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Identitas Jurnal Ilmiah	:	a. Nama Jurnal	:	Iranian Journal of Fuzzy Systems (IJFS)
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		c. Vol, No., Bln Thn	:	Volume 14, Issue 3, May and June 2017
		d. Penerbit	:	Unisity of Sistan & Baluchistan
		e. DOI artikel (jika ada)	:	DOI : 10.22111/ijfs.2017.3238
		f. Alamat web jurnal	:	http://ijfs.usb.ac.ir/article_3238.html
		Alamat Artikel	:	http://ijfs.usb.ac.ir/article_3238_c398a2f414222f158d23d078724feb5f.pdf
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Reviewer 2

Dr. Iwan Setiawan, S.T., M.T.
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Reviewer 1

Dr. Wahyudi, S.T., M.T.
NIP. 196906121994031001
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Reviewer 1

Dr. Wahyudi, S.T., M.T.
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Semarang,
Reviewer 2

Dr. Iwan Setiawan, S.T., M.T.
NIP. 197309262000121001
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Robust fuzzy control design using genetic algorithm optimization approach: Case study of spark ignition engine torque control (Article)

Triwiyatno, A. ✉, Sumardi, S. ✉, Apriaskar, E. ✉

Department of Electrical Engineering, Diponegoro University, Semarang, Indonesia

Abstract

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In the case of widely-uncertain non-linear system control design, it was very difficult to design a single controller to overcome control design specifications in all of its dynamical characteristics uncertainties. To resolve these problems, a new design method of robust fuzzy control proposed. The solution offered was by creating multiple soft-switching with Takagi-Sugeno fuzzy model for optimal solution control at all operating points that generate uncertainties. Optimal solution control at each operating point was calculated using genetic algorithm. A case study of engine torque control of spark ignition engine model was used to prove this new method of robust fuzzy control design. From the simulation results, it can be concluded that the controller operates very well for a wide uncertainty. © 2017, University of Sistan and Baluchestan. All rights reserved.

SciVal Topic Prominence

Topic: Steam generators | Nuclear power plants | Reverse flow

Prominence percentile: 48.536

Author keywords

Engine torque control | Fuzzy logic | Genetic algorithm | Robust fuzzy control | Spark ignition engine | Takagi-Sugeno fuzzy model

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1 Athans, Michael
TUTORIAL ON THE LQG/LTR METHOD.
(1986) *Proceedings of the American Control Conference*, pp. 1289-1296. Cited 122 times.
View at Publisher

2 Cao, S.-G., Rees, N.W., Feng, G.
Analysis and design of fuzzy control systems using dynamic fuzzy-state space models
(1999) *IEEE Transactions on Fuzzy Systems*, 7 (2), pp. 192-200. Cited 107 times.
doi: 10.1109/91.755400
View at Publisher

3 Denai, M.A., Attia, S.A.
Robust fuzzy state feedback control of a field oriented induction motor
(2000) *International Workshop on Advanced Motion Control, AMC*, pp. 281-286. Cited 3 times.
View at Publisher

4 Eklund, P., Zhou, J.
Comparison of learning strategies for adaptation of fuzzy controller parameters
(1999) *Fuzzy Sets and Systems*, 106 (3), pp. 321-333. Cited 5 times.
doi: 10.1016/S0165-0114(97)00292-3
View at Publisher

5 Goldberg, D.E.
(1989) *Genetic Algorithm in Search, Optimization, and Machine Learning*, pp. 60-85. Cited 45902 times.
Addison-Wesley Publ. Co

6 Heintz, N., Mews, M., Stier, G., Beaumont, A.J., Noble, A.D.
An approach to torque-based engine management systems
(2001) *SAE Technical Papers*. Cited 28 times.
http://papers.sae.org/
doi: 10.4271/2001-01-0269
View at Publisher

7 Lamberson, D.M.
(2003) *Torque Management of Gasoline Engines*, pp. 27-40. Cited 9 times.
Thesis, University of California at Berkeley

8 Tong, S.C., Li, Q., Chai, T.
Fuzzy adaptive control for a class of nonlinear systems

(1999) *Fuzzy Sets and Systems*, 101 (1), pp. 31-39. Cited 83 times.

9 Li, T.-S., Tong, S.-C., Feng, G.
A novel robust adaptive-fuzzy-tracking control for a class of nonlinear-Multi-input/Multi-Output systems

(2010) *IEEE Transactions on Fuzzy Systems*, 18 (1), art. no. 5352263, pp. 150-160. Cited 257 times.
doi: 10.1109/TFUZZ.2009.2038277

View at Publisher

10 Mei, F., Zhihong, M., Yu, X., Nguyen, T.
A robust tracking control scheme for a class of nonlinear systems with fuzzy nominal models
(1998) *Appl. Math. Comput. Sci.*, 8 (1-19), pp. 145-158.

