

Multiplicative Schwarz Method For Time-dependent Problems

Hongxing Rui

SHANDONG UNIVERSITY, CHINA

hxrui@sdu.edu.cn

Some multiplicative Schwarz methodbased on domain decomposition, combining with characteristic method, for time-dependent convection-diffusion problem are presented. We consider the relation between the convergence rate and the discretization parameters, including the diameters of the subdomains, the spacial meshsize and time increment. We give the error estimates. Finally we will present some numerical examples.