

UNIVERSITY OF SYDNEY

SCHOOL OF MATHEMATICS AND STATISTICS

Statistics Seminar

Friday, 27 May, 2.00pm

Carslaw 173

**BOOTSTRAP FOR IRREGULARLY
SPACED SPATIAL DATA**

**Professor S.N. Lahiri
Iowa State University**

Abstract

In this talk, we consider the problem of bootstrapping a class of spatial regression models when the sampling sites are generated by a (possibly nonuniform) stochastic design and are irregularly spaced. It is shown that the natural extension of the existing block bootstrap methods for grid spatial data does not work under nonuniform stochastic designs. A variant of the blocking mechanism is proposed. It is shown that the proposed block bootstrap method provides a valid approximation to the distribution of a class of M -estimators of the spatial regression parameters. Finite sample properties of the method are investigated through a moderately large simulation study.

The talk is based on a joint work with Professor J. Zhu.

Enquiries about the Statistics Seminar should be directed to
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