

STANFORD UNIVERSITY
DEPARTMENT OF STATISTICS
DEPARTMENTAL SEMINAR

4:15 p.m., Tuesday, May 31, 2005
Sequoia Hall Room 200
(Cookies at 3:45 in 1st Floor Lounge)

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Separable Point Processes and their use in Wildfire Risk Estimation

Wildfires pose an extremely serious threat to California each year, damaging vast areas of public and private property and often threatening human lives. Wildfire risk assessments are presently made primarily using the Burning Index (BI), a numerical rating issued by the USDA Department of Forestry. Unfortunately, the BI appears to be a very poor predictor of wildfires. Because so many variables are positively associated with wildfire risk, the construction of models to compete with the BI is quite a difficult task. The problem is essentially the familiar "curse of dimensionality," and is greatly alleviated when different components in the process may be estimated separately. Some results will be presented concerning situations where such separability is permitted, and their use in predicting wildfires in Los Angeles County will be explored.