

ACKNOWLEDGEMENT OF PRIORITY

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The primary motivation for Kurtz (1981) was to provide a proof of the central limit theorem for the Markov chains considered as polymer models by Freed (1981). It has been brought to the author's attention that this case was treated in Gorostiza (1975) using other methods.

The question has also been raised as to how one verifies the ergodicity hypothesis (3) in the case where $P(x, \Gamma)$ is radially symmetric about x and the angle the new direction makes with x is independent of x and nonzero with positive probability. Note that these assumptions imply that there exist $\varepsilon > 0$ and k such that $P^k(x, \Gamma) > \varepsilon \sigma(\Gamma)$ for all Borel sets Γ where σ is the surface measure on $S_r(0)$. This inequality implies

$$\inf_x f(x) < \inf_x P^k f(x) \leq \sup_x P^k f(x) < \sup_x f(x)$$

for all nonconstant, continuous f . These inequalities in turn imply

$$\lim_{m \rightarrow \infty} P^m f = C_\sigma \int f d\sigma.$$

REFERENCES

- GOROSTIZA, LUIS G. (1975). Convergence of transport processes with radially symmetric direction changes and chain molecules. *J. Appl. Probab.* **12** 812-816.
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