

ON THE GENERATOR OF A KILLED FELLER PROCESS

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The aim of the talk is to characterize the generator L_Ω of the semigroup associated with a Feller process killed upon leaving a regular bounded domain Ω in Euclidean space. We will describe the domain of L_Ω in terms of the generator L of the free process and provide an explicit formula for L_Ω for sufficiently regular functions. The presented methods work under the assumption that the semigroup of the free process is strong Feller. We will also discuss applications to fractional Cauchy problems on bounded domains. The talk is based on a joint work with B. Baeumer and M.M. Meerschaert.