

Alex Yuffa

Title of Talk: A New Formulation of the Integral Equation Method for Electromagnetic Scattering

Abstract:

We have developed a new formulation of the integral equation method by choosing electric field and its normal derivative as the boundary unknowns. Our formulation provides a significant computational advantage over the standard Stratton-Chu formulation. Because our impedance matrix has three diagonal blocks and is 80% sparse. We used our new formulation to model the behavior of light emanating from an NSOM fiber tip as a test of our formalism.