Special Issue

Statistical Methods and Applications in Genetics and Genomics

Message from the Guest Editors

High-throughput sequencing technologies have catalyzed the rapid growth of large-scale complex genetics, genomics and multi-omics data. However, the scale and complexity of such data pose significant challenges to traditional computational and statistical methods, both in terms of computational scalability and statistical efficiency. To address these issues, this Special Issue aims to bridge this gap by providing a collection of articles that focus on innovative statistical methodologies and their applications in genetics genomics, and multi-omics data. This Special Issue will feature a selection of papers demonstrating the integration of advanced mathematical theories, statistical and machine/deep learning methods, and computational algorithms to address complex problems in analyzing genetics, genomics and multi-omics data. The topics covered include statistical genetics and genomics, population genetics, bioinformatics, and computational biology. The objective is to advance the mathematical and statistical foundations of genomics research and enhance our understanding of the genetic underpinnings of various diseases and traits.

Guest Editors

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Message from the Editor-in-Chief

The journal *Mathematics* publishes high-quality, refereed papers that treat both pure and applied mathematics. The journal highlights articles devoted to the mathematical treatment of questions arising in physics, chemistry, biology, statistics, finance, computer science, engineering and sociology, particularly those that stress analytical/algebraic aspects and novel problems and their solutions. One of the missions of the journal is to serve mathematicians and scientists through the prompt publication of significant advances in any branch of science and technology, and to provide a forum for the discussion of new scientific developments.

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