, P.L., Nies, H., Frey, O., Ender, J., Ihrke, I. (2023): SAR Tomography Reconstruction using ISTA and GLRT Techniques. In: APSAR 2023 - 2023 8th Asia-Pacific Conference on Synthetic Aperture Radar (Conference Paper). DOI:10.1109/APSAR58496.2023.10389006. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184665992&doi=10.1109%2fAPSAR58496.2023.10389006&partnerID=40&md5=42cb89a77ba27241249618cdf2fe7e6d>
- Lavau, L.C., Suhrke, M., Knott, P. (2023): Securing Temperature Measurements: An Assessment of Sensors' Vulnerability to IEMI. In: IEEE International Symposium on Electromagnetic Compatibility

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

(Conference Paper). DOI:10.1109/EMCEurope57790.2023.10274337. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174625077&doi=10.1109%2fEMCEurope57790.2023.10274337&partnerID=40&md5=69276515d4e970cd56db819b5c2dfe37>

- Amarandi-Netedu, L.-M., Merz, M., Progin, O., Nagy, L., Caris, M., Wellig, P., Henke, D., Domínguez, E.M. (2023): Signature Analysis in Synthetic Aperture Radar Imagery with a Radar Target Simulator. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2678669. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178597990&doi=10.1117%2f12.2678669&partnerID=40&md5=08fb6886144104b9e10a7e61a74c0597>
- Granich, A.C., Sozer, M.S., Heberling, D. (2023): Simulation Based Uncertainty Analysis for Radiation Pattern Measurements Using an Active Radar Module. In: 45th Annual Meeting and Symposium of the Antenna Measurement Techniques Association, AMTA 2023 - Proceedings (Conference Paper). DOI:10.23919/AMTA58553.2023.10293444. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178254330&doi=10.23919%2fAMTA58553.2023.10293444&partnerID=40&md5=cb34766714a043f51457734e646ca746>
- Wagner, Simon; Johannes, Winfried; Qosja, Denisa; Brüggewirth, Stefan (2023): Small Target Detection in a Radar Surveillance System Using Contractive Autoencoders. In: IEEE transactions on aerospace and electronic systems (Article). DOI:10.1109/TAES.2023.3253469. Link: <https://publica.fraunhofer.de/entities/publication/22b3afb7-d06e-48d0-b12b-2bfc98925f97/details>
- Geschke, R.H., Chaves, C.S., Krebs, C. (2023): Surface Wave Mitigation based on Finite EBG Structures for W-band Radar Millimetre-wave MIMO Antenna Arrays. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290209. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177559751&doi=10.23919%2fEuMC58039.2023.10290209&partnerID=40&md5=e5373c3928ca7f5ea573c49503c4d621>
- Cesbron Lavau, L., Suhrke, M., Knott, P. (2023): Susceptibility of Commercial-Off-The-Shelf Sensors to IEMI using Pulse Modulated Signals. In: Advances in Radio Science (Article). DOI:10.5194/ars-20-37-2023. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85151407056&doi=10.5194%2fars-20-37-2023&partnerID=40&md5=923ad4ee756cd05f167c82769f380edc>
- Nusler, D., Grimm, A., Heinrich, W., Chartier, S., Fischer, G., Friederich, F. (2023): Terahertz technologies for non destructive testing. In: 2023 6th International Workshop on Mobile Terahertz Systems, IWMTS 2023 (Conference Paper). DOI:10.1109/IWMTS58186.2023.10207858. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169437723&doi=10.1109%2fIWMTS58186.2023.10207858&partnerID=40&md5=d0d7b6819230e441f9381183325176a2>
- Günther, M., Stoja, E., Konstandin, S., Bertuch, T., Müller, J., Philipp, D. (2023): The benefit of reconfigurable metamaterials in Magnetic Resonance Imaging. In: International Conference on Metamaterials, Photonic Crystals and Plasmonics (Conference Paper). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174591373&partnerID=40&md5=e7c7ba83a7e2206f37480aa335e9f4e5>
- Petervari, R., Weidner, S., Nekris, A., Brüggewirth, S., Knott, P. (2023): The Measurement of Radar-Plasma Signatures in a Hypersonic Shock Tunnel: Simulation and Experiment. In: IEEE Transactions on Aerospace and Electronic Systems (Article). DOI:10.1109/TAES.2023.3310497. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85170578995&doi=10.1109%2fTAES.2023.3310497&partnerID=40&md5=499f52600855ffae0887af84cbef711>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Johannes, W., Stanko, S., Kallfass, I. (2023): Time Domain Analysis of Joint Broadband Radar and Single Carrier Communication in Frequency Division Multiplexing. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289247. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177579835&doi=10.23919%2fEuRAD58043.2023.10289247&partnerID=40&md5=2971cfb289cb9abde592e88efde0a082>
- Rhiem, Dominik; Froehly, André; Wallrath, Patrick (2023): Tomographic Reconstruction of the Index of Refraction Using Radar at 15 GHz. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133257. Link: <https://publica.fraunhofer.de/entities/publication/09f61838-b44b-4b7c-bf18-aa06fe7140c0/details>
- Vogelsang, F., Starke, D., Wittemeier, J., Bredendiek, C., Aufinger, K., Pohl, N. (2023): Ultra-Wideband Signal Source Tuneable From 86 GHz to 142 GHz in SiGe Technology. In: 2023 6th International Workshop on Mobile Terahertz Systems, IWMTS 2023 (Conference Paper). DOI:10.1109/IWMTS58186.2023.10207779. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169442506&doi=10.1109%2fIWMTS58186.2023.10207779&partnerID=40&md5=bacb9e691093bb9e4e8a853fa41d9007>
- Warnke, M., Bruggenwirth, S. (2023): Waveform Adaptation for Target Classification Using HRRP in a Cognitive Framework. In: IEEE Transactions on Aerospace and Electronic Systems (Article). DOI:10.1109/TAES.2022.3230659. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85146239247&doi=10.1109%2fTAES.2022.3230659&partnerID=40&md5=2e5365faf11ec11294de9f41ab11aa8e>
- Cioni, S., Lin, X., Chamailard, B., El Jaafari, M., Charbit, G., Raschkowski, L. (2023): Physical layer enhancements in 5G-NR for direct access via satellite systems. In: International Journal of Satellite Communications and Networking (Conference Paper). DOI:10.1002/sat.1461. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85135917346&doi=10.1002%2fsat.1461&partnerID=40&md5=daeffa51a546c24b18a42f50693aa2b9>
- Wittig, S., Peter, M., Keusgen, W. (2023): Channel estimation with Zadoff–Chu sequences in the presence of phase errors. In: Electronics Letters (Article). DOI:10.1049/ell2.12996. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174616334&doi=10.1049%2fell2.12996&partnerID=40&md5=d566f6720807f005272d35328a969a72>
- Tannoury, C., Merupo, V., Di Gioia, G., Avramovic, V., Troadec, D., Lampin, J.-F., Ducournau, G., Breuer, S., Globisch, B., Barbieri, S., Kohlhaas, R.B., Peytavit, E. (2023): Photonic THz mixers based on iron-doped InGaAs embedded in a plasmonic microcavity. In: APL Photonics (Article). DOI:10.1063/5.0153046. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85175695284&doi=10.1063%2f5.0153046&partnerID=40&md5=2e7d1479e75af99c126690e067706ba1>
- Palaios, A., Vielhaus, C.L., Kulzer, D.F., Watermann, C., Hernangomez, R., Partani, S., Geuer, P., Krause, A., Sattiraju, R., Kasparick, M., Fettweis, G.P., Fitzek, F.H.P., Schotten, H.D., Stanczak, S. (2023): Machine Learning for QoS Prediction in Vehicular Communication: Challenges and Solution Approaches. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3303528. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167836725&doi=10.1109%2fACCESS.2023.3303528&partnerID=40&md5=583d5bdf02a9b43e32de8a2535ec57b0>
- Hoffmann, M., Kunzmann, G., Dudda, T., Irmer, R., Jukan, A., MacHer, G., Ahmad, A., Beenen, F.R., Broring, A., Fellhauer, F., Fettweis, G.P., Fitzek, F.H.P., Franchi, N., Gast, F., Haberland, B., Hoppe, S., Joodaki, S., Kuruvatti, N.P., Li, C., Lopez, M., Mehmeti, F., Meyerhoff, T., Miretti, L., Nguyen, G.T., Parvini, M., Pries, R., Schaefer, R.F., Schneider, P., Schupke, D.A., Strassner, S.,

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Stubbe, H., Voicu, A.M. (2023): A Secure and Resilient 6G Architecture Vision of the German Flagship Project 6G-ANNA. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3313505. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171580696&doi=10.1109%2fACCESS.2023.3313505&partnerID=40&md5=b44509932a1c2ae0bc7761968ae2660d>
- Tohidi, E., Stöcker, R., Köszegi, J.-M., Stańczak, S. (2023): D-Band RIS as a Reflect Array: Characterization and Hardware Impairments Study. In: 2023 International Balkan Conference on Communications and Networking, BalkanCom 2023 (Conference Paper). DOI:10.1109/BalkanCom58402.2023.10167898. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165648155&doi=10.1109%2fBalkanCom58402.2023.10167898&partnerID=40&md5=80e528f699318de3c02d41815a257a98>
 - Willenberg, B., Phillips, C.R., Pupekis, J., Camenzind, S.L., Liebermeister, L., Kohlhaas, R.B., Globisch, B., Keller, U. (2023): THz time-domain spectroscopy with a GHz single-cavity dual-comb laser. In: 2023 Conference on Lasers and Electro-Optics Europe and European Quantum Electronics Conference, CLEO/Europe-EQEC 2023 (Conference Paper). DOI:10.1109/CLEO/EUROPE-EQEC57999.2023.10231454. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85175706008&doi=10.1109%2fCLEO%2fEUROPE-EQEC57999.2023.10231454&partnerID=40&md5=63b900e782c61c9e5a7e59d82950c224>
 - Aksoy, E., Gregson, S., Parini, C., Dubrovka, R., Jones, R., Khan, H., Raschkowski, L., Thiele, L., Stanczak, S. (2023): Design and Optimization of a Near-Field Measurement Probe for a Minimized Scattering Cross Section. In: IEEE International Symposium on Electromagnetic Compatibility (Conference Paper). DOI:10.1109/EMCTurkiye59424.2023.10287532. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178004061&doi=10.1109%2fEMCTurkiye59424.2023.10287532&partnerID=40&md5=b6ee2d95116678152be537db70df6a7e>
 - Cwalina, S., Mohammadi, S.K., Habel, K., Jungnickel, V., Freund, R. (2023): Demonstration of a Real-Time 100G Ethernet Space Division Multiplexing PON Using a Weakly Coupled Multicore Fiber. In: 2023 International Workshop on Fiber Optics on Access Networks, FOAN 2023 (Conference Paper). DOI:10.1109/FOAN59927.2023.10328140. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180129974&doi=10.1109%2fFOAN59927.2023.10328140&partnerID=40&md5=319db3adc10f57bb2f1e2063601a981a>
 - Fink, J., Cavalcante, R.L.G., Utkovski, Z., Stanczak, S. (2023): Deep-Unfolded Adaptive Projected Subgradient Method For Mimo Detection. In: ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings (Conference Paper). DOI:10.1109/ICASSP49357.2023.10096706. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180604743&doi=10.1109%2fICASSP49357.2023.10096706&partnerID=40&md5=46f0e96d469414217c7de1bda822795e>
 - Agrawal, N., Cavalcante, R.L.G., Stanczak, S. (2023): Dynamic Distributed Convex Optimization "Over-The-Air" In Decentralized Wireless Networks. In: ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings (Conference Paper). DOI:10.1109/ICASSP49357.2023.10096916. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168158965&doi=10.1109%2fICASSP49357.2023.10096916&partnerID=40&md5=04e14613e06cefe4afe0a7903e3ee618>
 - Cavalcante, R.L.G., Miretti, L., Stańczak, S. (2023): Characterization of the Weak Pareto Boundary of Resource Allocation Problems in Wireless Networks - Implications to Cell-Less Systems. In: IEEE International Conference on Communications (Conference Paper). DOI:10.1109/ICC45041.2023.10278737. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178290136&doi=10.1109%2fICC45041.2023.10278737&partnerID=40&md5=b7a05d90c30da622465502a7274436c4>
 - Tohidi, E., Haesloop, S., Thiele, L., Stańczak, S. (2023): Near-Optimal LOS and Orientation Aware Intelligent Reflecting Surface Placement. In: IEEE International Conference on Communications

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

(Conference Paper). DOI:10.1109/ICC45041.2023.10279027. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85161577879&doi=10.1109%2fICC45041.2023.10279027&partnerID=40&md5=d4661fadbaad4633da8b7c06ae76df47>

- Dehkordi, S.K., Hauffen, J.C., Jung, P., Caire, G. (2023): Hierarchical Soft-Thresholding for Parameter Estimation in Beam-Space OTFS Integrated Sensing and Communication. In: IEEE International Conference on Communications (Conference Paper). DOI:10.1109/ICC45041.2023.10279367. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178276664&doi=10.1109%2fICC45041.2023.10279367&partnerID=40&md5=c3c0207b9cf7926db338b9d14a8238>
- Miretti, L., Cavalcante, R.L.G., Björnson, E. (2023): UL-DL Duality for Cell-Free Networks Under Per-AP Power and Information Constraints. In: IEEE International Conference on Communications (Conference Paper). DOI:10.1109/ICC45041.2023.10279505. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172357679&doi=10.1109%2fICC45041.2023.10279505&partnerID=40&md5=9749997635c2da01996c49ee374d28ef>
- Son, J., Sanchez, Y., Hampe, C., Schnieders, D., Schierl, T., Hellge, C. (2023): L4S Congestion Control Algorithm for Interactive Low Latency Applications over 5G. In: Proceedings - IEEE International Conference on Multimedia and Expo (Conference Paper). DOI:10.1109/ICME55011.2023.00176. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171200531&doi=10.1109%2fICME55011.2023.00176&partnerID=40&md5=927b12061181204d021a5896ba416863>
- Aksoy, E., Khan, H., Chen, Y., Raschkowski, L., Thiele, L., Stanczak, S. (2023): Accurate Vegetation Models with Low Computational Complexity for Ray Tracing. In: 2023 International Microwave and Antenna Symposium, IMAS 2023 (Conference Paper). DOI:10.1109/IMAS55807.2023.10066883. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85151655801&doi=10.1109%2fIMAS55807.2023.10066883&partnerID=40&md5=f62d42254c581d6211dc15a068e01b69>
- Stiewe, O., Merkle, T., Elschner, R., Hoppe, J., Schubert, C., Freund, R. (2023): High Capacity Dual-Polarization THz-Wireless Transmission in the 300 GHz Band using a Broadband Orthomode Transducer. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10187965. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168548122&doi=10.1109%2fIMS37964.2023.10187965&partnerID=40&md5=24f0156158ee70062a44d3c3404ed957>
- Azpilicueta, L., Schultze, A., Celaya-Echarri, M., Rodriguez-Corbo, F.A., Sumner, C., Dryhurst, M., Shubair, R.M., Falcone, F., Navarro-Cia, M. (2023): TeraHertz vs Microwaves Ray-Launching Model in a 0.45 THz Indoor Wireless Scenario. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10298852. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174985126&doi=10.1109%2fIRMMW-THz57677.2023.10298852&partnerID=40&md5=84da1046c9fe3d1ae5fc75afdb4bea24>
- Dohms, A., Breuer, S., Keyvaninia, S., Gruner, M., Liebermeister, L., Schell, M., Kohlhaas, R.B. (2023): Fiber-coupled THz transceiver based on rhodium-doped InGaAs with 6.5 THz bandwidth and up to 106 μ W emitted THz power. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10298878. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177684497&doi=10.1109%2fIRMMW-THz57677.2023.10298878&partnerID=40&md5=9ba6c8c331a87b157246f89319ecf752>
- Deumer, M., Berrios, S., Breuer, S., Keyvaninia, S., Nellen, S., Nguyen, C.P.V., Liebermeister, L., Schell, M., Kohlhaas, R.B. (2023): Photoconductive, continuous wave THz detectors based on rhodium doped InGaAs with 125 dB peak dynamic range. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

THz57677.2023.10298912. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177634655&doi=10.1109%2fIRMMW-THz57677.2023.10298912&partnerID=40&md5=167d558395254e4c4dfb78e696a54989>

