COLORADO SCHOOL OF MINES

Revised January 2025

ATEF Z. ELSHERBENI
IEEE Fellow (2007) and ACES Fellow (2008)

Proceedings Publications and Presentations: (Total 308 Presentations)

2024

- Charles Vath and Atef Z. Elsherbeni, "An Interactive Visualization of Electrostatic Electric Field and Potential Distribution," International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, Miami, May 2024.
- Lisa K. Elmiladi, Kenneth Y. Hora, Peter H. Aaen, and Atef Z. Elsherbeni, "Wireless Monitoring of S-Parameters Measurement using a Nano-VNA for Biomedical Applications," International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, Miami, May 2024.
- Kenneth Y. Hora, Trevor J. Wolf, Collin Kringlen, Atef Z. Elsherbeni, Jamal Rostami, "Sensor Data Relay System for Underground Mine Communications," International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, Miami, May 2024.
- Matthew J. Dodd and Atef Z. Elsherbeni, "Simulation of Mutual Coupling in Aperiodic Arrays," International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, Miami, May 2024.
- Nelson L. Angels and Atef Z. Elsherbeni, "Safety of Wireless Brain Implants: A Review," International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, Miami, May 2024.
- Silje Ostrem, Collin Kringlen, Cameron Evanovich, Atef Elsherbeni, and Peter Aaen, "Towards the Design of a Non-invasive Glucose Monitoring Sensor," International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, Miami, May 2024.
- Nolan H. Grant, Atef Z. Elsherbeni, Quang M Nguyen, and Amir Zaghloul, "Automated Pixelated Unit Cell Design for Reflectarray Antennas and Reconfigurable Intelligent Surfaces," International Applied Computational Electromagnetics Society (ACES) Symposium, Orlando, Miami, May 2024.

2023

- Matthew Dodd and Atef Z. Elsherbeni, "Bowtie Antenna with Integrated Matching Network for Wideband and Circular Polarization," 2023 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Portland, Origan, July 23-28, 2020.
- F. Kaburcuk and Atef Z. Elsherbeni, "Electromagnetic Analysis using the Temporal and Spatial Interpolated Subgridding Algorithm," 2023 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Portland, Origan, July 23-28, 2020.
- Rachel Lumnitzer and Atef Z. Elsherbeni, "Electromagnetic Visualization Tools for Effective Undergraduate Education," International Applied Computational Electromagnetics Society (ACES) Symposium, Monterey, CA, 2023.
- Zahid Hassan and Atef Z. Elsherbeni, "Visualization of Electric and Magnetic Fields Inside Circular and Baffle Waveguides and Cavities," International Applied Computational Electromagnetics Society (ACES) Symposium, Monterey, CA, 2023.

2022

- Yiming Chen, Atef Elsherbeni, and Veysel Demir, "Machine Learning for Microstrip Patch Antenna Design: Observations and Recommendations," USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2022.

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- Matthew J. Dodd and Atef Elsherbeni, "A Wideband Circulalry Polarized Printed Bow-Tie Antenna for Low-SWaP Aerial Applications," IEEE 20th Biennial Conference on Electromagnetic Field Computation (CEFC), Denver, Colorado, October 9 – 12, 2022.
- Yiming Chen, Atef Elsherbeni, and Veysel Demir, "Machine Learning Design of Printed Patch Antenna," International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Denver, Colorado, July 10-15, 2022.
- Harun Tekin, Huseyin S. Savci, and Atef Z. Elsherbeni, "Compact Wide-band Gysel Power Divider, " International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Denver, Colorado, July 10-15, 2022.
- Joshua Kast and Atef Elsherbeni, "FDTD Formulation for Nonlinear Two-Port Networks using their X-Parameters," International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Denver, Colorado, July 10-15, 2022.
- Joseph E. Diener and Atef Z. Elsherbeni, "Tri-Polarization Reconfigurable Patch Antenna for ISM Application," International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Denver, Colorado, July 10-15, 2022.
- Alec Weiss, Atef Elsherbeni, Jeanne Quimby, and Jake Rezac, "Framework for Evaluating Channel Estimators in Millimeter-Wave New-Radio Systems," International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Denver, Colorado, July 10-15, 2022.
- Orcun Kiris, Atef Z. Elsherbeni, and Yiming Chen, "An Efficient Transmitarray Element using Diagonal Double-Headed Arrows with Vias," International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Denver, Colorado, July 10-15, 2022.

