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Statistical Causality and Local Uniqueness for Solutions of the Martingale Problem

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Abstract. In this paper we consider the concept of statistical causality between filtrations associated with stopping times, which is based on Granger's definition of causality. Especially, we consider a generalization of a causality relationship "**G** is a cause of **E** within **H**" from fixed to stopping time. Then we apply the given causality concept to local uniqueness for the solution of the martingale problem. Also, we give some applications in finance.

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