

数学与系统科学研究院
计算数学所学术报告

报告人: 侯磊教授 (上海大学)

报告题目:

A Computational Study on the Non-Newtonian Impact Problem

邀请人: 曹礼群研究员

报告时间: 2007年11月1日(周四)

上午 10:30—11:30

报告地点: 科技综合楼三层 311

计算数学所报告厅

Abstract:

The non-linear numerical method is applied to simulate the viscous-elastic-plastic deformation and its stress over-shoot. The resolution agrees with the theoretical results from the non-Newtonian stress (convective Maxwell) equation. The numerical result of the impact acceleration (G) has been estimated by the adaptive mesh solutions. Therefore the complex anisotropic material stress distribution in the 3-dimensional large deformation has been obtained. Also the posteriori-estimate solver has been used for the numeric convergence when the impact happening. This part of simulation is very interesting for the passive safety in automotive protection analysis and airflow triggering control. A good numeric confirmation has been given by the singular perturbation for a over-stretch limit in the impact direction.

欢迎大家参加！