



Nonadditive entropy and nonextensive statistical mechanics - An overview after 20 years

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Statistical mechanics constitutes one of the pillars of contemporary physics. Recognized as such — together with mechanics (classical, quantum, relativistic), electromagnetism and thermodynamics —, it is one of the mandatory theories studied at virtually all the intermediate- and advanced-level courses of physics around the world. As it normally happens with such basic scientific paradigms, it is placed at a crossroads of various other

branches of knowledge. In the case of statistical mechanics, the standard theory — hereafter referred to as the Boltzmann-Gibbs (BG) statistical mechanics—exhibits highly relevant connections at a variety of microscopic, mesoscopic and macroscopic physical levels, as well as with the theory of probabilities (in particular, with the Central Limit Theorem, CLT).

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