"Fluctuations, information, and survival: some lessons from bacteria"

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Abstract

"Growing (micro)organisms are subject to different types of environmental changes. Some of those are regular, for instance daily variations of light intensity. Others are stochastic, such as the random appearance of predators or toxins.

Bacteria have developed an astonishing panoply of survival strategies in varying environments. I will describe a few examples of recent experimental and theoretical studies of rich bacterial behavior. In particular, I will try to discuss some possibilities and limitations associated with a quantitative description of these biological phenomena