

A timely update of a highly popular handbook on statistical genomics

This new, two-volume edition of a classic text provides a thorough introduction to statistical genomics, a vital resource for advanced graduate students, early-career researchers and new entrants to the field. It introduces new and updated information on developments that have occurred since the 3rd edition. Widely regarded as the reference work in the field, it features new chapters focusing on statistical aspects of data generated by new sequencing technologies, including sequence-based functional assays. It expands on previous coverage of the many processes between genotype and phenotype, including gene expression and epigenetics, as well as metabolomics. It also examines population genetics and evolutionary models and inference, with new chapters on the multi-species coalescent, admixture and ancient DNA, as well as genetic association studies including causal analyses and variant interpretation.

The Handbook of Statistical Genomics focuses on explaining the main ideas, analysis methods and algorithms, citing key recent and historic literature for further details and references. It also includes a glossary of terms, acronyms and abbreviations, and features extensive cross-referencing between chapters, tying the different areas together. With heavy use of up-to-date examples and references to web-based resources, this continues to be a must-have reference in a vital area of research.

- Provides much-needed, timely coverage of new developments in this expanding area of study
- Numerous, brand new chapters, for example covering bacterial genomics, microbiome and metagenomics
- Detailed coverage of application areas, with chapters on plant breeding, conservation and forensic genetics
- Extensive coverage of human genetic epidemiology, including ethical aspects
- Edited by one of the leading experts in the field along with rising stars as his co-editors
- Chapter authors are world-renowned experts in the field, and newly emerging leaders.

The Handbook of Statistical Genomics is an excellent introductory text for advanced graduate students and early-career researchers involved in statistical genetics.

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