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Some applications for a graph theory approach to the study of discrete-event dynamic systems. (Chinese: English summary) [Zbl 0837.60011]

Summary: Since many discrete-production processes can be described by using discrete-event systems, discrete-event dynamic systems have a very strong background of applications, for instance, application to flexible manufacturing systems. So great attention has been paid to discrete-event dynamic systems both domestically and internationally, deep studies were made, and a number of meaningful results were obtained. We try to give explanatory notes and new proofs for some important results by using the graph theory viewpoint and methods, and attempt to go further into the application of graph theory to the study of discrete-event dynamic systems.

MSC:
05C90 Applications of graph theory
93C65 Discrete event control/observation systems

Keywords:
discrete-event dynamic systems; directed graph; critical cycles; application of graph theory