Understanding Statistical Error: A Primer for Biologists

Marek Gierlinski
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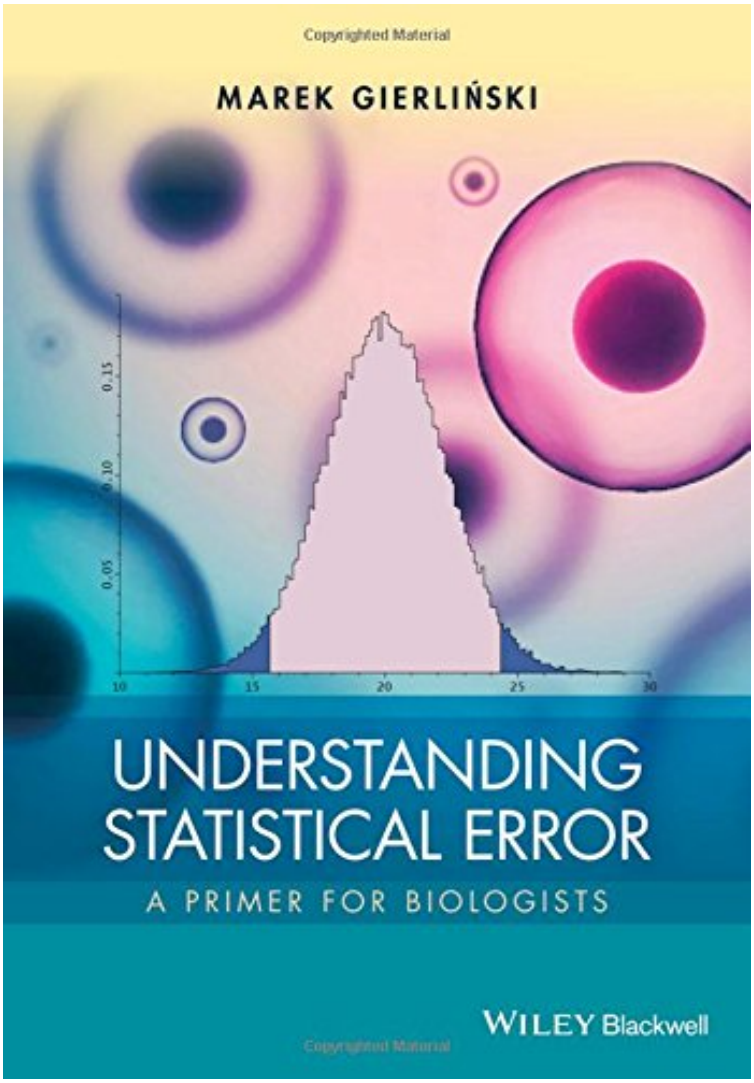

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Marek Gierlinski : Understanding Statistical Error: A Primer for Biologists before purchasing it in order to gage whether or not it would be worth my time, and all praised Understanding Statistical Error: A Primer for Biologists:

0 of 0 people found the following review helpful. statistical errorBy Julien HoffmanAn easily understood book that will be very useful for beginners

This accessible introductory textbook provides a straightforward, practical explanation of how statistical analysis and error measurements should be applied in biological research. Understanding Statistical Error - A Primer for Biologists: Introduces the essential topic of error analysis to biologists Contains mathematics at a level that all biologists can

grasp Presents the formulas required to calculate each confidence interval for use in practice Is based on a successful series of lectures from the authors established course Assuming no prior knowledge of statistics, this book covers the central topics needed for efficient data analysis, ranging from probability distributions, statistical estimators, confidence intervals, error propagation and uncertainties in linear regression, to advice on how to use error bars in graphs properly. Using simple mathematics, all these topics are carefully explained and illustrated with figures and worked examples. The emphasis throughout is on visual representation and on helping the reader to approach the analysis of experimental data with confidence. This useful guide explains how to evaluate uncertainties of key parameters, such as the mean, median, proportion and correlation coefficient. Crucially, the reader will also learn why confidence intervals are important and how they compare against other measures of uncertainty. Understanding Statistical Error - A Primer for Biologists can be used both by students and researchers to deepen their knowledge and find practical formulae to carry out error analysis calculations. It is a valuable guide for students, experimental biologists and professional researchers in biology, biostatistics, computational biology, cell and molecular biology, ecology, biological chemistry, drug discovery, biophysics, as well as wider subjects within life sciences and any field where error analysis is required.

"This volume highlights and promotes these high standards and practices, and should serve as an important starting point for biologists, data scientists, or anyone interested in effectively assessing and presenting uncertainty in data" Marc J. Lajeunesse, Integrative Biology, University of South Florida, Tampa, Florida on behalf of The Quarterly of Biology, Sept 17