Special Issue

Modeling, Analysis, and Computation of Complex Fluids

Message from the Guest Editor

Multiphase complex fluids are ubiquitous in both natural and synthetic systems, such as emulsions, foams, biological materials, and advanced functional composites. They pose significant modeling, analysis, and computation challenges due to the couplings across multiple physical scales and phases. This Special Issue of *Entropy* aims to highlight recent modeling, analysis, and computational developments in the study of multiphase complex fluids. Topics of interest include, but are not limited to, continuum, kinetic, and multiscale methods and models for complex fluids; multiphase fluid models such as phase-field models; non-equilibrium thermodynamics; and emerging applications in soft matter and biological systems. Research that leverages entropy-based principles, variational structures, and deep learning techniques to better understand the interplay between microstructure and macroscopic behavior is particularly welcome.

Guest Editor

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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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