

CURRICULUM VITAE

VAN-PHONG VU, *Ph.D.*

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PERSONAL INFORMATION

Full Name	VAN-PHONG VU
Date of Birth	Oct 05, 1984
Gender	Male
Address:	132/1 Dong Tu, Lai Thieu, Thuan An, Binh Duong, Vietnam
Nationality	Vietnamese
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EDUCATION

Sept-2014 – Nov-2017	Study Ph.D at National Central University, Taiwan. Major: Automatic Control. Advisor: Professor Wen-June Wang. PhD Dissertation: Unknown Input Method Based Observer and Controller Synthesis for nonlinear Uncertain Systems GPA: 93/100
2008 - 2010	Study M.E. at Southern Taiwan University of Science and Technology, Taiwan. Major: Automatic Control Advisor: Professor Chi-Jo Wang GPA: 85.3/100
2002 - 2007	Study B.A. at Ha Noi University of Science and Technology Major: Automatic Control GPA: 7.71/10

WORKING EXPERIENCE

2007-2008	Working at Hoya Glass Disk Vietnam, Japanese Company I worked as Engineering Engineer for setting up, repairing and maintaining AOI (Automatic Optical Inspection) for detecting defect of glass disk surface.
2010-2011	Working at Global Service Engineering (GES) Company, US Company. When I worked in GES, I have more than one year working as Field Service Engineer at ASM factory at Japan in which my main job was installing manufacturing Chip Machines (CVD machines).
Feb. 2012 -Mar 2012	Field Service Engineer at Western Digital Factory, Thailand In Western Digital Factory, I was in charge of installing and maintaining the IBE (Ion Beam Etch) machine.
March 2012- Oct. 2012	Working at Mitsubishi Electric Vietnam, Japanese Company I was in charge EDM section (Electrical Discharge Machine) with responsibilities being installing, repairing, and maintaining EDM machine for customer in Southern area of Vietnam.
Oct. 2012- Aug. 2014	Lecturer at Ho Chi Minh University of Technology and Education, Vietnam.
Nov. 2017- July 2018	Postdoctoral Research Fellow at National Central University.
Aug. 2018- Current	Lecturer at Ho Chi Minh University of Technology and Education, Vietnam.

ACADEMIC EMPLOYMENT

2012 – **Lecturer at Ho Chi Minh University of Technology and Education, Vietnam.**
I work in Automatic Control Group, Faculty of Electrical and Electronic Engineering.

Teaching courses: Intelligent Control System (**Fuzzy Control System and Neural Network**)
Control Theory

LANGUAGE SKILLS

Vietnamese Mother Language

English **IELTS: 6.0 (Taken in 2013)**

I can use English fluently in four skills: reading, listening, speaking and writing in both routine life and academic, especially, teaching and researching.

Chinese I can use Chinese for daily communication in routine life.

HONORS AND AWARDS

- 2008 **Master Research Scholarship** at Southern Taiwan University of Science and Technology-Taiwan (2008-2010)
- 2014 **PhD Research Scholarship** at National Central University-Taiwan (2014-present)
- 2015 **Outstanding Paper Award**
Awarded for paper: “An Observer Design with Unmeasurable Premise Variables for Uncertain T-S Fuzzy System”. Awarded by the 2015 International Conference on Fuzzy Theory and Its Applications (IFUZZY 2015).
- 2017 **Best Paper Award**
Awarded for paper: “State and disturbance observer-based controller synthesis for polynomial system”. Awarded by the 2017 IEEE International Conference on Science System and Engineering (ICSSE 2017).
- 2017-2018 **Postdoc Grant** at Intelligent Control and Image Processing Lab, National Central University, Taiwan.
- 2018 **Best Presentation Paper Award**
Awarded for paper: “A Decentralized Controller Design for A Large-Scale Polynomial System”. Awarded by the 2018 International Conference on Fuzzy Theory and Its Applications (IFUZZY 2018).

RESEARCH INTEREST

Intelligent Control
Fuzzy Control Systems
Observer and Controller Design
Uncertain T-S fuzzy systems & Polynomial System
Fault Estimation
Large-scale systems

ACADEMIC ACTIVITIES

Reviewer

1. The Journal Electrical Engineering
2. IEEE Transactions on Aerospace and Electronic Systems.
3. Mathematical Problems in Engineering
4. Journal of Electrical Engineering (DOI:10.17265/2328-2223)
5. IEEE Access
6. IEEE Transactions on Industrial Informatics
7. The 4th conference on Green Technology and Sustainable Development
8. Asia Journal of Control
9. Advances in Science, Technology and Engineering Systems Journal (ASTESJ)

Editorial Member

1. Advance Research in Electrical Electronics and Instrumentation
(https://www.gavinpublishers.com/journals/board_members/Advanced-Research-in-Electrical-Electronics-and-Instrumentation)
2. Journal of Electrical and Electronic Engineering (ISSN Online: 2329-1605).

