

GRAPH MODELS AND ALGORITHM FOR STUDYING THE DYNAMICS OF A LINEAR STATIONARY SYSTEM WITH VARIABLE DELAY

Introduction. The use of digital devices for control purposes, the need to process large amounts of information and transmit them over long distances using modern means of communication, computer networks, and the inclusion of a human operator in the control process have created prerequisites for the emergence of such control system structures that contain variable delay links [1-5]. Variable periodic delay can lead to the phenomenon of resonance, in which a closed system becomes unstable even if it is stable at any constant delay. On the other hand, the use of a lag model, even if not very accurate, usually allows you to significantly improve the dynamics of automatic control systems.

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