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On the behavior of stopped diffusions

Abstract :

In this presentation, we will discuss a number of issues arising from the study of stopped diffusions. In particular, together with N. Frikha (Paris-Diderot) and L. Li (UNSW, Australia), we obtained an unbiased formula for the integration by parts of a one dimensional stopped process. This result based on Markov chain structures has a number of interesting geometrical aspects which in current work with Dan Crisan (Imperial), we are clarifying. In order to obtain these results one of the main tools is the weak convergence methods for stochastic equations which were developed in Jakubowski, A., Mémmin, J. & Pages, G. (when he was young and I could not read French) and later developed for stochastic equations by Kurtz-Protter.