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Titolo	Mathematica for Bioinformatics [[electronic resource]] : A Wolfram Language Approach to Omics / / by George Mias
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Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	1 Introduction to Bioinformatics -- 2. A Mathematica Primer for Bioinformaticians -- 3. Statistics for Genomic Analysis -- 4. Genomic Sequences -- 5. Databases -- 6. Transcriptomics -- 7. Proteomics -- 8. Metabolomics -- 9. Systems Biology -- 10. Networks -- 11. Time Series Analysis -- 12. Omics Integration and Systems Medicine -- 13. Bioinformatics Development with Mathematica.
Sommario/riassunto	This book offers a comprehensive introduction to using Mathematica and the Wolfram Language for Bioinformatics. The chapters build gradually from basic concepts and the introduction of the Wolfram Language and coding paradigms in Mathematica, to detailed worked examples derived from typical research applications using Wolfram

Language code. The coding examples range from basic sequence analysis, accessing genomic databases, and differential gene expression, to time series analysis of longitudinal omics experiments, multi-omics integration and building dynamic interactive bioinformatics tools using the Wolfram Language. The topics address the daily bioinformatics needs of a broad audience: experimental users looking to understand and visualize their data, beginner bioinformaticians acquiring coding expertise in providing biological research solutions, and practicing expert bioinformaticians working on omics who wish to expand their toolset to include the Wolfram Language.
