



## 复旦大学数学科学学院 数学综合报告会

报告题目: **Nematic Liquid Crystals in the whole space**

报告人: Dr. Francesco De Anna

(Penn State University)

报告时间: 2017-07-10 星期一 14:00 - 15:00

报告地点: 光华东主楼 1801

摘要: We deal with several models treating the time-evolution of nematic liquid crystals. We analyze the major theories such as the Ericksen-Leslie and the Beris-Edwards, for nematics living in the whole space. This allows us to successfully take advantage of Fourier analysis and paradiifferential calculus tools when performing global-in-time well-posedness. The class affinity of the considered solutions is that of Besov spaces.

We finally take into consideration the formalism of Qian-Sheng, modeling the inertial contribution of twisting constitutive molecules. We perform the existence of the so-called twist-wave solutions.

非线性数学模型与方法教育部重点实验室  
中法应用数学国际联合实验室  
上海市现代应用数学重点实验室  
复旦大学数学研究所