Sub-actions in expanding contexts

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Abstract

Sub-actions can be interpreted as a concept which corresponds by duality to maximizing probabilities. Considering an expanding dynamical system, we propose an extension of the standard model of ergodic optimization, namely, we introduce the holonomic model. Under the transitive hypothesis, we show the existence of sub-actions for Hölder potentials also in the holonomic setting. A representation formula for calibrated sub-actions is presented, which drives us naturally to a classification theorem for these sub-actions. Finally, we prove that the set of Hölder separating sub-actions is a residual subset of the Hölder sub-actions.

References

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