

### **Full Title of Your Paper**

Kebir Boukas<sup>1</sup> and Penguan Liu<sup>2</sup>

<sup>1</sup>Department of Mechanical Engineering  
Ecole polytechnique de Montreal  
P. O. Box 6079, Station centre-ville  
Montreal, Quebec, H3C 3A7, Canada  
el-kebir.boukas@polymtl.ca

<sup>2</sup>Beijing Language and Culture University  
No.15, Xueyuan Road, Haidian District, Beijing, China  
liupengyuan@blcu.edu.cn

Received June 2010; revised December 2010

ABSTRACT. *Please write down the abstract of your paper here....*

**Keywords:** Please write down the keywords of your paper here, such as, System control

1. **Introduction.** Please write down the Introduction of your paper here....

2. **Problem Statement and Preliminaries.** Please write down your section. When you cite some references, please give numbers, such as, ....In the work of [1-3,5], the problem of..... For more results on this topic, we refer readers to [1,4-5] and the references therein....

Examples for writing definition, lemma, theorem, corollary, example, remark.

**Definition 2.1.** *System (1) is stable if and only if...*

**Lemma 2.1.** *If system (1) is stable, then....*

**Theorem 2.1.** *Consider system (1) with the control law....*

**Proof:** Let....

**Corollary 2.1.** *If there is no uncertainty in system (1), i.e.,  $_A = 0$ , then...*

**Remark 2.1.** *It should be noted that the result in Theorem 2.1....*

**Example 2.1.** *Let us consider the following example....*

$$\dot{y}x(t) = Ax(t) + Bu(t) + B_1w(t) \tag{1}$$

$$y(t) = Cx(t) + Du(t) + D_1w(t) \tag{2}$$

.....

3. **Main Results.** Here are the main results in this paper.....

**Definition 3.1.** System (3) is stable if and only if...

**Lemma 3.1.** If system (3)-(4) is stable, then.....

$$\dot{y}x(t) = Ax(t) + Bu(t) + B_1w(t) \tag{3}$$

$$y(t) = Cx(t) + Du(t) + D_1w(t) \tag{4}$$

**Theorem 3.1.** Consider system (3) with the control law....

**Proof:** Let....

**Corollary 3.1.** If there is no uncertainty in system (3), i.e.,  $\Delta A = 0$ , then...

**Remark 3.1.** It should be noted that the result in Theorem 2.1.....

**Example 3.1.** Let us consider the following example....

.....

TABLE 1. Fuzzy rule table by FSTRM

$x_1/x_2$	$A_{21}$	...	$A_{2j}$	...	$A_{2k}$
$A_{11}$	$w_1/y_1$	...	$w_j/y_j$	...	$w_k/y_k$
$A_{12}$	$w_{k+1}/y_{k+1}$	...	$w_{k+j}/y_{k+j}$	...	$w_{2k}/y_{2k}$
...			...		
$A_{1i}$	...	...	$w_{(i-1)k+j}/y_{(i-1)k+j}$	...	...
...			...		
$A_{1r}$	$w_{(i-1)k+1}/y_{(r-1)k+1}$	.....			$w_{rk}/y_{rk}$

4. **Control Design.** In this section, we present.....

$$\dot{y}x(t) = Ax(t) + Bu(t) + B_1w(t) \tag{5}$$

$$y(t) = Cx(t) + Du(t) + D_1w(t) \tag{6}$$

**Definition 4.1.** System (5) is stable if and only if...

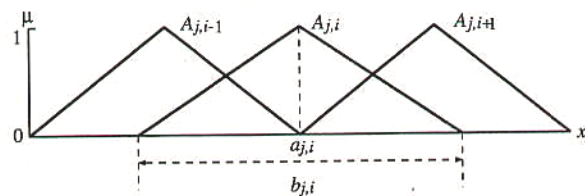


FIGURE 1. Triangular-type membership functions for  $x_j$ .

**Lemma 4.1.** If system (5) is stable, then.....

**Theorem 4.1.** Consider system (5)-(6) with the control law....

**Proof:** Let....

**Corollary 4.1.** If there is no uncertainty in system (5)-(6), i.e.,  $\Delta A = 0$ , then...

**Remark 4.1.** *It should be noted that the result in Theorem 2.1.....*

**Example 4.1.** *Let us consider the following example....*

.....

5. **Conclusions.** The conclusion of your paper is here.....

**Acknowledgment.** This work is partially supported by ..... The authors also gratefully acknowledge the helpful comments and suggestions of the reviewers, which have improved the presentation.

#### REFERENCES

- [1] M. Mahmoud and P. Shi, *Methodologies for Control of Jump Time-delay Systems*, Kluwer Academic Publishers, Boston, 2003.
- [2] P. Shi, Limited Hamilton-Jacobi-Isaacs equations for singularly perturbed zero-sum dynamic (discrete time) games, *SIAM J. Control and Optimization*, vol.41, no.3, pp.826-850, 2002.
- [3] S. K. Nguang, and P. Shi, Fuzzy H-infinity output feedback control of nonlinear systems under sampled measurements, *Automatica*, vol.39, no.12, pp.2169-2174, 2003.
- [4] E. K. Boukas, Z. Liu and P. Shi, Delay-dependent stability and output feedback stabilization of Markov jump systems with time-delay, *IEE-Part D, Control Theory and Applications*, vol.149, no.5, pp.379-386, 2002.
- [5] P. Shi, E. K. Boukas and R. K. Agarwal, H<sub>1</sub> control of discrete-time linear uncertain systems with delayed-state, *Proc. of the 37th IEEE Conf. on Decision & Control*, Tampa, Florida, pp.4551-4552, 1998.