

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

### **Conference Abstracts and Presentations: (Total 213 Abstracts)**

#### **2024**

- Atef Elsherbeni, “A Review of Radar Cross-Section evaluation of Canonical and Complex Objects,” IEEE combined ICEAA and IEEE APWC conferences, Lisbon, Portugal, September 2024.
- Robert Jones, Atef Elsherbeni, Joseph Diener, Alec Weiss, and Joshua Cast. “Pyramidally Shaped Absorbing Boundary for FDTD Simulations,” IEEE combined ICEAA and IEEE APWC conferences, Lisbon, Portugal, September 2024.

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#### **2021**

- Atef Elsherbeni, “Power Transmission using Reflect and Transmit Array Configurations,” IEEE Wireless in Space and Extreme Environments (online), October 2021.

#### **2020**

- A. Algarni, A. Z. Elsherbeni, and M. Hadi, “Passive and Active Circuit Elements in Cylindrical Finite-Difference Time-Domain Method,” GRADS, Colorado School of Mines, April 2020.
- Alec Weiss, and A. Elsherbeni, “Critical Comparison Between Python and MATLAB Performance for Computational Electromagnetics,” GRADS, Colorado School of Mines, April 2020.
- Joseph E. Diener, and Atef Z. Elsherbeni, “Polarization Reconfigurable Patch Antenna for 5.8 GHz ISM Applications,” GRADS, Colorado School of Mines, April 2020.
- J. Kast and Atef Z. Elsherbeni, “Simulation of a Nonlinear Frequency Multiplier using the Finite-Difference Time-Domain Technique,” GRADS, Colorado School of Mines, April 2020.
- Madison Le, A. Elsherbeni, and M. Hadi “Sub-Gridding Errors in Standard and Hybrid Higher Order FDTD Simulations,” GRADS, Colorado School of Mines, April 2020.
- Rachel Lumnitzer, Allison Tanner, and A. Elsherbeni, “Biological Tissues Debye Coefficients for 100 MHz to 100 GHz Simulations,” GRADS, Colorado School of Mines, April 2020.
- Robert D. Jones, Atef Z. Elsherbeni, Joshua Kast, Alec J. Weiss, “Pyramidal Absorbing Boundary for Electromagnetic Finite-Difference Time-Domain Simulations,” GRADS, Colorado School of Mines, April 2020.
- Yiming Chen and Atef Elsherbeni, “Cavity Backed Patch-Slot Antenna for 5G Lower Frequency Band Communications,” GRADS, Colorado School of Mines, April 2020.
- Yuhao Feng, Yiming Chen and Atef Elsherbeni, “Arrow Patch-Slot Antenna for 5G Lower Frequency Band Communications,” GRADS, Colorado School of Mines, April 2020.
- Robert D. Jones, Atef Z. Elsherbeni, Joshua Kast, Alec J. Weiss, “Pyramidally Shaped Absorbing Boundary for FDTD Simulations,” ICEAA - IEEE APWC 2020.
- Rachel Lumnitzer, Allison Tanner, and A. Elsherbeni, “The Effects of Electromagnetic Waves on a Human Head Model,” MURF, Colorado School of Mines, March 2020.

#### **2019**

- M. F. Hadi and A. Z. Elsherbeni, “A Predicting PML Performance at Normal Incidence in Cylindrical FDTD,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2019.
- A. Algarni, M. Hadi, and A. Z. Elsherbeni, “Cylindrical Finite-Difference Time-Domain for Wireline Logging,” GRADS, Colorado School of Mines, 2019.
- A. Weiss, A. Elsherbeni, V. Demir, M. Hadi, “Speeding Up The FDTD Algorithm on CPUs with MATLAB’s Parallel Computing Toolbox,” GRADS, Colorado School of Mines, 2019.