- Wenzel, K., Breuer, S., Kohlhaas, R.B., Schell, M., Liebermeister, L. (2023): Electrical Properties of Thin Layers of III/V Semiconductors Obtained by Terahertz Reflectometry and Transmissometry. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10298990. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177687048&doi=10.1109%2fIRMMW-THz57677.2023.10298990&partnerID=40&md5=79368f2170a14ffef80f654b127dcbf>
- Kreuzer, L.C., Brix, F., Duchting, P., Gassel, S., Brenner, C., Deumer, M., Kohlhaas, R., Kramer, U., Hofmann, M.R. (2023): Towards the detection of heavy metals in plants using THz. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299050. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177657546&doi=10.1109%2fIRMMW-THz57677.2023.10299050&partnerID=40&md5=eea02c1b4532e54cdba665ccaa122778>
- Deumer, M., Liebermeister, L., Stiewe, O., Nellen, S., Kohlhaas, R.B., Elschner, R., Schubert, C., Freund, R., Schell, M. (2023): Purely Photonic Wireless Link at 120 GHz With a Photoconductive Antenna as Heterodyne Receiver. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299068. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177650406&doi=10.1109%2fIRMMW-THz57677.2023.10299068&partnerID=40&md5=95e2fb86f61ddc0b588c9d9011c914fd>
- Pupekis, J., Willenberg, B., Phillips, C.R., Camenzind, S.L., Liebermeister, L., Kohlhaas, R.B., Globisch, B., Keller, U. (2023): THz-TDS with a GHz single-cavity dual-comb laser. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299270. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177697505&doi=10.1109%2fIRMMW-THz57677.2023.10299270&partnerID=40&md5=1623d4f1a7de77c5850ad3ec969ee75e>
- Heselmann, T., Liebermeister, L., Dohms, A., Breuer, S., Keyvaninia, S., Gruner, M., Wenzel, K., Schell, M., Kohlhaas, R.B. (2023): 10 THz Bandwidth with a Fiber-Coupled THz Time-Domain Spectrometer. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299279. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177664066&doi=10.1109%2fIRMMW-THz57677.2023.10299279&partnerID=40&md5=c1011d929cd05acd9e9b1baedf3bfe3b>
- Schwenson, L., Nellen, S., Liebermeister, L., Deumer, M., Lauck, S., Schell, M., Kohlhaas, R.B. (2023): Photonic Integrated Phase Control for Continuous Wave Terahertz Spectroscopy. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299314. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177664517&doi=10.1109%2fIRMMW-THz57677.2023.10299314&partnerID=40&md5=421f36b596819c850d021eac58603442>
- Aksoy, E., Khan, H., Raschkowski, L., Thiele, L., Stanczak, S. (2023): Co-Design of Tapering and Dielectric Loading for Minimizing the Scattering Cross Section of a Near-Field Measurement Probe. In: 2023 IEEE International Symposium on Antennas and Propagation, ISAP 2023 (Conference Paper). DOI:10.1109/ISAP57493.2023.10388552. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184824807&doi=10.1109%2fISAP57493.2023.10388552&partnerID=40&md5=016b79478d94df92e69d3afd9476ce13>
- Göktepe, B., Hellge, C., Rykova, T., Schierl, T., Stanczak, S. (2023): On the Limits of HARQ Prediction for Short Deterministic Codes with Error Detection in Memoryless Channels. In: IEEE International Symposium on Information Theory - Proceedings (Conference Paper). DOI:10.1109/ISIT54713.2023.10206831. Link: <https://www.scopus.com/inward/record.uri?eid=2->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

s2.0-85171434568&doi=10.1109%2fISIT54713.2023.10206831&part-
nerID=40&md5=69d0b106480b5157f22939310d6cbeb5

- Bober, L., Schulz, D., Jungnickel, V., Mengi, A. (2023): A Proof of Concept Implementation of LiFi over Power Line Networks based on ITU-T G.hn. In: 2023 IEEE International Symposium on Power Line Communications and its Applications, ISPLC 2023 (Conference Paper). DOI:10.1109/ISPLC57122.2023.10104189. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85158955672&doi=10.1109%2fISPLC57122.2023.10104189&partnerID=40&md5=47dd0a70aab04ffc2092119edf3d228>
- Yang, J., Liu, Y., Guan, K., Schmieder, M., Fei, D., Peter, M., Keusgen, W., Wang, N., Wang, Y., Ai, B. (2023): Quasi-Deterministic Modeling for Industrial IoT Channels Based on Millimeter Wave Measurements. In: IEEE Internet of Things Journal (Article). DOI:10.1109/JIOT.2023.3319048. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172989585&doi=10.1109%2fJIOT.2023.3319048&partnerID=40&md5=7533bf6128e1f6d452e55e0ee0e66e81>
- Sena, M., Hazarika, P., Santos, C., Correia, B., Emmerich, R., Shariati, B., Napoli, A., Curri, V., Forysiak, W., Schubert, C., Fischer, J.K., Freund, R. (2023): Advanced DSP-Based Monitoring for Spatially Resolved and Wavelength-Dependent Amplifier Gain Estimation and Fault Location in C+L-Band Systems. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2022.3208209. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85139411709&doi=10.1109%2fJLT.2022.3208209&partnerID=40&md5=58a9e645d3be8bf3ce942708b5cb00a>
- Reimer, V., Abdalwareth, A., Flachenecker, G., Willer, U., Angelmahr, M., Schade, W. (2023): Ultra-Short Fiber Bragg Grating Used for Spectral Analysis of Guided Light in Single-Mode Fibers. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2022.3217113. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141545862&doi=10.1109%2fJLT.2022.3217113&partnerID=40&md5=ef7b8b7b46bc5b567dc7a37bdfb32723>
- Costa, W., Camporez, H., Hinrichs, M., Rocha, H., Pontes, M., Segatto, M., Paraskevopoulos, A., Jungnickel, V., Freund, R., Silva, J. (2023): Toward AI-Enhanced VLC Systems for Industrial Applications. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2022.3231791. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85146241295&doi=10.1109%2fJLT.2022.3231791&partnerID=40&md5=4968536536f6b409086458b6e4aeb64>
- Gupta, Y.D., Binet, G., Diels, W., Abdeen, O., Gaertner, T., Baier, M., Schell, M. (2023): Implementation, Modelling and Verification of High-Speed Mach-Zehnder Phase Modulators in an Open Access InP Foundry Platform. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2023.3244129. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149412812&doi=10.1109%2fJLT.2023.3244129&partnerID=40&md5=9f34afa77a3f035d578ce4f1732ebfff>
- Boerma, H., Ganzer, F., Runge, P., Schell, M., Fernandes, E., Rudin, B., Emaury, F. (2023): Microwave Photonic PS-Pulse and 140 GHz RF Comb Generator. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2023.3251112. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149379554&doi=10.1109%2fJLT.2023.3251112&partnerID=40&md5=c5291b478f48db25122cb4aacf6c8a39>
- Ronniger, G., Sackey, I., Schmidt-Langhorst, C., Elschner, R., Khan, M.M., Muranaka, H., Kato, T., Okada, S., Yamamoto, T., Tanaka, Y., Hoshida, T., Schubert, C., Freund, R. (2023): Optimization and Performance Evaluation of Single-Mode SOI Waveguides for Ultra-Broadband C-to-S Wavelength Conversion. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2023.3268826. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85153793982&doi=10.1109%2fJLT.2023.3268826&part-
nerID=40&md5=d0202673e1085e372468c916aebf189c

- Luis, R.S., Rademacher, G., Puttnam, B.J., Sciuillo, G.D., Marotta, A., Emmerich, R., Braig-Christophersen, N., Stolte, R., Graziosi, F., Mecozzi, A., Schubert, C., Ferri, G., Achten, F., Sillard, P., Ryf, R., Dallachiesa, L., Shinada, S., Antonelli, C., Furukawa, H. (2023): Demonstration of a 15-Mode Network Node Supported by a Field-Deployed 15-Mode Fiber. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2023.3276312. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85160251159&doi=10.1109%2fJLT.2023.3276312&partnerID=40&md5=a88b7ef66fc2e94ee851a0c3353a2092>
- Weigel, M., Kleinert, M., Kresse, M., de Felipe, D., Conradi, H., Reck, J., Mihov, K., Qian, T., Zawadzki, C., Scheu, A., Keil, N., Schell, M. (2023): Design and Fabrication of Crossing-free Waveguide Routing Networks using a Multi-layer Polymer-based Photonic Integration Platform. In: Journal of Lightwave Technology (Article). DOI:10.1109/JLT.2023.3320908. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174857359&doi=10.1109%2fJLT.2023.3320908&partnerID=40&md5=eab912b2fbd4afd8a29918352760e2bf>
- Askar, R., Keusgen, W. (2023): Lossless Decoupling Networks for RF Self-Interference Cancellation in MIMO Full-Duplex Transceivers. In: IEEE Journal on Selected Areas in Communications (Article). DOI:10.1109/JSAC.2023.3287544. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165243616&doi=10.1109%2fJSAC.2023.3287544&partnerID=40&md5=8144e7a36046205c946a19b0e82a36f4>
- Andrianopoulos, E., Lyras, N.K., Pikasis, E., Schwanke, G., Deumer, M., Nellen, S., Qian, T., Ntouni, G.D., Loghis, E.C., Tsirbas, E.D., Chartsias, P.-K., De Felipe, D., Groumas, P., Massaouti, M., Tsokos, C., Kouloumentas, C., Kritharidis, D., Kohlhaas, R.B., Keil, N., Schell, M., Avramopoulos, H. (2023): Real-Time Sub-THz Link Enabled Purely by Optoelectronics: 90-310 GHz Seamless Operation. In: IEEE Photonics Technology Letters (Article). DOI:10.1109/LPT.2023.3235932. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85147274170&doi=10.1109%2fLPT.2023.3235932&partnerID=40&md5=a2d9ca36019a2b146a5c4956b4d608fc>
- Dsilva, V., Sackey, I., Ronniger, G., Von Hunefeld, G., Chacko, B., Schubert, C., Freund, R. (2023): Performance Assessment of Joint Optical-Digital Nonlinearity Mitigation Schemes in Long-Haul Systems. In: IEEE Photonics Technology Letters (Article). DOI:10.1109/LPT.2023.3268735. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85153799807&doi=10.1109%2fLPT.2023.3268735&partnerID=40&md5=f1c7bcb35afd903c3f48311d0f9f6e13>
- Emmerich, R., Schmidt-Langhorst, C., Schubert, C., Freund, R. (2023): Characterization of C-Band Coherent Receiver Front-Ends for Transmission Systems beyond S-C-L-Band. In: IEEE Photonics Technology Letters (Article). DOI:10.1109/LPT.2023.3312697. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171527054&doi=10.1109%2fLPT.2023.3312697&partnerID=40&md5=7dc8f5155aa794a421aac01e5b0de8a4>
- Balef, A.R., Maghsudi, S. (2023): Piecewise-Stationary Multi-Objective Multi-Armed Bandit With Application to Joint Communications and Sensing. In: IEEE Wireless Communications Letters (Article). DOI:10.1109/LWC.2023.3244686. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149418364&doi=10.1109%2fLWC.2023.3244686&partnerID=40&md5=9e58dcfab14764cbb8dc8bc76924730a>
- Tang, J., Agrawal, N., Stanczak, S., Zhu, J. (2023): Coded Distributed Image Classification. In: IEEE International Workshop on Machine Learning for Signal Processing, MLSP (Conference Paper). DOI:10.1109/MLSP55844.2023.10285915. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177186236&doi=10.1109%2fMLSP55844.2023.10285915&partnerID=40&md5=d501658feeb3add930b5e8d3104f000a>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Eckhardt, J.M., Schultze, A., Askar, R., Doeker, T., Peter, M., Keusgen, W., Kurner, T. (2023): Uniform Analysis of Multipath Components From Various Scenarios With Time-Domain Channel Sounding at 300GHz. In: IEEE Open Journal of Antennas and Propagation (Article). DOI:10.1109/OJAP.2023.3263597. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159267070&doi=10.1109%2fOJAP.2023.3263597&partnerID=40&md5=db76ee51a7440c3fa180b9d842758fff>
- Hinrichs, M., Costa, W., Rocha, H., Pontes, M., Segatto, M., Paraskevopoulos, A., Jungnickel, V., Freund, R., Silva, J. (2023): A Performance Comparison of OFDM and Pulsed PHY Modulations in Optical Wireless Communications. In: 2023 South American Conference on Visible Light Communications, SACVLC 2023 (Conference Paper). DOI:10.1109/SACVLC59022.2023.10347540. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182023986&doi=10.1109%2fSACVLC59022.2023.10347540&partnerID=40&md5=1627002d0b2de3b0a8d1e4e8ad7eb974>
- Mbugua, A.W., Chen, Y., Raschkowski, L., Ji, Y., Gharba, M., Fan, W. (2023): Efficient Preprocessing of Site-Specific Radio Channels for Virtual Drive Testing in Hardware Emulators. In: IEEE Transactions on Aerospace and Electronic Systems (Article). DOI:10.1109/TAES.2022.3205289. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85137872875&doi=10.1109%2fTAES.2022.3205289&partnerID=40&md5=962b82d79ef40a8ce881fe3fb3e1bc3d>
- Azpilicueta, L., Schultze, A., Celaya-Echarri, M., Rodriguez-Corbo, F.A., Constantinou, C., Shubair, R.M., Falcone, F., Navarro-Cia, M. (2023): Diffuse-Scattering-Informed Geometric Channel Modeling for THz Wireless Communications Systems. In: IEEE Transactions on Antennas and Propagation (Article). DOI:10.1109/TAP.2023.3307868. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169662968&doi=10.1109%2fTAP.2023.3307868&partnerID=40&md5=1bc45188c883db2308d01fb7bea73d94>
- Molinari, F., Agrawal, N., Stanczak, S., Raisch, J. (2023): Over-the-Air Max-Consensus in Clustered Networks Adopting Half-Duplex Communication Technology. In: IEEE Transactions on Control of Network Systems (Article). DOI:10.1109/TCNS.2022.3212870. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85139863808&doi=10.1109%2fTCNS.2022.3212870&partnerID=40&md5=4b94a4de4b773d32c5965327ad7f5066>
- Mittal, V., Maghsudi, S., Hossain, E. (2023): Distributed Cooperation Under Uncertainty in Drone-Based Wireless Networks: A Bayesian Coalitional Game. In: IEEE Transactions on Mobile Computing (Article). DOI:10.1109/TMC.2021.3073772. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85104644476&doi=10.1109%2fTMC.2021.3073772&partnerID=40&md5=3caac199ddb0483029ff9303c9ff7>
- Zubow, A., Gawlowicz, P., Brunn, C., Bober, K.L., Jungnickel, V., Habel, K., Dressler, F. (2023): Hybrid-Fidelity: Utilizing IEEE 802.11 MIMO for Practical Aggregation of LiFi and WiFi. In: IEEE Transactions on Mobile Computing (Article). DOI:10.1109/TMC.2022.3157452. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85126272888&doi=10.1109%2fTMC.2022.3157452&partnerID=40&md5=d2f99a118521a768f67b237d0edb7eb5>
- Habiba, U., Maghsudi, S., Hossain, E. (2023): A Repeated Auction Model for Load-Aware Dynamic Resource Allocation in Multi-Access Edge Computing. In: IEEE Transactions on Mobile Computing (Article). DOI:10.1109/TMC.2023.3338602. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179801884&doi=10.1109%2fTMC.2023.3338602&partnerID=40&md5=1de5cd51848e06f44fe9593cf518dc7d>
- Fink, J., Cavalcante, R.L.G., Stanczak, S. (2023): Superiorized Adaptive Projected Subgradient Method With Application to MIMO Detection. In: IEEE Transactions on Signal Processing (Article). DOI:10.1109/TSP.2023.3263255. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85153398476&doi=10.1109%2fTSP.2023.3263255&part-
nerID=40&md5=57b6c602c0e05661121a0366b29fc7f8

