Special Issue

Numerical Simulation of Turbulent Combustion

Message from the Guest Editor

This Special Issue is open to research and review articles of numerical simulations of turbulent combustion, focused on the practical applications and validation of any turbulent combustion modeling, in order to collect contemporary usages of computational fluid dynamics in the field of combustion science and engineering hoping to share between us insights on what the accomplishments, limits, costs, and room to further develop are in the field of turbulent combustion modeling and applications. In this sense, not only successful simulations but also failure stories are welcome to be communicated in this Special Issue.

- validation against canonical turbulent flames
- validation against measurements
- turbulent flames at near-limit conditions
- combustion instability of turbulent flames
- interaction of turbulence and combustion
- turbulent combustion at elevated pressures
- application to IC engines, gas turbines, rocket propulsion, ramjet/scramjets
- deflagration and detonation
- assessment of turbulent combustion models
- application of machine-learning and data-driven approaches for turbulent combustion

Guest Editor

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Deadline for manuscript submissions

closed (31 December 2021)

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Energies is an international, open access journal in energy engineering and research. The journal publishes original papers, review articles, technical notes, and letters. Authors are encouraged to submit manuscripts which bridge the gaps between research, development and implementation. The journal provides a forum for information on research, innovation, and demonstration in the areas of energy conversion and conservation, the optimal use of energy resources, optimization of energy processes, mitigation of environmental pollutants, and sustainable energy systems.

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