- Allison Tanner, A. Elsherbeni, and M. Hadi, “Time Reversal Using the Finite-Difference Time-Domain Method with MATLAB for Applications in Medical Imaging,” GRADS, Colorado School of Mines, 2019.
- Andres Velasco, Mohammed Hadi, and Atef Z. Elsherbeni, “Frequency Dispersive Soil Analysis for Oil and Gas Bore-Hole Exploration,” GRADS, Colorado School of Mines, 2019.
- Joseph E. Diener, Atef Z. Elsherbeni, “Miniaturized Omnidirectional UHF RFID Antennas,” GRADS, Colorado School of Mines, 2019.
- J. Kast and Atef Z. Elsherbeni, “Quantification of Timing Uncertainty in a Correlation-Based Channel Sounder Systems,” GRADS, Colorado School of Mines, 2019.
- Madison Le, M. Hadi, and A. Elsherbeni, “Errors Analysis of Subgridding when Modeling Multiscale Structures using the Finite-Difference Time-Domain Method,” GRADS, Colorado School of Mines, 2019.
- T. D’Esposito, A. Elsherbeni, M. Hadi, “A Fourth Order Accurate FDTD Algorithm for Maxwell’s Equations Solutions of Large-Scale Problems ,” GRADS, Colorado School of Mines, 2019.

## 2018

- N. Sonth, R. C. Bollimuntha, M. F. Hadi, M. J. Piket-May, and A. Z. Elsherbeni, “A Finite Volumes-Based FDTD Material Dispersion Modeling,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2018.
- R. C. Bollimuntha, M. F. Hadi, M. J. Piket-May, and A. Z. Elsherbeni, “Spherical FDTD Numerical Dispersion Analysis s,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2018.

## 2017

- R. C. Bollimuntha, J. Diener, M. F. Hadi, M. J. Piket-May, and A. Z. Elsherbeni, “Ogive Modeling with Conformal Standard and Higher-Order FDTD,” Accepted for USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2017.
- A. Weiss, S. DMello, A. Akbar Basha, A. Z. Elsherbeni, M. J. Piket-May, and M. F. Hadi, “Enhancement of Higher Order FDTD Method Using OpenCL, CUDA, and MPI on Single and Multiple CPUs/GPUs,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2017.
- R. C. Bollimuntha, V. D. Paladugu, R. Saha, M. J. Piket-May, A. Z. Elsherbeni, and M. F. Hadi, “Fiber Glass-Weave Skew Analysis using the Finite-Difference Time-Domain Method,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2017.

## 2016

- K. Patel, P. Nayeri, and A. Z. Elsherbeni, “Space-fed antenna array design and analysis software package,” National Radio Science Meeting, Colorado, U.S., Jan. 2016.
- M. F. Hadi, A. Z. Elsherbeni, M. J. Piket-May and S. F. Mahmoud, “Dispersion Relation for Cylindrical FDTD Grids,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2016.
- R. P. Kandurwar, V. S. Vyas, M. J. Piket-May, D. A. Connors, A. Z. Elsherbeni and M. F. Hadi, “Comparative Analysis of CUDA and OpenCL for Electromagnetics Simulations using FDTD,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2016.
- S. DMello, A. Weiss, M. J. Piket-May, M. F. Hadi and A. Z. Elsherbeni, “High Performance Multi-CPU and Multi-GPU Computing of the High-Order FV24 Algorithm,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2016.
- R. C. Bollimuntha, M. F. Hadi, M. J. Piket-May and A. Z. Elsherbeni, “Excitation of Plane Waves in Higher Order FDTD Grids,” USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2016.



- R. C. Bollimuntha, M. F. Hadi, M. J. Piket-May, and A. Z. Elsherbeni, "Separation of Electric and Magnetic Surface Currents in Equivalent EM Problems," USNC/URSI National Radio Science Meeting, Boulder, Colorado, January 2016.

### 2015

- David Hodge and Kyle Patel, Shannon Bradley, Tyler Croteau, Garrett Dietz, Sean Garneau, John Hong, Logan Knowles, Kelton Lightfoot, Steven Mohan, Nick Smith, Evan Stoelzel, Richard Uhrig, and Emma Watson, Payam Nayeri, Atef Elsherbeni, Randy Haupt, and Ozkan Celik, "MINESat: Colorado School of Mines to extend its core virtues to space," American Institute of Aeronautics and Astronautics Rocky Mountain 4th Technical Symposium, Golden, Colorado, U.S., November 6, 2015.

### 2014

- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "The Parabolic-Torus-Phase reflectarray Antenna," *USNC-URSI National Radio Science Meeting*, Boulder, Colorado, Jan. 2014.
- A. H. Abdelrahman, A. Z. Elsherbeni, and F. Yang, "Triple-layer transmitarray antenna designs," USNC-URSI National Radio Science Meeting, Boulder, Colorado, USA, January 2014.
- Fatih Kaburcuk, V. Demir, A. Z. Elsherbeni, E. Arvas, "Integration of the FDTD Method into the Iterative Multi-Region Technique for Scattering from Multiple Three-Dimensional Objects," *USNC-URSI National Radio Science Meeting*, Boulder, Colorado, Jan. 2014.