- Awan, D.A., Cavalcante, R.L.G., Yukawa, M., Stanczak, S. (2023): Robust Online Multiuser Detection: A Hybrid Model-Data Driven Approach. In: IEEE Transactions on Signal Processing (Article). DOI:10.1109/TSP.2023.3282698. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85161565990&doi=10.1109%2fTSP.2023.3282698&partnerID=40&md5=6542b9fabab7f4b930b8247d79885686>
- Cao, Y., Ohtsuki, T., Maghsudi, S., Quek, T.Q.S. (2023): Deep Learning and Image Super-Resolution-Guided Beam and Power Allocation for mmWave Networks. In: IEEE Transactions on Vehicular Technology (Article). DOI:10.1109/TVT.2023.3282429. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162709567&doi=10.1109%2fTVT.2023.3282429&partnerID=40&md5=ad0f84293c93f7775a5a4bc52cd105a1>
- Agostini, P., Utkovski, Z., Decurninge, A., Guillaud, M., Stanczak, S. (2023): Constant Weight Codes With Gabor Dictionaries and Bayesian Decoding for Massive Random Access. In: IEEE Transactions on Wireless Communications (Article). DOI:10.1109/TWC.2022.3215309. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141589417&doi=10.1109%2fTWC.2022.3215309&partnerID=40&md5=369e2be1b351ef2ef2da676367d440c9>
- Yahya, M., Maghsudi, S., Stanczak, S. (2023): Federated Learning in UAV-Enhanced Networks: Joint Coverage and Convergence Time Optimization. In: IEEE Transactions on Wireless Communications (Article). DOI:10.1109/TWC.2023.3330010. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177037841&doi=10.1109%2fTWC.2023.3330010&partnerID=40&md5=8c64cb2986ed64c819c5d218d9ae241d>
- Aksoy, E., Khan, H., Chen, Y., Raschkowski, L., Thiele, L., Stanczak, S. (2023): Required Orders of Interaction for Accurate Ray Tracing Simulations in mm-Wave Indoor Scenarios. In: IEEE Antennas and Propagation Society, AP-S International Symposium (Digest) (Conference Paper). DOI:10.1109/USNC-URSI52151.2023.10238332. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172418195&doi=10.1109%2fUSNC-URSI52151.2023.10238332&partnerID=40&md5=d6ebf657a9f48ba6cbadc742349aefd1>
- Rokoni, A.A., Schaufele, D., Kasparick, M., Stanczak, S. (2023): From Empirical Measurements to Augmented Data Rates: A Machine Learning Approach for MCS Adaptation in Sidelink Communication. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Fall60731.2023.10333593. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85181173115&doi=10.1109%2fVTC2023-Fall60731.2023.10333593&partnerID=40&md5=8afebdec421b3d79435014d715dafb99>
- Sarmadi, M.M., Askar, R., Schmieder, M., Peter, M., Schwantuschke, D., Keusgen, W. (2023): Outdoor Transmission Trials in the W-Band for 6G Mobile Access Scenarios. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Spring57618.2023.10200420. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169800546&doi=10.1109%2fVTC2023-Spring57618.2023.10200420&partnerID=40&md5=d3c2c62d2cde93833d1497efd41d860d>
- Hernangómez, R., Geuer, P., Palaios, A., Schäufele, D., Watermann, C., Taleb-Bouhemadi, K., Parvini, M., Krause, A., Partani, S., Vielhaus, C., Kasparick, M., Kulzer, D.F., Burmeister, F., Fitzek, F.H.P., Schotten, H.D., Fettweis, G., Stanczak, S. (2023): Berlin V2X: A Machine Learning Dataset from Multiple Vehicles and Radio Access Technologies. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Spring57618.2023.10200750. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169789601&doi=10.1109%2fVTC2023-Spring57618.2023.10200750&partnerID=40&md5=15f66f9137c9f04f8afd970b5afd8450>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Gholipour, J., Bober, K.L., Hinrichs, M., Jungnickel, V. (2023): Compressed Sensing for Feedback Generation in OFDM Based LiFi Systems. In: IEEE Wireless Communications and Networking Conference, WCNC (Conference Paper). DOI:10.1109/WCNC55385.2023.10118619. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159789189&doi=10.1109%2fWCNC55385.2023.10118619&partnerID=40&md5=c480b97267e61c618a47d099318a17>
- Rykova, T., Goktepe, B., Schierl, T., Hellge, C. (2023): Soft-Output PAC Decoder for Uplink Sparse Code Multiple Access System. In: International Conference on Wireless and Mobile Computing, Networking and Communications (Conference Paper). DOI:10.1109/WiMob58348.2023.10187794. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167610445&doi=10.1109%2fWiMob58348.2023.10187794&partnerID=40&md5=a0ed2b166da3a5d4eb7ebc8781ab9460>
- Andrianopoulos, E., Deumer, M., Qian, T., Lyras, N., Nellen, S., Pikasis, E., Ntouni, G., Loghis, E., Tsiaras, E., de Felipe, D., Groumas, P., Tsokos, C., Massaouti, M., Kouloumentas, C., Kritharidis, D., Kohlhaas, R.B., Keil, N., Schell, M., Avramopoulos, H. (2023): Photonic Integrated Circuits for 5G-and-Beyond Networks: Enabling the mmWave Band and Beyond with InP-based Photomixers in Integrated Transceivers. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2648079. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159765342&doi=10.1117%2f12.2648079&partnerID=40&md5=c5d4d33b3143b7035a1639a15e63c60f>
- Deumer, M., Stiewe, O., Nellen, S., Kohlhaas, R.B., Elschner, R., Schubert, C., Freund, R., Schell, M. (2023): Purely Photonic Wireless Link at 120 GHz Carrier Frequency Enabled by Heterodyne Detection with a Photoconductive Antenna. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2649256. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85160691205&doi=10.1117%2f12.2649256&partnerID=40&md5=12d8c04938a1000a84b88f5bf60e1569>
- Perlot, N., Hanne, P., Johst, A., Rothe, M. (2023): 18km bidirectional free-space optical link with multi-aperture antenna and DWDM SFP+ transceivers (VERTIGO project). In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2652245. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159788487&doi=10.1117%2f12.2652245&partnerID=40&md5=af42e9a622fb55eae856fdd5f1759eb2>
- Rajeswari, G.V., Moehrle, M., Ehrensack, F., Troppenz, U., Sigmund, A., Schell, M. (2023): Novel >57 GHz bandwidth O-band InGaAlAs MQW RW DFB. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2656921. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85160688715&doi=10.1117%2f12.2656921&partnerID=40&md5=36aaecb4a18a817dd9345855e1a72ae5>
- Wolf, J., Ferstl, M., Voigt, A., Grützner, S., Schleunitz, A., Grützner, G. (2023): Novel Approach of Patterning Technologies enabling Monolithic Micro-Optical Components. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2661529. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164196840&doi=10.1117%2f12.2661529&partnerID=40&md5=85b5a2087d69d888621516e080b32b27>
- Chatterjee, M., Palla, C., Fiamanya, E., Legate, S., Cervello, A.C., Roux, L., Beltran, M., Piqueras, M.A., Runge, P., Cameron, N., Zverina, J. (2023): Design and Development of PhLEXSAT - A Flexible Photo-Digital Communication Payload for Very High Throughput Satellites. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2690526. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85174009378&doi=10.1117%2f12.2690526&partne-
rID=40&md5=7dd14c8d134c2e075137c8e901a281eb

- Mas-Machuca, C., Kaufmann, M., Linnartz, J.-P., Riegel, M., Schulz, D., Jungnickel, V. (2023): Techno-economic study of very dense optical wireless access using visible or infrared light. In: Journal of Optical Communications and Networking (Article). DOI:10.1364/JOCN.482707. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85156223582&doi=10.1364%2fJOCN.482707&partnerID=40&md5=8160a4a6f791879edda1bd209e571a86>
- Liu, F., Farmer, J., Schreier, A., Faulkner, G., Chun, H., Matthews, W., Wang, Z., O'Brien, D. (2023): Ultra-sensitive UV solar-blind optical wireless communications with an SiPM. In: Optics Letters (Article). DOI:10.1364/OL.503235. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85175033198&doi=10.1364%2fOL.503235&partnerID=40&md5=360221f2ae7f5fe3ae41d6f58f200a7d>
- Aksoy, E., Khan, H., Chen, Y., Raschkowski, L., Thiele, L., Stanczak, S. (2023): Analysis of Varying Car Geometry Accuracies for Ray Tracing Simulations in Urban V2V Scenarios. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133119. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162221140&doi=10.23919%2fEuCAP57121.2023.10133119&partnerID=40&md5=391122ecd18badbd7937e4d3563a89ec>
- Sarmadi, M.M., Schmieder, M., Peter, M., Schwantuschke, D., Keusgen, W. (2023): Design, Implementation and Demonstration of Waveguide Components for OTA Power-Combining in W-Band. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133130. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162200882&doi=10.23919%2fEuCAP57121.2023.10133130&partnerID=40&md5=17cc50ddc10c79f32ac7a148faa696b8>
- Schultze, A., Askar, R., Peter, M., Keusgen, W., Eichler, T. (2023): Angle-Resolved THz Channel Measurements at 300 GHz in a Shopping Mall Scenario. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133686. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159307424&doi=10.23919%2fEuCAP57121.2023.10133686&partnerID=40&md5=0529a69084998d48fdfcc53ae2afab90>
- Aksoy, E., Khan, H., Raschkowski, L., Thiele, L., Stanczak, S. (2023): Complexity Reduction Techniques for a Frame Based Dynamic Ray Tracing Approach. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290311. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177586921&doi=10.23919%2fEuMC58039.2023.10290311&partnerID=40&md5=1927f1003863887fb4a2a47509eefd29>
- Stiewe, O., Elschner, R., Merkle, T., Das, K., Weide, S., Schubert, C., Freund, R. (2023): Experimental Demonstration of a High Capacity THz-Wireless Dual Link Transmission System. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290458. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177585109&doi=10.23919%2fEuMC58039.2023.10290458&partnerID=40&md5=251944a5227d06cfc67c421e8dc5ed93>
- Eichler, T., Puppe, T., Muller, S., Noack, T., Deumer, M., Nellen, S., Mayzlin, Y., Riedmann, N., Liebermeister, L., Wilk, R., Kohlhaas, R., Vieweg, N., Hechtfisher, G., Keusgen, W. (2023): Ultra-Stable Tunable THz System for 6G Communication Based on Photonics. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290656. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

85177582774&doi=10.23919%2fEuMC58039.2023.10290656&part-
nerID=40&md5=1a218438b3ae54d122a93a16ded6b866

- Schostak, J., Tannert, T., Grozing, M., Jungnickel, V., Schmidt, C., Rucker, H., Berroth, M., Freund, R. (2023): 190 GBd PAM-4 Signal Generation using Analog Multiplexer IC with On-Chip Clock Multiplier. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288816. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177169302&doi=10.23919%2fEuMIC58042.2023.10288816&partnerID=40&md5=4a71a43086fc1668c9a3bcd379edde17>
- Keil, A., Mohammadzadeh, S., Liebermeister, L., Schwenson, L.M., Globisch, B., Kohlhaas, R.B., Friederich, F. (2023): Optoelectronic Multistatic Terahertz Imaging FMCW Radar. In: 20th European Radar Conference, EuRAD 2023 (Conference Paper). DOI:10.23919/EuRAD58043.2023.10289237. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177581485&doi=10.23919%2fEuRAD58043.2023.10289237&partnerID=40&md5=f7a8dff56f9c40b798b0bfbe902c1488>
- Gatto, A., Parolari, P., Luis, R.S., Rademacher, G., Puttnam, B.J., Emmerich, R., Schubert, C., Ferri, G., Achten, F., Sillard, P., Martelli, P., Sciallo, G.D., Graziosi, F., Marotta, A., Mecozzi, A., Antonelli, C., Boffi, P. (2023): Partial MIMO-based Mode Division Multiplexing Transmission over the First Field-Deployed 15-Mode Fiber in Metro Scenario. In: 2023 Optical Fiber Communications Conference and Exhibition, OFC 2023 - Proceedings (Conference Paper). DOI:10.23919/OFC49934.2023.10116440. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159202963&doi=10.23919%2fOFC49934.2023.10116440&partnerID=40&md5=c8792dc5a16d49fbec1381d6739a3ea8>
- Theurer, M., Kottke, C., Freund, R., Ganzer, F., Runge, P., Moehrle, M., Troppenz, U., Sigmund, A., Schell, M. (2023): 4 x 200 Gb/s EML-Array with a Single MQW Layer Stack. In: 2023 Optical Fiber Communications Conference and Exhibition, OFC 2023 - Proceedings (Conference Paper). DOI:10.23919/OFC49934.2023.10116734. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85161291024&doi=10.23919%2fOFC49934.2023.10116734&partnerID=40&md5=26b386f0d785f96b01f606d8fb189bd5>
- Chojecki, P., Strazdas, D., Przewozny, D., Gard, N., Runde, D., Hoerner, N., Al-Hamadi, A., Eisert, P., Bosse, S. (2023): Assessing the Value of Multimodal Interfaces: A Study on Human–Machine Interaction in Weld Inspection Workstations. In: Sensors (Article). DOI:10.3390/s23115043. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85161500803&doi=10.3390%2fs23115043&partnerID=40&md5=9b824226d6c5ad4f1466052106e3f09e>
- Hoog Antink, C., Schulz, R., Rohr, M., Wenzel, K., Liebermeister, L., Kohlhaas, R., Preu, S. (2023): Estimating Thoracic Movement with High-Sampling Rate THz Technology. In: Sensors (Article). DOI:10.3390/s23115233. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85161610751&doi=10.3390%2fs23115233&partnerID=40&md5=9a6d309126a82ed031a2d7be7ff5aac2>
- Kovalenko, M., Przewozny, D., Eisert, P., Bosse, S., Chojecki, P. (2023): Data Fusion for Cross-Domain Real-Time Object Detection on the Edge. In: Sensors (Article). DOI:10.3390/s23136138. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164845473&doi=10.3390%2fs23136138&partnerID=40&md5=00cdc911356a71bfc70da6697dddd772>
- Dai, S., Maghsudi, S., Thiele, L., Stanczak, S. (2023): Overhead Reduction in UAV-Assisted Federated Learning with Fast-Varying Environment. In: WSA and SCC 2023 - 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding (Conference

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

Paper). DOI: Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166985354&partnerID=40&md5=bafd16e36705c10fade0d2121a45f7f7>

- Balef, A.R., Maghsudi, S., Stanczak, S. (2023): Adaptive Energy-Efficient Waveform Design For Joint Communication and Sensing using Multiobjective Multiarmed Bandits. In: WSA and SCC 2023 - 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding (Conference Paper). DOI: Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166980606&partnerID=40&md5=72b7ebf2d0c36c0bf8b92b63c9826a67>
- Dehkordi, S.K., Hauffen, J.C., Jung, P., Hernangomez, R., Caire, G., Stanczak, S. (2023): Multi-Scatter-Point Target Estimation for Sensing-Assisted OTFS Automotive Communication. In: WSA and SCC 2023 - 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding (Conference Paper). DOI: Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166956285&partnerID=40&md5=b98fe3908a45545c6d1daca2ed943b7>
- Zheng, P., Zhu, Y., Bouchaala, M., Hu, Y., Stańczak, S., Schmeink, A. (2023): Federated Learning with Integrated Over-the-Air Computation and Sensing in IRS-assisted Networks (Invited Paper). In: WSA and SCC 2023 - 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding (Conference Paper). DOI: Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166936854&partnerID=40&md5=d65672f7559c8de7008454b22e792a09>
- Armandoust, F., Tohidi, E., Kasparick, M., Wang, L., Gokceoglu, A.H., Stanczak, S. (2023): MIMO Systems with Reconfigurable Antennas: Joint Channel Estimation and Mode Selection. In: WSA and SCC 2023 - 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding (Conference Paper). DOI: Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166926886&partnerID=40&md5=4a8fd3976bc122ceab6068e803bec68b>
- Hanne, Peter; Arnould, Aymeric; Perlot, Nicolas; Johst, Abraham; Bernhardt, Bill Antonio; Rothe, Marcel; Freund, Ronald (2023): Real-Time 10 Gbit/s Digital Combining Over a 3 km Free-Space Optical Link With Multi-Aperture Receiver. In: Photonische Netze. Beiträge der 24. VDE ITG Fachtagung (Conference Paper). DOI: Link: <https://publica.fraunhofer.de/entities/publication/044b49da-0d40-42aa-91a1-2aab56bbef73/details>
- Cimbili, Bharath Kumar; Friesicke, Christian; Raay, Friedbert van; Wagner, Sandrine; Bao, Mingquan; Quay, Rüdiger (2023): 2.6-and 4-W E-Band GaN Power Amplifiers with a Peak Efficiency of 22% and 15.3%. In: IEEE Microwave and Wireless Technology Letters (Article). DOI:10.1109/LMWT.2023.3268522. Link: <https://publica.fraunhofer.de/entities/publication/e8166033-0a67-4db0-8602-d2d4e3f6c77f/details>
- Renau, A., Maye, C., Wrana, D., Haussmann, S., Kallfass, I., John, L., Jung, B.K., Hellrung, U., Schlegel, P., Kuerner, T., Braun, R.P., Leiba, Y., Kawanishi, T., Hisatake, S., Kondou, K., Szriftgiser, P., Ducournau, G. (2023): 300 GHz super heterodyne link over 645 m with frequency duplexing for point to point backhuls. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290501. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177595492&doi=10.23919%2fEuMC58039.2023.10290501&partnerID=40&md5=97f151f63a23ddb5a69fc26a81b3d221>
- Cimbili, B., Friesicke, C., Krause, S., Van Raay, F., Quay, R. (2023): A 2.5W/mm High-Power Density V-Band Power Amplifier Using 150 nm GaN Technology beyond fT. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10289029. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177211513&doi=10.23919%2fEuMIC58042.2023.10289029&partnerID=40&md5=9d7a784e08b21d81f4a20b9f52d42f73>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Kuliabin, Konstantin; Maurette Blasini, Cristina; Lozar, Roger; Chartier, Sébastien; Quay, Rüdiger (2023): A 220-300 GHz Vector Modulator in 35 nm GaAs mHEMT Technology. In: IEEE/MTT-S International Microwave Symposium, IMS 2023 (Conference Paper). DOI:10.1109/IMS37964.2023.10188185. Link: <https://publica.fraunhofer.de/entities/publication/448f6e8c-e8ed-4a32-a5d6-5811b8114bf1/details>
- Safari Mugisho, Moise; Friesicke, Christian; Ayad, Mohammed; Maier, Thomas; Quay, Rüdiger (2023): A 24 GHz Harmonic-Injection Doherty Power Amplifier with 42% PAE at 6 dB OPBO in 100 nm GaN Technology. In: 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10289079. Link: <https://publica.fraunhofer.de/entities/publication/60a67c0b-2742-4110-af06-8f96198a030b/details>
- Bao, M., Cimbili, B., Schwantuschke, D., Andersson, K., Bruckner, P., Quay, R., Hansryd, J. (2023): A 63-73 GHz GaN Power Amplifier with a Compact Power Combiner. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288967. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177241790&doi=10.23919%2fEuMIC58042.2023.10288967&partnerID=40&md5=3323e2ffc022690fbf2fd58cd0857414>
- Ihle, M., Ziesche, S., Zech, C., Baumann, B. (2023): A broadband 140 GHz aperture-coupled SPA Antenna in LTCC-Technology. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290412. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177551576&doi=10.23919%2fEuMC58039.2023.10290412&partnerID=40&md5=61af97a5bc472f52157ce8657bb1de67>
- Heinz, F., Thome, F., Leuther, A. (2023): A Cryogenic Four-Channel C-Band Low-Noise Amplifier MMIC in 50-nm Metamorphic High-Electron-Mobility-Transistor Technology. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10188065. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168559040&doi=10.1109%2fIMS37964.2023.10188065&partnerID=40&md5=d19332d9b864381ede405a3c062af446>
- Thome, F., Bruckner, P., Quay, R. (2023): A D-Band Low-Noise Amplifier MMIC in a 70-nm GaN HEMT Technology. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288876. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177238095&doi=10.23919%2fEuMIC58042.2023.10288876&partnerID=40&md5=9dd81a16994b8909c33fe6668fc8c1ad>
- Doring, P., Sinnwell, M., Muller, S., Czap, H., Driad, R., Bruckner, P., Kohler, K., Kirste, L., Mikulla, M., Quay, R. (2023): A Study on the Performance of AlGaIn/GaN HEMTs Regrown on Mg-Implanted GaN Layers With Low Channel Thickness. In: IEEE Transactions on Electron Devices (Article). DOI:10.1109/TED.2023.3237803. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85148465303&doi=10.1109%2fTED.2023.3237803&partnerID=40&md5=6440f0a24273e8aeb4f8d78d9479b051>
- Weber, R., Wagner, S., Leuther, A., Mikulla, M. (2023): A X4 Multiplier MMIC to E-Band Frequencies with High Spectral Purity in 50 nm mHEMT Technology. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288653. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177182498&doi=10.23919%2fEuMIC58042.2023.10288653&partnerID=40&md5=1540ce592fcc125c6ffcba88dd93635d>
- Albahrani, S.A., Schwantuschke, D., Khandelwal, S. (2023): Accurate Modelling of GaN HEMT Capacitances in the Framework of the ASMHEMT Model. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper).

