



SCIENTIFIC CURRICULUM VITAE

1. Personal details

Full name: Truong Nguyen Luan Vu Date of birth: 15/09/1977
Academic title: Assoc. Prof. Dr Sex: Male
Administrative position: Vice Dean
Department: Mechanical Engineering
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Research gate: <https://www.researchgate.net/profile/Truong-Nguyen-Luan-Vu>

2. Qualifications:

No	Years	Academic institutions	Major/Specialty	Academic degree
1.	2000	HCMC University of Technology, HCMC National University	Mechanical Engineering	Bachelor in Engineering
2.	2003	Yeungnam University, Republic of Korea	Process System Design and Control	Master in Engineering
3.	2009	Yeungnam University, Republic of Korea	Process System Design and Control	PhD in Engineering

3. Professional experience:

No	Years	Institution	Professional address	Position
1.	2002	Technisches Beufskolleg Solingen, Germany	Mechanical Engineering	Advanced Professional Training
2.	2014	Higher Engineering Education Alliance Program (HEEAP)	Educational Science	Advanced Professional Training

4. Language (rating: A- Poor/deficient; B- Fair; C- Sufficient; D- Fluent)

Language	Reading	Writing	Speaking
English	D	D	D
Germany	B	B	B
Korean	C	C	B

5. Expertise and research interests

5.1. Main research orientation



- Process Control
- Fractional Control
- Multivariable Control
- Robust Control
- Systems Modeling and Automatic Control
- Process Identification
- Modern Control

5.2. List of research projects:

List all the research grants/projects:

No	Project ID and Project name	Funding institution & funded amount	Project duration	Project evaluation ranking	Position/ role in the project
1	A study on technology, design, and manufacturing of ultrasonic soldering equipment for aluminum alloys	Ministerial level	2019-2020	Good	Leader
2	Research and manufacturing the Ethanol/water distillation column with capacity of 100 liter/day	Ministerial level	2018-2019	Good	Key member
3	A research, design, and manufacturing the simplified decoupler for enhance the robust stability and performance of industrial multivariable processes	Ministerial level	2016-2017	Good	Leader
4	Manufacturing the industrial gear hobbing CNC machine	Ho Chi Minh city	2015-2016	Good	Key member
5	Improving the design and manufacturing the gear hobbing CNC machine	Ho Chi Minh city	2014-2015	Good	Key member
6	Research and design the multi-loop PID controller for the inverted decoupler system	University key project	2019 - 2020	Good	Leader
7	Research, design, and manufacturing inverted decoupler controller based on the fractional algorithm	University key project	2017 - 2018	Good	Leader
8	Analytical design method of fractional control system for industrial processes	University key project	2014 - 2015	Good	Leader
9	Design method of simplified decoupler for multivariable process	University key project	2013 - 2014	Good	Leader
10	Unified design method of advanced PID controller for industrial process with time delays	University key project	2012 - 2013	Good	Leader
11	Design and manufacturing the temperature control system model in the drying oven of refined sugar	University key project	2002 - 2003	Good	Leader
12	Design and manufacturing the temperature controller using micro-processor	University key project	2001 - 2002	Good	Leader



13	Design and manufacturing 4DoF automatic rotary table	University key project	2000 - 2001	Good	Leader
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5.3. Publications

No	Authors	Year	Publications	Name of Journal/Conference , publishers/ No, Vol, Page	ISSN/ ISBN	Doi/ Link	Notes
1	Article(s) in WoS-covered journal						
1.1	TNL Vu , VL Chuong, NTN Truong, JH Jung	2022	Analytical Design of Fractional-Order PIController for Parallel Cascade Control System	Applied Sciences, 12(4), 2222, (Q1)	2076-3417	https://doi.org/10.3390/app12042222	
1.2	VL Chuong, TNL Vu , NTN Truong, JH Jung	2022	The Pareto optimal robust design of generalized-order PI Controllers based on the decentralized structure for multivariable processes	Korean Journal of Chemical Engineering, 39 , 865–875, (Q2)	Electronic (1975-7220) Print (0256-1115)	https://doi.org/10.1007/s11814-021-0982-2	
1.3	Minsu Kim, NTN Truong, HL Nguyen, N Le, Asiya M Tamboli, M S Tamboli, TNL Vu , JH Jung	2022	Vacuum-free quantum dots planar hybrid solar cells: improving charge transport using reduced graphene oxide and pmo as the buffer layer	Applied Sciences. 20 , 12(3), 1185, (Q1)	2076-3417	https://doi.org/10.3390/app12031185	
1.4	VL Chuong, TNL Vu , NTN Truong, JH Jung	2019	An analytical design of simplified decoupling Smith predictors for multivariable processes	Applied Sciences, 9 (12), 2487, (Q1)	2076-3417	https://doi.org/10.3390/app9122487	
1.5	VL Chuong, TNL Vu , NTN Truong, JH Jung	2019	A Novel Design of Fractional PI/PID Controllers for Two-Input-	Applied Sciences, 9 (23), 5262, (Q1)	2076-3417	https://doi.org/10.3390/app9235262	
1.6	TNL Vu , MY Lee	2014	Smith predictor based fractional-order PI control for time-delay processes	Korean Journal of Chemical Engineering , 31, 1321–1329, (Q2)	Electronic (1975-7220) Print (0256-1115)	https://doi.org/10.1007/s11814-014-0076-5	
1.7	NTN, Truong, CH	2014	Study of Composition,	Journal of Korean Physical Society,		https://doi.org/10.3938/jkps.64.965	



