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Book Reviews: Technical Books Section

...A GIFT TO FORENSIC COMMUNITY In summary, the book explains in a simple and clear way the great majority of statistical aspects of forensic genetics. This little book is a gift to the forensic community...
Weight of evidence for Forensic DNA Profiles, 1st Edition by David J. Balding. Hard Bound, 9.1" x 6" x 0.7"

John Wiley & Sons, Ltd., The Atrium, Southern Gate, Chichester, West Sussex PO19 8SQ, England, UK. 198 pages. ISBN-10: 0470867647, ISBN-13: 978-0470867648. Publication date: March 18, 2005. Price: $90.00

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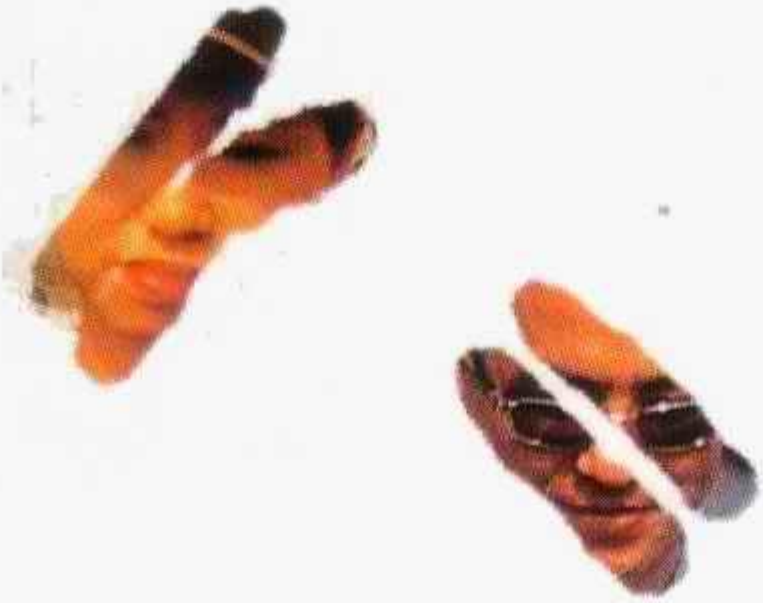

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Weight of evidence for Forensic DNA Profiles by David J. Balding describes almost all aspects of statistical evaluation of modern DNA typing for forensic genetic purposes. The book has approximately 180 pages including a handful of drawings and a number of statistical exercises that helps to understand the statistics. The book is part of the series *Statistics in Practice* .

David J. Balding is a professor of statistical genetics at the Imperial College, London, England (). David Balding has worked with a number of statistical issues in forensic genetics for many years.

The book begins with an introduction to probabilities in relation to forensic genetics in a very patient way based on practical examples and goes on with likelihood ratio based analyses. The DNA typing methods, the results, the pitfalls and their consequences are described in an admirable way considering that David Balding is a statistician. The basic issues of population genetics are described in a way that allows non-statisticians to feel that they can follow the arguments and the calculations.

...Having explained the background, David Balding addresses the key problems: The weight of evidence of DNA results for identification in crime case work and testing for relatedness in paternity, immigration and other similar cases. These statistical issues, which are challenging to a large proportion of forensic geneticists, are dealt with in such a disarmingly simple way that there is no excuse for not understanding the basic statistical principles in forensic genetics and not using proper statistics in usual forensic genetic casework...
Having explained the background, David Balding addresses the key problems: The weight of evidence of DNA results for identification in crime case work and testing for relatedness in paternity, immigration and other similar cases. These statistical issues, which are challenging to a large proportion of forensic geneticists, are dealt with in such a disarmingly simple way that there is no excuse for not understanding the basic statistical principles in forensic genetics and not using proper statistics in usual forensic genetic casework.

The book includes a number of statistical exercises concerning basic statistics and forensic statistics. These exercises are very helpful to the reader to understand both basic statistics and forensic genetic statistics.

The book is of great value to students in forensic genetics and a good companion to forensic geneticists. Furthermore, it can also help practicing lawye rs, law enforcement professionals, and other people involved in cases with DNA evidence.

Hopefully, the book will be updated soon with a second edition so that the statistical problems of emerging technologies and the edges of forensic genetics will be covered, including e.g. haploid markers (Y chromosome and mtDNA) in DNA mixtures and Low Copy Number DNA results of mixtures of DNA. Guidance by statisticians like David Balding would be very valuable.

In summary, the book explains in a simple and clear way the great majority of statistical aspects of forensic genetics. This little book is a gift to the forensic community.

-Niels Morling

-Niels Morling
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