



## Complexity in High Energy and Statistical Physics

Guest Editors:

**Dr. Airton Deppman**

**Dr. Magno Valério Trindade  
Machado**

**Dr. Roman Pasechnik**

**Prof. Dr. Edward Sarkisyan-  
Grinbaum**

**Prof. Dr. Vyacheslav Yukalov**

Deadline for manuscript  
submissions:

**31 January 2025**

### Message from the Guest Editors

Dear Colleagues,

The *Complexity in High Energy and Statistical Physics* Workshop (<https://sites.usp.br/chesp/>) will be held in Erice, Italy, on 1–7 December 2024. It will enable scientists from all over the world to present their latest research in high energy and statistical physics, receive direct feedback, and engage in discussions with the wider scientific community.

We are honored to serve as Guest Editors of this Special Issue in *Physics*, which will contain a selection of papers both submitted to and accepted for this workshop. We warmly invite researchers to submit their contributions to this Special Issue. The topics include, but are not limited to, the following:

- Nonadditive entropies—foundation, application, and complex systems;
- Scale-free systems and networks;
- (Multi)fractals, self-similar systems;
- Renormalization group of quantum field theory;
- Electromagnetic plasma;
- The bootstrap approach to quantum field theory;
- Nonextensive statistics and transport processes;
- Nonextensive statistics in cosmology;
- Perspectives in particle and nuclear physics.

All relevant research and review articles, including those beyond the Workshop, are welcome.

