

Stochastic Models >
Volume 36, 2020 - Issue 1

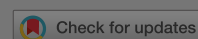
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Sticky reflecting Ornstein-Uhlenbeck diffusions and the Vasicek interest rate model with the sticky zero lower bound

Yutian Nie & Vadim Linetsky

Pages 1-19 | Received 05 Nov 2018, Accepted 03 Jun 2019, Published online: 20 Jun 2019

Cite this article <https://doi.org/10.1080/15326349.2019.1630287>

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Abstract

This article studies Ornstein-Uhlenbeck (OU) diffusions with sticky reflection at zero. Sticky reflecting OU diffusions are defined as weak solutions of a system of SDEs involving the local time at the boundary at zero. The transition semigroup and the distribution of the first hitting time up are characterized analytically via their spectral

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Funding

This research was supported by the National Science Foundation under grant DMI-0200429.

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