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BAYESIAN INFERENCE IN STOCHASTIC PROCESSES**

Bayesian inference in a class of two-sex branching processes in a random environment

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Branching process theory has become an active research area of interest and applicability. Especially, it plays a major role in modeling general population dynamics. In particular, in order to describe the demographic dynamics of populations with sexual reproduction, several classes of two-sex branching processes have been studied. In this contributed work, we focus our attention in a class of two-sex branching processes in a random environment. From a Bayesian point of view, we provide estimators for the main parameters involved in the probability model. Also, we determine the highest posterior density credibility sets. By way of illustration, we show an application in population dynamics.

Keywords:

Branching processes; Two-sex processes;
Processes in random environment; Bayesian estimation.

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