### 2013

- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "Planar reflectarray antennas with spherical phase distribution for two-dimensional beam-scanning," *USNC-URSI National Radio Science Meeting*, Boulder, Colorado, Jan. 2013.

### 2012

- Payam Nayeri, Fan Yang, and Atef Z. Elsherbeni, "Radiation Analysis of Reflectarray Antennas: Numerical Approaches versus Full-Wave Simulations," *USNC-URSI National Radio Science Meeting*, Boulder, Colorado, Jan. 2012.
- P. Nayeri, F. Yang, and A. Z. Elsherbeni, "Beam-scanning Reflectarray Antennas: an overview," *URSI Radio Science Meeting*, Illinois, U.S., July 2012.
- Ahmed H. Abdelrahman, Fan Yang, and Atef Z. Elsherbeni, "Phase Range Limitations for Multi-Layer Transmitarray Antennas," *Mid-South Annual Engineering and Sciences Conference (MAESC)*, Memphis, USA 2012.
- Xue-Xia Yang, Chao Jiang, Atef Z. Elsherbeni, and Fan Yang, "A Novel Compact Printed Rectenna for Communication Systems," *Mid-South Annual Engineering and Sciences Conference (MAESC)*, Memphis, USA 2012.
- Yilin Mao, Jianxia Xue, F. Yang, and A. Elsherbeni, "Indoor Localization using RFID System," *USNC-URSI National Radio Science Meeting*, Boulder, Colorado, Jan. 2012.
- Ahmed H. Abdelrahman, Fan Yang, and A. Elsherbeni, "Phase range limitations for multi-layer transmitarray antennas," *Mid-South Annual Engineering and Sciences Conference (MAESC)*, Memphis, USA 2012.
- K ElMahgoub, A. Z. Elsherbeni, "Implementing Voltage Controlled Voltage Source in Electromagnetic Full-Wave Simulation using the FDTD Method," 34 Annual AMTA Symposium - Bellevue, Washington USA - October 24, 2012.
- K ElMahgoub, A. Z. Elsherbeni, "Implementing Current Controlled Current Source in Electromagnetic Full-Wave Simulation using the FDTD Method," IEEE ICWITS 2012 - Maui, Hawaii USA - November 11-16, 2012.
- K ElMahgoub, A. Z. Elsherbeni "Implementing Current Controlled Voltage Source in Electromagnetic Full-Wave Simulation using the FDTD Method," MECAP 2012 - Cairo, Egypt - 29-



31 December 2012.

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## 2011

- Yilin Mao, Jianxia Xue, F. Yang, and A. Elsherbeni, "Indoor Localization using RFID System," The Graduate School and the Office of Research and Sponsored Programs (ORSP) Poster Symposium, The University of Mississippi, Oxford, MS, April 8, 2011.
- Matthew J. Inman, Matthew P. Herring, Sarah J. Ferrris, William D. McArthur, Tiffany M. Robbins, William Panlener, Ahmed Hassan, and Atef Z. Elsherbeni, "MissSat Pico-Satellite Development at Ole Miss," The Graduate School and the Office of Research and Sponsored Programs (ORSP) Poster Symposium, The University of Mississippi, Oxford, MS, April 8, 2011.
- Qian Qiao, F. Yang, and A. Elsherbeni, "Bandwidth Enhancement of Circularly Polarized Patch Antenna using Lumped LC Matching Circuit," The Graduate School and the Office of Research and Sponsored Programs (ORSP) Poster Symposium, The University of Mississippi, Oxford, MS, April 8, 2011.
- Payam Nayeri, F. Yang, and A. Elsherbeni, "Radiation Analysis of Planar and Conformal Reflectarray Antennas," The Graduate School and the Office of Research and Sponsored Programs (ORSP) Poster Symposium, The University of Mississippi, Oxford, MS, April 8, 2011.
- Yilin Mao, Jianxia Xue, F. Yang, and A. Elsherbeni, "Development of an RFID System for Indoor Target Localization," USNC-URSI National Radio Science Meeting, Boulder, Colorado, 2011.
- Payam Nayeri, Kai-Fong Lee, Atef Z. Elsherbeni, and Fan Yang, "Dual-band Circularly Polarized Antennas using Unequal Arm U-slots," USNC-URSI National Radio Science Meeting, Boulder, Colorado, 2011.
- Ahmed Khidre, Kai-F. Lee, Atef Z. Elsherbeni, and Fan Yang "Wideband Dual-Beam Microstrip Antenna for Wireless Communication," *URSI Radio Science Meeting, Spokane*, Washington, 3-8 July 2011.
- A. Yu, F. Yang, A. Z. Elsherbeni, and J. Huang, "Transmitarray Antennas: An Overview," URSI Radio Science Meeting, Spokane, Washington, 3-8 July 2011.
- Leena Ukkonen, Toni Björninen, Lauri Sydänheimo, and Atef Z. Elsherbeni, "Platform Tolerant Wideband Matching Method for UHF RFID Tags," URSI Radio Science Meeting, Spokane, Washington, 3-8 July 2011.
- Qian Qiao, Fan Yang, Tamer A. Elsherbeni, Atef Z. Elsherbeni, Leena Ukkonen, Lauri Sydänheimo, "Design of RFID Tags with Integrated Temperature Sensors," URSI Radio Science Meeting, Spokane, Washington, 3-8 July, 2011.