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

DOI:10.23919/EuMIC58042.2023.10288780. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177197241&doi=10.23919%2fEuMIC58042.2023.10288780&partnerID=40&md5=29fc8ec9360c53552f2d74113f05439d>

- Tessmann, A., Leuther, A., Thome, F., John, L., Gashi, B., Massler, H., Saam, A., Chartier, S. (2023): Advanced mHEMT Technologies for Use in Radar, Communication and Meteorological Applications. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10310734. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179518633&doi=10.1109%2fBCICTS54660.2023.10310734&partnerID=40&md5=b07046f91c565474cab1a66f2edac8dc>
- Neining, P., Mikulla, M., Döring, P., Dammann, M., Thome, F., Krause, S., Schwantuschke, D., Brückner, P., Friesicke, C., Quay, R. (2023): Advances in GaN Devices and Circuits at Higher mm-Wave Frequencies. In: e-Prime - Advances in Electrical Engineering, Electronics and Energy (Article). DOI:10.1016/j.prime.2023.100177. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163398264&doi=10.1016%2fj.prime.2023.100177&partnerID=40&md5=735991dc42a63ee256e466d5565cc764>
- Krause, S., Streicher, I., Waltereit, P., Kirste, L., Bruckner, P., Leone, S. (2023): AlScN/GaN HEMTs Grown by Metal-Organic Chemical Vapor Deposition with 8.4 W/mm Output Power and 48 % Power-Added Efficiency at 30 GHz. In: IEEE Electron Device Letters (Article). DOI:10.1109/LED.2022.3220877. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141589838&doi=10.1109%2fLED.2022.3220877&partnerID=40&md5=74648fa89e37768a271f722c2c291581>
- Quay, R. (2023): Amplifiers. In: Fundamentals of RF and Microwave Techniques and Technologies (Book Chapter). DOI:10.1007/978-3-030-94100-0_9. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171008095&doi=10.1007%2f978-3-030-94100-0_9&partnerID=40&md5=ce7cb15091e3ba140673716dc03a5956
- Tran Caliste, T.N., Kirste, L., Baruchel, J. (2023): An advanced Bragg diffraction imaging technique to characterize defects: The examples of GaN and AlN. In: Microelectronic Engineering (Article). DOI:10.1016/j.mee.2023.112012. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85153854387&doi=10.1016%2fj.mee.2023.112012&partnerID=40&md5=f2be16b8ab0a8c5851769ab9b9cc595c>
- Yassine, Mohamed; Feil, Niclas; Nair, Akash; Greiff, Andreas; Driad, Rachid; Wade, E.; Benkhelifa, Fouad; Ambacher, Oliver (2023): Chapter Four - In-plane ferroelectric switching of non-polar wurtzite AlScN films using SAW resonators. In: Emerging Ferroelectric Materials and Devices (Book Chapter). DOI: . Link: <https://publica.fraunhofer.de/entities/publication/a4685f6c-c239-4a6f-9a18-d115299e7e1c/details>
- Sarmadi, M.M., Schmieder, M., Peter, M., Schwantuschke, D., Keusgen, W. (2023): Design, Implementation and Demonstration of Waveguide Components for OTA Power-Combining in W-Band. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133130. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162200882&doi=10.23919%2fEuCAP57121.2023.10133130&partnerID=40&md5=17cc50ddc10c79f32ac7a148faa696b8>
- Schoch, B., Wrana, D., Manoliu, L., Kuri, M., Wagner, S., Tessmann, A., Kallfass, I. (2023): E-Band Active Upconverter Module with Tunable LO Feedthrough. In: IEEE Radio and Wireless Symposium, RWS (Conference Paper). DOI:10.1109/RWS55624.2023.10046296. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149304538&doi=10.1109%2fRWS55624.2023.10046296&partnerID=40&md5=cf17d7d7ae3959a169d8ee041069eb0e>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Cimbili, B., Friesicke, C., Raay, F.V., Bao, M., Quay, R. (2023): E-band Downlink GaN PA with a Homogeneous Output Power of 2.7W and a Peak PAE of 32.3%. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288779. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177240065&doi=10.23919%2fEuMIC58042.2023.10288779&partnerID=40&md5=f7bc52ea29de5051f975f98ccd8e9f25>
- Streicher, I., Leone, S., Manz, C., Kirste, L., Prescher, M., Waltereit, P., Mikulla, M., Quay, R., Ambacher, O. (2023): Effect of AlN and AlGaIn Interlayers on AlScN/GaN Heterostructures Grown by Metal-Organic Chemical Vapor Deposition. In: Crystal Growth and Design (Article). DOI:10.1021/acs.cgd.2c01013. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85145982212&doi=10.1021%2facscgd.2c01013&partnerID=40&md5=d3d80e92d074cb4afb5a7575b36d9cf>
- Wrana, D., Haussmann, S., Schoch, B., John, L., Tessmann, A., Kallfass, I. (2023): Effects of Harmonics from Frequency-Multiplicative Carrier Generation in a Superheterodyne 300 GHz Transmit Frontend. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290717. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177585031&doi=10.23919%2fEuMC58039.2023.10290717&partnerID=40&md5=c5442af81da1d4d0139309a77af1e2cf>
- Monch, S., Kuring, C., Geng, X., Hoehner, P.A., Liserre, M., Quay, R., Dieckerhoff, S. (2023): Efficient Talkative Power Conversion With Quasi-Square-Wave Zero-Voltage Switching Hysteretic Current Control. In: IEEE Transactions on Power Electronics (Article). DOI:10.1109/TPEL.2023.3297508. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165391818&doi=10.1109%2fTPEL.2023.3297508&partnerID=40&md5=64f0176effb640a69f5e8f1380002115>
- Stiewe, O., Elschner, R., Merkle, T., Das, K., Weide, S., Schubert, C., Freund, R. (2023): Experimental Demonstration of a High Capacity THz-Wireless Dual Link Transmission System. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290458. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177585109&doi=10.23919%2fEuMC58039.2023.10290458&partnerID=40&md5=251944a5227d06cfc67c421e8dc5ed93>
- Yang, Q. (2023): Finesse of ring resonators. In: AIP Advances (Article). DOI:10.1063/5.0157450. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169577409&doi=10.1063%2f5.0157450&partnerID=40&md5=0d149041d281b3be2c6f49dc46c070ea>
- Manoliu, Laura; Wrana, Dominik; Schoch, Benjamin; Haussmann, Simon; Tessmann, Axel; Kallfass, Ingmar (2023): Frequency and Phase Investigation of the Local Oscillator Offset in a W-Band Satellite Communication Link. In: European Microwave Week 2023. Conference Proceedings "Waves Beyond Walls" (Conference Paper). DOI:10.23919/EuMC58039.2023.10290372. Link: <https://publica.fraunhofer.de/entities/publication/c263f5cb-e72e-4382-9a56-e1c432ea162d/details>
- Hartnagel, H.L., Quay, R., Rohde, U.L., Rudolph, M. (2023): Fundamentals of RF and Microwave Techniques and Technologies. In: Fundamentals of RF and Microwave Techniques and Technologies (Book). DOI:10.1007/978-3-030-94100-0. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171001667&doi=10.1007%2f978-3-030-94100-0&partnerID=40&md5=644689693bf6446a63c24e4135234cf3>
- Mönch, S., Basler, M., Reiner, R., Benkhelifa, F., Döring, P., Sinnwell, M., Müller, S., Mikulla, M., Waltereit, P., Quay, R. (2023): GaN power converter and high-side IC substrate issues on Si, p-n junction, or SOI. In: e-Prime - Advances in Electrical Engineering, Electronics and Energy (Article). DOI:10.1016/j.prime.2023.100171. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85165674596&doi=10.1016%2fj.prime.2023.100171&partne-
rID=40&md5=6e26d7360cc672f8c1819b17ac50338d

- Sivverini, G., Meazza, A., Traversa, A., Colzani, A., Fonte, A., Moscato, S., Friesicke, C. (2023): GaN/SiC V-band 33 dBm Power Amplifier with 10% PAE for Inter Satellite Communications. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288947. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177166479&doi=10.23919%2fEuMIC58042.2023.10288947&partnerID=40&md5=8793a71c613b87205dd337b182c4c8cb>
- Schwantuschke, D., Ture, E., Bruckner, P., Neininger, P., Tessmann, A., Zink, M., Kuri, M., Meder, D., Wagner, S., Lozar, R. (2023): GaN-based Power Amplifier MMIC and Module for D-Band Applications. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10289074. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177214711&doi=10.23919%2fEuMIC58042.2023.10289074&partnerID=40&md5=fee3ba823b31d1d2c1ea767b0d020f67>
- Stiewe, O., Merkle, T., Elschner, R., Hoppe, J., Schubert, C., Freund, R. (2023): High Capacity Dual-Polarization THz-Wireless Transmission in the 300 GHz Band using a Broadband Orthomode Transducer. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10187965. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168548122&doi=10.1109%2fIMS37964.2023.10187965&partnerID=40&md5=24f0156158ee70062a44d3c3404ed957>
- Cimbili, B., Friesicke, C., Van Raay, F., Wagner, S., Bao, M., Quay, R. (2023): High-Efficiency Watt-Level E-band GaN Power Amplifier with a Compact Low-loss Combiner. In: 2023 IEEE Topical Conference on RF/Microwave Power Amplifiers for Radio and Wireless Applications, PAWR 2023 (Conference Paper). DOI:10.1109/PAWR56957.2023.10046243. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149382483&doi=10.1109%2fPAWR56957.2023.10046243&partnerID=40&md5=917311e1b6bc793caec2beb8a4a29463>
- Thome, F., John, L., Gashi, B., Tessmann, A., Leuther, A., Chartier, S. (2023): InGaAs HEMT Technology for Submillimeter-Wave and Ultra-Wideband Monolithic Integrated Circuits. In: International Geoscience and Remote Sensing Symposium (IGARSS) (Conference Paper). DOI:10.1109/IGARSS52108.2023.10282876. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178340368&doi=10.1109%2fIGARSS52108.2023.10282876&partnerID=40&md5=9a40a13c3351ea6b78bb178ca5fc5c5f>
- Yassine, M., Feil, N., Nair, A., Graff, A., Driad, R., Benkhelifa, F., Wade, E., Ambacher, O. (2023): In-plane ferroelectric switching of non-polar wurtzite AlScN films using SAW resonators. In: Semiconductors and Semimetals (Book Chapter). DOI:10.1016/bs.semsem.2023.09.014. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174414031&doi=10.1016%2fbs.semsem.2023.09.014&partnerID=40&md5=7215792ef763967cce497e73f9f5eb36>
- John, L., Thome, F., Weber, R., Leuther, A., Tessmann, A., Massler, H., Emrich, A., Adebahr, J., Kangas, V. (2023): Low-Noise Amplifiers for the Arctic Weather Satellite. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290663. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177580977&doi=10.23919%2fEuMC58039.2023.10290663&partnerID=40&md5=620744efb9463100d8cb245e73789568>
- Haussmann, S., Manoliu, L., Gebert, L., Schoch, B., Koller, M., Meier, J., Steinmetz, F., Freese, J., Henneberger, R., Tessmann, A., Klinkner, S., Kallfass, I. (2023): Measurement and Analysis of FDM for E-Band Satellite Communication. In: 2023 53rd European Microwave Conference, EuMC 2023

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

(Conference Paper). DOI:10.23919/EuMC58039.2023.10290622. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177603823&doi=10.23919%2fEuMC58039.2023.10290622&partnerID=40&md5=55e2121c4b84887df79decaa7b591366>

- Thome, F., Massler, H., Leuther, A., Chartier, S. (2023): Millimeter-Wave LNA and PA MMICs with 10:1 and 4:1 Bandwidth in a 35-nm Gate-Length InGaAs mHEMT Technology. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10188135. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168556097&doi=10.1109%2fIMS37964.2023.10188135&partnerID=40&md5=429b90119c213adce0db8c92296fc43b>
- Heinz, F., Leuther, A., Thome, F. (2023): Modeling of 50-nm Metamorphic HEMTs for Cryogenic Ultra-Low-Power Operation. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288995. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177231040&doi=10.23919%2fEuMIC58042.2023.10288995&partnerID=40&md5=49cf5bf869f322ab03afc3edbbae6b65>
- Heinz, F., Thome, F., Leuther, A. (2023): Monolithically Integrated C -Band Low-Noise Amplifiers for Use in Cryogenic Large-Scale RF Systems. In: IEEE Transactions on Microwave Theory and Techniques (Article). DOI:10.1109/TMTT.2023.3340519. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182347515&doi=10.1109%2fTMTT.2023.3340519&partnerID=40&md5=b8be3c840e25b115aea4efae31970f20>
- John, L., Merkle, T., Leuther, A., Chung, J. (2023): Multi-Channel PA, LNA, and Switch MMICs for Beam-Switching Applications at 160 GHz, Based on an InGaAs mHEMT Technology. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10310666. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179506671&doi=10.1109%2fBCICTS54660.2023.10310666&partnerID=40&md5=e84ffe9fa810c00d9752f114d308724c>
- Sinnwell, M., Dammann, M., Driad, R., Krause, S., Leone, S., Mikulla, M., Quay, R. (2023): Normally-off quasi-vertical GaN FinFET on SiC substrate with record small-signal current gain of $f_t=10.2$ GHz. In: Device Research Conference - Conference Digest, DRC (Conference Paper). DOI:10.1109/DRC58590.2023.10187017. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167864194&doi=10.1109%2fDRC58590.2023.10187017&partnerID=40&md5=d6e5f884e0c8b25bab90b66bc35bd3dc>
- Pascal, Y., Daschner, F., Mönch, S., Liserre, M., Höft, M., Quay, R. (2023): Online die temperature measurement using S-parameters in GaN-based power converters. In: Microelectronics Reliability (Article). DOI:10.1016/j.microrel.2023.115085. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174711823&doi=10.1016%2fj.microrel.2023.115085&partnerID=40&md5=e6e52f7cf44461c38e454ea146e37b61>
- Sarmadi, M.M., Askar, R., Schmieder, M., Peter, M., Schwantuschke, D., Keusgen, W. (2023): Outdoor Transmission Trials in the W-Band for 6G Mobile Access Scenarios. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Spring57618.2023.10200420. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169800546&doi=10.1109%2fVTC2023-Spring57618.2023.10200420&partnerID=40&md5=d3c2c62d2cde93833d1497efd41d860d>
- Chen, Y., Peng, H., Fang, D., Dittmer, J., Lihachev, G., Voloshin, A., Skacel, S.T., Laueremann, M., Tessmann, A., Wagner, S., Bhave, S., Kallfass, I., Zwick, T., Freude, W., Randel, S., Kippenberg, T.J., Koos, C. (2023): Self-Injection-Locked Kerr Soliton Microcombs With Photonic Wire Bonds For Use

