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Forskningsprofil

Peng Mei (Senior Member, IEEE) was born in Suizhou, Hubei Province, in 1993. He received the B.Eng and M.Eng. degrees (with highest honors) in electromagnetic field and microwave technology from the University of Electronic Science and Technology of China (UESTC), Chengdu, China, and Ph.D. degree in wireless communications from the Aalborg University, Demark, in 2015, 2018, 2021, respectively. Dr. Mei finished his postdoctoral training in Aug. 2023, and is currenly working as an Assistant Professor at Department of Electronic Systems, Aalborg University.
Dr. Mei was a recipient of the Outstanding Student of UESTC (only 10 awardees from 12000 graduate students, the highest honor awarded to individual at UESTC) in 2017, the Excellent Graduate Student of UESTC in 2018, and the Excellent Graduate Student of Sichuan Province in 2018. Dr. Mei was also twice recipient of the National Scholarships from the Ministry of Education of the People's Republic of China, in 2016 and 2017. Dr. Mei was a recipient of Excellent Master Thesis from the Chinese Institute of Electronics (CIE) in 2019.
Dr. Mei served as a Session Chair for the IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communications (APWC), Granada, Spain, in September 2019, served as a Session Chair for the PhotonIcs & Electromagnetics Research Symposium (PIERS), Hangzhou, China, in April, 2022, and served as a Session Chair for the 2022 International Symposium on Antennas and Propagation (ISAP), Sydney, Australia, in Nov, 2022. Dr. Mei is also invited as a Session Chair for the 2023 PhotonIcs & Electromagnetics Research Symposium (PIERS), Prague, Czech, in 2023, a chief guest editor of the special issue entitled "Advanced Massive MIMO Antenna Arrays, Metasurfaces, and Reconfigurable Intelligent Surfaces for Sensing, Localization, and Wireless Communications" launched by Sensors, 2022, a chief guest editor of the special issue entitlted "Selected Papers from the 2023 International Workshop on Antenna Technology" launched by Sensors, 2023, a lead guest editor of the spcial section entitled "Recent Advances on Absorbers/Rasorbers and Their Applications on Antennas and EMC" launched by the IEEE Open Journal of Antennas and Propagation, a guest editor of the article collection entitled "Advances in Antenna Design and Radio Propagation for Integrated Sensing and Communications" launched by the IEEE Open Journal of Antennas and Propagation, and best paper competition co-chair of the 2023 international workshop on antenna technology (iWAT 2023), and was invited to deliver an invited talk at IWAT2024. His current research interests include: periodic structures, metamaterials, reflectarray/transmitarray antennas, and multibeam millimeter-wave antennas, and reconfigurable intelligent surfaces. Dr. Mei was a recipient of top reviewer of the IEEE Transactions on Antennas and Propagation from 2022 to 2024, three consecutive years, was listed as World Top 2% Scientists in the Year 2023 and 2024, two consecutive years. Dr. Mei has been selected as 2025 IEEE Antennas and Propaation Society Young Professional Ambassador.

Kvalifikationer

Wireless Communications, Ph.D, Millimeter-wave Transmitarray and Reflectarray Antennas for Communications Systems.
1 maj 2019 → 22 nov. 2021
Dimissionsdato: 22 nov. 2021

Electromagnetic Fields and Microwave Technology, Master, University of Electronic Science and Technology of China
1 sep. 2015 → 30 jun. 2018
Dimissionsdato: 30 jun. 2018

Electromagnetic Fields and Wireless Technology, Bachelor, University of Electronic Science and Technology of China
1 sep. 2011 → 30 jun. 2015
Dimissionsdato: 30 jun. 2015

Publikationer

Analytical Synthesis of 2D Flat-Top Beam and Its Application on 2D Beam-Steerable Transmitarray Antenna in the 25 GHz Band

Mei, P., Cai, Y., Yao, M., Pedersen, G. F. & Zhang, S., jan. 2026, I: IEEE Transactions on Antennas and Propagation. 74, 1, s. 394-402 9 s.

Development of Wideband Transmitarray Antennas With Adaptive Bidirectional Beam Reconfigurability for mm-Wave IoT Applications

Mei, P., Pedersen, G. F. & Zhang, S., 15 aug. 2025, I: IEEE Internet of Things Journal. 12, 16, s. 34044-34053 10 s.

High Gain and Low Gain Roll-Off Mechanically Beam-Steerable Transmitarray Antennas

Mei, P. & Zhang, S., 8 nov. 2024, *2024 International Symposium on Antennas and Propagation (ISAP).* IEEE (Institute of Electrical and Electronics Engineers), s. 1-2 2 s. 10846270

Efficient Methods to Enhance the Bandwidths of Transmitarray Antennas

Mei, P., Cai, Y. & Zhang, S., 2024, *2024 IEEE International Workshop on Antenna Technology, iWAT 2024.* IEEE (Institute of Electrical and Electronics Engineers), s. 169-172 4 s. 10535775

Guest Editorial Introduction to the Special Section on Recent Advances on Absorbers/Rasorbers and Their Applications on Antennas and EMC

Mei, P., Omar, A., Li, B., Zhang, S. & Hong, W., 2024, I: IEEE Open Journal of Antennas and Propagation.

