A Feedforward Compensation Scheme for Perfect Decoupling of Measurable Input Functions

Giovanni Marro; Lorenzo Ntogramatzidis

Abstract: In this paper the exact decoupling problem of signals that are accessible for measurement is investigated. Exploiting the tools and the procedures of the geometric approach, the structure of a feedforward compensator is derived that, cascaded to a linear dynamical system and taking the measurable signal as input, provides the control law that solves the decoupling problem and ensures the internal stability of the overall system.

Keywords: geometric control theory; disturbance decoupling; measurable input functions; model matching; unknown input observation;

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