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ON THE DEFINITION OF THE SUPG PARAMETER*

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Abstract. We consider the SUPG finite element method for two–dimensional steady scalar convection–diffusion equations and discuss a recently introduced definition of the SUPG stabilization parameter along outflow Dirichlet boundaries for problems containing interior layers.

Key words. convection–diffusion equations, singularly perturbed problems, boundary layers, spurious oscillations, streamline upwind/Petrov–Galerkin (SUPG) method, SOLD methods

AMS subject classifications. 65N30

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