

# AP-S 2014 PRESENTATIONS FROM THE EMC LAB OF PENN STATE

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Listed below are the titles of the presentations from the EMC Lab of Penn State presented at the 2014 International Symposium on Antennas and Propagation in Memphis, TN:

- A Technique for Solving Multiscale Problems by Hybridizing Frequency and Time Domain Algorithms
- Electromagnetic Sub-wavelength Imaging Using The Basis Matrix Method In Conjunction with Singular Value Decomposition (SVD) Algorithm [presentation]
- Parallelized Multilevel Characteristic Basis function Method (MLCBFM) Combined with Adaptive Cross Approximation (ACA) for the Analysis of the Scattering from electrically large Rough surfaces
- A Technique for Designing Flat Lenses Using Artificially Engineered Materials
- Modeling Logging While Drilling Systems at Low Frequencies Using the Finite Difference Time Domain (FDTD)
- Combining the FDTD Algorithm with Signal Processing Techniques for Performance Enhancement
- Broadband Flat-base Luneburg Lens Antenna for Wide Angle Scan
- Performance Enhancement of A Dual-Loop FSS-based Absorber
- Design of Antennas with an Iso-flux Pattern to Achieve Suppression of Radiation along Zenith
- Performance Enhancement of Aperture Antennas Used for Estimation of Direction of Arrival (DOA)
- Fast Computing of Large 3D Dielectric Forest Scattering Problems Using the Characteristic Basis Function Method with the Adaptive Cross Approximation Algorithm

Keywords: Multi-scale, Hybrid methods, FDTD, MoM, Singular Value Decomposition (SVD), Sub-wavelength imaging, Characteristic Basis Function Method (CBFM), Parallelized Multilevel Characteristic Basis Function Method (MLCBFM), Adaptive Cross Approximation (ACA), Electrically large problems, Rough surface, Lens design, Metasurfaces, Artificially engineered materials, Low-frequency, FDTD, Drilling, Signal processing, Luneburg lens, Wide-angle scan, Absorber, Wideband absorption, FSS-based Absorber, Direction of Arrival (DOA), Iso-flux pattern, Guided Wave antennas

Appended are the presentation materials. The abstracts associated with these presentations may be found by visiting the link: <http://www.2014apsursi.org/>