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EL SEMINARIO ALEATORIO

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Comparison of various kernel smoothing approaches to modeling non-stationary spatial processes

impartirá

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ABSTRACT

Much current research in spatial statistics has centered around modeling strategies for non-stationary spatial processes, in contrast with more traditional approaches, which assume stationarity. In a previous approach, we modeled a non-stationary process as a convolution of a Gaussian white noise process and a series of kernels. This strategy, while effective, requires substantial computing time, since the number of individual kernels that must be modeled increases both with sample size and the finer partitioning of our prediction grid. A more recent approach seeks to improve this methodology by establishing a set of ``basis" kernels and using weighted functions of these to determine the covariance structure of the spatial process. This allows us to obtain the spatial realization based on the weights and the "basis" kernels much more quickly, and makes use of the model practical for much larger data sets. In this talk, I will address both of these methodologies, and also compare the results and effectiveness of the two strategies.

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Hora: 17:30
Salón: Sala de Video II Biblioteca, 2. Piso

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