Characterizations of Millimeter-Wave Reconfigurable Intelligent Surfaces in the Near-Field Region

Mei, P., Pedersen, G. F. & Zhang, S., aug. 2023, *2023 Photonics and Electromagnetics Research Symposium, PIERS 2023 - Proceedings.* IEEE (Institute of Electrical and Electronics Engineers), s. 2079-2085 7 s. 10221249. (Photonics & Electromagnetics Research Symposium (PIERS)).

Mutual Coupling Reductions of Dielectric Resonator Antennas without Extra Circuits

Mei, P., Pedersen, G. F. & Zhang, S., maj 2023, *17th European Conference on Antennas and Propagation, EuCAP 2023.* IEEE (Institute of Electrical and Electronics Engineers), 4 s. 10133143

Performance Improvement of Mechanically Beam-Steerable Transmitarray Antennas by Using Offset Unifocal Phase Symmetry

Mei, P., Pedersen, G. F. & Zhang, S., 1 jan. 2023, I: I E E E Transactions on Antennas and Propagation. 71, 1, s. 1129-1134 6 s.

On the Study of Reconfigurable Intelligent Surfaces in the Near-Field Region

Mei, P., Cai, Y., Zhao, K., Ying, Z., Pedersen, G. F., Lin, X. & Zhang, S., nov. 2022, I: I E E E Transactions on Antennas and Propagation. 70, 10, s. 8718-8728 11 s.

MIMO Antenna Array Decoupler

Mei, P. (Opfinder), Zhang, S. (Opfinder), Xu, Z. (Opfinder) & Pedersen, G. F. (Opfinder), 3 mar. 2022, IPC nr. PCT/EP2020/073623, H01Q1/52; H01Q21/06;, Patentnr. WO2022042817A1, 24 aug. 2020

An Overview of Metamaterial Absorbers and Their Applications on Antennas

Mei, P., Pedersen, G. F., Liu, Q., Lin, X. Q. & Zhang, S., 2022, *2022 Photonics & Electromagnetics Research Symposium (PIERS).* IEEE (Institute of Electrical and Electronics Engineers), s. 1053-1060 8 s. 9792666. (Progress in Electromagnetics Research Symposium).

Enabling Simultaneous Near-Field Focusing and Far-Field Radiation Using Multiple Lenses

Mei, P., Pedersen, G. F. & Zhang, S., 2022, *The 2022 International Symposium on Antennas and Propagation.* IEEE (Institute of Electrical and Electronics Engineers), s. 199-200 2 s.

Generation of Sum and Difference Radiation Beam with a 2-bit Polarization-Dependent Metasurface

Mei, P., Pedersen, G. F. & Zhang, S., 2022, *2022 16th European Conference on Antennas and Propagation (EuCAP).* IEEE (Institute of Electrical and Electronics Engineers), 9769559

Design of a Triple-Band Shared-Aperture Antenna with High Figures of Merit
Mei, P., Lin, X. Q., Pedersen, G. F. & Zhang, S., dec. 2021, I: I E E E Transactions on Antennas and Propagation. 69, 12, s. 8884 - 8889 6 s.

A Dual Polarized and High Gain X-/Ka Band Shared Aperture Antenna with High Aperture Reuse Efficiency
Mei, P., Zhang, S. & Pedersen, G. F., mar. 2021, I: I E E E Transactions on Antennas and Propagation. 69, 3, s. 1334-1344 11 s., 9210161.

A Broadband and FSS-Based Transmitarray Antenna for 5G Millimeter-Wave Applications
Mei, P., Pedersen, G. F. & Zhang, S., jan. 2021, I: I E E E Antennas and Wireless Propagation Letters. 20, 1, s. 103-107 5 s., 9280323.

A Low-Profile and Beam-Steerable Transmitarray Antenna: Design, Fabrication, and Measurement [Antenna Applications Corner]
Mei, P., Zhang, S. & Pedersen, G. F., 2021, I: I E E E Antennas and Propagation Magazine. 63, 5, s. 88-101 14 s.

Decoupling of a Wideband Dual-Polarized Large-Scale Antenna Array with Dielectric Stubs
Mei, P., Zhang, Y. & Zhang, S., 2021, I: I E E E Transactions on Vehicular Technology. 70, 8, s. 7363-7374 12 s., 9457163.

Millimeter-Wave Transmitarray and Reflectarray Antennas for Communications Systems
Mei, P., 2021, Aalborg Universitetsforlag. 167 s.

A Low-Cost, High-Efficiency and Full-Metal Reflectarray Antenna with Mechanically 2-D Beam-Steerable Capabilities for 5G Applications
Mei, P., Zhang, S. & Pedersen, G. F., okt. 2020, I: I E E E Transactions on Antennas and Propagation. 68, 10, s. 6997-7006 10 s., 9093159.

