数学与系统科学研究院

计算数学所学术报告

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报告题目：

Analytical results for the Lagrangian averaged Euler equations

邀请人：　明平兵研究员

报告时间：**2011** 年 **8** 月 **16** 日（周二）

上午 **10：00-11：00**

报告地点：　科技综合楼三层 **311**

计算数学所报告厅

Abstract:

3D Lagrangian averaged Euler equation (also known as Euler-alpha equation) has both practical and theoretical significance. On one hand, it can be applied to the study of turbulence as a closure model; on the other hand, it enjoys similar geometrical and analytical structures as that of the 3D Euler equations and thus can be studied as a regularized model of the latter. In this talk, we will discuss some analytical results for 3D Lagrangian averaged Euler equation, such as local well-posedness in Triebel-Lizorkin spaces, a Beale-Kato-Majda type necessary and sufficient condition for global existence involving the stream function, and new sufficient conditions for global existence in terms of mixed Lebesgue norms of the generalized Clebsch variables.

This is joint work with Zhichun Zhai.

欢迎大家参加！