



Thursday, November 16th 2017
11:00 am
Open to all seminar

"Earth and climate science and the age of big data : opportunities and challenges"

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Abstract

The scientific fields of earth and climate sciences rely on a combination of observational data, numerical model data and theoretical understanding based on first principle physics. As many fields of modern science, earth and climate sciences are facing challenges because of the exponential growth of available data (coming from satellites, in-situ observations and numerical models) but also opportunities because of the algorithms and technologies coming from the modern data science stack. In this seminar, I will describe how the scientific approaches in earth and climate sciences are fundamentally questioned by the emergence of these new practices and how our scientific fields may gradually evolve in response to these drivers. The seminar will in particular describe some of the conditions for earth and climate sciences to fruitfully go through this transition. Illustrations and examples will be drawn from computational fluid dynamics, physical oceanography, atmospheric science and climate science.

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