

1. Record Nr.	UNINA9910298317003321
Autore	Dickhaus Thorsten
Titolo	Simultaneous statistical inference : with applications in the life sciences // by Thorsten Dickhaus
Pubbl/distr/stampa	Berlin, Heidelberg : , : Springer Berlin Heidelberg : , : Imprint : Springer, , 2014
ISBN	3-642-45182-9
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (182 p.)
Disciplina	006.312 519.5 570 570.15195
Soggetti	Biometry Statistics Biomathematics Data mining Biomedical engineering Biostatistics Statistical Theory and Methods Mathematical and Computational Biology Data Mining and Knowledge Discovery Biomedical Engineering and Bioengineering
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	The problem of simultaneous inference -- Part I General Theory -- Some theory of p-values -- Classes of multiple test procedures -- Simultaneous test procedures -- Stepwise rejective multiple tests -- Multiple testing and binary classification -- Multiple testing and model selection -- Software solutions for multiple hypotheses testing -- Part II From Genotype to Phenotype -- Genetic association studies -- Gene expression analyses -- Functional magnetic resonance imaging -- Part III Further Applications in the Life Sciences -- Further life science

applications.

---

**Sommario/riassunto**

This monograph will provide an in-depth mathematical treatment of modern multiple test procedures controlling the false discovery rate (FDR) and related error measures, particularly addressing applications to fields such as genetics, proteomics, neuroscience and general biology. The book will also include a detailed description how to implement these methods in practice. Moreover, new developments focusing on non-standard assumptions are also included, especially multiple tests for discrete data. The book primarily addresses researchers and practitioners but will also be beneficial for graduate students.

---