

# Derivatives of Killed Diffusions Semigroups can be represented using reflected processes

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In the recent past, Prof. Aida has been interested in the construction of reflected diffusions using rough paths. In my presentation, I would like to discuss a different aspect of the generation of reflected diffusions. One starts with a killed diffusion and we propose a stochastic representation of the derivative of the diffusion semigroup. This representation uses an exponential process which is based on a reflected diffusion.

This is ongoing work with Dan Crisan and Fabio Antonelli.