Special Issue

Intermittency and Self-Organisation in Turbulence and Statistical Mechanics

Message from the Guest Editor

There is overwhelming evidence, from laboratory experiments, observations, and computational studies, that coherent structures can cause intermittent transport, dramatically enhancing transport. A proper description of this intermittent phenomenon, however, is extremely difficult, requiring a new non-perturbative theory, such as statistical description. Furthermore, multi-scale interactions are responsible for inevitably complex dynamics in strongly non-equilibrium systems, a proper understanding of which remains a main challenge in classical physics. As a remarkable consequence of multi-scale interaction, a quasiequilibrium state (the so-called self-organisation) can however be maintained. This Special Issue aims to present different theories of statistical mechanics to understand this challenging multiscale problem in turbulence. Submissions addressing intermittency, coherent structures and self-organisation are especially welcome.

Guest Editor

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Editor-in-Chief

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