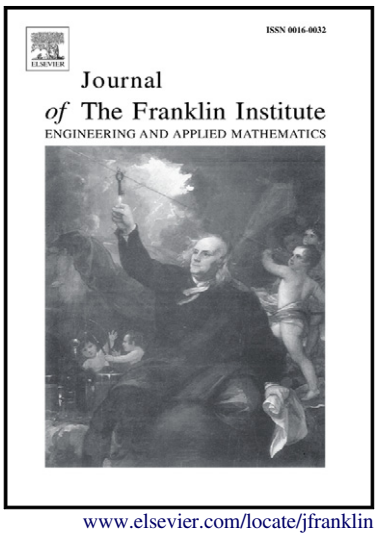


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# Output Feedback High-Gain Proportional Integral Control for Minimum Phase Uncertain Systems

Jeang-Lin Chang, Chia-Pin Wu, and Ching-Long Shih

Jeang-Lin Chang and Chia-Pin Wu are with the Department of Electrical Engineering, Oriental Institute of Technology, Banchiao, New Taipei City 220, Taiwan, (E-mail: jlchang@ee.oit.edu.tw).
Ching-Long Shih is with the Department of Electrical Engineering, National Taiwan University of Science and Technology, Taipei, Taiwan.

**Abstract**

This study examines the problem of designing a high-gain proportional integral controller for minimum-phase linear systems with mismatched parameter uncertainties and matched perturbations. The proposed method can efficiently eliminate the matched disturbance when the control gain is high enough and uses the static output feedback control technique to stabilize the closed-loop system. By using the singular perturbation theory, the system states are finally constrained in a bounded region. Simulation results show the effectiveness of the proposed method.



**Keywords:** Singular perturbation, output feedback, minimum phase, proportional integral control.