1057-35-411 **Matthew Wright*** (mwright@missouristate.edu), Mathematics Department, Missouri State University, 901 S. National Ave., Springfield, MO 65897. *Transmission problems for higher order equations in Lipschitz domains.* Preliminary report.

A transmission boundary value problem seeks to find solutions of a partial differential equation in both the interior and exterior of a fixed boundary that interact in a precise fashion along the boundary. This talk will explain the connections between transmission problems and more standard Dirichlet and Neumann problems and will also demonstrate how the method of layer potentials can be applied to solve higher order transmission problems in Lipschitz domains, including the biharmonic transmission problem. (Received January 26, 2010)