FULL TITLE OF YOUR PAPER

Yan Shi[1] and Junhu Ruan[2,*]

[1]School of Industrial and Welfare Engineering
Tokai University
9-1-1, Toroku, Kumamoto 862-8652, Japan
yshi@ktmail.tokai-u.jp

[2]College of Economics and Management
Northwest A&F University
No. 3, Taicheng Road, Yangling 712100, P. R. China
*Corresponding author: rjh@nwsuaf.edu.cn

ABSTRACT. *Please write down the abstract of your paper here...*
Keywords: Please write down the keywords of your paper here, such as, Control systems, Genetic algorithm, ...

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...

2.1. **Several definitions and theorems.** Please write down your subsection. 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...

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

$$\dot{x}(t) = Ax(t) + Bu(t) + B_1 w(t) \tag{1}$$
$$y(t) = Cx(t) + Du(t) + D_1 w(t) \tag{2}$$

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...*

$$\dot{x}(t) = Ax(t) + Bu(t) + B_2 w(t) \tag{3}$$
$$y(t) = Cx(t) + Du(t) + D_2 w(t) \tag{4}$$

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 3.1...*

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

....

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

$$\dot{x}(t) = Ax(t) + Bu(t) + B_1 w(t) \tag{5}$$
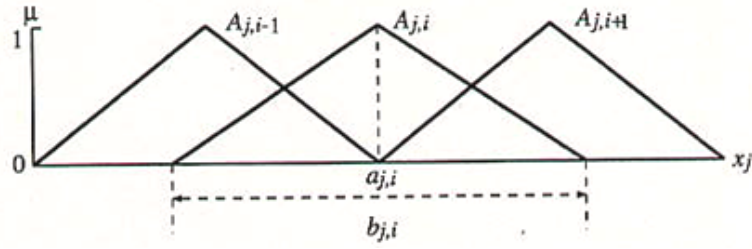
Definition 4.1. *System (5) is stable if and only if...*

FIGURE 1. Example of figure

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

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

Proof: Let...

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

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

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

....

5. **Numerical Example.**

TABLE 1. Sample data

	x_1	x_2	x_3	x_4	x_5	x_6	x_7	x_8	x_9	x_{10}	x_{11}	x_{12}
M_1	1	1	1	0	0	0	0	0	0	0	0	0
M_2	0	0	1	1	1	1	1	0	1	0	0	0
M_3	0	1	0	1	1	0	0	1	0	0	0	0
M_4	1	0	0	0	2	0	0	1	0	0	0	0
M_5	0	0	0	1	0	1	1	0	0	0	0	0
M_6	0	0	0	0	0	0	0	0	0	1	0	0
M_7	0	0	0	0	0	0	0	0	0	1	1	0
M_8	0	0	0	0	0	0	0	0	0	1	1	1
M_9	0	0	0	0	0	0	0	0	1	0	1	1

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

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_∞ control of discrete-time linear uncertain systems with delayed-state, *Proc. of 37th IEEE Conf. on Decision & Control*, Tampa, Florida, pp.4551-4552, 1998.

Author Biography

Yan Shi received the BSc degree in Applied Mathematics from Northeast Heavy Machinery Institute (now Yanshan University), China, 1982; the MSc degree in Applied Mathematics from Dalian Maritime University, China, 1988; the PhD degree in Information and Computer Sciences, from Osaka Electro-Communication University, Japan, 1997.

Dr. Shi is currently a full-time professor at the School of Industrial and Welfare Engineering, Tokai University, Japan. His research interests include approximate reasoning, fuzzy reasoning, fuzzy system modelling and applications, and neuro-fuzzy learning algorithms for system identification. He has published over 200 papers in journals and conferences. He has actively served in a number of journals. He is a Foreign Fellow of The Engineering Academy of Japan.

Junhu Ruan obtained his PhD degree in Management Science and Engineering from Dalian University of Technology, China in 2015; he visited the University of Adelaide, Australia for PhD joint training from November 2013 to November 2014; he worked at the Polytechnic University of Hongkong as the postdoctoral from February 2016 to February 2018.

Dr. Ruan is currently a full-time professor at the College of Economics and Management, Northwest A&F University, China. His main research interests include the IoT-based agriculture, e-commerce, and logistics. He has published over 50 papers on well-known journals. He is hosting some research projects funded from National Natural Science Foundation of China, China Ministry of Education, etc.