Special Issue on
T-S Fuzzy-Model-Based Control for Nonlinear Time-Delay Systems

CALL FOR PAPERS

During the last decade, fuzzy logic technique has been widely applied to many kinds of fields, for example, control system analysis, intelligent robot, chemical engineering, and socioeconomics. Among various fuzzy logic techniques, T-S (Takagi-Sugeno) fuzzy-model-based control is recognized as a popular and systematic tool in approximating a complex nonlinear system. Based on T-S fuzzy-model-based model, the control design can be carried out by the so-called parallel distributed compensation scheme. For stability/stabilization analysis, linear matrix inequality techniques have been developed to find the feasible solutions for T-S fuzzy system.

Time-delay phenomenon commonly occurs in dynamic systems due to measurement, transmission, transport lags, and computational delays. In addition, time delay may lead to unsatisfactory performance and is frequently an instability source. Therefore, controller synthesis and stabilization analysis of time-delay systems are increasingly drawing attention from control engineers and researchers. We aim to publish recent development in nonlinear system and control theories together with the applications on possible real world problems.

We invite authors to submit original research related to T-S fuzzy-model-based control for nonlinear time-delay systems. We are interested in articles that explore aspects of T-S fuzzy-model-based control application in industrial and physical models. This special issue aims to collect achievement on T-S fuzzy-model-based control for nonlinear time-delay systems, especially the work devoted to several new challenges in real word applications.

Potential topics include, but are not limited to:

- ▶ Identification of nonlinear time-delay systems
- ▶ T-S fuzzy-model-based control for nonlinear time-delay systems
- ▶ Stability analysis for T-S fuzzy time-delay system
- ▶ Robust control for T-S fuzzy time-delay system
- ▶ Relaxed stabilization of T-S fuzzy time-delay system
- ▶ Application of time-delay system

Authors can submit their manuscripts via the Manuscript Tracking System at http://mts.hindawi.com/submit/journals/jam/ntds/.

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