

Divergences via generalized statistical mechanics

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Three families of divergences are discussed via an approach of generalized statistical mechanics. The first and second ones are based on generalized logarithms. The first family of divergences is essentially the f-divergences proposed by Renyi and has as members the Kullback-Leibler and Tsallis ones. The second set of divergences has as a particular case the Renyi one. The third family is obtained from generalized free energies and has the Kullback-Leibler divergence as a special case.