Special Issue

Mathematical Sciences for Sustainability

Message from the Guest Editor

Mounting scientific evidence makes clear that all material aspects of modern life have essential components which are unsustainable. It is vital, that mathematics plays its role in quantifying the extent and urgency of, as well as possible solutions to, these difficult issues. For example, the Lotka–Volterra model is a basic mathematical jumping-off point, bridging the gap between existing and needed processing as it establishes conditions of growth and death rates under which predator/prey populations may both indefinitely survive under varying circumstances. The complication lies in the fact that, unlike the predator/prey scenario, we do not want to maintain equilibrium in present COVID-19 times – we do not want to sustain the virus nor wish to return to our previous, unsustainable lives. In our fight against the pandemic, societies and governments will be faced with complex choices: what should we prioritize as necessary to sustain – Our health? Our economy? Our culture? Our freedom? Our educational system? Mathematical models of possibilities and limits can provide a politically and emotionally neutral means of understanding and tackling the problem.

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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