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Ergodicity of Quasi-birth and death processes (I)

Xiao Hua LI, 侯振挺

中南大学铁道校区科学研究所

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摘要

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Ergodicity of Quasi-birth and death processes (I)

Xiao Hua LI, Zhen Ting HOU

School of science, Beijing University of Posts and School of science, Beijing University of Posts and Telecommunications, Beijing 100876, P. R. China

Abstract Quasi-birth and death processes with block tridiagonal matrices find many applications in various areas. Neuts gave the necessary and sufficient conditions for the ordinary ergodicity and found an expression of the stationary distribution for a class of quasi-birth and death processes. In this paper we obtain the explicit necessary and sufficient conditions for β -ergodicity and geometric ergodicity for the class of quasi-birth and death processes, and prove that they are not strongly ergodic.

Key words [ergodicity](#) [quasi-birth and death process](#) [Markov chain](#) [matrix geometric solutions](#)

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通讯作者 Xiao Hua LI paper_li@163.com

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