11 Shi, Y., Mizumoto, M.
A new approach of neuro-fuzzy learning algorithm for tuning fuzzy rules

(2000) *Fuzzy Sets and Systems*, 112 (1), pp. 99-116. Cited 50 times.
http://www.journals.elsevier.com/fuzzy-sets-and-systems/
doi: 10.1016/S0165-0114(98)00238-3

View at Publisher

12 Stefanopoulou, A.
(1996) *Modeling and Control of Advanced Technology Engines*, pp. 11-28. Cited 20 times.
Thesis, The University of Michigan

13 Takagi, T., Sugeno, M.
Fuzzy Identification of Systems and Its Applications to Modeling and Control

(1985) *IEEE Transactions on Systems, Man and Cybernetics*, SMC-15 (1), pp. 116-132. Cited 13832 times.
doi: 10.1109/TSMC.1985.6313399

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14 Triwiyatno, A., Nuh, M., Santoso, A., Sutantra, I.N.
Engine torque control of spark ignition engine using robust fuzzy logic control
(2011) *IACSIT Int. J. Eng. Technol.*, 3 (4), pp. 352-358. Cited 6 times.

15 Triwiyatno, A., Nuh, M., Santoso, A., Sutantra, I.N.
Engine torque control of si engine using linear quadratic integral tracking (LQIT) Optimal Control
(2011) *IPTEK*, 22 (4), pp. 190-197. Cited 2 times.

16 Triwiyatno, A., Nuh, M., Santoso, A., Sutantra, I.N.
T-S fuzzy model design for engine torque control system of spark ignition engine
(2009) *Transmisi*, 11 (4), pp. 177-182.

17 Triwiyatno, A., Nuh, M., Santoso, A., Sutantra, I.N.
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(2011) *Int. J. Acad. Res.*, 3 (5), pp. 178-185. Cited 2 times.

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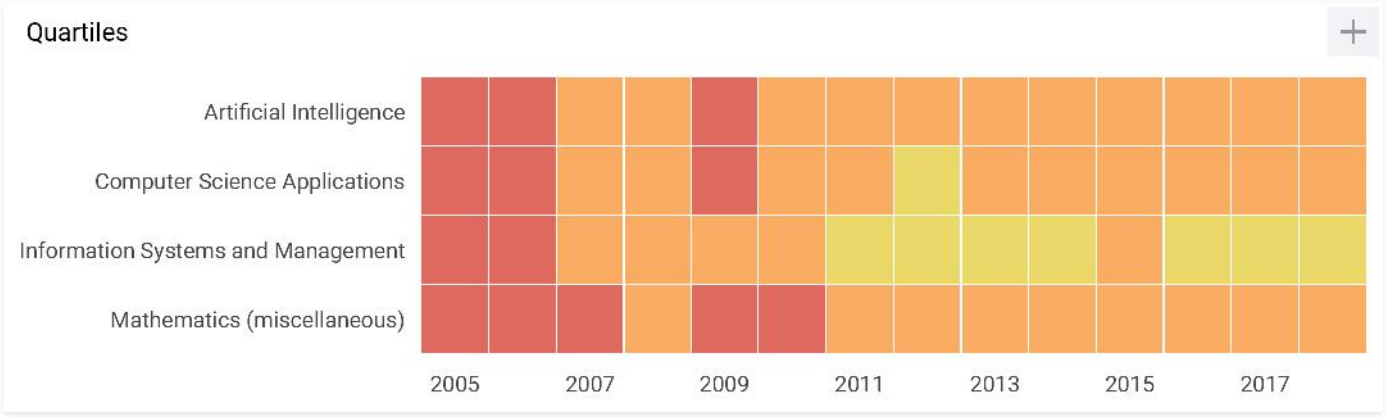