2021
- Yiming Chen, Fatih Kaburcuk, Rachel Lumnitzer, Atef Z. Elsherbeni; Veysel Demir; Atif Shamim, "Human Tissues Parameters and Resolution for Accurate Simulations of Wearable Antennas," International Applied Computational Electromagnetics Society (ACES) Symposium, 2021.
- Yiming Chen, A. Z. Elsherbeni, "Circularly Polarized RFID Tag Antenna Design for Underground Localization System," USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2021.
- Abdullah Algarni; Mohammed Hadi; Atef Z. Elsherbeni, "A Perfectly-Matched Layer Formulation Capable of Absorbing Multi-Modal Waves in Cylindrical FDTD," International Applied Computational Electromagnetics Society (ACES) Symposium, 2021.
- Alec Weiss; Atef Elsherbeni, "Accelerating Simulations of Large Scale Phased-Array Systems," International Applied Computational Electromagnetics Society (ACES) Symposium, 2021.
- Robert D. Jones; Joseph E. Diener; Yiming Chen; Atef Z. Elsherbeni; Jurgen Brune, "Underground Localization System using a Combination of RFID and IMU Technologies," International Applied Computational Electromagnetics Society (ACES) Symposium, 2021.
- Joshua M. Kast; Atef Z. Elsherbeni, "Extraction of X-Parameters from FDTD Simulation of a Two-Port Nonlinear Circuit," International Applied Computational Electromagnetics Society Symposium (ACES), 2021.
- Gurkan Kalinay, Fatih Kaburcuk, Yiming Chen, Atef Z. Elsherbeni, and Veysel Demir, " Dual-Band Microstrip Patch Antenna for 5G Mobile Communications," International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, Canada (Online), December 2021.
- Joshua M. Kast, A. Z. Elsherbeni, "FDTD Simulation of Nonlinear Diode Characteristics using X-Parameter-Based Updating Formulation," International Conference on Microwave, Antennas and Circuits (ICMAC 2021), Islamabad, Pakistan, December 10-11, 2021.

- Joshua M. Kast, A. Z. Elsherbeni, "Extraction of Nonlinear X-Parameters from FDTD Simulation of a One-Port Device," USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2021.
- Alec Weiss, A. Z. Elsherbeni, and Jeanne Quimby, "Hybrid Simulation Framework for 5G OFDM Channel Estimator Testing," USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2021.
- Alec Weiss; Atef Elsherbeni; Jeanne Quimby, "Verification of an Evaluator for a New-Radio Channel Estimator," United States National Committee of URSI National Radio Science Meeting (USNC-URSI NRSM), 2021.

