PROBABILITY
AND
MATHEMATICAL STATISTICS
Vol. 28, Fasc. 1 (2008), pp. 75–90

TWO TYPES OF MARKOV PROPERTY

Arkadiusz Kasprzyk
WŁadysŁaw Szczotka

Abstract: The paper gives some insight into the relations between two types of Markov processes – in the strict sense and in the wide sense – as well as into two aspects of periodicity. It concerns Markov processes with finite state space, the elements of which are complex numbers. Firstly it is shown that under some assumptions this space can be transformed in such a way that the resulting Markov process is also Markov in the wide sense. Next, sufficient conditions are given under which periodic homogeneous Markov chain is a periodically correlated process.

2000 AMS Mathematics Subject Classification: Primary: 60J10, 60J27; Secondary: 60G12.

Key words and phrases: Markov chains in the strict sense and in the wide sense, linear prediction, covariance function, cyclostationary distribution, periodically correlated process.

THE FULL TEXT IS AVAILABLE HERE