## 2010

- Ahmed Khidre, Kai-F. Lee, Fan Yang, Atef Z. Elsherbeni, "Circularly Polarized E-Shaped Patch Antenna for Wireless applications," *URSI Radio Science Meeting*, Toronto, Canada, July 2010.
- K. ElMahgoub, F. Yang, A. Elsherbeni, V. Demir, and J. Chen, "Analysis of Skewed Grid Periodic Structures using FDTD," National Radio Science Meeting URSI, Boulder, CO, Jan. 2010.
- P. Nayeri, Y. R. Padooru, F. Yang, A. B. Yakovlev, and A. Z. Elsherbeni, "Broadband reflectarray antenna using two-layer sub-wavelength elements," URSI Radio Science Meeting, Toronto, Canada, July 2010.
- P. Nayeri, A. Yu, B. Devireddy, T. Elsherbeni, F. Yang, and A. Z. Elsherbeni, "Reflectarray: recent developments and challenges," 27th National Radio Science Conference, Menouf, Egypt, March 2010.

## 2009

- Fan Yang, Atef Elsherbeni, and Yahya Rahmat-Samii, "Nano Reflectarray Antennas for Solar Power Concentration," National Radio Science Meeting (URSI), Boston, June 2009.
- Ang Yu, Fan Yang, Atef Elsherbeni, John Huang, and Yahya Rahmat-Samii, "Optimizing aperture



efficiency of reflectarray antennas,” National Radio Science Meeting URSI, Boulder, CO, Jan. 2009.

## 2007

- T. Gerald and A. Z. Elsherbeni, “Solution of Maxwell’s equations within a 3-dimensional multi-blocked curvilinear domain,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- A. Magableh, I. Y. Abualhaol, M. M. Matalgah, and A. Z. Elsherbeni, “Simulation and performance evaluation of best hopping sequence selection protocol for increasing battery life of unmanned airborne vehicles,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- R. Hasse, D. Kajfez, V. Demir, and A. Z. Elsherbeni, “A partitioned loop antenna with omnidirectional performance at 5.8 GHz,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- R. K. Challa, V. Demir, D. Kajfez, J. R. Gladden, and A. Z. Elsherbeni, “Permittivity measurement in customized waveguide fixtures,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- Tejaswi Makineni, F. Yang, and A. Z. Elsherbeni, “Design of single and dual band circularly polarized microstrip patch antennas,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- Yanghyo Kim, F. Yang, and A. Z. Elsherbeni, “Compact artificial magnetic conductor design using spiral geometries,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- Wei-Chung Weng, F. Yang, and A. Z. Elsherbeni, “Taguchi’s method for optimizing microwave filters,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- B. Henin, A. Z. Elsherbeni, and M. H. Al Sharkawy, “Scattering of obliquely incident plane wave from an array of circular dielectric cylinders,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- M. H. Al Sharkawy, V. Demir, and A. Z. Elsherbeni, “Radiating characteristics of dipole antennas in the presence of obstacles using the iterative multi-region technique,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- A. Z. Elsherbeni, F. Yang, A. Kishk, and Chasidy West, “Investigation of RFID system performance in multiple-tag environments,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- I. Y. Abualhaol, M. M. Matalgah, and A. Z. Elsherbeni, “Adaptive power control protocol for multi-carrier wireless communication systems,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- C. H. Loo, A. Z. Elsherbeni, and F. Yang, “Passive microstrip resonator for chipless RFID tags,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- O. Hammouri, I. Y. Abualhaol, M. M. Matalgah, and A. Z. Elsherbeni, “Simulation and performance evaluation of path loss recovery protocol for unmanned airborne vehicle,” Mississippi Academy of Sciences Annual Meeting, Starkville, MS, 21-23 February 2007.
- Tejaswi Makineni, Fan Yang, and Atef Z. Elsherbeni, “Dual band circularly polarized microstrip patch antenna array,” 2007 Mid-South Area Engineering and Sciences Conference, Memphis, TN, May 2007.
- Yanghyo Kim, Fan Yang, and Atef Z. Elsherbeni, “Design of compact artificial magnetic conductor using planar square spiral,” 2007 Mid-South Area Engineering and Sciences Conference, Memphis, TN, May 2007.
- Chye-Hwa Loo, Atef Z. Elsherbeni, and Fan Yang, “Microstrip chipless RFID designs,” 2007 Mid-South Area Engineering and Sciences Conference, Memphis, TN, May 2007.





