Uncertain Judgements: Eliciting Experts' Probabilities


**DESCRIPTION**

Elicitation is the process of extracting expert knowledge about some unknown quantity or quantities, and formulating that information as a probability distribution. Elicitation is important in situations, such as modelling the safety of nuclear installations or assessing the risk of terrorist attacks, where expert knowledge is essentially the only source of good information. It also plays a major role in other contexts by augmenting scarce observational data, through the use of Bayesian statistical methods. However, elicitation is not a simple task, and practitioners need to be aware of a wide range of research findings in order to elicit expert judgements accurately and reliably. *Uncertain Judgements* introduces the area, before guiding the reader through the study of appropriate elicitation methods, illustrated by a variety of multi-disciplinary examples.

**This is achieved by:**

- Presenting a methodological framework for the elicitation of expert knowledge incorporating findings from both statistical and psychological research.
- Detailing techniques for the elicitation of a wide range of standard distributions, appropriate to the most common types of quantities.
- Providing a comprehensive review of the available literature and pointing to the best practice methods and future research needs.
- Using examples from many disciplines, including statistics, psychology, engineering and health sciences.
- Including an extensive glossary of statistical and psychological terms.
An ideal source and guide for statisticians and psychologists with interests in expert judgement or practical applications of Bayesian analysis, *Uncertain Judgements* will also benefit decision-makers, risk analysts, engineers and researchers in the medical and social sciences.

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**ABOUT THE AUTHOR**

Professor Anthony O’Hagan is the Director of The Centre for Bayesian Statistics in Health Economics at the University of Sheffield. The Centre is a collaboration between the Department of Probability and Statistics and the School of Health and Related Research (ScHARR). The Department of Probability and Statistics is internationally respected for its research in Bayesian statistics, while ScHARR is one of the leading UK centres for economic evaluation.

Prof O’Hagan is an internationally leading expert in Bayesian Statistics.

Co-authors:

Professor Paul Gathwaite – Open University, Prof of Statistics, Maths and Computing

Dr Jeremy Oakley – Sheffield University

Professor John Brazier – Director of Health Economics Group, University of Sheffield

Dr Tim Rakow – University of Essex, Psychology Department

Dr Alireza Daneshkhah – University of Sheffield, Medical Statistics Department

Dr Jim Chilcott - School of Health Research, University of Sheffield, Department of OR

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