

Bolthausen, Erwin

Markov process large deviations in τ -topology. (English) Zbl 0625.60026
Stochastic Processes Appl. 25, 95-108 (1987).

The author extends results of Donsker and Varadhan on the probability of large deviations for the empirical measure (or occupation measure) of uniformly ergodic Markov processes from their usual formulation in terms of the weak topology on the set of probability measures to the finer τ -topology which is generated by the integrals over bounded measurable functions.

Reviewer: [M.Scheutzow](#)

MSC:

60F10 Large deviations
60J05 Discrete-time Markov processes on general state spaces
60J10 Markov chains (discrete-time Markov processes on discrete state spaces)

Cited in **1** Review
Cited in **10** Documents

Keywords:

large deviations for the empirical measure; occupation measure; τ - topology

Full Text: [DOI](#)

References:

- [1] Csiszar, I., I-divergence geometry of probability distributions and minimization problems, Ann. prob., 3, 146-158, (1975) · [Zbl 0318.60013](#)
- [2] Donsker, M.; Varadhan, S.R.S., Asymptotic evaluation of certain Markov process expectations for large time I, Comm. pure appl. math., 28, 1-47, (1975) · [Zbl 0323.60069](#)
- [3] Donsker, M.; Varadhan, S.R.S., Asymptotic evaluation of certain Markov process expectations for large time III, Comm. pure appl. math., 29, 389-461, (1976) · [Zbl 0348.60032](#)
- [4] Gärtner, J., On large deviations from the invariant measure, Th. prob. appl., 22, 24-39, (1977) · [Zbl 0375.60033](#)
- [5] Groeneboom, P.; Oosterhoff, J.; Ruymgaart, F.H., Large deviation theorems for empirical probability measures, Ann. prob., 7, 553-586, (1979) · [Zbl 0425.60021](#)
- [6] Stroock, D.W., An introduction to the theory of large deviations, (1984), Springer Verlag Berlin · [Zbl 0552.60022](#)

This reference list is based on information provided by the publisher or from digital mathematics libraries. Its items are heuristically matched to zbMATH identifiers and may contain data conversion errors. It attempts to reflect the references listed in the original paper as accurately as possible without claiming the completeness or perfect precision of the matching.