

Abstract Submitted  
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**A Second Law for Markov Processes** BLAKE POLLARD, University of California, Riverside — In this talk we describe the notion of an open Markov process. An open Markov process is a generalization of an ordinary Markov process in which populations are allowed to flow in and out of the system at certain boundary states. We show that the rate of change of relative entropy in an open Markov process is less than or equal to the flow of relative entropy through its boundary states. This can be viewed as a generalization of the Second Law for open Markov processes.

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