Control Design of T-S Fuzzy Large-Scale Systems

駱樂
Electrical Engineering
Engineering
lluoh@ee.ncu.edu.tw

Abstract

This paper proposes a new fuzzy controller design method to stabilize a
large-scale system. The system is composed of a number of T-S fuzzy modeled subsystems.Based on Lyapunov criterion, some sufficient conditions are derived and the fuzzy control is developed such that the whole large-scale closed loop system is asymptotically stable. Finally, a numerical example is shown to illustrate the control design procedure and its effectiveness.

Keyword：Fuzzy large-scale system, T-S fuzzy model, Fuzzy control, Stability; Lyapunov criterion;