

# Special Issue

## Advances in High-Dimensional Scientific Computing

### Message from the Guest Editor

With the continuous advancement of computational capabilities, solving high-dimensional data and complex problems has become one of the key challenges in modern engineering and scientific research. This Special Issue aims to gather research on high-dimensional numerical computing, efficient solutions for partial differential equations, and large-scale data modeling and computation, exploring their innovative applications in geotechnical engineering. In particular, we will focus on how high-precision numerical computing and numerical analysis methods can address complex problems in geotechnical and structural engineering, such as simulating the mechanical behavior of geotechnical media, risk assessment, and uncertainty quantification. Additionally, the Special Issue will highlight how high-dimensional computational techniques facilitate the effective solution of partial differential equations and their inverse calculations, providing more precise and efficient tools for engineering design and decision-making. By showcasing the latest research developments, this Special Issue aims to promote the broad application of high-dimensional scientific computing in geotechnical engineering.

### Guest Editor

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## Mathematics

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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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