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Non-equilibrium steady states of stochastic processes with intermittent resetting STEPHAN EULE, Max-Planck-Institute, JAKOB METZGER, Rockefeller University — Stochastic processes that are randomly reset to an initial condition serve as a showcase to analytically investigate non-equilibrium steady states. Here we study such processes for which the time between the resets is random and drawn from a generic waiting time distribution. We obtain the general solution for the stationary state and quantify the temporal relaxation of the process in terms of its moments. Our results are applied to analyze the efficiency of constrained random search processes. For a fixed mean reset time, we show that the search efficiency can be optimized by adapting the shape of the waiting time distribution.

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