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Mathematics and Computational Methods in Nuclear Energy Technology

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Deadline for manuscript submissions:
closed (31 October 2023)

Message from the Guest Editors

This Special Issue aims to present the most recent research and developments in mathematics and computational methodologies (including theories, methods, models, frameworks, tools, etc.) applied to the nuclear energy technologies. Themes of interest include but are not limited to:

1. Multi-scale/multi-physics simulation for existing and advanced nuclear energy systems
2. Artificial intelligence applications in nuclear energy
3. Deterministic, Monte Carlo, and hybrid methods in reactor physics analyses
4. Thermal-hydraulics and safety analysis
5. Computational fluid dynamics and applications
6. Computer code development, verification, and validation
7. Uncertainty quantification, sensitivity analysis, and optimization
8. High-performance computing, visualization for fluid flow and radiation transport problems
9. Other applications related to advanced mathematics and computational methods in nuclear energy

We welcome submissions on novel concepts and innovations of original research articles as well as communications and review articles from different disciplines that are relevant to the abovementioned topics.



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Special Issue



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Message from the Editor-in-Chief

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