

**NON-LIPSCHITZIAN APPROACH TO
DISCRETE EVENT DYNAMICS**

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ABSTRACT

Complexity of dynamical system performance can be significantly enriched by exploiting a non-Lipschitzian model of nonlinear dynamics. This model can capture stochastic properties of information processing without utilizing a random number generator: a multi-choice response to a deterministic message is provided by a failure of uniqueness of the solution due to relaxation of Lipschitz conditions at some critical points. This paper presents a mathematical formalism for non-Lipschitzian approach to discrete event dynamics.