

國家理論科學研究中心學術演講

NCTS/NCU Seminar on Scientific Computing

主講人：謝博文 教授 (國立中興大學應用數學系)

題目：IAS scheme for strongly coupled systems of singularly perturbed equations

時間：2016年11月14日(星期一) 10:00 ~11:30

地點：國立中央大學鴻經館M107

Abstract:

In this talk, we will first introduce the Il'in-Allen-Southwell (IAS) scheme, which is a robust finite difference scheme for treating scalar singularly perturbed convection-diffusion equations. The convergence of the IAS scheme is uniformly in the perturbation parameter in the discrete maximum norm. However, to our knowledge, it has never been achieved before in the literature to successfully construct an effective IAS scheme for strongly coupled systems of singularly perturbed convection-diffusion equations. Using the MHD duct flow as a model problem, we will then explain the difficulties that arise and give some ideas to capture the essence of the problem.

Organizer: 楊肅煜 教授 (國立中央大學數學系)

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