

The Weak Topology of Nonadditive Measures based on Nonlinear Integral Functionals

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In this talk, we formulate a general portmanteau theorem for a perturbative nonlinear integral functional and discuss the uniformity of weak convergence of nonadditive measures based on such a functional.

As their direct consequences, it turns out that Lévy convergence of nonadditive measures coincides with every one of three types of weak convergence, that is, weak Choquet, weak Sugeno, and weak Shilkret convergence and they are uniform on every bounded subset of Lipschitz functions. Those results are applied when discussing the metrizability of the Lévy topology on the space of nonadditive measures and defining the Fortet-Mourier type metrics on a uniformly equi-autocontinuous set of nonadditive measures.