2020

- Alec J. Weiss, Jeanne Quimby, Rod Leonhardt, Ben Jamroz, Dylan Williams, Kate Remley, Peter Vouras, and Atef Elsherbeni," Configuration and Control of a Millimeter-Wave Synthetic Aperture Measurement System with Uncertainties," 94th ARFTG Microwave Measurement Conference, San Antonio TX, Jan 26-29, 2020.
- Joshua M. Kast, Atef Z. Elsherbeni," Simulation of a Nonlinear Frequency Multiplier using the FDTD Technique," International Applied Computational Electromagnetics Society (ACES) Symposium, July 27-31, 2020.
- Z. Su, K. Klionovski, H. Liao, A. Shamim, Yiming Chen, and A. Z. Elsherbeni, "3D Antenna in Package Design: Maximizing Radiation Pattern Isotropicity and CP Coverage," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, Canada (Online), July5-10, 2020.
- Antonio P. Thomson, Atef Z. Elsherbeni, Mohammed Hadi, "A Practical Fourth Order Finite-Difference Time-Domain Algorithm for the Solution of Maxwell's Equations," International Applied Computational Electromagnetics Society (ACES) Symposium, July 27-31, 2020.
- Abdullah M. Algarni, Atef Z. Elsherbeni, Mohammed Hadi, "Implementation of Passive and Active Circuit Elements in Cylindrical Finite-Difference Time-Domain Formulation," International Applied Computational Electromagnetics Society (ACES) Symposium, July 27-31, 2020.
- F. Kaburcuk, Atef Z. Elsherbeni, Rachel Lumnitzer, and Allison Tanner "SAR and Temperature Distributions in a Head Model Due to Electromagnetic Radiation with Frequencies up to 100 GHz," 2020 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Montreal, Canada (Online), July 5-10, 2020.
- Yiming Chen, Atef Z. Elsherbeni, Khalid Alharbi, and Rabah Aldhaheri," Cavity Backed Patch-Slot Antenna for Lower Band 5G Communications," URSI GASS 2020, Rome, Italy, 29 August - 5 September 2020.
- Madison Le, Mohammed Hadi, Atef Elsherbeni, "Quantifying Sub-gridding Errors in Standard and Hybrid Higher Order 2D FDTD Simulations," International Applied Computational Electromagnetics Society (ACES) Symposium, July 27-31, 2020.
- Yuhao Feng, Yiming Chen, Atef Z. Elsherbeni, Khalid Alharbi, "Arrow Patch-Slot Antenna for 5G Lower Frequency Band Communications," International Applied Computational Electromagnetics Society (ACES) Symposium, July 27-31, 2020.
- Rachel Lumnitzer, Allison Tanner, Atef Z. Elsherbeni, "Debye Coefficients for Biological Tissues From 100 MHz to 100 GHz," International Applied Computational Electromagnetics Society (ACES) Symposium, July 27-31, 2020.
- Alec Weiss, Atef Elsherbeni, "Computational Performance of MATLAB and Python for Electromagnetic Applications," International Applied Computational Electromagnetics Society (ACES) Symposium, July 27-31, 2020.

Atef Elsherbeni – Conference Proceedings

2019

- Madison Le, M. F. Hadi, and A. Z. Elsherbeni, "Quantifying Subgridding Errors when Modeling Multiscale Structures with FDTD," International Applied Computational Electromagnetics Society (ACES) Symposium, Miami, Florida, April 2019.
- Joseph Diener and A. Z. Elsherbeni, "Miniaturized Omnidirectional UHF RFID Antennas," International Applied Computational Electromagnetics Society (ACES) Symposium, Miami, Florida, April 2019.
- Alec Weiss, Veysel Demir, A. Z. Elsherbeni, and M. Hadi, "Accelerating the FDTD Algorithm on CPUs with MATLAB's Parallel Computing Toolbox," International Applied Computational Electromagnetics Society (ACES) Symposium, Miami, Florida, April 2019.
- M. Hadi and A. Z. Elsherbeni, and M. Hadi, "Axial PML Performance Near the Axis of Rotation in Cylindrical FDTD," International Applied Computational Electromagnetics Society (ACES) Symposium, Miami, Florida, April 2019.
- M. F. Hadi and A. Z. Elsherbeni, "Oblique Incidence PML Reflection Analysis for Cylindrical FDTD," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, July 2019.
- Marrwa H. Bannis, Fatma M. El-Hefnawi, and A. Z. Elsherbeni, "Identification of Suspicious Mass in Biological Tissues Using Resonance Parameters Extracted from Late Time Response," 2019 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Atlanta, GA, July 2019.
- Andres Velasco, Mohammed F. Hadi, Atef Z. Elsherbeni, Joseph E. Diener, "Debye Coefficients for Low Frequency FDTD Dispersive Soils Analysis," International Applied Computational Electromagnetics Society (ACES) Symposium, Nanjing, China, August 2019.

