

Robust Continuous-Time Tracking and Regulation for Multirate Sampled-Data Systems

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Abstract: In this paper, the robust ripple-free tracking and disturbance rejection problem is solved for multirate sampled-data systems whose matrices are assumed to depend on some “physical” parameters. Making use of a hybrid control system structure, including a continuous-time internal model of the exogenous signals and a periodic discrete-time subcompensator, a ripple-free null steady-state error response is obtained in a neighbourhood of the nominal “physical” parameters of the plant, and a ripple-free dead-beat error response at the nominal ones.

Keywords:

AMS Subject Classification: