Special Issue

Modeling, Control and Optimization of Biological Systems

Message from the Guest Editor

Biological systems, from cellular pathways to ecosystems, exhibit intricate dynamics shaped by nonlinear interactions. Advances in biological systems, computational tools and synthetic biology have created opportunities to model, control and optimize these systems for transformative applications in healthcare, biomanufacturing and environmental sustainability. However, challenges persist in balancing model accuracy, scalability and real-world applicability. This proposal aims to achieve specific goals such as maintaining homeostasis, improving bioprocesses or developing novel therapeutic approaches. By integrating modeling, control and optimization techniques, researchers can gain a deeper understanding of biological systems and potentially develop more effective strategies for their manipulation and application.

Guest Editor

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About the Journal

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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