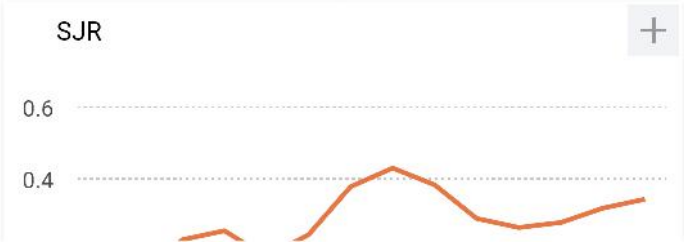

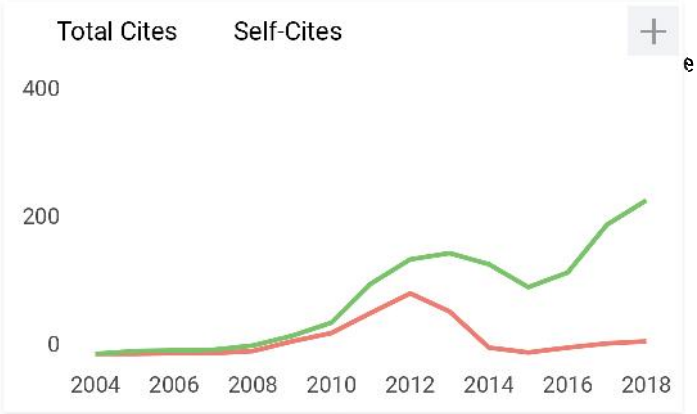

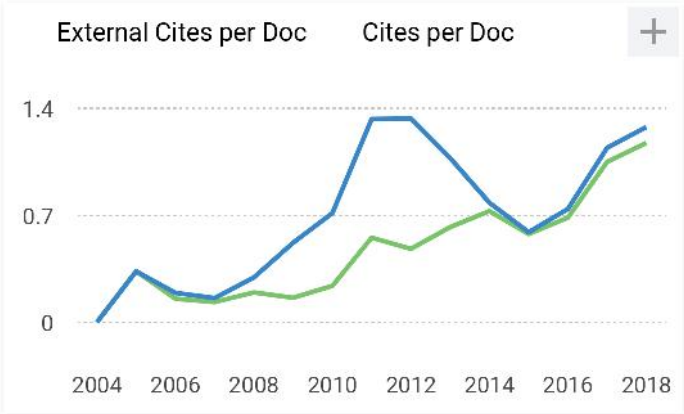

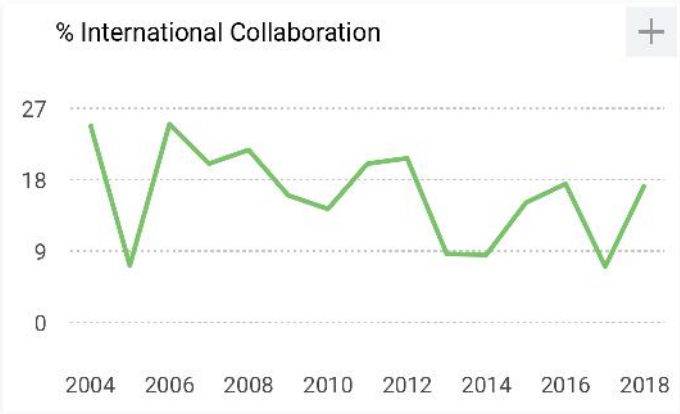

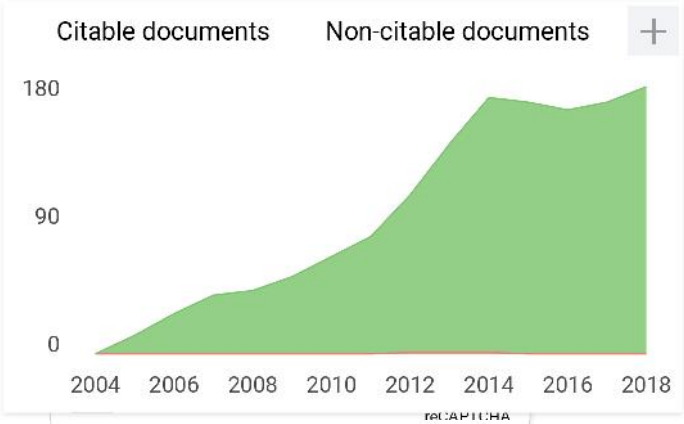

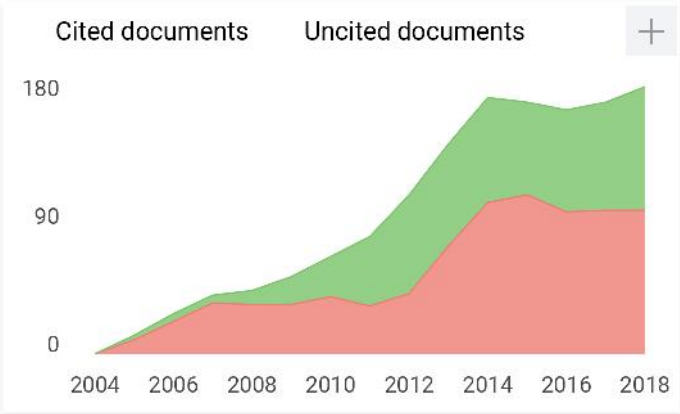

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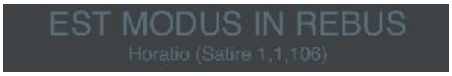

IRANIAN JOURNAL OF FUZZY SYSTEMS

Volume 14 Number 3 June 2017

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