Special Issue Reprint

Systems Analytics and Integration of Big Omics Data

www.mdpi.com/books/reprint/2183

Edited by
Gary Hardiman
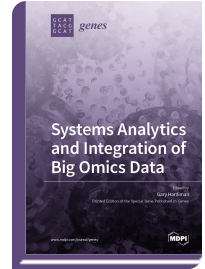
A "genotype" is essentially an organism's full hereditary information which is obtained from its parents. A "phenotype" is an organism's actual observed physical and behavioral properties. These may include traits such as morphology, size, height, eye color, metabolism, etc. One of the pressing challenges in computational and systems biology is genotype-to-phenotype prediction. This is challenging given the amount of data generated by modern Omics technologies. This "Big Data" is so large and complex that traditional data processing applications are not up to the task. Challenges arise in collection, analysis, mining, sharing, transfer, visualization, archiving, and integration of these data. In this Special Issue, there is a focus on the systems-level analysis of Omics data, recent developments in gene ontology annotation, and advances in biological pathways and network biology. The integration of Omics data with clinical and biomedical data using machine learning is explored. This Special Issue covers new methodologies in the context of gene–environment interactions, tissue-specific gene expression, and how external factors or host genetics impact the microbiome.

MDPI

Order Your Print Copy
You can order print copies at
www.mdpi.com/books/reprint/2183

MDPI\Books

Publishing Open Access Books & Series

MDPI Books offers quality open access book publishing to promote the exchange of ideas and knowledge in a globalized world. MDPI Books encompasses all the benefits of open access – high availability and visibility, as well as wide and rapid dissemination. With MDPI Books, you can complement the digital version of your work with a high quality printed counterpart.

Open Access
Your scholarly work is accessible worldwide without any restrictions. All authors retain the copyright for their work distributed under the terms of the Creative Commons Attribution License.

Author Focus
Authors and editors profit from MDPI's over two decades of experience in open access publishing, our customized personal support throughout the entire publication process, and competitive processing charges as well as unique contributor discounts on book purchases.

High Quality & Rapid Publication
MDPI ensures a thorough review for all published items and provides a fast publication procedure. State-of-the-art research and time-sensitive topics are released with a minimum amount of delay.

High Visibility
Due to our global network and well-known channel partners, we ensure maximum visibility and broad dissemination. Title information of books is sent to international indexing databases and archives, such as the Directory of Open Access Books (DOAB), and the Verzeichnis Lieferbarer Bücher (VLB).

Print on Demand and Multiple Formats
MDPI Books are available for purchase and to read online at any time. Our print-on-demand service offers a sustainable, cost-effective and fast way to publish MDPI Books printed versions.

Learn more ▶ mdpi.com/books