

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Elizabeth Mansfield**

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报告题目:

Introduction to Moving Frames

邀请人: 胡星标 研究员

报告时间: **2015 年 8 月 9 日 (周日)**

下午 16:30~17:30

报告地点: 数学院南楼七层

702 会议室

Abstract:

I will give a brief overview, suitable for graduate students, of the definition and construction of the Lie group based moving frame, and then I will talk about applications to the equivalence problem, to the invariant evolution of curves, to solving invariant ODE, to the algebra of differential invariants, and to the variational calculus. I will finish by briefly introducing recent work with Gloria Mari Beffa: a construction of multispace, a manifold which contains both finite difference and Taylor polynomial approximations (ie the jet bundle) to functions defined on surfaces. This will be used to construct a finite difference Lagrangian for shallow water systems which not only has all the correct continuum limits, but is invariant under a discretisation of the particle relabelling symmetry, needed for the conservation of potential vorticity.

欢迎大家参加！