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**Susanne C. Brenner, Eun-Hee Park\*** (epark2@math.lsu.edu) and **Li-yeng Sung**. *A nonoverlapping domain decomposition preconditioner for a symmetric interior penalty Galerkin method.*

In this talk we will discuss a preconditioner for a symmetric interior penalty Galerkin method for second order elliptic problems. This preconditioner is based on balancing domain decomposition by constraints (BDDC). Theoretical results on the condition number estimate of the preconditioned system will be presented along with numerical results. (Received September 15, 2011)