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

in Terahertz Communications. In: 2023 Conference on Lasers and Electro-Optics, CLEO 2023 (Conference Paper). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85175958001&partnerID=40&md5=30d7707309799eccbec47e5269d44b0>

- Quay, R. (2023): Semiconductors and Semiconductor Devices and Circuits. In: Fundamentals of RF and Microwave Techniques and Technologies (Book Chapter). DOI:10.1007/978-3-030-94100-0_7. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171006525&doi=10.1007%2f978-3-030-94100-0_7&partnerID=40&md5=d1ef06995667b0048ca2440442b57b48
- Maurette-Blasini, C., Weber, R., Wagner, S., Schwantuschke, D., Chartier, S., Quay, R. (2023): Single-Ended Resistive Down-Converter MMICs in InGaAs mHEMT and GaN-HEMT Technologies for D-Band (110-170 GHz) Applications. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10310862. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179521218&doi=10.1109%2fBCICTS54660.2023.10310862&partnerID=40&md5=95df7935c28d2f14747af2cd0e757300>
- Basler, M., Doring, P., Monch, S., Reiner, R., Mikulla, M., Quay, R. (2023): Switching of GaN CAVET With Quasi-Monolithic Integrated HEMT Gate Driver. In: IEEE Electron Device Letters (Article). DOI:10.1109/LED.2023.3290608. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163556672&doi=10.1109%2fLED.2023.3290608&partnerID=40&md5=b3aa8e1079caa30bb7f7073ac9a62fe1>
- Nusler, D., Grimm, A., Heinrich, W., Chartier, S., Fischer, G., Friederich, F. (2023): Terahertz technologies for non destructive testing. In: 2023 6th International Workshop on Mobile Terahertz Systems, IWMTS 2023 (Conference Paper). DOI:10.1109/IWMTS58186.2023.10207858. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169437723&doi=10.1109%2fIWMTS58186.2023.10207858&partnerID=40&md5=d0d7b6819230e441f9381183325176a2>
- Manoliu, L., Schoch, B., Haussmann, S., Tessmann, A., Henneberger, R., Freese, J., Steinmetz, F., Wrana, D., Wörmann, J., Koller, M., Kalfass, I. (2023): The technology platform of the EIVE CubeSat mission for high throughput downlinks at W-band. In: Acta Astronautica (Article). DOI:10.1016/j.actaastro.2023.02.039. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149637654&doi=10.1016%2fj.actaastro.2023.02.039&partnerID=40&md5=7143ad16bf62117ba8742cab765ea0d>
- Doring, P., Krause, S., Friesicke, C., Quay, R. (2023): Theoretical Limits of the Matching Bandwidth and Output Power of AlScN-Based HEMTs. In: IEEE Transactions on Electron Devices (Article). DOI:10.1109/TED.2023.3334224. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184800350&doi=10.1109%2fTED.2023.3334224&partnerID=40&md5=4f7a4c4288996b6bd00c00e3205fba0a>
- Thome, F., John, L., Weber, R., Heinz, F., Massler, H., Leuther, A., Chartier, S. (2023): Ultra-Low-Noise 50-nm InGaAs mHEMT Technology and MMICs for Room Temperature and Cryogenic Applications. In: International Geoscience and Remote Sensing Symposium (IGARSS) (Conference Paper). DOI:10.1109/IGARSS52108.2023.10281518. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178337476&doi=10.1109%2fIGARSS52108.2023.10281518&partnerID=40&md5=caf59e338e357a0c3255a98dac3c49ec>
- Thome, F., John, L., Weber, R., Heinz, F., Massler, H., Leuther, A., Chartier, S. (2023): Ultra-Low-Noise InGaAs mHEMT Technology and MMICs for Space Missions and Radio Astronomy. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10187960. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168552585&doi=10.1109%2fIMS37964.2023.10187960&partnerID=40&md5=de1abc7ac04c3aa81048cd3f9fa06af7>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Neiningner, P., Thome, F., John, L., Leuther, A., Chartier, S., Quay, R. (2023): Ultra-Wideband mmW Digital Step Attenuator. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288944. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177221861&doi=10.23919%2fEuMIC58042.2023.10288944&partnerID=40&md5=d38b740256d3236d98653abe08627e79>
- Döring, P., Krause, S., Waltereit, P., Brückner, P., Leone, S., Streicher, I., Mikulla, M., Quay, R. (2023): Voltage-margin limiting mechanisms of AlScN-based HEMTs. In: Applied Physics Letters (Article). DOI:10.1063/5.0159501. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165516216&doi=10.1063%2f5.0159501&partnerID=40&md5=312475fa0eb86587aa2cb120b00833b7>
- Schoch, B., Wrana, D., Tessmann, A., Kallfass, I. (2023): Wideband Cross-Domain Characterization of a W-band Amplifier MMIC. In: 2023 53rd European Microwave Conference, EuMC 2023 (Conference Paper). DOI:10.23919/EuMC58039.2023.10290485. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177607288&doi=10.23919%2fEuMC58039.2023.10290485&partnerID=40&md5=e51699c1612e74d9b84a17bd577152e3>
- Krause, S., Quay, R. (2023): X-Band 100-W High-Voltage GaN Internally Matched FET with Low Gain Compression. In: International Geoscience and Remote Sensing Symposium (IGARSS) (Conference Paper). DOI:10.1109/IGARSS52108.2023.10282801. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178338579&doi=10.1109%2fIGARSS52108.2023.10282801&partnerID=40&md5=9040956a46b47c1144cec68c08615e52>
- Mykytyn, P., Brzozowski, M., Dyka, Z., Langendoerfer, P. (2023): GPS-Spoofing Attack Detection Mechanism for UAV Swarms. In: 12th Mediterranean Conference on Embedded Computing, MECO 2023 (Conference Paper). DOI:10.1109/MECO58584.2023.10154998. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164967996&doi=10.1109%2fMECO58584.2023.10154998&partnerID=40&md5=7528afc4319ab977c9ff964857dfb3a4>
- Lehniger, K., Aftowicz, M., Scholzel, M., Langendorfer, P. (2023): Coarse-grained Control Flow Integrity Check for Processors with Sliding Register Windows. In: 12th Mediterranean Conference on Embedded Computing, MECO 2023 (Conference Paper). DOI:10.1109/MECO58584.2023.10154928. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164960424&doi=10.1109%2fMECO58584.2023.10154928&partnerID=40&md5=8b832ceb4427bd4dc74fad0c77bb7ecf>
- Sigourou, A.A., Kabin, I., Langendorfer, P., Sklavos, N., Dyka, Z. (2023): Successful Simple Side Channel Analysis: Vulnerability of an atomic pattern kP algorithm implemented with a constant time crypto library to simple electromagnetic analysis attacks. In: 12th Mediterranean Conference on Embedded Computing, MECO 2023 (Conference Paper). DOI:10.1109/MECO58584.2023.10154940. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164922502&doi=10.1109%2fMECO58584.2023.10154940&partnerID=40&md5=6531c91a30e73116a8d7cbf338602c52>
- Herold, C., Mausolf, T., Carta, C., Malignaggi, A. (2023): A Broadband D-Band Power Detector System in SiGe 130 nm BiCMOS Technology. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288992. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177198808&doi=10.23919%2fEuMIC58042.2023.10288992&partnerID=40&md5=b0a41574486579183c778f1a5f8bfdb1>
- Panic, G., Herold, C., Karakuzulu, A. (2023): A Fully Integrated Wideband D-Band Receiver for 6G Applications. In: 2023 31st Telecommunications Forum, TELFOR 2023 - Proceedings (Conference

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

Paper). DOI:10.1109/TELFOR59449.2023.10372681. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85183470941&doi=10.1109%2fTELFOR59449.2023.10372681&partnerID=40&md5=50a6f8ea75e4a4e6f8a96d812f11ec70>

- Nauman, M., Lopacinski, L., Maletic, N., Scheide, M., Krstic, M., Grass, E. (2023): 6G and Beyond: Synchronization Challenges and Solutions with OTFS Modulation using SDR. In: 2023 31st Telecommunications Forum, TELFOR 2023 - Proceedings (Conference Paper). DOI:10.1109/TELFOR59449.2023.10372652. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85183460398&doi=10.1109%2fTELFOR59449.2023.10372652&partnerID=40&md5=767cd1c78323f7d128078a268bd284b5>
- Nusler, D., Grimm, A., Heinrich, W., Chartier, S., Fischer, G., Friederich, F. (2023): Terahertz technologies for non destructive testing. In: 2023 6th International Workshop on Mobile Terahertz Systems, IWMTS 2023 (Conference Paper). DOI:10.1109/IWMTS58186.2023.10207858. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169437723&doi=10.1109%2fIWMTS58186.2023.10207858&partnerID=40&md5=d0d7b6819230e441f9381183325176a2>
- Haag, A., Kaynak, M., Ulusoy, A.C. (2023): Thermal Analysis and Design of a Ka-Band Power Amplifier in 130 nm SiGe BiCMOS. In: 2023 IEEE 23rd Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2023 (Conference Paper). DOI:10.1109/SiRF56960.2023.10046279. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149426923&doi=10.1109%2fSiRF56960.2023.10046279&partnerID=40&md5=f69546fccc5d900ec83a552adc686e2a>
- Iseini, F., Inac, M., Malignaggi, A., Peczek, A., Kahmen, G. (2023): Monolithically Integrated Optoelectronic Transmitter based on Segmented Mach-Zehnder Modulator in EPIC 250 nm BiCMOS Technology. In: 2023 IEEE 23rd Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2023 (Conference Paper). DOI:10.1109/SiRF56960.2023.10046278. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149415308&doi=10.1109%2fSiRF56960.2023.10046278&partnerID=40&md5=f0ed3cf35c3a177e75dbc911be008a7e>
- Schoepfel, J., Rucker, H., Pohl, N. (2023): A Differential SiGe HBT Doherty Power Amplifier for Automotive Radar at 79 GHz. In: 2023 IEEE 23rd Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2023 (Conference Paper). DOI:10.1109/SiRF56960.2023.10046275. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149395971&doi=10.1109%2fSiRF56960.2023.10046275&partnerID=40&md5=edd1daa929df65e8007b1328c5c16886>
- Sutbas, B., Eissa, M.H., Kahmen, G. (2023): A Ka-Band VCO Chip with Integrated Dividers Using 1.5 v Supply in 130-nm SiGe BiCMOS Technology for Low-Power Radar Sensors. In: 2023 IEEE BiCMOS and Compound Semiconductor Integrated Circuits and Technology Symposium, BCICTS 2023 (Conference Paper). DOI:10.1109/BCICTS54660.2023.10310707. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179515384&doi=10.1109%2fBCICTS54660.2023.10310707&partnerID=40&md5=22d69980acb57ff884d7b85d27e9b4b7>
- Koropiecki, I., Piotrowski, K. (2023): Household Digital Twin to Support Energy Management and Smart Appliance Research. In: 2023 IEEE International Conference on Communications, Control, and Computing Technologies for Smart Grids, SmartGridComm 2023 - Proceedings (Conference Paper). DOI:10.1109/SmartGridComm57358.2023.10333886. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180785452&doi=10.1109%2fSmartGridComm57358.2023.10333886&partnerID=40&md5=d6595adbc53e69261b2bcecfbb9dedcf>
- Shahin, K., Rotta, R., Archila, O., Mykytyn, P., Nattke, M., Reichenbach, M., Nolte, J., Natarov, R. (2023): A Modular Communication Architecture for Adaptive UAV Swarms. In: 2023 IEEE International Conference on Omni-Layer Intelligent Systems, COINS 2023 (Conference Paper).

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

DOI:10.1109/COINS57856.2023.10189245. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167874548&doi=10.1109%2fCOINS57856.2023.10189245&partnerID=40&md5=2d6ddd417090b9dbdefc96e91c3f224c>

- Osman, A., Winzer, G., Mai, C., Peczek, A., Voigt, K., Dorward, W., Lischke, S., Inac, M., Malignaggi, A., Zimmermann, L., Sourikopoulos, I., Stampoulidis, L. (2023): First 100 Gb/s monolithically integrated electronic-photonics coherent receiver with direct edge coupling to standard single mode fiber array. In: 2023 Optical Fiber Communications Conference and Exhibition, OFC 2023 - Proceedings (Conference Paper). DOI:10.23919/OFC49934.2023.10116608. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85161302642&doi=10.23919%2fOFC49934.2023.10116608&partnerID=40&md5=f3db96b2847263c283f9f928f3e60011>
- Meller, G., Methfessel, M., Wagner, J., Ellinger, F. (2023): Analysis of a Switched Passive Input Network Based on a Surface Acoustic Wave Resonator for 433 MHz Wakeup Receivers. In: 20th SBMO/IEEE MTT-S International Microwave and Optoelectronics Conference, IMOC 2023 (Conference Paper). DOI:10.1109/IMOC57131.2023.10379776. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184347076&doi=10.1109%2fIMOC57131.2023.10379776&partnerID=40&md5=016b37337855eb8ae16780c5f46eb252>
- Herzel, F., Carta, C., Fischer, G. (2023): Random and Static Phase Errors in a PLL Array for Millimeter-Wave Frequency Generation. In: 21st IEEE Interregional NEWCAS Conference, NEWCAS 2023 - Proceedings (Conference Paper). DOI:10.1109/NEWCAS57931.2023.10198063. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168546501&doi=10.1109%2fNEWCAS57931.2023.10198063&partnerID=40&md5=61867d89d70671114f53bbd0ea5a589a>
- Reiser, D., Reichenbach, M., Rizzi, T., Baroni, A., Fritscher, M., Wenger, C., Zambelli, C., Bertozzi, D. (2023): Technology-Aware Drift Resilience Analysis of RRAM Crossbar Array Configurations. In: 21st IEEE Interregional NEWCAS Conference, NEWCAS 2023 - Proceedings (Conference Paper). DOI:10.1109/NEWCAS57931.2023.10198076. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168545496&doi=10.1109%2fNEWCAS57931.2023.10198076&partnerID=40&md5=5f7fbda2f9fee44328c8bad2520ef51e>
- Santamaria, I., Soleymani, M., Jorswieck, E., Gutiérrez, J. (2023): Interference Leakage Minimization in RIS-Assisted MIMO Interference Channels. In: ICASSP, IEEE International Conference on Acoustics, Speech and Signal Processing - Proceedings (Conference Paper). DOI:10.1109/ICASSP49357.2023.10094656. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163722442&doi=10.1109%2fICASSP49357.2023.10094656&partnerID=40&md5=a9cee4fbf2e6c390452e63ce34c8eb4f>
- Al Beattie, B., Muralidhar, B.K.S., Uhlmann, M., Kahmen, G., Rieger, R., Ochs, K. (2023): Electrical and Wave Digital Modeling of CMOS-Based Ring Oscillators. In: ICECS 2023 - 2023 30th IEEE International Conference on Electronics, Circuits and Systems: Technosapiens for Saving Humanity (Conference Paper). DOI:10.1109/ICECS58634.2023.10382939. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85183585448&doi=10.1109%2fICECS58634.2023.10382939&partnerID=40&md5=5795afd0e9dae00aeae1e30dc79c8dc6>
- Petryk, D., Dyka, Z., Krstic, M., Bělohoubek, J., Fišer, P., Steiner, F., Blecha, T., Langendörfer, P., Kabin, I. (2023): On the Influence of the Laser Illumination on the Logic Cells Current Consumption : First measurement results. In: ICECS 2023 - 2023 30th IEEE International Conference on Electronics, Circuits and Systems: Technosapiens for Saving Humanity (Conference Paper). DOI:10.1109/ICECS58634.2023.10382757. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85183579054&doi=10.1109%2fICECS58634.2023.10382757&partnerID=40&md5=cf00775a65b4f6a184115605fc08a33e>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Corici, M.-I., Eichhorn, F., Bless, R., Gundall, M., Lindenschmitt, D., Bloessl, B., Petrova, M., Wimmer, L., Kreuch, R., Magedanz, T., Schotten, H.D. (2023): Organic 6G Networks: Vision, Requirements, and Research Approaches. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3293055. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164415700&doi=10.1109%2fACCESS.2023.3293055&partnerID=40&md5=f215a27b35339f5eafa9378a79a2eac>
- McNamara, J., Camps-Mur, D., Goodarzi, M., Frank, H., Chinchilla-Romero, L., Canellas, F., Fernandez-Fernandez, A., Yan, S. (2023): NLP Powered Intent Based Network Management for Private 5G Networks. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3265894. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85153359715&doi=10.1109%2fACCESS.2023.3265894&partnerID=40&md5=3453738bb826137f4ffdc50e1b316d6f>
- Karakuzulu, A., Ahmad, W.A., Kissinger, D., Malignaggi, A. (2023): A Four-Channel Bidirectional D-Band Phased-Array Transceiver for 200 Gb/s 6G Wireless Communications in a 130-nm BiCMOS Technology. In: IEEE Journal of Solid-State Circuits (Article). DOI:10.1109/JSSC.2022.3232948. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85147207413&doi=10.1109%2fJSSC.2022.3232948&partnerID=40&md5=32c4cfd65fa9263fd74c555f0b3b1e32>
- Eissa, M.H., Kahmen, G. (2023): A 200-260-GHz Voltage-Controlled Distributed Attenuator in 130-nm BiCMOS:C Technology. In: IEEE Microwave and Wireless Technology Letters (Article). DOI:10.1109/LMWT.2023.3325303. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85181546729&doi=10.1109%2fLMWT.2023.3325303&partnerID=40&md5=5f0c27d307f097ce96800fa27abf53c3>
- Bhutani, A., Kaynak, M., Bekker, E., Zwick, T. (2023): 200–330-GHz Substrate-Integrated Waveguide in BEOL of a SiGe BiCMOS Process. In: IEEE Microwave and Wireless Technology Letters (Article). DOI:10.1109/LMWT.2023.3283304. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182520072&doi=10.1109%2fLMWT.2023.3283304&partnerID=40&md5=8f816980a3219ac22947140cff88934a>
- Kim, D., Son, H., Kim, J., Lee, J., Zhao, Y., Al Hadi, R., Kaynak, M., Chang, M.-C.F., Rieh, J.-S. (2023): A 10–100-GHz Wideband Amplifier With Low-Impedance Coupled Lines in SiGe BiCMOS. In: IEEE Microwave and Wireless Technology Letters (Article). DOI:10.1109/LMWT.2023.3288114. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182506604&doi=10.1109%2fLMWT.2023.3288114&partnerID=40&md5=1f31be9e8e76eaa196fb75ba1a138ebb>
- Bohn, C., Kaynak, M., Zwick, T., Ulusoy, A.Ç. (2023): A 100 GBd PAM-4 Combiner and Driver in SiGe BiCMOS. In: IEEE Microwave and Wireless Technology Letters (Article). DOI:10.1109/LMWT.2023.3293040. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182501902&doi=10.1109%2fLMWT.2023.3293040&partnerID=40&md5=04fdeb610ecf86915dcaa39989710718>
- Polzin, L., Van Delden, M., Pohl, N., Rücker, H., Musch, T. (2023): A 142-GHz 4/5 Dual-Modulus Prescaler for Wideband and Low Noise Frequency Synthesizers in 130-nm SiGe:C BiCMOS. In: IEEE Microwave and Wireless Technology Letters (Conference Paper). DOI:10.1109/LMWT.2023.3265861. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85183484787&doi=10.1109%2fLMWT.2023.3265861&partnerID=40&md5=a34830ebda645513c521bc30f7638676>
- Rausch, M., Wietstruck, M., Stölmacker, C., Doerner, R., Fischer, G., Thies, A., Knigge, S., Yacoub, H., Heinrich, W. (2023): Broadband Hetero-Integration of InP Chipllets on SiGe BiCMOS for mm-Wave MMICs up to 325GHz. In: IEEE MTT-S International Microwave Symposium Digest (Confer-

