Staibilization parameters in SUPG and PSPG formulations

http://www.firstlight.cn 2002-06-29

We describe how we determine the stabilization parameters and element length scales used in the finite element formulations in fluid m echanics. These formulations include the interface-tracking and interface-capturing techniques we developed for computation of flow proble ms with moving boundaries and interfaces. The stabilized formulations we focus on are the streamline-upwind/Petrov-Galerkin (SUPG) an d pressurestabilizing/Petrov-Galerkin (PSPG) methods. The stabilization parameters described here are designed for the semi-discrete and spa ce-time formulations of the advection-di®usion equation and the Navier-Stokes equations of incompressible flows.

存档文本