

## Weather and Climate, a Playground for Big Data and Visualization

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Room 30201 (former 3137)

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### Abstract

Weather and climate science is among the most demanding in terms of challenges for computation and data. Terabytes of data are produced every day for operational forecasting, but at the end most people are only interested in a few symbols on their favorite weather app worth a few kilobytes. I will touch on the principles of weather forecasting and the computational demands and challenges for data input and transfer. In particular, I will also focus on current research questions with respect to storm development and state-of-the-art analysis techniques, including feature detection and data reduction using theoretical assessments of the flow evolution.

I will also highlight challenges in visualizing our conceptual understanding of the workings of the weather and point to open questions regarding best use of the available data given the current research questions, also with respect to ensemble prediction. As an outlook, I will also touch on data availability at our institute for possible collaboration and close with open questions from the atmospheric science side.

