1044-65-248   **Younbae Jun*** (`yjun@uwa.edu`), Department of Mathematics, University of West Alabama, Station 7, Livingston, AL 35470. *Domain decomposition method for solving parabolic partial differential equations.*

A non-overlapping domain decomposition algorithm to solve two- or three-dimensional parabolic partial differential equations is presented. It has been shown that the algorithm is unconditionally stable, efficient, and highly parallelizable. Spectral radii for the interface and interior region, maximum error, and speedup curves are provided. (Received September 03, 2008)