

Meeting: 1005, Newark, Delaware, SS 3A, Special Session on Mathematical Methods in Electromagnetic Wave Propagation

1005-65-171 **Joseph F Coyle*** (jcoyle@monmouth.edu), 400 Cedar Ave., West Long Branch, NJ 07746.
hp-Version of an Overlapping Solution Technique for Two Dimensional Electromagnetic Scattering. Preliminary report.

The finite element implementation of an overlapping solution technique used for solving a two dimensional time-harmonic electromagnetic scattering problem is revisited in a more general setting. In particular, results concerning convergence for piecewise p^{th} -order polynomial finite elements will be discussed as well as issues regarding implementation. These topics are illustrated by a series of numerical examples. (Received February 08, 2005)