

# COLLOQUIUM

## Computational Tools for Data Assimilation

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The task of providing an optimal analysis of the state of the atmosphere requires the development of novel computational tools that facilitate an efficient integration of observational data into models.

We introduce variational and statistical estimation approaches to data assimilation. We discuss important computational aspects including the construction of efficient models for background errors, the construction and analysis of discrete adjoint models, new approaches to estimate the information content of observations, and hybrid variational-ensemble approaches to assimilation.

Data assimilation results for several real problems are used to illustrate the power of the proposed methods.

The lecture will take place in Thackeray 704 at 3:30pm.

Refreshments will start at 3:00pm.