- Ang Yu, Fan Yang, and Atef Z. Elsherbeni, “Composite right/left-handed circularly polarized dual band ring antenna,” 2007 Mid-South Area Engineering and Sciences Conference, Memphis, TN, May 2007.
- Wei-Chung Weng, Fan Yang, and Atef Z. Elsherbeni, “Initializing particle swarm optimization using orthogonal arrays,” 2007 Mid-South Area Engineering and Sciences Conference, Memphis, TN, May 2007.
- Chye-Hwa Loo, A. Elsherbeni, and F. Yang, “Chipless Item-level RFID Tagging,” Sigma Xi 2007 Poster Symposium, The University of Mississippi, 2007.

## 2006

- M. H. Al Sharkawy, V. Demir, and A. Z. Elsherbeni, “Hybrid FDFD and MOM techniques in conjunction with the Iterative Multi – Region algorithm for the solution of large electromagnetic problems,” Mississippi Academy of Sciences Annual Meeting, Vicksburg, MS, 22-24 February 2006.
- Wei-Chung Weng, F. Yang, and A. Z. Elsherbeni, “Taguchi method for linear antenna array synthesis design,” Sigma Xi Graduate Students Poster Symposium, The University of Mississippi, April 2006.
- Wei-Chung Weng, F. Yang, and A. Z. Elsherbeni, “Optimization using the orthogonal arrays for unequally spaced linear array antennas and global numerical solutions,” Mississippi Academy of Sciences Annual Meeting, Vicksburg, MS, 22-24 February 2006.
- V. Demir, D. Elsherbeni, D. Kajfez, and A. Elsherbeni, “Design of a wideband microstrip power divider,” Mississippi Academy of Sciences Annual Meeting, Vicksburg, MS, 22-24 February 2006.
- L. Kuzu, V. Demir, A. Z. Elsherbeni, and E. Arvas, “Electromagnetic scattering from chiral media using the Finite Difference Frequency Domain technique,” Mississippi Academy of Sciences Annual Meeting, Vicksburg, MS, 22-24 February 2006.
- M. Inman, C. Loo, and A. Elsherbeni, “Image processing and target identification using graphical processing units,” Mississippi Academy of Sciences Annual Meeting, Vicksburg, MS, 22-24 February 2006.
- C. Loo and A. Elsherbeni, “Real-time distortion invariant object classification with SDF based FJTC,” Mississippi Academy of Sciences Annual Meeting, Vicksburg, MS, 22-24 February 2006.
- C. Loo and A. Elsherbeni, “Wobbled SDF Based real-time distortion invariant ATR,” Sigma Xi Graduate Students Poster Symposium, The University of Mississippi, April 2006.
- L. Kuzu, V. Demir, A. Z. Elsherbeni, and E. Arvas, “Electromagnetic scattering from chiral material using the Finite Difference Frequency Domain method,” The Twelfth Biennial IEEE Conference on Electromagnetic Field Computation CEFC 2006, Miami, FL, USA, April 30 - May 3, 2006.
- M. J. Inman and A. Z. Elsherbeni, “Acceleration of field computations using graphical processing units,” The Twelfth Biennial IEEE Conference on Electromagnetic Field Computation CEFC 2006 Miami, FL, USA, April 30 - May 3, 2006.
- L. Kuzu, V. Demir, A. Z. Elsherbeni, and E. Arvas, “Electromagnetic scattering from arbitrarily shaped three-dimensional chiral objects using the finite difference frequency domain method,” National Radio Science Meeting (URSI), p. 333, Albuquerque, NM, USA, 2006.

