
MEAN REFLECTED STOCHASTIC DIFFERENTIAL EQUATIONS WITH JUMPS

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Résumé

This paper is devoted to the study of reflected Stochastic Differential Equations with jumps when the constraint is not on the paths of the solution but acts on the law of the solution. This type of reflected equations have been introduced recently by Briand, Elie and Hu [BEH16] in the context of BSDEs, when no jumps occur. In [BCdRGL17], the authors study a numerical scheme based on particle systems to approximate these reflected SDEs. In this paper, we prove existence and uniqueness of solutions to this kind of reflected SDEs with jumps and we generalize the results obtained in [BCdRGL17] to this context.

References:

BCdRGL17

Philippe Briand, Paul-Eric Chaudru de Raynal, Arnaud Guillin, and Céline Labart. Particles systems and numerical schemes for mean reflected stochastic differential equations. arXiv:1612.06886, 2017.

BEH16

Philippe Briand, Romuald Elie, and Ying Hu. BSDEs with mean reflection. arXiv:1605.06301 [math, q-fin], May 2016. arXiv: 1605.06301.

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