

عنوان مقاله:

Stability Boundaries in the Space of Uncertain Delay and Controller Coefficients Using Phase Conditions

محل انتشار:

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خلاصه مقاله:

In this paper, a new procedure is presented for drawing the stability boundaries in the space of controller coefficients and an uncertain delay of the process. The phase diagram of the open-loop transfer function is used to determine the maximum allowable time delay to preserve stability. The stable region in the plane of proportional controller and the time delay, is computed. Using an open-loop phase condition, it is also demonstrated how designing a proper lead controller can increase the maximum allowable time delay. A case study is carried out to demonstrate the application of the approach. The results can be used to design low order controllers for systems with uncertain delays

کلمات کلیدی:

Stability boundaries, uncertain delay, maximum allowable delay, phase diagram, Nyquist plot

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