Temple University Mathematics Colloquium

Charles L. Epstein

University of Pennsylvania

will speak on

Solving Maxwell's equations in exterior domains

ABSTRACT:

An important problem in scattering theory involves solving Maxwell's equations, at a fixed frequency, in the exterior of a bounded object. This entails imposing an outgoing boundary condition "at infinity." To do this efficiently, one usually represents the solution as a multiple layer potential over the boundary of the region. The choice of representation can dramatically effect the computational problems one encounters. We present a novel representation formula that does not suffer from either interior resonances or low frequency breakdown.

Monday, 21 April 2008
Lecture at 4:00 pm
Coffee, tea, and refreshments from 3-5 pm
Room 617, Wachman Building
Department of Mathematics