报告人： **Prof. Luca Dieci**

（ *School of Mathematics, Georgia Institute of Technology* ，

Tang Aoqing visiting professor at Jilin University ）

报告题目：

Filippov sliding motion on a co-dimension 2 discontinuity surface

邀请人： 洪佳林 研究员

报告时间：**2013** 年 **7** 月 **10** 日（周三）

下午 **16:00-17:00**

报告地点： 科技综合楼三层 **311**

计算数学所报告厅

Abstract：

We consider sliding motion, in the sense of Filippov, on a discontinuity surface Σ of co-dimension 2, intersection of two co-dimension 1 singularity surfaces. In particular, we consider a certain Filippov sliding vector field f_F recently adopted by Dieci and Lopez, and show that it enjoys several interesting properties.

First, restricting to the case of nodally attractive Σ, we show that this Filippov vector field is the limiting vector field for a natural regularization of the original problem.

Then, we characterize, and restrict to, the general case of Σ being attractive through sliding, and show that f_F exists and is unique. We also propose a characterization of first order exit conditions, clarify its relation to generic (co-dimension 1) losses of attractivity for Σ, and examine what happens to the dynamics on Σ for the aforementioned vector field f_F.

--This talk is based upon the following works--

"A Filippov sliding vector field on an attracting co-dimension 2 discontinuity surface, and a limited bifurcation analysis", by L. Dieci, C. Elia, L. Lopez. [J.Diff. Eq.s, 2013]

"Regularizing piecewise smooth differential systems: co-dimension 2 discontinuity surface", by L. Dieci, N. Guglielmi. [J. Dynamics & Diff. Eq.s, 2013]

欢迎大家参加！