

# IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION

A PUBLICATION OF THE IEEE ANTENNAS AND PROPAGATION SOCIETY



MARCH 2025

VOLUME 73

NUMBER 3

IETPAK

(ISSN 0018-926X)

---

## PAPERS

### Antennas

- [Ray-Tracing and Physical Optics Modeling of Leaky Wave Antennas Combined With Lenses](#) ..... *M. Poveda-Garcia, F. Mesa, A. Algaba-Brazález, O. Quevedo-Teruel, and J. L. Gomez-Tornero*
- [Space-Time Modulation of a Multimode Electrically Small Antenna for Increased Matching and Efficiency Bandwidths](#) ..... *Z. Fritts, A. Babaei, S. M. Young, and A. Grbic*
- [Theory and Computation of Substructure Characteristic Modes](#) ..... *M. Gustafsson, L. Jelinek, M. Capek, J. Lundgren, and K. Schab*
- [Antenna Radiation Pattern Measurement in an Entirely Stirred VIRC Working as a \(Quasi\)-Chaotic Reverberation Chamber](#) ..... *Y. Rammal, G. Andrieu, N. Ticaud, N. Roger, A. Laisné, and P. Pouliguen*
- [Reconfigurable Unit Cell Design Using MEMS Actuator for Beam-Steering Applications](#) ..... *J. Tayebpour and R. R. Mansour*
- [Multiphysical Field Driven Low-Frequency Magnetolectric Antenna Array With Nonlinearly Enhanced Magnetic Field Transmission](#) ..... *C. Guan, Y. Wang, N. Xiao, L. Chen, G. Wang, Y. Wen, and P. Li*
- [An Endfire/Backfire Reconfigurable Leaky Wave Antenna by Radiating Different Space Harmonics](#) ..... *Z. Deng and J. Liu*
- [Microwave Photon Receiving Antenna: New Concept and UWB Applications](#) ..... *Y. Tian, Y. Song, Y. Li, S. Luan, S. Xie, Y. Yang, and Y. Li*
- [Axial Mode Planar Meander-Line Antenna With High-Gain Endfire Radiation Pattern Mounted on Large-Scale Ground Plane](#) ..... *X. Teng, Y. Hou, M. Liu, S. Wang, L. Yang, C. You, and K. Ma*
- [A Low-Profile Programmable Metasurface Antenna for Harmonic Modulation and Wireless Communication Applications](#) ..... *H. Yao, H. Zheng, B. Li, Z. Zhang, J. Xu, S. Gao, Y. Guo, and K. Bi*
- [Multibeam Quad-Polarized Transmit-Array Antenna With Arbitrary Radiation Direction for Vehicle Communication via Generalized Phase Superposition](#) ..... *C. Zhang, Y. Luo, Y. He, N. Yan, and K. Ma*
- [A Compact Ultrawideband Circularly Polarized Antenna Based on Miniaturized Phase Shifter](#) ..... *H.-J. Xu and S.-W. Qu*
- [Log-Periodic Patch Array With Coupled T-Probes for Broadband Dual-Polarized Antenna-on-Display](#) ..... *J. M. Heo, K. Kim, J. Choi, and G. Byun*
- [Grating-Lobe Reduction for Uniform Undersampled Phased Array Using Dielectric Dome Lens](#) ..... *Y. Wang, K. Haneda, C. Icheln, J. Ala-Laurinaho, J. Tuomela, L. Vähä-Savo, B. Xue, and X. Chen*
- [General Optimized Design of the E-Plane Waveguide Butler Matrix With Non-2n Beams Based on the FFT](#) ..... *B.-Y. Han, X.-Y. Chen, J.-D. Zhang, W. Wu, J.-Y. Zhang, and D.-G. Fang*
- [Real-Time Pattern Synthesis for Large-Scale Phased Arrays Based on Autoencoder Network and Knowledge Distillation](#) ..... *J. Zhang, C. Qu, X. Zhang, and H. Li*
- [Engineering Leaky Wave Antennas: Modulated Impedance Surfaces and Radiative Characteristics](#) ..... *K. Zafari, H. Oraizi, and H. Ahmadi*
-