Special Issue

Computational Aerodynamics and Fluid Dynamics: Trends and Challenges

Message from the Guest Editors

The Special Issue explores the evolving domain of computational aerodynamics and fluid dynamics, investigating the latest trends and confronting modern challenges in these disciplines. From optimizing aircraft design to refining weather prediction models, computational methods have transformed our comprehension and manipulation of fluid flows. This collection of articles showcases state-of-the-art research, emphasizing advancements in numerical algorithms, high-performance computing, turbulence modeling, and multiphysics simulations. Additionally, it addresses evolving challenges such as enhancing accuracy, quantifying uncertainties, and integrating artificial intelligence. By synthesizing theoretical insights with practical applications, this Special Issue offers a comprehensive overview of the current landscape and lays the groundwork for future breakthroughs in computational aerodynamics and fluid dynamics.

Guest Editors

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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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