

[Štěpán, J.](#); [Ševčík, P.](#)

Convex analysis for sets of local martingales measures. (English) Zbl 0996.60055
[Acta Univ. Carol., Math. Phys.](#) 41, No. 1, 57-80 (2000).

This article is a continuation of the paper reviewed above where the authors deal with topological properties for the sets of solutions of local martingale problems. Now, they deepen and refine their study by investigating measure convexity properties for the sets of solutions of local martingale problems. First, they derive some results on measure convex sets of Borel probability measures on a Polish space, focusing, particularly, on Choquet sets. Relying on this general theory, they analyze the set of solutions to local martingale problems constrained by a boundary condition. That allows them to tackle the problem of the uniqueness of weak solutions in the theory of stochastic differential equations, extending the Stroock-Varadhan theorem.

Reviewer: [Miguel Ángel Mirás Calvo \(Vigo\)](#)

MSC:

- [60G48](#) Generalizations of martingales
- [46A55](#) Convex sets in topological linear spaces; Choquet theory
- [52A07](#) Convex sets in topological vector spaces (aspects of convex geometry)
- [60H10](#) Stochastic ordinary differential equations (aspects of stochastic analysis)

Keywords:

[local martingale problems](#); [measure convex sets](#); [Choquet convex sets](#); [stochastic differential equations](#)

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