2018

- F. Kaburcuk and Atef Z. Elsherbeni, "SAR and Temperature Rise Distributions in a Human Head Due to a Multi-Frequency Antenna Source," Applied Computational Electromagnetics Society (ACES), Denver, CO, USA, March 2018.
- M. F. Hadi, A. Z. Elsherbeni, Ravi C. Bollimuntha and Melinda J. Piket-May "FDTD Numerical Dispersion Relation in Spherical Coordinates," 12th European Conference on Antennas and Propagation, London, UK, April 2018.
- R. C. Bollimuntha, M. F. Hadi, M. J. Piket-May, and A. Z. Elsherbeni, "Numerical Dispersion Analysis for Spherical FDTD," International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, Colorado, March 2018.
- B. Martin, A. Elsherbeni, G. Fasshauer and M. F. Hadi, "Improved FDTD Method around Dielectric and PEC," International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, Colorado, March 2018.
- M. F. Hadi, A. Z. Elsherbeni, Ravi C. Bollimuntha and Melinda J. Piket-May "Reflection Analysis of Spherical FDTD Absorbing Boundary Conditions," 2018 IEEE International Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Boston, MA, July 2018.
- Allee D. Zarrini, A. Elsherbeni, and Jurgen F. Brune, "Directional of Arrival Tag Response for Reverse RFID Localization," International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, Colorado, March 2018.
- Joseph E. Diener, Jeanne Quimby, Kate A. Remley, and A. Elsherbeni, "Millimeter-wave Frequency FDTD Simulation for Error Vector Magnitude of Modulated Signals," International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, Colorado, March 2018.

- Kyle Patel, Robert Jones, and A. Elsherbeni, "A Cost-Effective Far-Field Antenna Pattern Measurement System," International Applied Computational Electromagnetics Society (ACES) Symposium, Denver, Colorado, March 2018.

2017

- M. F. Hadi and A. Z. Elsherbeni, "Numerical Dispersion and Stability for Three-Dimensional Cylindrical FDTD near the Axis of Rotation," European Conference on Antennas and Propagation, Paris, France, pp. 936-938, March 2017.
- Mohamed Bakr, Atef Elsherbeni, and Veysel Demir, "Wideband Adjoint Sensitivity of Dispersive Structures Using FDTD Method," 2017 IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, pp. 2411-2412, San Diego, CA, July 9-14, 2017.
- Joseph E. Diener, Robert D. Jones, and Atef Z. Elsherbeni, "Isoflux Phased Array Design for CubeSat," IEEE International Symposium on Antennas and Propagation & USNC/URSI National Radio Science Meeting, pp. 1811-1812, San Diego, CA, July 9-14, 2017.
- Mohamed. H. Bakr, Atef Elsherbeni and Veysel Demir, "Second Order Adjoint Sensitivities: An Alternative Formulation," IEEE 30th Canadian Conference on Electrical and Computer Engineering (CCECE), pp. 1-2, Windsor, ON, 30 April-3 May 2017.
- Mohamed. H. Bakr, Atef Elsherbeni and Veysel Demir, "A Maxwellian Formulation of Adjoint Sensitivity Analysis Using the FDTD Method," IEEE 30th Canadian Conference on Electrical and Computer Engineering (CCECE), pp. 1-2, Windsor, ON, 30 April-3 May 2017.
- M. M.T. Maghrabi, M.H. Bakr, S. Kumar, A. Elsherbeni, and V. Demir, "Adjoint sensitivity analysis of nonlinear structures exploiting FDTD," AES 2017, the 5th Applied Electromagnetics Symposium, Incheon, Korea, July 2017. (invited)
- Si Li; Wenxing Li; Yunlong Mao; Wenhua Yu; Atef Z. Elsherbeni, "A Tunable Dual-band Left-Handed Metamaterial Implementation," Applied Computational Electromagnetics Society (ACES) Symposium, Firenze, Italy, March 26-30, 2017.
- F. Kaburcuk and Atef Z. Elsherbeni, "Fast Algorithm for Lossless Anisotropic Simulations using the FDTD method," 2017 IEEE International Symposium on Antennas and Propagation and USNC/URSI Radio Science Meeting, San Diego, CA, USA, July 9-14, 2017.
- F. Kaburcuk and Atef Z. Elsherbeni, "A Speeding up Technique for Lossy Anisotropic Algorithm in FDTD Method," Applied Computational Electromagnetics Society (ACES) Symposium, Firenze, Italy, March 26-30, 2017.
- Y. Mao, A. Z. Elsherbeni, S. Li, "Non-uniform surface impedance absorbing boundary condition for FDTD method," European Conference on Antennas and Propagation, Paris, France, pp. 516-519, March 2017.
- Y. Mao, Tao Jiang, and A. Elsherbeni, "An efficient boundary condition based on surface impedance concept in FDTD simulations," Applied Computational Electromagnetics Society (ACES) Symposium, Firenze, Italy, March 26-30, 2017.
- Chongyi Yue, W. Li, A. Elsherbeni, and V. Demir, "Compact Meander Printed Dipole Antenna," Applied Computational Electromagnetics Society (ACES) Symposium, Firenze, Italy, March 26-30, 2017.

