

عنوان مقاله:

MPC Based Robust Stabilization of a Chemical Reactor

محل انتشار:

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نویسندگان:

,Fereshte Fakoor Kargar - Msc student, Ferdowsi University of Mashhad

,Naser Pariz - Associate Professor, Ferdowsi University of Mashhad

خلاصه مقاله:

The offset-free robust constrained model predictive control (MPC) of an uncertain system based on linear matrix inequalities (LMI) is concerned in this paper. The considered controlled system is a linear system. The polytopic structure of the system is considered with four vertex systems. The constraints on control inputs are also taken into account. The robust MPC represents useful control strategy to handle the system uncertainties and the input constraints. The robust stability conditions and requirements on input constraints are transformed using the Schur complement into more tractable LMI form. Therefore the obtained robust MPC problem can be solved as the convex optimization problem. The robust MPC was verified using simulation experiments.

کلمات کلیدی:

MPC, robust control, input constraints, multivariable control system, LMI, offset-free control

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