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	Park, JH Jung, TNL Vu		Heat Treatment, and Inorganic Nanocrystal Incorporation for Hybrid-solar-cells Performance	64, 965–969,(Q2)			
1.8	TNL Vu , MY Lee	2013	Analytical design of fractional-order proportional-integral controllers for time-delay processes	ISA transactions, 52(5), 583-591, (SCI,Q1)		https://doi.org/10.1016/j.isatra.2013.06.003	
1.9	TNL Vu , MY Lee	2013	An extended method of simplified decoupling for multivariable processes with multiple time delays	Journal of Chemical Engineering of Japan, 46(4), 279-293, (SCI, Q1)		https://doi.org/10.1252/jcej.12we213	
1.10	TNL Vu , MY Lee	2013	A unified approach to the design of advanced proportional-integral-derivative controllers for time-delay processes	Korean Journal of Chemical Engineering, 30(3), 546-558, (SCIE, Q2)		https://doi.org/10.1007/s11814-012-0161-6	
1.11	NTN Truong, CN Park, JH Jung, TNL Vu , BS Sun	2013	Effect of annealing and semiconductor for nanoparticle incorporation on the performance of hybrid bulk hetero-junction solar cells	Journal of the Korean Physical Society, 62(5), 1-5			
1.12	TNL Vu , MY Lee	2010	Independent design of multi-loop PI/PID controllers for interacting multivariable processes	Journal of Process Control, 20(8), 922-933, (SCI, Q1)		https://doi.org/10.1016/j.procont.2010.06.012	
1.13	TNL Vu , MY Lee	2010	Analytical design of multi-loop PI controllers for interactive multivariable processes	Journal of Chemical Engineering of Japan, 43(2), 196-208, (SCI, Q1)		https://doi.org/10.1252/jcej.09we140	
1.14	TNL Vu , MY Lee	2010	Multi-loop PI controller design	ISA transactions, 49(1), 79-86, (SCI,		https://doi.org/10.1016/j.isatra.200	



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			based on the direct synthesis for interacting multi-time delay processes	Q1)		9.09.002	
1.15	TNL Vu, JT Lee, MY Lee	2007	Design of multi-loop PID controllers based on the generalized IMC-PID method with Mp criterion	International Journal of Control, Automation, and Systems, 5(2), 212-217, (SCIE, Q2)	1598-6446	http://ksci.kisti.re.kr/search/article/articleView.ksci?articleBean.atclMgntNo=E1CAB6_2007_v5n2_212	
2	Article(s) in Scopus-covered journal						
2.1	TNL Vu, LC Vo, TH Nguyen, MY Lee	2020	Design of Simplified Decoupling Control System of Pulsed MIG Welding Process for Aluminum Alloy	Computational Intelligence Methods for Green Technology and Sustainable Development , 364-374, 1284, Springer	2194-5357	https://doi.org/10.1007/978-3-030-62324-1_31	
2.2	TNL Vu, MY Lee	2010	Analytical Design of Robust Multi-loop PI Controller for Multi-time Delay Processes	Advances in Machine Learning and Data Analysis, Springer, 48, 95-108	1876-1100	https://doi.org/10.1007/978-90-481-3177-8_7	
3	Article(s) in other international journal						
3.1	M Masum Jujuly, Truong Nguyen Luan Vu, Moonyong Lee	2011	Analytical Design of PID Controller for Improved Disturbance Rejection of Delay-Free Processes	Korean Chemical Engineering Research	2233-9558	https://doi.org/10.9713/kcer.2011.49.5.565	
3.2	TNL Vu, MY Lee	2010	Design of Advanced Multi-loop PI Controller for Multi-delay Processes	Journal of Institute of Control, Robotics and Systems, 16(1), 77-82	1976-5622	https://doi.org/10.5302/J.ICROS.2010.16.1.077	
3.3	TNL Vu, MY Lee	2010	Analytical Design of IMC-PID Controller Cascaded with a Second-Order Filter for First-Order Processes with Time Delay	Institute of Control, Robotics and Systems, 733-738		https://www.dbpia.co.kr/Journal/articleDetail?nodeId=NODE02040587	