## 2005

- Mohamed Al Sharkawy, Veysel Demir, Atef Z. Elsherbeni, “The Iterative Multi-Region Technique Based on the FDFD Method for Electromagnetic Scattering from Multiple Three Dimensional Objects,” Progress in Electromagnetics Research Symposium (PIERS), Hangzhou, Zhejiang, China, 22 - 26 August 2005.
- Fan Yang, Veysel Demir, Dalia Elsherbeni, Atef Z. Elsherbeni, and Abdelnasser Eldek, “Enhancing antenna radiation characteristics by using electromagnetic band gap structures,” Memphis Area Engineering Societies Conference (MAESC), Memphis, TN, 11 May 2005.
- Mohamed Al Sharkawy, Veysel Demir, and Atef Z. Elsherbeni, “Iterative Multi-Region technique for electromagnetic scattering from large scale problems,” Memphis Area Engineering Societies



Conference (MAESC), Memphis, TN, 11 May 2005.

- M. H. Al Sharkawy, V. Demir, and A. Z. Elsherbeni, "Using the Iterative Multi-Region Technique to Study the Scattering from Large Electromagnetic Problems Excited by an Incident Plane Wave," Sigma Xi Graduate Students Poster Symposium, The University of Mississippi, April 2005.
- Veysel Demir, Atef Elsherbeni, Denchai Worasawate, Ercument Arvas, "A graphical user interface (GUI) for plane wave scattering from chiral spheres," Mississippi Academy of Sciences Annual Meeting, Oxford, MS, 17-18 February 2005.
- M. Inman, Atef Elsherbeni, C. E. Smith, "Use Of Graphic Processing Units For General Scientific Computations," Mississippi Academy of Sciences Annual Meeting, Oxford, MS, 17-18 February 2005.
- Veysel Demir, Atef Elsherbeni, "Finite-difference time-domain simulation of human head," Mississippi Academy of Sciences Annual Meeting, Oxford, MS, 17-18 February 2005.
- Mohamed Al Sharkawy, Veysel Demir, Atef Z. Elsherbeni, "Iterative Multi-Region technique for large electromagnetic scattering problems," Mississippi Academy of Sciences Annual Meeting, Oxford, MS, 17-18 February 2005.
- Wei-Chung Weng, Veysel Demir, Atef Z. Elsherbeni, Charles E. Smith, "Analysis of inverted-F antennas using the Finite Difference Time Domain method," Mississippi Academy of Sciences Annual Meeting, Oxford, MS, 17-18 February 2005.
- Abdelnasser A. Eldek, Atef Z. Elsherbeni and Charles E. Smith, "Wideband Two-Dimensional Arrays Of Microstrip-Proximity Fed Rectangular Slot Antennas With Low Sidelobe Level," Mississippi Academy of Sciences Annual Meeting, Oxford, MS, 17-18 February 2005.
- Walker Hunsicher, Atef Z. Elsherbeni and Charles E. Smith, "Analysis and Design of Printed Vivaldi Antenna for Wideband Applications," Mississippi Academy of Sciences Annual Meeting, Oxford, MS, 17-18 February 2005.
- Mohamed Al Sharkawy, Veysel Demir, and Atef Z. Elsherbeni, "Educational Software Package for Electromagnetic Scattering from Simple Two- and Three-Dimensional Objects," URSI National Radio Science Meeting, Boulder, CO, 4-7 January 2005.
- Abdelnasser A. Eldek, Atef Z. Elsherbeni, and Charles E. Smith, "A Modified Bow-Tie Antenna for Single and Dual Polarized Wideband Phased Array Applications," 2005 National Radio Science Meeting, Boulder, CO, 4-7 January 2005.
- Abdelnasser A. Eldek, Atef Z. Elsherbeni, and Charles E. Smith, "Modified-Fed Printed Lotus Antenna for Wideband Wireless Communication Systems," 2005 National Radio Science Meeting, Boulder, CO, 4-7 January 2005.
- R. Mantena, A. Elsherbeni, J. Sharma, P. Gloyer, C. Loo, M. Anakapalli, A. Radhakrishnan, and P. Srinivasan, "Evaluation and field testing of low-cost sensors for remote sensing applications," Enterprise for Innovative Geospatial Solutions Research Symposium, Stennis Space Center, MS, August 10, 2005.