2016

- M. F. Hadi, S. F. Mahmoud and A. Z. Elsherbeni, "Modeling Cylindrical-Sectoral Structures with the BOR-FDTD Method," IEEE AP-S Topical Conf. on Antennas and Propagation in Wireless Communications, Cairns, Australia, pp. 335-336, September 2016.
- M. F. Hadi, S. F. Mahmoud, A. Z. Elsherbeni and M. J. Piket-May, "FDTD Modeling Challenges of Cylindrical Structures," IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Puerto Rico, pp. 2023-2024, June/July 2016.

- Yunlong Mao, Tao Jiang and Atef Z. Elsherbeni, "An Improved Surface Impedance Absorbing Boundary Based on Collocation Technology," IEEE/ACES International Conference on Wireless Information Technology (ICWITS) and System and Applied Computational Electromagnetics, Hawaii, March 2016.
- Mohamed Bakr, Atef Elsherbeni, and Veysel Demir, "An FDTD-Based Adjoint Sensitivity Approach," Accepted for IEEE AP-S Symposium on Antennas and Propagation and USNC-URSI Radio Science Meeting, Puerto Rico, pp. 2021-2022, June/July 2016.
- Si Li; Yunlong Mao; Wenhua Yu, A Novel Dual Notched UWB Antenna for Wireless Body Area Network, 2016 IEEE/ACES International Conference on Wireless Information Technology (ICWITS) and System and Applied Computational Electromagnetics, Hawaii, March 2016.

2015

- P. Nayeri, A. Z. Elsherbeni, R. L. Haupt, and F. Yang, "Near-Field Scanning Characteristics of Focused Reflectarray Antennas," the 2015 Applied Computational Electromagnetics Society Conference, Williamsburg, VA, March 2015.
- P. Nayeri, A. Z. Elsherbeni, and R.L. Haupt, "Broadband Focusing Using Aperture-Coupled Microstrip Patch Antenna Arrays," the 2015 European Conference on Antennas and Propagation, EUCAP 2015.
- P. Nayeri, A. Z. Elsherbeni, and R. L. Haupt, "Mutual Coupling in an Array of Vivaldi Antennas with Wide Instantaneous Bandwidth," the 2015 IEEE Radar Conference, NY, 2015.
- Mao Y, Elsherbeni A Z, Jiang T, et al. Absorbing Boundary for Terminating FDTD Simulations based on Surface Impedance Concept, Applied Computational Electromagnetics Society conference, 2015.

2014

- P. Nayeri, D. Kajfez, and A. Z. Elsherbeni, "Design of a segmented half-loop antenna," IEEE Antennas and Propagation Society International Symposium, Tennessee, U.S., July 2014.
- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "The offset parabolic-torus-phase planar reflectarray antenna," IEEE Antennas and Propagation Society International Symposium, Tennessee, U.S., July 2014.
- A. H. Abdelrahman, P. Nayeri, A. Z. Elsherbeni, and F. Yang, "Analysis and design of wideband transmitarray antennas with different unit-cell phase ranges," IEEE Antennas and Propagation Society International Symposium, Tennessee, U.S., July 2014.
- A. H. Abdelrahman, P. Nayeri, A. Z. Elsherbeni, and F. Yang, "Design of single-feed multi-beam transmitarray antennas," IEEE Antennas and Propagation Society International Symposium, Tennessee, U.S., July 2014.
- A. Khidre, F. Yang, and A. Z. Elsherbeni, "Reconfigurable Microstrip Antennas with Dynamic Radiation Patterns," URSI Radio Science Meeting Digest, Memphis, TN, USA, July 2014.
- A. H. Abdelrahman, A. Z. Elsherbeni, and F. Yang, "Broadband high gain triple-layer transmitarray antenna," IEEE Antennas and Propagation Society International Symposium (APSURSI), pp. 1270-1271, Memphis, Tennessee, USA, July 2014.
- Huanhuan Yang, Yilin Mao, Shengheng Xu, Fan Yang and Atef. Z. Elsherbeni, "Analysis and Optimization of the Scanning Performance of 1-bit Reconfigurable Reflectarrays," IEEE Antennas and Propagation Society International Symposium (AP-S), Memphis, Tennessee, July 2014.
- Fang Guo, Yilin Mao, Shengheng Xu, Fan Yang and Atef. Z. Elsherbeni, "A Modified Parabolic-Cylindrical Reflectarray Antenna for Wide Beam Scanning Capability," IEEE Antennas and Propagation Society International Symposium (AP-S), Memphis, Tennessee, July 2014.
- Q. Qiao, F. Yang and A. Z. Elsherbeni, "A high sensitivity RFID temperature sensor tag design using PTFE material," IEEE AP-S International Symposium, Memphis, TN, July 2014.