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3.3	TNL Vu, MY Lee	2008	Multi-loop PI controller design for enhanced disturbance rejection in multi-delay processes	International Journal of Mathematics and Computers in Simulation, 2(1), 89-94	1998-0159	https://www.naun.org/main/NAUN/mcs/mcs-78.pdf	
3.4	TNL Vu, JT Lee, MY Lee	2006	Analytical Design of Multiloop PI Controller for Disturbance Rejection in Multivariable Processes	Journal of Institute of Control, Robotics and Systems	2233-4335	https://doi.org/10.5302/J.ICROS.2006.12.5.505	
4	Article(s) in National scientific journal						
4.1	TNL Vu, HG Lee, L Le, LC Vo, TH Phan	2017	PID controller design for second-order delayed unstable process	Journal of Technical Education Science, 44A, 27-32	2615-9740	https://jte.hcmute.edu.vn/index.php/jte/article/view/357	
4.1	LC Vo, TNL Vu	2017	Identification method for simplified decoupling control system of multivariable processes	Journal of Technical Education Science, 36, 27-32	2615-9740	https://jte.hcmute.edu.vn/index.php/jte/article/view/385	
4.3	TNL Vu, HG Le, L Le, BTĐ Nguyen, TH Phan, VD Pham	2016	Design of IMC-PID controller for enhanced disturbance rejection of SOPDT processes	Journal of Technical Education Science, 36, 27-32	2615-9740	https://jte.hcmute.edu.vn/index.php/jte/article/view/441	
5	National/International Conference (s)						
5.1	Vo Lam Chuong, Truong Nguyen Luan Vu, Le Linh	2018	Fractional PI Control for Coupled-Tank MIMO System	4th International Conference on Green Technology and Sustainable Development (GTSD)	2325-0925	https://doi.org/10.1109/GTSD.2018.8595675	
5.2	TNL Vu, PT Hai	2018	Robust Multi-Loop PID Controller Design for Multivariable Process with Time Delay	International Conference on Fluid Machinery and Automation Systems (ICFMAS2018)		https://ste.hust.edu.vn/icfmas2018/	
5.3	TNL Vu, HS Nguyen	2018	A Fractional-order PID controller design	13th World Congress on Computational		http://www.wccm2018.org/	



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			based on fractional calculus for enhanced performance of dead-time processes	Mechanics (WCCM XIII) and 2nd Pan American Congress on Computational Mechanics			
5.4	Nguyen Luan Vu Truong, Nguyen Van Trang, Phan Tan Hai	2017	Analytical design of PID controller for enhancing ride comfort of active vehicle suspension system	International Conference on System Science and Engineering (ICSSE)	2325-0925	10.1109/ICSSE.2017.8030886	
5.5	Vo Lam Chuong, Truong Nguyen Luan Vu	2017	Identification and Dynamic Matrix Control algorithm for a heating process	International Conference on System Science and Engineering (ICSSE)	2325-0925	10.1109/ICSSE.2017.8030954	
5.6	Truong Nguyen Luan Vu, Le Linh, Vo Lam Chuong	2017	Advanced IMC-PID controller design for the disturbance rejection of first order plus time delay processes	International Conference on System Science and Engineering (ICSSE)	2325-0925	10.1109/ICSSE.2017.8030881	
5.7	Truong Nguyen Luan Vu, HG Le, L Le, NT Chuong	2014	Design of simplified decoupling smith control scheme for multivariable process with multiple time delays,	The 2nd International Conference on Green Technology and Sustainable Development (GTSD 2014)			
5.8	Truong Nguyen Luan Vu, HG Le, L Le, NTH Yen	2014	A new analytical design based on the effect of closed-loop interaction in multi-loop control systems	The 2nd International Conference on Green Technology and Sustainable Development (GTSD 2014)			
5.9	Truong Nguyen Luan Vu, Hieu Giang Le, Thien Ngon Dang, Linh Le, Tat Linh Doan, Truong Thinh Nguyen, Moonyong	2013	Fractional-order PI controllers design based on IMC scheme for enhanced performance of dead-time processes	13th International Conference on Control, Automation and Systems (ICCAS 2013), IEEE	2093-7121	10.1109/ICCAS.2013.6704105	



