

H ∞ robust Control Law for a Speed Dc Motor in Both Directions of Rotation

Authors : Ben Abdallah Aicha

Abstract : In this work we show a H ∞ synthesis method which enables us to calculate a feedback controller according to considerations of stability robustness and disturbance rejection translated on to the open loop response. However, it may happen that we have an additional specification on the closed loop response relating to tracking of the reference trajectory. The H ∞ synthesis has the advantage of offering increased specifications in robustness stability. Implemented for a DC motor, it offers invaluable performance in speed control in both directions of rotation.

Keywords : H ∞ synthesis, DC motor, robustness stability, performance conditions

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