ence Paper). DOI:10.1109/IMS37964.2023.10188164. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168561402&doi=10.1109%2fIMS37964.2023.10188164&partnerID=40&md5=5fc04635b558464073a8506176d6519e>

- Zampa, G.M., Sonara, A., Mencarelli, D., Pierantoni, L., Christopher, H.J., Cao, Z., Hadi, R.A., Chang, M.-C.F., Kaynak, M. (2023): Characterization of a D-Band Electric-Inductive-Capacitive Metamaterial-Based Transmission Line Phase Shifter. In: IEEE MTT-S International Microwave Symposium Digest (Conference Paper). DOI:10.1109/IMS37964.2023.10187973. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168542453&doi=10.1109%2fIMS37964.2023.10187973&partnerID=40&md5=16acf714b18fbd9cbb674113363d97c>
- Tuero, E.J., Franzese, A., Malignaggi, A. (2023): HBT Power Detector utilizing an Ultra-compact Transformer-based Coupler for 5G BIST. In: IEEE Radio and Wireless Symposium, RWS (Conference Paper). DOI:10.1109/RWS55624.2023.10046321. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149340176&doi=10.1109%2fRWS55624.2023.10046321&partnerID=40&md5=d0da8a6f951176f0cac595b0374ba113>
- Franzese, A., Maletic, N., Negra, R., Malignaggi, A. (2023): Image-Rejection Up-/Down-Converter LO Distribution Chain for 5G mm-wave Phased-Array Systems. In: IEEE Radio and Wireless Symposium, RWS (Conference Paper). DOI:10.1109/RWS55624.2023.10046204. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149317653&doi=10.1109%2fRWS55624.2023.10046204&partnerID=40&md5=90aff6836e34f4317d6226db48b43b9b>
- Sutbas, B., Eissa, M.H., Kahmen, G. (2023): Vector Modulator Based Leakage Cancellation Technique for CW Radar Transceiver Frontends. In: IEEE Radio and Wireless Symposium, RWS (Conference Paper). DOI:10.1109/RWS55624.2023.10046307. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149316306&doi=10.1109%2fRWS55624.2023.10046307&partnerID=40&md5=b32f5e2db044642f034d878a0b4f6aa2>
- Santamaria, I., Soleymani, M., Jorswieck, E., Gutierrez, J. (2023): SNR Maximization in Beyond Diagonal RIS-Assisted Single and Multiple Antenna Links. In: IEEE Signal Processing Letters (Article). DOI:10.1109/LSP.2023.3296902. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165276049&doi=10.1109%2fLSP.2023.3296902&partnerID=40&md5=ce76ea4c5e039f70b92d2e04064ad670>
- Sutbas, B., Ng, H.J., Eissa, M.H., Kahmen, G. (2023): A Low-Power V-Band Radar Transceiver Front-End Chip Using 1.5 V Supply in 130-nm SiGe BiCMOS. In: IEEE Transactions on Microwave Theory and Techniques (Article). DOI:10.1109/TMTT.2023.3269519. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159848465&doi=10.1109%2fTMTT.2023.3269519&partnerID=40&md5=15965686f75d975f3650f88486b33c2a>
- Hasan, R., Eissa, M.H., Ahmad, W.A., Ng, H.J., Kissinger, D. (2023): Wideband and Efficient 256-GHz Subharmonic-Based FMCW Radar Transceiver in 130-nm SiGe BiCMOS Technology. In: IEEE Transactions on Microwave Theory and Techniques (Article). DOI:10.1109/TMTT.2022.3207995. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85139512956&doi=10.1109%2fTMTT.2022.3207995&partnerID=40&md5=c59c00692b68345d08fd02fd8d0bbaf9>
- Zhao, Y., Sark, V., Krstic, M., Grass, E. (2023): Gesture Recognition Using Multiple mmWave FMCW Radars. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Fall60731.2023.10333652. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85181169629&doi=10.1109%2fVTC2023-Fall60731.2023.10333652&partnerID=40&md5=16c9208777cef2cd0fce8f0cbc88dfc9>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Lopacinski, L., Maletic, N., Kraemer, R., Hasani, A., Gutiérrez, J., Krstic, M., Grass, E. (2023): Amplitude- and phase-modulated PSSS for wide bandwidth mixed analog-digital baseband processors in THz communication. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Spring57618.2023.10199923. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169825496&doi=10.1109%2fVTC2023-Spring57618.2023.10199923&partnerID=40&md5=18b498dbe5f364d2b6684cc908f52dd7>
- Hasani, A., Lopacinski, L., Krstic, M., Grass, E. (2023): Fully Parallel Fully Unrolled BP Decoding of LDPC and Polar Codes. In: IEEE Wireless Communications and Networking Conference, WCNC (Conference Paper). DOI:10.1109/WCNC55385.2023.10118633. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159777273&doi=10.1109%2fWCNC55385.2023.10118633&partnerID=40&md5=8c100b899e434408c32e5e7f6cb308cc>
- Mesogiti, I., Theodoropoulou, E., Setaki, F., Lyberopoulos, G., Stamatis, K., Chartsias, P.K., Makris, N., Flegkas, P., Gutiérrez, J., Politi, C., Tranoris, C., Anastasopoulos, M., Tzanakaki, A. (2023): Techno-economic Analysis Highlighting Aspects of 5G Network Deployments at Railway Environments. In: IFIP Advances in Information and Communication Technology (Conference Paper). DOI:10.1007/978-3-031-34171-7_11. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163998510&doi=10.1007%2f978-3-031-34171-7_11&partnerID=40&md5=1b8ccdaaa76f806754f337f7ca59fe6a
- Grzyb, J., Andree, M., Heinemann, B., Rucker, H., Pfeiffer, U.R. (2023): On Cold Operation of an SiGe HBT as a Broadband Low-NEP THz Direct Detector. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299102. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177635717&doi=10.1109%2fIRMMW-THz57677.2023.10299102&partnerID=40&md5=8704ee4cf2eb43dfc00939baf5243331>
- Rothbart, N., Koczulla, R., Holz, O., Schmalz, K., Hubers, H.-W. (2023): Breath Analysis of COPD Patients by Terahertz/Millimeter-Wave Gas Spectroscopy - A Proof-of-Principle Study. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299123. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177635656&doi=10.1109%2fIRMMW-THz57677.2023.10299123&partnerID=40&md5=08f71af694e8f5767315de58a4ab295f>
- Ortolani, M., Baldassarre, L., Venanzi, T., Berkman, F., Simola, E.T., Montanari, M., Digaspere, L., Campagna, E., Cibella, S., Notargiacomo, A., Giovine, E., Corley, C., Capellini, G., Virgilio, M., Scarlari, G., De Seta, M. (2023): Strong light-matter coupling in SiGe quantum wells embedded in terahertz patch antenna cavities. In: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz (Conference Paper). DOI:10.1109/IRMMW-THz57677.2023.10299382. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177635126&doi=10.1109%2fIRMMW-THz57677.2023.10299382&partnerID=40&md5=09eadcd7479dc568340ddf15a24eed60>
- Starke, D., Bott, J., Vogelsang, F., Sievert, B., Barowski, J., Schulz, C., Rücker, H., Rennings, A., Erni, D., Rolfes, I., Pohl, N. (2023): A compact and fully integrated FMCW radar transceiver combined with a dielectric lens. In: International Journal of Microwave and Wireless Technologies (Article). DOI:10.1017/S1759078723001368. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179723569&doi=10.1017%2fS1759078723001368&partnerID=40&md5=7b6a614043caffd059410ad59df8528f>
- Kim, H., Lee, J., Kim, M., Jo, Y., Lischke, S., Mai, C., Zimmermann, L., Choi, W. (2023): A 4- λ × 28-Gb/s/λ Silicon Ring-resonator-based WDM Receiver with a Reconfigurable Temperature Controller. In: Journal of Light-wave Technology (Article). DOI:10.1109/JLT.2023.3337820. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184796063&doi=10.1109%2fJLT.2023.3337820&partnerID=40&md5=e66623d974eeb805f7835c2fcd9bb3a06>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Sedunova, E., Maletic, N., Cvetkovski, D., Grass, E. (2023): Enhanced Object Localization Using a Beamsteering mmWave Communication System. In: Proceedings - 6th International Conference on Advanced Communication Technologies and Networking, CommNet 2023 (Conference Paper). DOI:10.1109/CommNet60167.2023.10365256. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85182522262&doi=10.1109%2fCommNet60167.2023.10365256&partnerID=40&md5=39c2e463d6573f3b8b3400061b8fb8fe>
- Alsabbagh, W., Amogbonjaye, S., Urrego, D., Langendörfer, P. (2023): A Stealthy False Command Injection Attack on Modbus based SCADA Systems. In: Proceedings - IEEE Consumer Communications and Networking Conference, CCNC (Conference Paper). DOI:10.1109/CCNC51644.2023.10059804. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85150644104&doi=10.1109%2fCCNC51644.2023.10059804&partnerID=40&md5=6dbac125fe56f86ac652b9491cbb86e5>
- Iseini, F., Malignaggi, A., Inac, M., Kahmen, G. (2023): Analysis and Implementation of DC-coupled Compact and Power Efficient Lumped Driver for Single-Ended Optical Modulators in SiGe 250 nm BiCMOS Technology. In: Proceedings - IEEE International Symposium on Circuits and Systems (Conference Paper). DOI:10.1109/ISCAS46773.2023.10182091. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167710538&doi=10.1109%2fISCAS46773.2023.10182091&partnerID=40&md5=fc7e1a519d30a72096e71872e3b3574b>
- Zhao, Y., Wimmer, L., Sark, V., Krstic, M., Grass, E. (2023): Instantaneous 3D velocity estimation using coordinated OFDM Radar nodes. In: Proceedings International Radar Symposium (Conference Paper). DOI:10.23919/IRS57608.2023.10172411. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166248720&doi=10.23919%2fIRS57608.2023.10172411&partnerID=40&md5=3a47a769cbdd72784f0c5ebb3213e05>
- Nauman, M., Lopacinski, L., Maletic, N., Scheide, M., Krstic, M., Grass, E. (2023): 6G and Beyond: Hardware-in-the-Loop Experiments with OTFS Modulation Using SDR. In: Proceedings of 2023 Workshop on Microwave Theory and Technology in Wireless Communications, MTTW 2023 (Conference Paper). DOI:10.1109/MTTW59774.2023.10320001. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179557952&doi=10.1109%2fMTTW59774.2023.10320001&partnerID=40&md5=ca857d3f4926d7e8b8d1b9ab25091b24>
- Jian, Y., Lopacinski, L., Tittelbach-Helmrich, K., Scheide, M., Krishnegowda, K., Grass, E. (2023): Challenges for designing an FPGA-based data link layer processor dedicated to sub-THz communication. In: Proceedings of 2023 Workshop on Microwave Theory and Technology in Wireless Communications, MTTW 2023 (Conference Paper). DOI:10.1109/MTTW59774.2023.10320062. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179555179&doi=10.1109%2fMTTW59774.2023.10320062&partnerID=40&md5=24ebc3d300aeb95dd6cccd1b7f007002>
- Sourikopoulos, I., Winzer, G., Peczek, A., Inac, M., Ostrovskyy, P., Tittelbach-Helmrich, K., Panic, G., Fischer, G., Zimmermann, L., Franz, Y., Jones, S., Kushner, P., Marvet, U., Lujambio, A., Garcia, N., Poudereux, D., Bodega, M., Barbero, J., Stampoulidis, L. (2023): High-speed optical transceiver integrated chipset and module for onboard VCSEL-based satellite optical interconnects. In: Proceedings of SPIE - The International Society for Optical Engineering (Conference Paper). DOI:10.1117/12.2690846. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174054463&doi=10.1117%2f12.2690846&partnerID=40&md5=1e48e5d9c9377bf30245eb4b39a6eef5>
- Bräunlich, N., Wagner, C.W., Sachs, J., Del Galdo, G. (2023): Configurable Pseudo Noise Radar Imaging System Enabling Synchronous MIMO Channel Extension. In: Sensors (Article). DOI:10.3390/s23052454. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149650257&doi=10.3390%2fs23052454&partnerID=40&md5=c71d87aed040379d0f2a33daaff68f35>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Shoushtari, H., Harder, D., Kasperek, M., Schäfer, M., Müller-Lietzkow, J., Sternberg, H. (2023): Data-Driven Inertial Navigation assisted by 5G UL-TDoA Positioning. In: Proceedings of the International Technical Meeting of The Institute of Navigation, ITM (Conference Paper). DOI:10.33012/2023/18554. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168549075&doi=10.33012%2f2023%2f18554&partnerID=40&md5=df49517162cb5d60873977df96ac3f48>
- Vintimilla, R.Z., Lorenz, M., Muchhal, N., Landmann, M., Del Galdo, G. (2023): Demonstration and Validation of a 3D Wave Field Synthesis Setup for Multiple GNSS Satellite Emulation via Over-the-Air Testing. In: 45th Annual Meeting and Symposium of the Antenna Measurement Techniques Association, AMTA 2023 - Proceedings (Conference Paper). DOI:10.23919/AMTA58553.2023.10293372. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178296712&doi=10.23919%2fAMTA58553.2023.10293372&partnerID=40&md5=cc5dee11fcf12599d6c927e02399f1a3>
- Krishnamoorthy, A., Schober, R. (2023): Downlink Massive MU-MIMO With Successively-Regularized Zero Forcing Precoding. In: IEEE Wireless Communications Letters (Article). DOI:10.1109/LWC.2022.3218597. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85141567265&doi=10.1109%2fLWC.2022.3218597&partnerID=40&md5=77d202ba7dc85e8d09c26bfb4f30fc9f>
- Gedschold, J., Semper, S., Thoma, R.S., Dobereiner, M., Galdo, G.D. (2023): Dynamic Delay-Dispersive UWB-Radar Targets: Modeling and Estimation. In: IEEE Transactions on Antennas and Propagation (Article). DOI:10.1109/TAP.2023.3287672. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164707121&doi=10.1109%2fTAP.2023.3287672&partnerID=40&md5=2f031583ece570d1038cb4c1fa8e3264>
- Yammine, G., Kontes, G., Franke, N., Plinge, A., Mutschler, C. (2023): Efficient Beam Search for Initial Access Using Collaborative Filtering. In: IEEE Wireless Communications and Networking Conference, WCNC (Conference Paper). DOI:10.1109/WCNC55385.2023.10119028. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159780826&doi=10.1109%2fWCNC55385.2023.10119028&partnerID=40&md5=ebfcbcd14aed8af7a53904a3850ea881>
- Eltohamy, A., Elkhoully, M., Große, P., Landmann, M., Del Galdo, G. (2023): Efficient Phased Array Radiation Pattern Evaluation for 5G and SatCom On-The-Move (SOTM) Applications. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10132956. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162267043&doi=10.23919%2fEuCAP57121.2023.10132956&partnerID=40&md5=e4773c0824165727b8145dcd6c08d328>
- Rasp, F., Eberlein, E., Perner, B., Roth-Mandutz, E., Hipp, S. (2023): Enhanced 5G Sidelink Ranging Based on Carrier Aggregation. In: Proceedings of the 2023 13th International Conference on Indoor Positioning and Indoor Navigation, IPIN 2023 (Conference Paper). DOI:10.1109/IPIN57070.2023.10332548. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180795309&doi=10.1109%2fIPIN57070.2023.10332548&partnerID=40&md5=5c913311cee3def37168fe4a1309e493>
- Wegner, T.E., Gebhardt, S., Del Galdo, G. (2023): Fill level measurement of low-permittivity material using an M-sequence UWB radar. In: International Journal of Microwave and Wireless Technologies (Article). DOI:10.1017/S1759078723000739. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165121540&doi=10.1017%2fS1759078723000739&partnerID=40&md5=25f868fa8db380418fa184d5748c86fe>
- Smeenk, C., Schneider, C., Thoma, R.S. (2023): Framework for Simulation Models and Algorithms in ISAC Networks. In: 2023 IEEE 3rd International Symposium on Joint Communications and Sensing, JC and S 2023 (Conference Paper). DOI:10.1109/JC57290.2023.10107507. Link:

