



Stochastic space-time model for multisource data - Application in Oceanography

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There is an important demand in areas such as environmental and geophysical science for stochastic space-time models. Linear state-space models (also called dynamical linear models) and the Kalman Filter are commonly used for analysing spatially and temporally dependent data. This study focus on a particular remotely sensed variable, the Sea Surface Temperature. SST is acquired for several satellite sensors currently delivering data with various resolutions (1km to 25 km), sampling rates, estimation principles (infrared or microwave) and affected differently by environmental covariates (clouds, rain, aerosols, wind, humidity, ...). All these observations can be either redundant with possible important discrepancies between each other, or exhibit partial/large gaps over cloudy or rainy areas. In this talk, we will discuss how we can merge all this information using a state-space model, in order to produce near real-time analysis of SST fields.