Energetics and thermal transport of a Brownian heat engine in the underdamped regime.[1] RONALD BENJAMIN, RYOICHI KAWAI, University Of Alabama at Birmingham — Energetics and coherence of transport in the presence of non-uniform temperature is still an open problem.We study the same for a Brownian heat engine based on the Buttiker-Landauer ratchet model. Unlike other ratchet models where the role of inertia is not important in the study of stochastic energetics , efficiency of the Buttiker-Landauer ratchet can only be evaluated properly when inertia is taken into account. We study this system via numerical simulations and present our results.

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