1124-65-279 **Susanne C Brenner** (brenner@math.lsu.edu), Department of Mathematics, Center for Computation and Technology, Louisiana State University, Baton Rouge, LA 70803, **Christopher B Davis*** (cbdavis@tntech.edu), Department of Mathematics, Tennessee Technological University, Cookeville, TN 38505, and **Li-yeng Sung** (sung@math.lsu.edu), Department of Mathematics, Center for Computation and Technology, Louisiana State University, Baton Rouge, LA 70803. *A two level additive Schwarz domain decomposition preconditioner for a partition of unity method.*

In this talk, we investigate the use of a two level additive Schwarz domain decomposition preconditioner applied to a partition of unity method as it is applied to the biharmonic problem. The numerical algorithm will be presented and analyzed and numerical examples will be given to demonstrate the effectiveness of the method. (Received September 11, 2016)