

1038-62-163 **Soyeon Lee*** (sylee@oxy.edu), Mathematics Department, Occidental college, 1600 Campus Road, Los Angeles, CA. *Spatial fixed design nonparametric regression.*

Spatial data analysis has received considerable attention and played an important role in many applications. This talk is concerned with recovering a regression function on the basis of noisy observations taken at fixed design points. The observations are corrupted by additive dependent noises induced by a general spatial linear process. The regression function is estimated by a general linear smoother. Under general conditions, this estimator is shown to have an asymptotic multivariate normal distribution at multiple points. Some potential applications are also presented. (Received February 08, 2008)