

**Robust Stabilizing Observers of Decentralized  
Singularly-perturbed System**

分散式殊異擾動系統之強健穩定觀察器

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Abstract

In this paper, robust stabilizing observers are developed for decentralized singularly-perturbed systems. The observer is expected to be implemented by computer and to satisfy the following criteria: (1) computer control, (2) decentralized control, (3) robust control, (4) stabilizing control, (5) reduced-order control, and (6) global estimation. The concept of Riccati equation approach will be applied to design this computer controlled stabilizing observer.

Key words: Observers; Decentralized singularly-perturbed systems;  
Reduced-order