

IEEE Miami Section Seminar Announcement

***"Pushing the Boundaries of Computational Electromagnetics
– Application to Antenna Designs, Placement, Co-site
Interference Simulations and Digital Twins"***

Wednesday, October 9, 2024 | 12:00 PM EST

Location: EC 3930, 10555 W Flagler St, Miami, FL 33174

Zoom - Meeting ID: 845 3917 2990 | Passcode: E1SeCT



Dr. C. J. Reddy,

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Summary: This talk will focus on advanced CEM simulation tools that incorporate numerical methods, such as Method of Moments (MoM), Multilevel Fast Multipole Method (MLFMM), Finite Element Method (FEM), Finite Difference Time Domain (FDTD), Physical Optics (PO), Ray Lancing Geometrical Optics (RL-GO), and Uniform Theory of Diffraction (UTD). As the complexity of connected devices increases each day, designers are taking advantage of AI/ML to generate trained models for their physical antenna designs and perform fast and intelligent optimization on these trained models. Using the trained models, different optimization algorithms and goals can be run quickly, in seconds, that can be utilized for comparison studies, stochastic analysis for tolerance studies etc. Use of AI/ML, many design iterations can be performed in a short period and reducing the time to market. This talk will also focus on the emerging topics such as Digital Twins.

Speaker Bio: Dr. C.J. Reddy is Vice President, Business Development-Electromagnetics for Americas at Altair. Dr. Reddy was awarded the Natural Sciences and Engineering Research Council (NSERC) of Canada Visiting Fellowship to work at Communications Research Center in Ottawa during 1991-1993 and was awarded the US National Research Council (NRC) Resident Research Associateship in 1993 to work at NASA Langley Research Center in Hampton, Virginia. While conducting research at NASA Langley, he developed various computational codes for electromagnetics and received a Certificate of Recognition from NASA for development of a hybrid Finite Element Method/Method of Moments/Geometrical Theory of Diffraction code for cavity backed aperture antenna analysis. He also worked as Research Professor at Hampton University from 1995 to 2000. Dr. Reddy was the President of Applied EM, Inc (2000-2017) where he led several Phase I and Phase II SBIR projects for the DoD and NASA.

For more information, please contact:

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