### 2004

- Abdelnasser A. Eldek, Atef Z. Elsherbeni and Charles E. Smith, "Characteristics of microstrip-fed printed bow-tie antenna for wideband phased array systems," IEEE International Symposium on Antennas and Propagation and URSI National Radio Science Meeting, Monterey, CA, June 2004.
- Abdelnasser A. Eldek, Atef Z. Elsherbeni and Charles E. Smith, "The Application of Nanotechnology for the Design of reconfigurable planar Antennas," Memphis Area Engineering Societies Conference (MAESC 2003), May 12, 2004.
- Aik Min Choong, Charles E. Smith, and Atef Z. Elsherbeni, "Numerical Analysis of Force and Torque in Magnetostatic Problems using Magnetic Scalar Potential," Journal of The Mississippi Academy of Sciences, p. 98, February 2004.
- Abdelnasser A. Eldek, Atef Z. Elsherbeni, and Charles E. Smith, "Analysis and design of a novel



coplanar Waveguide fed slot antenna for ultra wideband applications,” Journal of The Mississippi Academy of Sciences, p.100, February 2004.

- Mohamed Al Sharkawy and Atef Z. Elsherbeni, “Simulation of Electromagnetic Scattering from Two Dimensional Chiral Objects using an Iterative Procedure,” Journal of The Mississippi Academy of Sciences, p. 100, February 2004. (Best paper, Engineering and Physics Division)
- John M. Earwood, Matthew J. Inman, Atef Z. Elsherbeni, and Charles E. Smith, “Bayesian Inference Techniques for the Design of Antenna Arrays,” Journal of The Mississippi Academy of Sciences, p. 101, February 2004.

## 2003

- Atef Z. Elsherbeni, R. Christopher-Lee Riley, and Matthew J. Inman, “A Finite Difference Simulation Package for Quasi-Static Electromagnetic Analysis,” Memphis Area Engineering Societies Conference (MAESC 2003), May 15, 2003.
- Santosh Parakkal, Mark D. Tew, and A. Z. Elsherbeni, “Scattering by a Circular Conducting Cylinder Coated by an Inhomogeneous Dielectric Shell,” Memphis Area Engineering Societies Conference (MAESC 2003), May 15, 2003.
- Atef Z. Elsherbeni, Mohamed H. Al Sharkawy, and Samir F. Mahmoud, “Electromagnetic Scattering from a Chiral Strip Simulated by Circular Cylinders,” Memphis Area Engineering Societies Conference (MAESC 2003), May 15, 2003.
- Matthew J. Inman, A. Z. Elsherbeni, and C. E. Smith, Moving Object Analysis and Simulation Using the Finite Difference Time Domain Technique,” Memphis Area Engineering Societies Conference (MAESC 2003), May 15, 2003.
- Edward Woo, A. Z. Elsherbeni, and C. E. Smith, “Satellite and Earth Computer Simulation for Remote Sensing Applications,” Memphis Area Engineering Societies Conference (MAESC 2003), May 15, 2003.
- Paul L. Chin, A. Z. Elsherbeni, and C. E. Smith, “Characteristics of Multiple Coplanar Waveguide Structures,” Memphis Area Engineering Societies Conference (MAESC 2003), May 15, 2003.
- Abdelnasser A. Eldek, Atef Z. Elsherbeni, and C. E. Smith, “Quasi-Static Characteristics of a Two-Conductor Microstrip Transmission Line Above Free Space Tunnels,” Memphis Area Engineering Societies Conference (MAESC 2003), May 15, 2003.
- Brian T. McDaniel, Charles E. Smith, Alexander B. Yakovlev, Atef Z. Elsherbeni, and Darko Kajfez, “Graphical User Interface (GUI) and Analysis Software Using MATLAB and Related Toolboxes for HPIB Data Acquisition and processing,” Sigma Xi Graduate Students Poster Symposium, The University of Mississippi, April 2003.
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