- F. Yang, P. Nayeri, and A. Z. Elsherbeni, "Recent advances in beam-scanning reflectarray antennas," URSI General Assembly and Scientific Symposium, Beijing, China, August 2014.
- P. Nayeri, A. Z. Elsherbeni, and D. Kajfez, "Segmented half-loop antennas for vehicular GPS applications," IEEE Antennas and Propagation in Wireless Communications (APWC 2014), Palm Beach, Aruba, August 2014.
- F. Yang, Q. Qiao, L. Zhang, Z. Yue and A. Z. Elsherbeni, "High-Sensitivity RFID Sensing Antennas: From Sensing Mechanism Selections to Antennas Structure Designs," IEEE URSI-GA, Beijing, China, August 2014.
- P. Nayeri, A. Z. Elsherbeni, and R. L. Haupt, "Phased array antenna limitations for ultra-wideband focusing," IEEE International Conference on Antenna Measurements & Applications (CAMA 2014), Antibes Juan-les-Pins, France, November 2014.

2013
- A. H. Abdelrahman, F. Yang, and A. Z. Elsherbeni "Analysis of multilayer frequency selective surfaces for transmitarray antenna applications," 29th International Review of Progress in Applied Computational Electromagnetics, California, U.S., March 2013. (Third Place-Best paper Competition)
- A. H. Abdelrahman, F. Yang, A. Z. Elsherbeni, and A. Khidre "Transmitarray Antenna Design using Slot-Type Element," *IEEE International Symposium on Antennas and Propagation*, Orlando, FL, July 2013.
- Q. Qiao, L. Zhang, F. Yang, Z. Yue and A. Z. Elsherbeni, "UHF RFID temperature sensor tag using novel HDPE-BST composite material," *IEEE International Symposium on Antennas and Propagation*, Orlando, FL, July 2013.
- F. Yang, Q. Qiao and Atef. Z. Elsherbeni, "Reconfigurable sensing antennas: concept, design, and applications," *IEEE Antenna Propagation Wireless Communication*, Italy, Sep. 2013.
- A. Khidre, F. Yang, and A. Z. Elsherbeni, "Reconfigurable Microstrip Antenna with Two-Dimensional Scannable Beam," *IEEE International Symposium on Antennas and Propagation*, Orlando, FL, July 2013.
- Yilin Mao, F. Yang, and Atef Elsherbeni, "Closely Separated Dual-Band Reflectarray Design for Satellite Communications," *IEEE International Symposium on Antennas and Propagation*, Orlando, FL, July 2013.
- A. Khidre, F. Yang, and A. Z. Elsherbeni, "Reconfigurable Microstrip Antenna with Tunable Radiation Beamwidth," *IEEE International Symposium on Antennas and Propagation*, Orlando, FL, July 2013.
- P. Nayeri, A. Z. Elsherbeni, and F. Yang, "Full-wave analysis of planar reflectarrays with spherical phase distribution for 2-D beam-scanning using FEKO electromagnetic software," 29th *International Review of Progress in Applied Computational Electromagnetics*, California, U.S., March 2013. (First Place-Best paper Competition)
- P. Nayeri, M. Liang, R. Sabory-García, M. Tuo, F. Yang, M. Gehm, H. Xin, and Atef Z. Elsherbeni, "Design, fabrication, and measurement of dielectric reflectarray antennas," 38th *International Conference on Infrared, Millimeter and Terahertz Waves*, Mainz, Germany, Sep. 2013.
- P. Nayeri, M. Liang, R. Sabory-García, M. Tuo, F. Yang, M. Gehm, H. Xin, and Atef Elsherbeni, "High gain dielectric reflectarray antennas for THz applications," *IEEE Antennas and Propagation Society International Symposium*, Florida, U.S., July 2013.
- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "Design of multifocal transmitarray antennas for beamforming applications," *IEEE Antennas and Propagation Society International Symposium*, Florida, U.S., July 2013.

- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "Studies on planar reflectarrays with spherical-phase distribution for 2-D beam-scanning," *IEEE Antennas and Propagation Society International Symposium*, Florida, U.S., July 2013.

2012

- Xue-Xia Yang, Chao Jiang, Atef Z. Elsherbeni, and Fan Yang, "A Novel Compact Printed Rectenna for Communication Systems," *the 4th IEEE Asia-Pacific Power and Energy Engineering Conference*, Shanghai, China, March 2012.
- A. Z. Elsherbeni, P. Nayeri, and F. Yang, "Reflectarray Antennas for Space Applications," *IEEE International Conference on Ultra-Wideband, Syracuse*, NY, U.S., Sep. 2012.
- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "Design of Single-Feed Reflectarrays with Asymmetric Multi-Beams," *IEEE Antennas and Propagation Society International Symposium*, Illinois, U.S., July 2012.
- Xue-Xia Yang, Chao Jiang, Atef Z. Elsherbeni, and Fan Yang, "A Reconfigurable Patch Antenna with Quad-Polarization States Using Dual Feed Ports," *IEEE Antennas and Propagation Society International Symposium*, Illinois, U.S., July 2012.
- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "High-gain beam-scanning reflectarray antennas using an active-feed scheme," *IEEE Antennas and Propagation Society International Symposium*, Illinois, U.S., July 2012.
- A. Khidre, F. Yang, and A. Z. Elsherbeni, "Reconfigurable Dual-Band Patch Antenna with a Varactor-Loaded Slot," *IEEE Antennas and Propagation Society International Symposium*, Illinois, U.S., July 2012.
- A. Khidre, F. Yang, and A. Z. Elsherbeni, "Reconfigurable Microstrip Yagi-Uda Antenna with a Scannable Circularly Polarized Beam," *IEEE Antennas and Propagation Society International Symposium*, Illinois, U.S., July 2012.
- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "Beam-scanning reflectarray antennas: A technical review," *28th International Review of Progress in Applied Computational Electromagnetics*, Columbus, Ohio, U.S., April 2012.
- P. Nayeri, A. Z. Elsherbeni, and F. Yang, "Design, full-wave simulation, and near-field diagnostics of reflectarray antennas using FEKO electromagnetic software," *28th International Review of Progress in Applied Computational Electromagnetics*, Columbus, Ohio, U.S., April 2012.
- Yilin Mao, Cong Wang, F. Yang, and A. Elsherbeni, "A Single-Layer Broad-band Reflectarray Design Using Dual-Frequency Phase Synthesis Method", *Proc. Of the Asia Pacific Microwave Conference*, pp. 64-66, Taiwan, Dec. 2012.
- Qian Qiao, F. Yang and A. Z. Elsherbeni, "Read range and sensitivity study of RFID temperature sensors," *IEEE APS International Symposium,* pp. 1-2, , Chicago, IL, July 2012.
- F. Yang, Q. Qiao, Z. Zhang, "Reconfigurable sensing antennas: a low-cost passive wireless sensing method," *IEEE APS International Symposium*, Chicago, IL, July 2012.
- K ElMahgoub, A. Z. Elsherbeni, "Implementing voltage controlled current source in electromagnetic full-wave simulation using the FDTD method," *Microwave Symposium Digest (MTT), IEEE MTT-S International*, 2012.
- A Ali Babar, J Virtanen, VA Bhagavati, L Ukkonen, AZ Elsherbeni, P Kallio, L Sydanheimo, "Inkjet-printable UHF RFID tag antenna on a flexible ceramic-polymer composite substrate," *Microwave Symposium Digest (MTT), IEEE MTT-S International*, 2012.

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