

Book Review: *Approximation of Population Processes*

Approximation of Population Processes. *Thomas G. Kurtz.* SIAM Monograph, Philadelphia, Pennsylvania, 1981. \$8.50. 75 pages.

One of the hottest research topics today concerns the microscopic justification of macroscopic kinetic phenomena. In particular, Markov models of chemical rate equations play a central role in many investigations. Thomas Kurtz, the author of this monograph, has developed many of the fundamental theorems related to the asymptotic analysis of Markov processes and its relation to macroscopic rate equations. The monograph itself summarizes a series of lectures on the subject for mathematicians. As such, it contains many of the important theorems underlying the foundations of the subject, albeit written in the telegraphic theorem-proof-lemma style of the pure mathematician. Applications of the theory are alluded to but not discussed in detail. Nevertheless, the material is extremely useful to all workers in this research area and the price is attractive.

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