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

<https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159072125&doi=10.1109%2fJCS57290.2023.10107507&partnerID=40&md5=017df92790581ce3abb4bd5e0b4f7282>

- Semper, S., Dobereiner, M., Steinmetz, C., Landmann, M., Thoma, R.S. (2023): High-Resolution Parameter Estimation for Wideband Radio Channel Sounding. In: IEEE Transactions on Antennas and Propagation (Article). DOI:10.1109/TAP.2023.3286024. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163547688&doi=10.1109%2fTAP.2023.3286024&partnerID=40&md5=be5adaaf1dbf58c51e5737471db6c01c>
- Zaglauer, Helmut W.;Pfeifle, Joerg;Gavras, Anastasius;Kapovits, Adam;Corici, Marius-Iulian;Chowdhury, Ananya;Frank, Leo;Hofmann, Alexander;Heyn, Thomas;Dang, Thi Uyen Ly;Guta, Maria;Cherniuk, Hlib;Völk, Florian;Schwarz, Robert;Knopp, Andreas (2023): Integrated satellite access to 5G/6G systems - an overview of the 5G space infrastructure study. In: 39th International Communications Satellite Systems Conference, ICSSC 2022 (Conference Paper). DOI:10.1049/icp.2023.1365. Link: <https://publica.fraunhofer.de/entities/publication/108754b1-3839-4906-8ac9-6ae9727b7404/details>
- Li, B., Dupleich, D., Xia, G., Zhou, H., Zhang, Y., Xiao, P., Yang, L. (2023): MDD-Enabled Two-Tier Terahertz Fronthaul in Indoor Industrial Cell-Free Massive MIMO. In: IEEE Transactions on Communications (Article). DOI:10.1109/TCOMM.2023.3330893. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177069706&doi=10.1109%2fTCOMM.2023.3330893&partnerID=40&md5=da187e4588f9e9362cae9ce2d9c4243e>
- Beuster, J., Andrich, C., Dobereiner, M., Schieler, S., Engelhardt, M., Schneider, C., Thoma, R. (2023): Measurement Testbed for Radar and Emitter Localization of UAV at 3.75 GHz. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133118. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162194004&doi=10.23919%2fEuCAP57121.2023.10133118&partnerID=40&md5=c920d45fed807778b73e9a9ea34bdbc0>
- Ott, J., Stahlke, M., Kram, S., Feigl, T., Mutschler, C. (2023): Multipath Delay Estimation in Complex Environments using Transformer. In: Proceedings of the 2023 13th International Conference on Indoor Positioning and Indoor Navigation, IPIN 2023 (Conference Paper). DOI:10.1109/IPIN57070.2023.10332470. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180772618&doi=10.1109%2fIPIN57070.2023.10332470&partnerID=40&md5=03f1f42c6193c97999f885e26864968f>
- Querol, J., Kumar, S., Kodheli, O., Astro, A., Duncan, J., Gholamian, M., Palisetty, R., Chatzinotas, S., Heyn, T., Casati, G., Zhao, B. (2023): Non-terrestrial network testbeds for 5g and beyond. In: Non-Geostationary Satellite Communications Systems (Book Chapter). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85148536205&partnerID=40&md5=82e81f5848ff2f5007de5b4294fac747>
- Cortés, I., Garzia, F., Conde, N., Lohan, E.S., Nurmi, J., Felber, W. (2023): Normalized Bandwidth Control Algorithm for Robust GNSS Adaptive Tracking. In: Proceedings of the 36th International Technical Meeting of the Satellite Division of the Institute of Navigation, ION GNSS+ 2023 (Conference Paper). DOI:10.33012/2023.19352. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184568102&doi=10.33012%2f2023.19352&partnerID=40&md5=f85b5f8d28941c225bac318ebad52a42>
- Steinmetz, C., Mayer, F., Tessema, M., Adel, H. (2023): Novel Phased Array Terminal Antenna for M2M Satellite Networks. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133598. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162209952&doi=10.23919%2fEuCAP57121.2023.10133598&partnerID=40&md5=103f5d9910782720cdb8154935841f10>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Ghimire, B., Shreevastav, R., Jiang, X. (2023): Preconfigured Assistance Data for Reduction in Latency and Power Consumption. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Spring57618.2023.10200624. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169828221&doi=10.1109%2fVTC2023-Spring57618.2023.10200624&partnerID=40&md5=64a0d02db3007db8b310a292e9ae49ea>
- Giehl, S., Andrich, C., Schubert, M., Engelhardt, M., Ihlow, A. (2023): Receiver Bandwidth Extension beyond Nyquist Using Channel Bonding. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133262. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162204839&doi=10.23919%2fEuCAP57121.2023.10133262&partnerID=40&md5=0fc559f5ac8acf4f2c9dbe41d6095528>
- Rashidifar, A., Drenkhahn, K.E. (2023): Reduction of Mutual Coupling between Dual-Polarized Antenna Elements Using Defected Ground Structures. In: 17th European Conference on Antennas and Propagation, EuCAP 2023 (Conference Paper). DOI:10.23919/EuCAP57121.2023.10133636. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162237378&doi=10.23919%2fEuCAP57121.2023.10133636&partnerID=40&md5=6e1572335304d4d43a9e35e0f658c33c>
- Laue, F., Jamali, V., Schober, R. (2023): RIS-Assisted Device Activity Detection With Statistical Channel State Information. In: IEEE Transactions on Wireless Communications (Article). DOI:10.1109/TWC.2023.3271365. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85159833715&doi=10.1109%2fTWC.2023.3271365&partnerID=40&md5=52008ab7c42343fa2ca27430a063e15e>
- Jain, V., Wetzker, U., Laxmi, V., Gaur, M.S., Mosbah, M., Mery, D. (2023): SAP: A Secure Low-Latency Protocol for Mitigating High Computation Overhead in Wi-Fi Networks. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3302529. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167783749&doi=10.1109%2fACCESS.2023.3302529&partnerID=40&md5=cc8d6286d8f2c435043eb5e86f8ac678>
- Ravelo, C., Martín-Sacristán, D., Haider Shah, S.N., Smeenk, C., Del Galdo, G., Monserrat, J.F. (2023): Sensing Resources Reduction for Vehicle Detection with Integrated Sensing and Communications. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Spring57618.2023.10199358. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85169818768&doi=10.1109%2fVTC2023-Spring57618.2023.10199358&partnerID=40&md5=1e48f68ad631d591086cd80e67116eb7a>
- Wagner, C.W., Braunlich, N., Drenkhahn, K.E., Glaser, G. (2023): Shut Off! - Hybrid BICMOS Logic for Power-Efficient High Speed Circuits. In: Proceedings - 2023 19th International Conference on Synthesis, Modeling, Analysis and Simulation Methods, and Applications to Circuit Design, SMACD 2023 (Conference Paper). DOI:10.1109/SMACD58065.2023.10192217. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168677211&doi=10.1109%2fSMACD58065.2023.10192217&partnerID=40&md5=8a67675a1ae3aad0fa7ee679c29bea08>
- Ravichandran, L., Soleymani, D.M., Roth-Mandutz, E., Leyh, M., Harounabadi, M. (2023): Study on Autonomous Resource Selection in Sidelink Vehicular Communication on mmWave and Sub-THz in 6G. In: 2023 IEEE International Black Sea Conference on Communications and Networking, BlackSeaCom 2023 (Conference Paper). DOI:10.1109/BlackSeaCom58138.2023.10299731. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179010968&doi=10.1109%2fBlackSeaCom58138.2023.10299731&partnerID=40&md5=1c708bedbbdce152a8bb13fe7b04fece>
- Stanko, D., Döbereiner, M., Sommerkorn, G., Czaniara, D., Andrich, C., Schneider, C., Semper, S., Ihlow, A., Landmann, M. (2023): Time Variant Directional Multi-Link Channel Sounding and Estimation for V2X. In: IEEE Vehicular Technology Conference (Conference Paper). DOI:10.1109/VTC2023-Spring57618.2023.10199213. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85162753007&doi=10.1109%2fVTC2023-Spring57618.2023.10199213&part-
nerID=40&md5=510efd44c6d969bce2ca9d9b98dd3ff6

- Harounabadi, M., Heyn, T. (2023): Toward Integration of 6G-NTN to Terrestrial Mobile Networks: Research and Standardization Aspects. In: IEEE Wireless Communications (Article). DOI:10.1109/MWC.005.2300207. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180403067&doi=10.1109%2fMWC.005.2300207&partnerID=40&md5=7ac804cf7127008327fe92597452cbcd>
- Cosmas, J., Ali, K., Araújo, M., Béchadergue, B., Chen, H., Dupleich, D.A., Eappen, G., Keskin, M.F., Goodarzi, M., Guo, H., Koffman, I., Lindberg, S., Mahbas, A., Mendes, B., Meunier, B., Taghavi, E.M., Ramirez, A., Sark, V., Schindhelm, K., Svensson, T., Van der Perre, L., Wilding, T., Wymeersch, H., Yajnanarayana, V., Zhang, X., Zhao, H. (2023): Towards joint communication and sensing. In: Towards Sustainable and Trustworthy 6G: Challenges, Enablers, and Architectural Design (Book Chapter). DOI:10.1561/9781638282396.ch4. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163383608&doi=10.1561%2f9781638282396.ch4&partnerID=40&md5=41dc76fb8047b8278fce9e2bf384bd5e>
- Fontaine, J., Van Herbruggen, B., Shahid, A., Kram, S., Stahlke, M., De Poorter, E. (2023): Ultra Wideband (UWB) Localization Using Active CIR-Based Fingerprinting. In: IEEE Communications Letters (Article). DOI:10.1109/LCOMM.2023.3254146. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149863176&doi=10.1109%2fLCOMM.2023.3254146&partnerID=40&md5=1426d83b18fd9d0f205b6a19ec7ea0b7>
- Stahlke, M., Feigl, T., Kram, S., Eskofier, B.M., Mutschler, C. (2023): Uncertainty-based Fingerprinting Model Selection for Radio Localization. In: Proceedings of the 2023 13th International Conference on Indoor Positioning and Indoor Navigation, IPIN 2023 (Conference Paper). DOI:10.1109/IPIN57070.2023.10332531. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178126346&doi=10.1109%2fIPIN57070.2023.10332531&partnerID=40&md5=9a1cac42cf3ce7ca63f010f0ae43415d>
- Küpper, C., Rösch, J., Porada, A., Loidl, K., Seitz, J., Winkler, H. (2023): Use Case Driven Feasibility Study on the Technical Capabilities of 5G Indoor Positioning in the Automotive Production. In: CEUR Workshop Proceedings (Conference Paper). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85179881076&partnerID=40&md5=ca156e9ef5a3c8d8b5df2404de1d76d8>
- Rugamer, A., Melgard, T.E., De Wilde, W., Gerstung, H., Wegmann, I., Schellekens, D. (2023): Validation of a Combined GNSS Correction and NMA L-Band Service Against Spoofing. In: 2023 IEEE/ION Position, Location and Navigation Symposium, PLANS 2023 (Conference Paper). DOI:10.1109/PLANS53410.2023.10140014. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85162865701&doi=10.1109%2fPLANS53410.2023.10140014&partnerID=40&md5=c26b464689b4ff76a20373d7ffae459f>
- vom Bögel, G., Vossiek, M., Wietfeld, C., Haferkamp, M., Häger, S., Sezgin, A., Weimer, M., Thill, R., Sivadevuni, S.S., Böcker, S., Pohl, N., Wessel, J., Braun, T.T., Kögel, T., Geiß, J. (2023): 6GEM Perspective on Joint Communication and Sensing. In: WSA and SCC 2023 - 26th International ITG Workshop on Smart Antennas and 13th Conference on Systems, Communications, and Coding (Conference Paper). DOI: . Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166950253&partnerID=40&md5=8daaebe9da20f44e0cdd5d8432913a5f>
- Essingholt, F., Böller, S., Grenter, T., Grabmaier, A. (2023): A Microwave Reflection-Based Measurement System for Moisture Detection in Textiles. In: 2023 Photonics and Electromagnetics Research Symposium, PIERS 2023 - Proceedings (Conference Paper). DOI:10.1109/PIERS59004.2023.10221425. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172029284&doi=10.1109%2fPIERS59004.2023.10221425&partnerID=40&md5=eaf7a4cd2f78c50010b5b02886d79dd6>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Haddadian, S., Scheytt, J.C., Vom Bogel, G., Greuter, T. (2023): A Sub-Threshold Microwave RFID Tag Chip, Compatible With RFID MIMO Reader Technology. In: IEEE Journal of Radio Frequency Identification (Article). DOI:10.1109/JRFID.2023.3308332. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85170569154&doi=10.1109%2fJRFID.2023.3308332&partnerID=40&md5=0820256628522cfd49960e99451dd272>
- Boller, S., Greuter, T., Grabmaier, A. (2023): Design of a Passive Retrodirective SHF-RFID Transponder for Communication and Localization. In: 2023 Photonics and Electromagnetics Research Symposium, PIERS 2023 - Proceedings (Conference Paper). DOI:10.1109/PIERS59004.2023.10221548. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172009162&doi=10.1109%2fPIERS59004.2023.10221548&partnerID=40&md5=227558502389d888322377b65b385bf2>
- Boller, S., Greuter, T., Grabmaier, A. (2023): FMCW Based Positioning Using Multiple SHF RFID Transponders. In: Proceedings of the 2023 13th International Conference on Indoor Positioning and Indoor Navigation, IPIN 2023 (Conference Paper). DOI:10.1109/IPIN57070.2023.10332495. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180784229&doi=10.1109%2fIPIN57070.2023.10332495&partnerID=40&md5=25cc64d993b3f09690058f4d9a0203ef>
- Goller, Diana; Wiede, Christian; Seidl, Karsten (2023): Terahertz - based non-contact vital sign measurements. In: Biomedizinische Technik (Article). DOI:10.24406/publica-2036. Link: <https://publica.fraunhofer.de/entities/publication/40b7b59b-680b-4dc5-a2ea-33d57d4f4ef9/details>
- Le, Q.H., Huynh, D.K., Lehmann, S., Zhao, Z., Schwan, C., Kampfe, T., Rudolph, M. (2023): 22-nm FDSOI CMOS Noise Modeling and Analysis in mm-Wave Frequency Range. In: 2023 IEEE 23rd Topical Meeting on Silicon Monolithic Integrated Circuits in RF Systems, SiRF 2023 (Conference Paper). DOI:10.1109/SiRF56960.2023.10046210. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85149414920&doi=10.1109%2fSiRF56960.2023.10046210&partnerID=40&md5=0c592244de37b5c209f2aa63320480a3>
- Rack, M., Nyssens, L., Le, Q.H., Huynh, D.K., Kampfe, T., Raskin, J.-P., Lederer, D. (2023): A Compact 120 GHz LNA in 22 nm FD-SOI with Back-Gate Controllable Variable-Gain. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288898. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177176762&doi=10.23919%2fEuMIC58042.2023.10288898&partnerID=40&md5=3a1814cfd8aac0c441d48d188dd76d6c>
- Abdulazhanov, S., Huynh, D.K., Le, Q.H., Kampfe, T., Gerlach, G. (2023): A novel reconfigurable RF switch based on ferroelectric hafnium oxide FeFET fabricated in 22 nm FDSOI technology. In: 2023 18th European Microwave Integrated Circuits Conference, EuMIC 2023 (Conference Paper). DOI:10.23919/EuMIC58042.2023.10288652. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177185583&doi=10.23919%2fEuMIC58042.2023.10288652&partnerID=40&md5=19b0f18f8547d580bb1396178d59acb0>
- Abdulazhanov, S., Le, Q.H., Huynh, D.K., Lehninger, D., Kampfe, T., Gerlach, G. (2023): Permittivity Characterization of Ferroelectric Thin-Film Hafnium Zirconium Oxide Varactors up to 170 GHz. In: Device Research Conference - Conference Digest, DRC (Conference Paper). DOI:10.1109/DRC58590.2023.10187025. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85167867998&doi=10.1109%2fDRC58590.2023.10187025&partnerID=40&md5=53c1f0288add0577745f9c3354074388>
- Köble, S., Dörsam, J.H., Haugwitz, C., Altmann, A.A., Allevato, G., Melnikov, A., Koch, S.G., Kupnik, M. (2023): Scaling of Air-Coupled Metagratings for Beam Steering. In: IEEE International Ultrasonics Symposium, IUS (Conference Paper). DOI:10.1109/IUS51837.2023.10307367. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

