



Compressive Sensing and Dynamical Systems

Christian Pape and Anselmo Garcia Cantu Ros
Potsdam Institute for Climate Impact Research

Compressive sensing (or compressed sensing) is a relatively new approach for signal reconstruction which makes use of the redundancy of many real world signals. Image reconstruction and tomography are some of its successful applications. Potential applications include remote sensing and hydrology. Recently, some papers have been published on the prediction of dynamical systems using compressive sensing. Building on that, we present in this session our ongoing work and results on the use of compressive sensing for the prediction of dynamical systems. A focus is on multiscale systems as they are particularly important for the description of the atmospheric and the climate system.