

Dr. Quoc Chi Nguyen



Title:	Lecturer - Automotive Field
Department:	Training Dept. - Matlab Project
Birth Date:	November 13, 1980
Hire Date:	August 1, 2016
Phone:	(84) 8 6681 5829
Extension:	3453
Mobile Phone:	(84)-903857361
Home Address:	268 Ly Thuong Kiet Street, District 10, Ho Chi Minh City, Vietnam

PIT No:

IBES Intelligent Business & Education Solution JSC
Training Department - Matlab Project

Education:

Degree	Field	Institution	Date Conferred
Mechanical Engineering		Pusan National University (PNU) Korea	Feb. 2012
M.Eng. Cybernetics Engineering		Ho Chi Minh City Univ. of Tech. Vietnam	Dec. 2016
B.Eng. Mechanical Engineering		Ho Chi Minh City Univ. of Tech. Vietnam	Feb. 2002

Fields of Current Research:

- Intelligent perception and control for robotics
- Vibration control of nonlinear dynamical system
- Control of infinite dimensional systems
- Control of offshore cranes

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Work Experience

Phase 1:

Nov. 2014 – present

Head, Control and Automation Laboratory, School of Mechanical Engineering, Ho Chi Minh City University of Technology, Vietnam

Feb. 2014 – present

Lecturer, School of Mechanical Engineering, Ho Chi Minh City University of Technology, Vietnam

Phase 2:

Jan. 2013 – Jan. 2014

Marie Curie Fellow, School of Mechanical Engineering, Tel Aviv University, Israel

Mar. 2012 – Dec. 2013

Lecturer, Department of Mechanical Engineering, Ho Chi Minh City University of Technology, Vietnam

Phase 3:

Feb. 2008 – Feb. 2012

Researcher, School of Mechanical Engineering, Pusan National University, Korea

May 2005 – Aug. 2007

Application Engineer, KUKA Industrial Robots Automation SDN BHD, Malaysia (Vietnam office)

Research Projects

Phase 1:

2016 – Present

Principle investigator of the university project Development of a vision anti-sway control system for container cranes

2013 – 2015

Principle investigator of the university project Development of a vision anti-sway control system for container cranes

Phase 2:

2013 – 2014

Join the Vibro-Impact Machines Based on the Parametric Resonance: Concepts, Mathematical Modelling, Experimental Verification and Implementation funded by Marie Curie Action

“Global Analysis, Design and Dynamics” of Tel

Phase 3:

2005 – 2006

- Develop a dynamic model of a 7 DOF biped robot
- Motion planning for a stable walking of a 7-DOF biped robot
- Build a 7-DOF biped robot

2004 – 2005

Developed a dynamic model of a 7-DOF biped robot

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Principle investigator of two national research projects:
1/ Robust multivariable control design for high speed precision axially moving system granted by Vietnam National Foundation for Science and Technology Development, Vietnam
2/ Adaptive control design for high speed axially moving systems granted by Vietnam National University Ho Chi Minh City

"Industry-Academia Partnerships and Pathways" at Tel Aviv University, Israel
2009 – 2010
Join the Mobile Harbor Project of the Korea Advanced Institute of Science and Technology funded by the Ministry of Education, Science and Technology, Korea
2005 – 2007
Work with KUKA Robot Automation to build automation and robot systems in Vietnam

- Develop a dynamic model of an autonomous vehicle
- Path planning and collision avoidance algorithm for the vehicle using fuzzy control method
- Control hardware design of the vehicle
2002 - 2004
- Serve as a research engineer for the corporation program KC.03-02 between Ho Chi Minh City University of Technology and industries under grant of Vietnam Ministry of Science and Technology to enhance the automation of the industrial systems.

Teaching Experience; Rewards, Honors; Professional Societies and Activities:

Teaching Experience:

- Nonlinear dynamics and control (Graduate course)
- Linear control system (Graduate course)
- Automatic control systems (Undergraduate course)
- Dynamics systems and control (Undergraduate course)
- Intelligent control system (Undergraduate course)

Rewards, Honors:

2013 – 2014 Marie Curie fellowship from European Commission
2008 – 2012 Received a Ph.D. scholarship from the BrainKorea21 (BK21).
2009 Received a Student Travel Grant of the ICCAS-STEP International Joint Conference 2009, P. 1

Professional Societies and Activities:

Member, the Korean Society of Mechanical Engineer (KSME)
Member, the Institute of Control, Robotics, and Systems (ICROS)
Member, the Institute of Electrical and Electronics Engineers (IEEE)
Chair session at ICCAS 2014 (Seoul, Korea)
International Research Commission Member, ICCAS 2014, 2015

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- Robotics (Undergraduate course)

SICE International Joint Conference 2009, Fukuoka, Japan.
2002 Graduated with Honor (Summa Cum Laude), Bachelor Program in Ho Chi Minh City University of Technology, Vietnam

International Program Committee Member of ICCAS 2014, 2015, 2016 (Korea)
Judging Panel Member of Innovate Malaysian Design Competition, Penang, 2016

Tutorial Workshops Attended:

Phase 1:

2015

Enhance teaching skills, Arizona State University, USA.

