

数学与系统科学研究院

计算数学所学术报告

报告人: **Prof. Craig C. Douglas**

(*University of Wyoming*)

报告题目:

**Dynamic Tracking and Identification
of Contaminants in Water Bodies
Using Multiscale Models and Sensors**

邀请人: 崔涛 副研究员

报告时间: 2018年7月6日 (周五)

上午 10:00-11:00

报告地点: 数学院南楼六层

602 教室

Abstract:

We modify a well known mathematical model of fluid flow in water bodies in order to improve the computational accuracy over time. Our goal is to backtrack observed pollution clouds in order to find the one or more polluters. We use a set of remote sensors and data assimilation on much smaller grid within the large computational mesh. We solve a multiscale interpolation problem on a coarse time scale that provides updates to the predictions from our regular model. Over a sliding window of time, we see far greater accuracy. The technique is similar to solving inverse problems, but less expensive.

This is joint work over a period of years with Li Deng, Yalchin Efendiev, Richard Ewing, Raytcho Lazarov, and Robert Lodder.

欢迎大家参加！