



Breve introducción a la Matemática de la Estadística Espacial

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Abstract Spatial statistical techniques and geostatistics are applied in numerous disciplines, including: Biology, Economic Geography, Image Processing, Earth Sciences and Environment, Ecology, Geography, Epidemiology, Agronomy, Forestry, mineral prospecting, etc. These notes are an introduction to this subject from a mathematically rigorous point of view but without going in details into any particular topic. Chapter 1 gives a brief motivation to the subject by means of an example of the statistical analysis of satellite images. Chapter 2 is devoted to spatial models defined by processes with finite second order moments. Chapter 3 deals with Gibbs-Markov random fields defined on pairs of integers. A few concepts developed in Statistical Physics are adapted to image processing. Finally Chapter 4 discusses briefly aspects related to spatial correlation.