85178550700&doi=10.1109%2fIU551837.2023.10307367&part-
nerID=40&md5=14925aaabe05245a31dd3aae4f4e4b83

- Ali, F., Ali, T., Abbas, A., Lehninger, D., Iqbal, M.F., Fadhali, M.M., Shaaban, I.A., Czernohorsky, M., Seidel, K., Kämpfe, T. (2023): Switching Dynamics and Energy Storage Properties of Fluorite-Structured Materials. In: *Physica Status Solidi (A) Applications and Materials Science (Article)*. DOI:10.1002/pssa.202200403. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85143618510&doi=10.1002%2fpssa.202200403&partnerID=40&md5=0d48a2cf8c02625d874df47ea697b23d>
- Abdulazhanov, Sukhrob; Le, Quang Huy; Huynh, Dang Khoa; Wang, Defu; Lehninger, David; Kämpfe, Thomas; Gerlach, Gerald (2023): THz Thin Film Varactor Based on Integrated Ferroelectric HfZrO₂. In: *ACS applied electronic materials (Article)*. DOI:10.1021/acsaelm.2c01273. Link: <https://publica.fraunhofer.de/entities/publication/fac6a59-7cef-43e0-94fb-2fe6c268fb93/details>
- Tschoban, C., Perlwitz, P., Hamani, J., Potter, H., Marques, J., Kallmayer, C., Ndip, I., Schneider-Ramelow, M. (2023): 3D Comform Radar System for Detection of Motion and Falls in Spatial Application. In: *2023 Smart Systems Integration Conference and Exhibition, SSI 2023 (Conference Paper)*. DOI:10.1109/SSI58917.2023.10387765. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184812434&doi=10.1109%2fSSI58917.2023.10387765&partnerID=40&md5=c9fc90daea46c46c44d07113b5719583>
- Le, T.H., Kaiser, M., Ndip, I., Koeszegi, J.-M., Thomas, T., Nalloweg, O., Dreissigacker, M., Tschoban, C., Schneider-Ramelow, M. (2023): 3D Mold Embedded PCB-based MIMO Antenna Arrays for 79 GHz Automotive RADAR. In: *20th European Radar Conference, EuRAD 2023 (Conference Paper)*. DOI:10.23919/EuRAD58043.2023.10289146. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85177605019&doi=10.23919%2fEuRAD58043.2023.10289146&partnerID=40&md5=57c373f0336fbf82841675900e83be25>
- Sirbu, B., Zoschke, K., Bernabé, S., Wilmart, Q., Tekin, T. (2023): 3D silicon interposer for terabit/s transceivers based on high-speed TSVs. In: *Proceedings - Electronic Components and Technology Conference (Conference Paper)*. DOI:10.1109/ECTC51909.2023.00230. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168306440&doi=10.1109%2fECTC51909.2023.00230&partnerID=40&md5=4404117e998241229f306f754d0d4046>
- Tohidi, E., Stöcker, R., Köszegei, J.-M., Stańczak, S. (2023): D-Band RIS as a Reflect Array: Characterization and Hardware Impairments Study. In: *2023 International Balkan Conference on Communications and Networking, BalkanCom 2023 (Conference Paper)*. DOI:10.1109/BalkanCom58402.2023.10167898. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85165648155&doi=10.1109%2fBalkanCom58402.2023.10167898&partnerID=40&md5=80e528f699318de3c02d41815a257a98>
- Le, T.H., Ndip, I., Schneider-Ramelow, M. (2023): Dual-Band Dual-Polarized Antennas for 5G mmWave Base Stations. In: *Journal of Microelectronics and Electronic Packaging (Article)*. DOI:10.4071/001c.91214. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180426513&doi=10.4071%2f001c.91214&partnerID=40&md5=1fcc6b8fbe68202cd24d81dc9b52d644>
- Ptilakis, A., Tsilipakos, O., Tasolamprou, A.C., Tsioliaridou, A., Yioultsis, T.V., Kantartzis, N.V., Manassis, D., Kenanakis, G., Ioannidis, S., Kafesaki, M., Liaskos, C. (2023): Holographic Metasurfaces for Wireless Communications and Extended Reality. In: *International Conference on Metamaterials, Photonic Crystals and Plasmonics (Conference Paper)*. DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174590253&partnerID=40&md5=50857ddd93f6546bffe2dd0d900cc43e>

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

- Tschoban, C.B., Potter, H., Dilek, S., Ndip, I., Schneider-Ramelow, M. (2023): Integratable Antenna Concepts Based on Conformal Antennas for 3D Radar Systems. In: 2023 International Workshop on Antenna Technology, iWAT 2023 (Conference Paper). DOI:10.1109/iWAT57058.2023.10171730. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166377993&doi=10.1109%2fiWAT57058.2023.10171730&partnerID=40&md5=0aa9df0a8ecbee9210c36caf7d84d370>
- Galler, T., Chaloun, T., Mayer, W., Krohnert, K., Ambrosius, N., Schulz-Ruhtenberg, M., Waldschmidt, C. (2023): MMIC-to-Dielectric Waveguide Transitions for Glass Packages Above 150 GHz. In: IEEE Transactions on Microwave Theory and Techniques (Article). DOI:10.1109/TMTT.2023.3236787. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85147268700&doi=10.1109%2fTMTT.2023.3236787&partnerID=40&md5=f1f98334701a5bff4bc7e0f61808b018>
- Pitilakis, A., Tyrovolas, D., Mekikis, P.-V., Tegos, S.A., Papadopoulos, A., Tsioliariidou, A., Tsilipakos, O., Manassis, D., Ioannidis, S., Kantartzis, N.V., Akyildiz, I.F., Liaskos, C.K. (2023): On the Mobility Effect in UAV-Mounted Absorbing Metasurfaces: A Theoretical and Experimental Study. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3299379. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166325093&doi=10.1109%2fACCESS.2023.3299379&partnerID=40&md5=de8de8b2aff9d88691b4d22fe3257c6d>
- Lim, T., Kaiser, M., Obst, M., Braun, T., van Dijk, M., Jaeschke, J., Böttcher, L., Murugesan, K.S., Maass, U., Ndip, I. (2023): Packaging technologies and challenges towards 5G Integration of mm-wave components and silicon ICs. In: Technologies Enabling Future Mobile Connectivity and Sensing (Book Chapter). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85172800794&partnerID=40&md5=381c8eb12ae2df6351c0a1b9637bb40f>
- Dilek, S., Tschoban, C. (2023): Performance Evaluation of E-Band Transmit-Receive Front-Ends Based on Characterization of Joint Effects of IQ Imbalance and Carrier Phase/Frequency Offset. In: IEEE Transactions on Microwave Theory and Techniques (Article). DOI:10.1109/TMTT.2022.3223946. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85144021282&doi=10.1109%2fTMTT.2022.3223946&partnerID=40&md5=5103a471a6dc7d2923f2e7c8a41379e8>
- Chaloun, T., Brandl, S., Ambrosius, N., Krohnert, K., Maune, H., Waldschmidt, C. (2023): RF Glass Technology Is Going Mainstream: Review and Future Applications. In: IEEE Journal of Microwaves (Article). DOI:10.1109/JMW.2023.3256413. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85166517315&doi=10.1109%2fJMW.2023.3256413&partnerID=40&md5=4d4e63daa17fd02066ad4d68dbc0fde4>
- Koszegi, J.-M., MacKowiak, P., Stocker, R., Ndip, I., Schiffer, M., Schneider-Ramelow, M. (2023): RF models for Through SiC Vias for Highly Integrated Interposer Technology. In: 2023 Smart Systems Integration Conference and Exhibition, SSI 2023 (Conference Paper). DOI:10.1109/SSI58917.2023.10387952. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184830888&doi=10.1109%2fSSI58917.2023.10387952&partnerID=40&md5=4fd6dca4d64a8bcaea44fb57bad49deb>
- Tsao, Y.-F., Chiu, P.-H., Chevtchenko, S., Ostermay, I., Wurfl, J., Hsu, H.-T. (2023): Highly Robust GaN Power Amplifier at Millimeter-Wave Frequencies Using Sputtered Iridium Gate MMIC Technology. In: IEEE Transactions on Electron Devices (Article). DOI:10.1109/TED.2023.3326427. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85178574813&doi=10.1109%2fTED.2023.3326427&partnerID=40&md5=9c64b9a5f07cf5cfa84cede8f0e1a6bc>
- Krishnaji Rao, M., Doerner, R., Chevtchenko, S.A., Haque, S., Rudolph, M. (2023): Common-Gate LNA MMIC With Switching Feature Using GaN-HEMT for 5G RF Front-End. In: IEEE Microwave and Wireless Technology Letters (Article). DOI:10.1109/LMWT.2023.3306177. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0->

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

85176545468&doi=10.1109%2fLMWT.2023.3306177&part-
nerID=40&md5=661a0ff0189411d917309fc3a6eff290

- Phung, G.N., Arz, U., Heinrich, W. (2023): Precise Modeling of Coplanar Device Measurements Under Realistic Conditions up to G-Band. In: IEEE Transactions on Components, Packaging and Manufacturing Technology (Article). DOI:10.1109/TCPMT.2023.3294620. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85164688414&doi=10.1109%2fTCPMT.2023.3294620&partnerID=40&md5=1c9229eda843720cf8e08eb6ad642685>
- Bonito Oliva, V., Mangelinck, D., Hagedorn, S., Bracht, H., Irmischer, K., Hartmann, C., Vennéguès, P., Albrecht, M. (2023): Silicon diffusion in AlN. In: Journal of Applied Physics (Article). DOI:10.1063/5.0159641. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85171301240&doi=10.1063%2f5.0159641&partnerID=40&md5=03557ba30dcf23dcf95d4a61e235311e>
- Yazdani, H., Graff, A., Simon-Najasek, M., Altmann, F., Brunner, F., Ostermay, I., Chevtchenko, S., Würfl, J. (2023): Analysis of Mechanical Strain in AlGaIn/GaN HFETs. In: Physica Status Solidi (A) Applications and Materials Science (Article). DOI:10.1002/pssa.202200683. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85146726285&doi=10.1002%2fpssa.202200683&partnerID=40&md5=ed0e6467eb3f49b6d01cf606924fa712>
- Heyn, T., Ahmadzadeh, A., Hofmann, A. (2023): 3rd generation partnership project integration of non-geostationary orbit satellites. In: Non-Geostationary Satellite Communications Systems (Book Chapter). DOI:. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85148536389&partnerID=40&md5=26a8697a933f0b22547ccdc6b19bed0>
- Ozger, M., Godor, I., Nordlow, A., Heyn, T., Pandi, S., Peterson, I., Viseras, A., Holis, J., Raffelsberger, C., Kercek, A., Molleryd, B., Toka, L., Biczok, G., De Candido, R., Laimer, F., Tarmann, U., Schupke, D., Cavdar, C. (2023): 6G for Connected Sky: A Vision for Integrating Terrestrial and Non-Terrestrial Networks. In: 2023 Joint European Conference on Networks and Communications and 6G Summit, EuCNC/6G Summit 2023 (Conference Paper). DOI:10.1109/EuCNC/6GSummit58263.2023.10188330. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85168407804&doi=10.1109%2fEuCNC%2f6GSummit58263.2023.10188330&partnerID=40&md5=69088172dd7066663a3f9631d41d56fb>
- Jain, V., Fokow, V., Wicht, J., Wetzker, U. (2023): A Dynamic Time Warping Based Method to Synchronize Spectral and Protocol Domains for Troubleshooting Wireless Communication. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3289305. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85163476474&doi=10.1109%2fACCESS.2023.3289305&partnerID=40&md5=e14c9e2398c9dba780690abd3630d7d0>
- Fu, X., Le Ruyet, D., Visoz, R., Ramireddy, V., Grossmann, M., Landmann, M., Quiroga, W. (2023): A Tutorial on Downlink Precoder Selection Strategies for 3GPP MIMO Codebooks. In: IEEE Access (Article). DOI:10.1109/ACCESS.2023.3338866. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85180268435&doi=10.1109%2fACCESS.2023.3338866&partnerID=40&md5=46a48d1cbdd6a4c2d43e3eb358f07998>
- Mertens, N., Wilde, A. (2023): Automated Classification of Datapoint Types in Building Automation Systems Using Time Series. In: IFIP Advances in Information and Communication Technology (Conference Paper). DOI:10.1007/978-3-031-25182-5_48. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85151057178&doi=10.1007%2f978-3-031-25182-5_48&partnerID=40&md5=af3641e3c2ffa116596d096de3e17864
- Merwe, J. Rossouw van der;Cortes Vidal, Inigo;Saad, Muhammad;Garzia, Fabio;Rügamer, Alexander;Overbeck, Matthias;Felber, Wolfgang (2023): Comparison of interference mitigation with adaptive notch filter architectures against privacy protection devices. In: IEEE/ION Position, Location and

Forschungsfabrik Mikroelektronik Deutschland – Microwave & Terahertz
**Publications from the Technology Platform “Microwave and Terahertz” of the Research Fab
Microelectronics Germany (2023)**

Navigation Symposium, PLANS 2023 (Conference Paper).

DOI:10.1109/PLANS53410.2023.10140017. Link: <https://publica.fraunhofer.de/entities/publication/d49444c0-0d9f-42ba-8685-2520601f40e5/details>

- Yang, J., Wilde, A., Menzel, K., Sheikh, M.Z., Kuznetsov, B. (2023): Computer Vision for Construction Progress Monitoring: A Real-Time Object Detection Approach. In: IFIP Advances in Information and Communication Technology (Conference Paper). DOI:10.1007/978-3-031-42622-3_47. Link: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85174439893&doi=10.1007%2f978-3-031-42622-3_47&partnerID=40&md5=61f4c5e50794b05e13cd2c22c5162527
- Urquijo, S., Garzia, F., Popugaev, A., Rügamer, A., Felber, W. (2023): Configurable Multi-Band GNSS Receiver for Robust Handheld Devices. In: Proceedings of the 36th International Technical Meeting of the Satellite Division of the Institute of Navigation, ION GNSS+ 2023 (Conference Paper). DOI:10.33012/2023.19241. Link: <https://www.scopus.com/inward/record.uri?eid=2-s2.0-85184580132&doi=10.33012%2f2023.19241&partnerID=40&md5=fab50d3b844ea3dfcef2d713b655fa58>