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# Theory and Applications of Hyperbolic Diffusion and Shannon Entropy

Guest Editor:

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## **Message from the Guest Editor**

The application of information theory to study these diffusion-like systems is an open statistics problem. Further progress on this matter calls for new statistical techniques based on the Shannon entropy theory, as well as for an improved understanding of the hyperbolic diffusion problem and the waves in the stochastic telegrapher's equation for complex systems. Contributions addressing any of these issues are very welcome.

This Special Issue aims to be a forum for the presentation of improved techniques for these kinds of finite-velocity diffusion-like systems. The analysis and interpretation of the hyperbolic diffusion using statistical tools based on the Shannon information theory fall within the scope of this Special Issue.

The Special Issue of interest includes, but are not limited to:

- finite-velocity diffusion
- wave telegrapher's equation
- stochastic and random media
- statistics information theory
- complex transport
- random waves and dispersion
- physics
- chemistry
- biology
- earth sciences
- social science Special sue





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### **Editor-in-Chief**

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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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