

数学与系统科学研究院

计算数学所学术报告

报告人: **Dr. Maria Varygina**

(*Institute of Computational Modelling of SB RAS*)

报告题目:

Parallel computations in dynamic problems of moment continua on multiprocessor computer systems

邀请人: 谢和虎副研究员

报告时间: **2011 年 7 月 13 日 (周三)**

上午 9: 30-10: 30

报告地点: **科技综合楼三层 311**

计算数学所报告厅

Abstract:

Computational algorithm for the solution of 2D and 3D dynamic problems of the Cosserat elasticity theory using multiprocessor computer systems is worked out. The algorithm is based on the two-cyclic decomposition method with respect to the spatial variables in combination with the explicit monotone finite-difference ENO--scheme for solving 1D problems adapted for the calculation of discontinuities. Computations of 3D Lamb's problem the action of concentrated load on the surface of a homogeneous elastic half-space and the problem on the action of concentrated impulsive periodic load are performed. It is shown that couple-stressed continuum possess eigenfrequency of acoustic resonance of a material which depends only on parameters of elasticity of material and the size of heterogeneity and doesn't depend on the size of a domain.

欢迎大家参加!