Special Issue

Advances in Engineering Thermodynamics and Numerical Simulation

Message from the Guest Editors

Advancements in thermodynamics have been realized through improved computational methods and novel numerical approaches. Recently, there has been significant progress in theoretical modeling and simulation techniques. These developments can be characterized by combining fundamental thermodynamic principles with advanced numerical methods and computational fluid dynamics (CFD). Examples include multi-physics simulations, finite element analysis, molecular dynamics, and various optimization algorithms. These advances in computational methods enable higher accuracy and improved prediction capabilities, thus enhancing our understanding of complex thermodynamic systems. This Special Issue seeks high-quality works focusing on the latest theoretical and computational developments for thermal systems. Topics include, but are not limited to, the following:

- Computational fluid dynamics (CFD) and heat transfer applications;
- Advanced thermodynamic modeling and simulation techniques;
- Novel numerical methods for thermal system analysis and optimization;
- Process simulation, industrial applications, and thermal system design.

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