A Wideband 3D Printed Reflectarray Antenna with Mechanically Reconfigurable Polarization
Mei, P., Zhang, S. & Pedersen, G. F., okt. 2020, I: I E E E Antennas and Wireless Propagation Letters. 19, 10, s. 1798-1802 5 s., 9173781.

Retrieval of Effective Permittivity and Permeability of Periodic Structures on Dielectric and Magnetic Substrates
Mei, P., Zhang, S., Lin, X. & Pedersen, G. F., 8 jul. 2020, *2020 14th European Conference on Antennas and Propagation (EuCAP).* IEEE (Institute of Electrical and Electronics Engineers), 5 s. 9135941. (Porceedings of the IEEE European Conference on Antennas and Propagation (EuCAP)).

A Reflectarray Antenna Designed with Gain Filtering and Low-RCS Properties
Mei, P., Zhang, S., Cai, Y., Lin, X. & Pedersen, G. F., 1 aug. 2019, I: I E E E Transactions on Antennas and Propagation. 67, 8, s. 5362-5371 10 s., 8693572.

A Millimeter-Wave Gain Filtering Transmitarray AntennaDesign Usinga Hybrid-Lens
Mei, P., Zhang, S., Lin, X. & Pedersen, G. F., jul. 2019, I: I E E E Antennas and Wireless Propagation Letters. 18, 7, s. 1362-1366 5 s., 8713586.

Design of An Absorptive Fabry-Perot Polarizer and Its Application
Mei, P., Zhang, S., Lin, X. & Pedersen, G. F., jul. 2019, I: I E E E Antennas and Wireless Propagation Letters. 18, 7, s. 1352-1356 5 s., 8713585.

A Triple-Band Absorber with Wide Absorption Bandwidths Using Impedance Matching Theory
Mei, P., Zhang, S., Lin, X. & Pedersen, G. F., mar. 2019, I: IEEE Antennas and Wireless Propagation Letters. 18, 3, s. 521-525 5 s., 8629031.

A Low-Profile Patch Antenna with Monopole-Like Radiation Patterns
Mei, P., Zhang, S., Lin, X. Q. & Pedersen, G. F., 2019, *Proceedings of the 2019 9th IEEE-APS Topical Conference on Antennas and Propagation in Wireless Communications, APWC 2019.* IEEE (Institute of Electrical and Electronics

Engineers), s. 66-68 3 s. 8870445

A Low Radar Cross Section and Low Profile Antenna Co-Designed with Absorbent Frequency Selective Radome
Mei, P., Lin, X. Q., Yu, J. W., Zhang, P. C. & Boukarkar, A., 2018, I: IEEE Transactions on Antennas and Propagation. 66, 1, s. 409-413

Development of a Low Radar Cross Section Antenna with Band-Notched Absorber
Mei, P., Lin, X. Q., Yu, J. W., Boukarkar, A., Zhang, P. C. & Yang, Z. Q., 2018, I: IEEE Transactions on Antennas and Propagation.

Dual-polarization tunable electromagnetic absorber
Mei, P., Zhao, Y. D., Zheng, K. & Lin, X., 2018, *2017 IEEE 6th Asia-Pacific Conference on Antennas and Propagation, APCAP 2017 - Proceeding.*

Realization of a low radar cross section antenna based on band-notched absorber
Mei, P., Lin, X. & Zhao, Y. D., 2018, *2017 IEEE 6th Asia-Pacific Conference on Antennas and Propagation, APCAP 2017 - Proceeding.*

A Band-Notched Absorber Designed with High Notch-Band-Edge Selectivity
Mei, P., Lin, X. Q., Yu, J. W. & Zhang, P. C., 2017, I: IEEE Transactions on Antennas and Propagation. 65, 7, s. 3560-3567 8 s.

Aktiviteter

The 2023 International Workshop on Antenna Technology
Mei, P. (Arrangør)
15 maj 2023 → 17 maj 2023

IEEE Open Journal of Antennas and Propagation (Tidsskrift)
Mei, P. (Redaktør)
5 apr. 2023 → 31 okt. 2024

Sensors (Tidsskrift)
Mei, P. (Redaktør)
1 sep. 2022 → 31 maj 2024

Université de Rennes
Mei, P. (Gæsteforsker)
26 nov. 2019 → 30 nov. 2019

Priser

2025 IEEE Antennas and Propagation Society Young Professional Ambassador
Mei, P. (Modtager), 2025

Top reviewers in the IEEE Transactions on Antennas and Propagation
Mei, P. (Modtager), jul. 2022

Top reviewers in the IEEE Transactions on Antennas and Propagation
Mei, P. (Modtager), jul. 2023

Top reviewers in the IEEE Transactions on Antennas and Propagation
Mei, P. (Modtager), 2024

World Top 2% Scientists in Year 2023
Mei, P. (Modtager), 2023

World Top 2% Scientists in Year 2024
Mei, P. (Modtager), 2024