

MINI-SEMINAR FOR SECOND-YEAR PH.D. STUDENTS

Department of Statistics

Estimation of Space-Time Covariance Matrix with Missing Observation

by

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ABSTRACT

Estimation of the covariance structure is very important in spatial interpolation problem and various parametric assumption could be taken to explore the structure. One critical issue here is that the selected structure can be considerably biased if our assumption is far from the truth. So to provide a guideline, we need a raw estimator of covariance matrix which is suggested by the data. Sample covariance matrix is one of the reasonable candidates. However with many missing observations which is often the case in spatial problem, it is not guaranteed to be positive definite. So the problem is that how can we provide a raw estimator of space-time covariance matrix which has positive definiteness. In this talk, I will mainly talk about these issues and present related approaches to deal with it.