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## Bayesian Learning and Its Applications in Genomics

Guest Editor:

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Deadline for manuscript  
submissions:

**29 November 2024**

### Message from the Guest Editor

Bayesian methods can offer a principled framework to model complex genomic structure, integrate prior biological information, and make probabilistic inferences for better understanding the etiology of complex diseases.

We kindly invite you to contribute your original research, reviews, or software articles to diverse aspects of Bayesian learning in genomics that include, but are not limited to, the following topics:

- Bayesian methods for integrative genomics and multi-omics integration;
- Bayesian machine learning for genomics data with complex disease traits (including categorical, survival, longitudinal, functional and neuroimaging phenotypes);
- Bayesian methods for single-cell genomics and spatial transcriptomics;
- Bayesian learning to infer complex structure in genomics data including gene regulatory networks, gene–gene and gene–environment interactions;
- Bayesian causal inference in genomics;
- Bayesian approaches for genetic association studies and Genome-Wide Association Studies.



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**Special** Issue



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## Editor-in-Chief

### Prof. Dr. Kevin H. Knuth

Department of Physics, University  
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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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