数学与系统科学研究院

计算数学所学术报告

报告人： Prof. Elena Celledoni

(Norwegian University of Science and Technology)

报告题目： A geometrically exact rod model and its Hamiltonian structure

邀请人： 洪佳林研究员

报告时间： 2008 年 6 月 12 日(周四)

上午 9:00—10:00

报告地点： 科技综合楼三层311

计算数学所报告厅

报告摘要：

We consider geometrically accurate models of rod dynamics that arise in the simulations of pipeline laying for oil and

gas industry. We consider rod models based on PDEs where the configuration of the centreline of the rod is parametrized via arc–length, and the movement of a rigid frame attached to each of the cross sections of the rod is considered.

This was first presented in a geometric context in the pioneering work of J. C. Simo in the eighties and nineties.

We transform the model in material coordinates and we discuss its Hamiltonian formulation. Numerical approaches for the discretization of this problem will also be addressed.

欢迎大家参加！