COLLOQUIA DI DOTTORATO, A.A. 2021/2022

Dipartimento di Fisica, A101
Giovedì 16 Giugno 2022 ore 16:00

Multifractal approach to fully developed turbulence

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The idea of the multifractals is basically contained in the large deviation theory; however, the introduction of the multifractal description in 1980s had an important role in statistical physics, chaos and disordered systems.

In particular, to clarify in a rather neat way that the usual idea, coming from critical phenomena, that just few scaling exponents are relevant, is not completely correct, and an infinite set of exponents is necessary for a complete characterization of the scaling features.

In this seminar, the multifractal approach to fully developed turbulence will be discussed, in particular some nontrivial predictions for the statistical properties of the velocity gradients, the existence of an intermediate dissipative range and Lagrangian statistics.

The seminar is in presence up to the maximum occupancy of A101 room.