# Superstatistics: Applications in turbulence and particle physics

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Abstract: Many complex systems are effectively described by a superposition of several statistics on different time scales, in short a `superstatistics'. In certain cases this can lead to power-law distributions and an effective description in terms of nonextensive statistical mechanics. However, the concept is quite general and also allows for other types of distributions.
We describe recent applications of the superstatistics concept for two examples of physical relevance: The statistics of a Lagrangian tracer particle embedded in a turbulent flow, and the statistics of scattering processes in high energy physics. Particular attention is drawn to the role of correlations.