Technical Program Co-chair:

IEEE International Conference on System Science and Engineering, 2019, Vietnam

PUBLICATIONS

PEER-REVIEWED JOURNAL ARTICLES

1. **V. P. Vu** and W. J. Wang, "Observer synthesis for uncertain Takagi-Sugeno fuzzy systems with multiple output matrices," *IET Control Theory and Applications*, vol. 10, no. 2, pp. 151-161, 2016 ((SCI- IF=3.296, IF in 2018), Ranked 23/948 Q1, scimago, control and system engineering).
2. W. J. Wang, **V. P. Vu**, W. Chang, C. H. Sun, S. J. Yeh, "A Synthesis of observer-based controller for stabilizing uncertain T-S fuzzy systems," *Journal of Intelligent and Fuzzy Systems*, vol. 30, no. 6, pp. 3451-3463, 2016. (SCIE- IF=1.426 (IF in 2018), Ranked 91/1006 Q2, scimago, Artificial Intelligent).
3. **V. P. Vu**, W. J. Wang, J. M. Zurada, H. C. Chen, and C. H. Chiu, "Unknown input method based observer synthesis for a discrete time uncertain T-S fuzzy system," *IEEE Trans. Fuzzy Syst.*, vol. 26, no. 2, pp. 761 – 770, 2018 ((SCI- IF=8.415, IF in 2018), Ranked 1/948 Q1, scimago, control and system engineering)
4. **V. P. Vu**, W. J. Wang, H. C. Chen, and J. M. Zurada, "Unknown Input Based Observer Synthesis for a Polynomial T-S Fuzzy Model System with Uncertainties," *IEEE Trans. Fuzzy Syst.*, vol. 26, no. 3, pp. 1447 – 1458, 2018. ((SCI- IF=8.415, IF in 2018), Ranked 1/948 Q1, scimago, control and system engineering)

5. **V. P. Vu**, W. J. Wang, "Observer-based controller synthesis for uncertain polynomial systems", *IET Control Theory and Applications*, vol.12, no.1, pp. 29-37, 2018, ((SCI-IF=3.296, IF in 2018), Ranked 23/948 Q1, scimago, control and system engineering).
6. **V. P. Vu** and W. J. Wang, "State/Disturbance observer synthesis for T-S fuzzy system with the enlarge class of disturbances," *IEEE Trans. Fuzzy Syst.* vol. 26, no. 6, pp. 3645-3659. 2018. DOI: 10.1109/TFUZZ.2018.2841858. ((SCI- IF=8.415, IF in 2018), Ranked 1/948 Q1, scimago, control and system engineering).
7. **V. P. Vu**, W. J. Wang, "Robust Observer Synthesis for The Uncertain Large-Scale T-S fuzzy System," *IET Control Theory and Applications*, vol. 13, no.1, pp. 134-145, 2019. ((SCI- IF=3.296, IF in 2018), Ranked 23/948 Q1, scimago, control and system engineering).
8. **V. P. Vu**, T. D. Do, "Fault/State Estimation Observer Synthesis for Uncertain T-S Fuzzy Systems," *IEEE Access*, DOI 10.1109/ACCESS.2018.2885379, 2018.((SCIE- IF=3.557, Q1, IF in 2018).
9. **V. P. Vu**, "Robust observer design for uncertain polynomial systems", *Journal of Technical Education Sciences*, vol. 40, pp. 42-49, 2017. (Peered-reviewed Journal Article)
10. W. J. Wang, S. K. Huang, T. C. Kuo, H. C. Chen, and **V. P. Vu**, "A sub-optimal route planning for the SCARA operation on a 3D object," *iRobotics*, vol. 1, no. 2, pp. 43-49, 2018. (Peered-reviewed Journal Article)
11. **V. P. Vu**, and W. J. Wang, "Polynomial Controller Synthesis for Uncertain Large-Scale Polynomial T-S Fuzzy Systems," *IEEE Trans. Cybernetics*, 2019. DOI: [10.1109/TCYB.2019.2895233](https://doi.org/10.1109/TCYB.2019.2895233). In press. ((SCI- IF=8.803, IF in 2018, Ranked 4/948, Q1in Control and System Engineering field)

CONFERENCE PAPERS

1. C. J. Wang and **V. P. Vu**, "The Application of Nonlinear Feedback Law for LDIs: DC/DC Converter Models," *the 8th International Symposium on Advanced Technology*, Tainan, Taiwan, 2010.
2. C. J. Wang, J. S. Chiou, and **V. P. Vu**, "The disturbance attenuation analysis of T-S fuzzy models using composite quadratic Lyapunov functions," *the 20th International Symposium on Computer Communication Control and Automation*, Tainan, Taiwan, 2010, pp. 241-244.

