Fall 2025 Graduate Student Opportunities in Data Assimilation

Overview

Are you passionate about data assimilation (DA), the study of combining numerical models and observations? If so, this might be the right opportunity for you. I am looking for motivated graduate students to join my research group in Fall 2025. There are several topical areas of interest:

1. Development and analysis of non-Gaussian DA algorithms.
2. Building DA software for a hierarchy of atmospheric models (e.g., SPEEDY and OpenIFS).
3. Studying the impact of new DA methodologies on high-impact weather processes (e.g., severe convection, hurricanes and river streamflow).
4. Integrating DA algorithms into AI-based atmospheric models.

How to apply

Prospective students should email Prof. Chipilski at `hchipilski@fsu.edu` with the subject line "`Fall 2025 Applications`", and include (i) a short description of their research interests as well as (ii) a CV/resume highlighting their training and experiences.

Qualifications

- Bachelor or Master degree in Meteorology/Atmospheric Science, Computational Mathematics/Statistics or other related fields [REQUIRED].
- Demonstrated scientific programming skills with scripting and compiled languages (e.g., Python and FORTRAN) [REQUIRED].
- Past experience with data assimilation, numerical weather prediction and machine learning software [PREFERRED].

Academic opportunities

The Department of Scientific Computing was one of the first programs in the nation to offer competitive graduate programs in Computational Science with specializations in Atmospheric Science, Biochemistry, Biological Science, Geological Science, Materials Science and Physics (see `https://www.sc.fsu.edu/education` for more information). Together with the newly developed Master of Data Science program, incoming students will be able to work and study in a highly interdisciplinary environment. They will also benefit from Prof. Chipilski's connections with various national labs (NCAR, NASA JPL, NOAA and NRL), creating additional research and training opportunities.