

Special Issue

Challenges and Progresses in the Modelling of Entropy Generation in Fluid Mechanics, Heat Transfer and Porous Media

Message from the Guest Editors

Studies of fluid flow and heat transfer in a porous media has been a subject of continuous interest for the past several decades because of the wide range of applications, such as drying technology, solar systems, building insulation, compact heat transfer and design of nuclear reactors, geothermal systems, drying technologies, the control of pollutant spread in groundwater, and many other applications. Various types of liquids can mix with each other due to the porous boundaries, and a porous medium is very helpful to separate the particles from fluid. However, one of the major issues in these applications is the enhancement of the heat transfer efficiency of fluid during the process, which is also called irreversibility. To overcome this problem, the second law of thermodynamics has recently been applied by researchers for minimization of entropy generation to find optimal engineering system designs. Entropy generation determines the level of irreversibilities accumulating during a process. Consequently, entropy production can be used as a criterion to assess the performance of engineering devices. Researchers are invited to contribute their original research on these topics.

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Message from the Editor-in-Chief

The concept of entropy is traditionally a quantity in physics that has to do with temperature. However, it is now clear that entropy is deeply related to information theory and the process of inference. As such, entropic techniques have found broad application in the sciences.

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Editor-in-Chief

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