Statistics and Actuarial Science Seminar

Title: Considerations on jury size and composition using lower probabilities

Speaker: Brett Houlding (TCD)

Date: Thu 8th December 2011 at 3:00PM

Location: Statistics Seminar Room- L550 Library building

Abstract: The use of lower probabilities is considered for inferences in basic jury scenarios to study aspects of the size of juries and their composition if society consists of subpopulations. The use of lower probability seems natural in law, as it leads to robust inference in the sense of providing a defendant with the benefit of the doubt. The method presented in this paper focuses on how representative a jury is for the whole population, using a novel concept of a second 'imaginary' jury together with exchangeability assumptions. It has the advantage that there is an explicit absence of any assumption with regard to guilt of a defendant. Although the concept of a jury in law is central in the presentation, the novel approach and the conclusions hold for representative decision making processes in many fields, and it also provides a new perspective to stratified sampling.