



UNIVERSITY OF SYDNEY

SCHOOL OF MATHEMATICS AND STATISTICS

Statistics Seminar

Friday, 20 October, 2.00pm

Eastern Avenue Lecture Theater

## **Statistical analysis of spatio-temporal seismicity.**

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**Curtin University of Technology**

### **Abstract**

The spatio-temporal seismicity patterns in a given earthquake-prone region are closely related to both tectonic regime and fault structures, but an important problem remains of quantifying the relations in a way which allows large events in the seismic region to be predicted, at least in probabilistic terms. In this talk, the stress release model, a stochastic version of the elastic-rebound theory, will be introduced and then applied to fit historical (or synthetic) earthquake catalogues from several typical kinds of seismicity such as China, Japan and New Zealand. The results highlight the major differences in tectonic seismicity, dynamic triggering mechanism, and the degree of predictability. Finally, some open problems and continuing challenges will be discussed.

Enquiries about the Statistics Seminar should be directed to  
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