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5.10	Lee TNL Vu, MY Lee	2012	Enhanced Simplified Decoupling for multivariable processes with multiple time delays	The 31st IASTED Asian Conference on Modelling, Identification, and Control		10.2316/P.2012. 769-083	
5.11	Truong Nguyen Luan Vu, Moonyong Lee	2011	Design of extended simplified decoupling for multivariable processes with multiple time delays	11th International Conference on Control, Automation and Systems, IEEE	2093- 7121	https://ieeexplore. ieee.org/abstract /document/61061 74	
5.12	Truong Nguyen Luan Vu, Moonyong Lee	2011	Analytical tuning rules for fractional order proportional integral controllers	11th International Conference on Control, Automation and Systems, IEEE	2093- 7121	https://ieeexplore. ieee.org/abstract /document/61062 40	
5.13	Truong Nguyen Luan Vu, Moonyong Lee	2010	Analytical Design of IMC-PID Controller Cascaded with a Second-Order Filter for First- Order Processes with Time Delay	ICROS		https://www.dbpi a.co.kr/Journal/ar ticleDetail?nodeI d=NODE020405 87	
5.14	Truong Nguyen Luan Vu, Moonyong Lee	2010	Analytical Design of Robust PID Filter Controller for Processes with Time Delay	Korean Institute of Chemical Engineering		https://www.cheri c.org/research/te ch/proceedings/v iew.php?seq=59 930	
5.15	Truong Nguyen Luan Vu, Seungtaek Hong, Moonyong Lee	2009	Analytical design of robust multi- loop PI controller for multivariable processes	ICCAS-SICE, IEEE	1098- 2981	https://ieeexplore. ieee.org/abstract /document/53329 72	
5.16	Truong Nguyen Luan Vu, Moonyong Lee	2009	Robust Multi-loop PID Controller Design for Interacting Multivariable Processes	Theories and Applications of Chem. Eng., 2009, Vol. 15, No. 1		https://www.cheri c.org/proceeding _disk/kiche2009s /0138.pdf	
5.17	Moonyong Lee, M Shamsuzzo ha, Truong Nguyen Luan Vu	2008	IMC-PID approach: An effective way to get an analytical design of robust PID controller	International Conference on Control, Automation and Systems, IEEE	1040- 9000	10.1109/ICCAS. 2008.4694246	



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5.18	Truong Nguyen Luan Vu, Viet Ha Nguyen, Moonyong Lee	2008	Analytical Design of Multi-loop PI Controllers Based on the Direct Synthesis for Multi-delay Processes	Theories and Applications of Chem. Eng., 2008, Vol. 14, No. 1		https://www.cheriac.org/proceeding_disk/kiche2008s/0168.pdf	
5.19	Truong Nguyen Luan Vu, Moonyong Lee	2007	Optimal design of multi-loop PI controllers for enhanced disturbance rejection in multivariable processes	The 3rd WSEAS/IASME international conference on Dynamical systems and control		http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.585.1300&rep=rep1&type=pdf	
5.20	Truong Nguyen Luan Vu, Moonyong Lee	2007	Design of Robustness PID Controllers for MIMO Systems	Theories and Applications of Chem. Eng., 2007, Vol. 13, No. 1		https://www.cheriac.org/proceeding_disk/kiche2007s/0117.pdf	
5.21	Truong Nguyen Luan Vu, Moonyong Lee	2006	Multiloop PI Controller Design Based on Disturbance Rejection of Multivariable Processes Using Ms Criterion	Theories and Applications of Chem. Eng., 2006, Vol. 12, No. 2		https://www.cheriac.org/proceeding_disk/kiche2006f/1470.pdf	
5.22	Truong Nguyen Luan Vu, Kihong Lee, Moonyong Lee, Jietae Lee	2005	Optimal Design Method Based On Mp Criteria for Multiloop PID Controllers	Theories and Applications of Chem. Eng., 2005, Vol. 11, No. 1		https://www.cheriac.org/proceeding_disk/kiche2005s/0190.pdf	
5.23	Truong Nguyen Luan Vu, Moonyong Lee	2004	Optimal Tuning Combined with BLT and Mp criteria For Multiloop PID Controllers	Theories and Applications of Chem. Eng., 2004, Vol. 10, No. 2		https://www.cheriac.org/proceeding_disk/kiche2004f/B1293.pdf	
6	Other (monographs, book chapter, patents, awards ...)						
6.1	Truong Nguyen Luan Vu, Vo Lam Chuong	2022	Decoupling control: Analysis, design and tuning for multivariable process	Vietnam National University – Ho Chi Minh City Press	978-604-73-8893-6		
6.2	Truong Nguyen Luan Vu	2018	PID controller design for process with time delay	Vietnam National University – Ho Chi Minh City Press	978-604-73-5978-3		



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6.3	Truong Nguyen Luan Vu	2018	Multi-loop PID controller: Analysis, Design, and tuning for multivariable processes	Vietnam National University – Ho Chi Minh City Press	978-604-73-5977-3		
6.4	Truong Nguyen Luan Vu, Moonyong Lee	2008	Multi-loop PI/PID Controller Design Based on Direct Synthesis for Multivariable Systems	Award of Merit for International Conference on Modeling, Simulation and Control, 2008, October 21-24, UC Berkeley, San Francisco, CA, USA.			