

APPROXIMATION OF SOLUTIONS OF SDE'S WITH OBLIQUE
REFLECTION ON AN ORTHANT

Krzysztof Czarkowski
Leszek Słomiński

Abstract: We consider the discrete penalization scheme, the projection and the Euler-Peano scheme for SDE's driven by general semimartingale on an orthant with oblique reflection. We prove that these schemes converge in probability to the solution of the SDE in various topologies provided that the oblique reflection satisfies the assumption introduced by Harrison and Reiman. In the case where the driving semimartingale is an Itô process, the rate of L^p -convergence is discussed in detail.

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