



UNIVERSITY OF SYDNEY

SCHOOL OF MATHEMATICS AND STATISTICS

Statistics Seminar

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Carslaw 373

## **Valid inference after preliminary statistical model selection**

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### **Abstract**

It is common in applied statistics to carry out a preliminary model selection using e.g. AIC, BIC or hypothesis tests. This is usually followed by the statistical inference of interest, using the same data, based on the assumption that the selected model had been given to us a priori. This assumption is false and it leads to invalid inferences. Breiman (1992) calls this "a quiet scandal in the statistical community". The purpose of the talk is to (a) describe the depth of this scandal and (b) to describe the speaker's proposed solution to this problem.

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