3. **V. P. Vu** and W. J. Wang, "Observer design for a discrete time T-S fuzzy system with uncertainties. *The 2015 IEEE International Conference on Automation Science and Engineering (CASE)*, Gothenburg, Sweden, 2015, pp. 1262-1267.
4. **V. P. Vu** and W. J. Wang, "An Observer design with unmeasurable premise variable for uncertain T-S fuzzy system," *The 2015 International Conference on Fuzzy Theory and Its Applications (Ifuzzy 2015)*, Yilan, Taiwan, 2015. (**Awarded Outstanding Paper**)
5. **V. P. Vu**, W. J. Wang, and P. J. Lee, "Observer Design for Uncertain T-S Fuzzy System with Multiple Output Matrices and Unmeasurable Premise Variables," *The FUZZ-IEEE 2016*, Vancouver, Canada 2016, pp. 1910-1917.
6. **V. P. Vu** and W. J. Wang, "Observer Design for Discrete Time Uncertain T-S Fuzzy Systems with Estimated Premise Variables," *Joint 17th World Congress of International Fuzzy Systems Association and 9th International Conference on Soft Computing and Intelligent Systems*, Otsu, Japan, June, 2017 (**Accepted**).
7. **V. P. Vu** and W. J. Wang, "States and Disturbance Observer-Based Controller Design for polynomial system with unknown input," *The IEEE International Conference on Systems Science and Engineering*, Ho Chi Minh City, Vietnam, 2017. (**Accepted**).
8. **V. P. Vu** and W. J. Wang, "Observer Synthesis for Uncertain T-S Fuzzy Systems with the Actuator and Output Disturbances," *The 4th International Conference on Control, Automation and Robotics (ICCAR 2018)*, Auckland, New Zealand, April 20-23, 2018 (**Accepted**).
9. Y. Ding, **V. P. Vu**, and W. J. Wang, "A novel control design for a HIV model," *The 8th International Congress on Engineering and Information (ICEAI)*, Sapporo, Japan, May 1-3, 2018 (**Accepted**).
10. S. K. Huang, T. C. Kuo, W. J. Wang, and **V. P. Vu**, "TSP based 3D Route Optimization for a SCARA Robot Arm," *The 8th International Congress on Engineering and Information (ICEAI)*, Sapporo, Japan, May 1-3, 2018 (**Accepted**).
11. **V. P. Vu** and W. J. Wang, "Unknown Input Method Based Observer Synthesis and Actuator Fault Estimation for Polynomial T-S Fuzzy Systems," *the 4th International Conference on Green Technology and Sustainable Development*, Ho Chi Minh City, Vietnam, Nov. 23-24, 2018 (**Accepted**).

12. **V. P. Vu** and D. T. Do, “LMI-Based Robust Observer Design for Estimating Wind Speed in Wind Energy Conversion Systems,” *The 4th conference on Green Technology and Sustainable Development*, Ho Chi Minh City, Vietnam, Nov. 20-23, 2018 (**Accepted**).
13. **V. P. Vu** and W. J. Wang, “Decentralized Observer Synthesis for A Discrete-Time Large-scale T-S Fuzzy System,” *the 2018 International Automatic Control Conference (CACs 2018)*, Nov. 4-7 2018, Taoyuan, Taiwan. (**Accepted**).
14. **V. P. Vu** and W. J. Wang, “A Decentralized Controller Design for A Large-Scale Polynomial System,” the Proceeding in *iFUZZY2018*, Nov. 14-17 2018, Daegu, South Korea. (**Best presentation Award**)

ADVISOR FOR UNDER-GRADUATE STUDENTS

1. H. D. Le and T. N. Nhu, *Bachelor Thesis*: “The Application Image Processing and Matlab Software for Fire Detection in Warehouse”, 2014.
2. H. M. Nguyen and H. C. Nguyen, *Bachelor Thesis*: “The Application Image Processing for Size and Shape Classification System of industrial Product”, 2014.
3. D. M. Vo, *Bachelor Thesis*: “Design the spare system and Circle Network Based on The PLC of Rockwell Automation”, 2014.
4. T. H. Chu and T. L. Pham, *Bachelor Thesis*: “Design the control system for Smart Green House based on PIC 16F887 Micro Controller”, 2013.
5. T.T Nguyen, *Bachelor Thesis*: “Design controller and Observer system for Classification Product Conveyor based on Web-Server and ABB PLC”, 2013.
6. D. Q. Pham and T. N. Vo, *Bachelor Thesis*: “Design a Smart Warehouse Based on Image Processing”, 2013.
7. D. C. Pham and V. T. Vuong, *Bachelor Thesis*: “Remote Controller and Observer Design to Detect the Oil Leaking Point for the Oil Pipe System on Basis of Mobile Phone”, 2013.