The Statistical and Applied Mathematical Sciences Institute
and the Institute for Mathematics Applied to Geosciences
Announce a Summer School on

THEORY PRACTICE
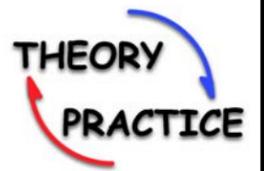
Fusing Geophysical Models with Data

Boulder, CO **13-17 June 2005**
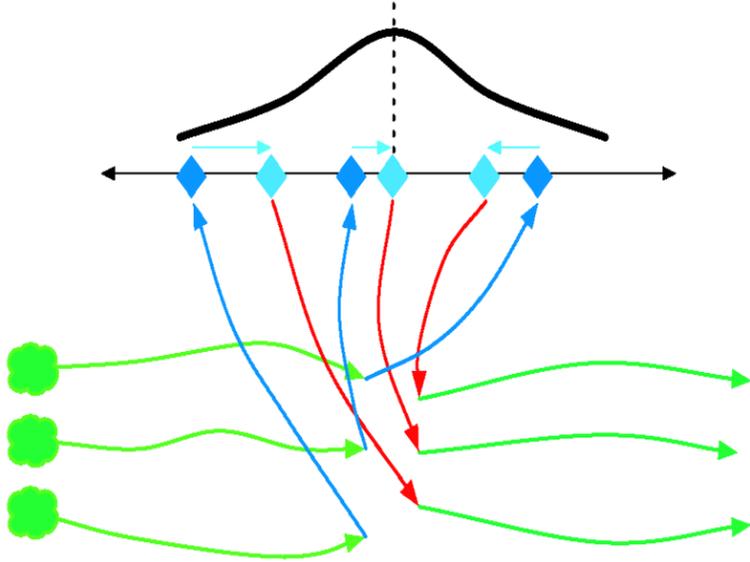
The Workshop

The ability to combine observations with a numerical model is critical to understanding and predicting geophysical systems like the earth's atmosphere. This summer school will be presented by statisticians and geophysicists who are leaders in the field of data assimilation. By bridging the gap between basic and applied research on ensemble data assimilation, the workshop will provide participants with an understanding of the most recent advances and the most critical unsolved problems in this rapidly growing field. Lectures and discussion will be supplemented by a series of computational explorations using the Data Assimilation Research Testbed facility at the National Center for Atmospheric Research. By the end of the workshop, participants will be equipped with the tools to attack the problems posed in the lectures and to undertake research in data assimilation for a large variety of applications.

Topics include:
• Bayesian foundations of data assimilation and ensemble filtering
• Estimating parameters for large geophysical models
• Design of effective and cost-efficient observing systems
• Data assimilation of Lagrangian observations

Applications include:
Climate modeling, weather prediction, and air quality

Organization

This workshop is part of the SAMSI program on Data Assimilation for Geophysical Systems and is coordinated with NCAR's Institute for Mathematics Applied to Geosciences and the Data Assimilation Initiative. A specific data assimilation problem will be the focus of each day's activities. Morning sessions will include invited lectures from atmospheric scientists working on data assimilation and statisticians working on related problems. Afternoon sessions will use computer exercises to gain enhanced understanding of the topics presented in lecture. Meetings will be at the National Center for Atmospheric Research's Mesa Lab, located on the foothills above beautiful Boulder, Colorado.

Participation and Support

Funding is available to support attendance with special emphasis given to graduate students and other young researchers. Statisticians who are not working directly on the workshop topics, yet have an interest in the program, are also encouraged to apply, as are members of under-represented groups.

Application Procedures

A letter of application stating your research interests is required. If a graduate student, please include a description of relevant coursework and training and a short letter of recommendation from a faculty advisor. Workshop registration and information can be found at www.image.ucar.edu/DAI/Workshop2005.

Applications and recommendations must be received by **31 March 2005**. Decisions will be made by 7 April 2005. For additional information contact:

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To learn more about the Institute for Mathematics Applied to Geosciences at NCAR, visit www.image.ucar.edu and for SAMSI, visit www.samsi.info.

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