Phase 2:

2008

Iterative learning control, 2008 ICROS Tutorial Workshop on Advanced Control Theory, Seoul, Korea. Instructor: Prof. Hyo-Sung Ahn (Gwangju Institute of Science and Technology).

2008

Modeling and control of roll-to-roll material processing systems. IFAC 2008

Phase 3:

2002

Robust control theory, 2002 ASME Summer School, Danang, Vietnam. Instructor: Prof. Bin Yao (Purdue University).

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systems, H. H. C. 2000
Tutorial, Seoul, Korea. Instructors: Prof. Prabhakar R. Pagilla (Oklahoma State University), Prof. Dominique Knittel (University of Strabourg), Prof. Kee Hyun Shin (Konkuk University).

Programming Skills; Practical Laboratory Skills; Domestic journals

Programming Skills:

C/C++, MATLAB/Simulink, LabVIEW, Maple, AutoCad, SolidWorks

Practical Laboratory Skills:

Experience with AC/DC servomotors, motion controllers, programmable logical controllers (PLC), microprocessor PIC.

Domestic journals:

- [1] Nguyen, Q. C., Duong, K. M., Chung, T. L., & Le, H. Q., "Dynamic model and control for robot biped," Science & Technology Development, Vol. 11, No. 3, pp. 41-48, 2008 (ISSN: 1859-0128).
- [2] Nguyen, Q. C. and Nguyen, H., "Adaptive control for a rewinding process of a roll-to-roll system," Science & Technology Development, Vol. 18, K-5, pp. 16-23, 2015 (ISSN:1859-0128)
- [3] Thinh, N. H. Q and Nguyen, Q. C., "Input shaping control to reduce residual vibration of a flexible beam," Journal of Computer Science and Cybernetics, Vol. 16, No. 4, pp. 1-4, 2016 (ISSN: 1813-9663)

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Publications

International journals:

1. Nguyen, Q. C., and Hong, K.-S., "Asymptotic stabilization of a nonlinear axially moving string by adaptive boundary control," Journal of Sound and Vibration, Vol. 329, No. 22, pp. 4588-4603, October 2010 (ISSN: 0022-460X, SCI).
2. Nguyen, Q. C., and Hong, K.-S., "Stabilization of an axially moving web via regulation of axial velocity," Journal of Sound and Vibration, Vol. 330, No. 20, pp. 4676-4688, September 2011 (ISSN: 0022-460X, SCI).
3. Nguyen, Q. C., and Hong, K.-S., "Transverse vibration control of axially moving membranes by regulation of axial velocity," IEEE Transactions on Control Systems. Technology, Vol. 19, July 2011 (ISSN: 1063-6536, SCI).

International journals:

4. Nguyen, Q. C., and Hong, K.-S., "Simultaneous control of longitudinal and transverse vibrations of an axially moving string with velocity tracking," Journal of Sound and Vibration, Vol. 331, No. 13, pp. 3006-3019, June 2012 (ISSN: 0022-460X, SCI).
5. Nguyen, Q. C., and Krylov, S., "Nonlinear tracking control of vibration amplitude for a parametrically excited microcantilever beam," Journal of Sound and Vibration, Vol. 338, No. 3, pp. 91-104, March 2015 (ISSN: 0022-460X, SCI).
6. Nguyen, Q. C., Le, T. H., and Hong, K. S., "Transverse vibration control of axially moving web systems by regulation of axial tension," International Journal of Control, Automation, and Systems, Vol. 13,

Domestic journals:

1. Nguyen, Q. C., Duong, K. M., Chung, T. L., & Le, H. Q., "Dynamic model and control for robot biped," Science & Technology Development, Vol. 11, No. 3, pp. 41-48, 2008 (ISSN: 1859-0128).
2. Nguyen, Q. C. and Nguyen, H., "Adaptive control for a rewinding process of a roll-to-roll system," Science & Technology Development, Vol. 18, K-5, pp. 16-23, 2015 (ISSN: 1859-0128)
3. Think, N. H. Q and Nguyen, Q. C., "Input shaping control to reduce residual vibration of a flexible beam," Journal of Computer Science and Cybernetics, Vol. 16, No. 4, pp. 1-4, 2016 (ISSN: 1813-9663)

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No. 3, pp. 1-8, March 2015 (ISSN: 1598-6446, SCIE).
7. Vo, A. H., Truong, Q. T., Thinh, N. H. Q., and Nguyen, Q. C., "Nonlinear tracking control of a 3-d overhead crane with friction and payload compensations," Journal of Mechatronics, Electrical Power, and Vehicular Technology, Vol. 9, No. 9, pp. 10-12, Aug. 2016 (ISSN: 2087-3379)

Conference Proceedings

Conference Proceedings 1

1. Nguyen, Q. C., Ngo, Q. H., and Hong, K.-S., "Active vibration control of an axially 4 moving beam using varying velocity method," Proceedings of ICROS-SICE International Joint Conference 2009, pp. 287-292, Fukuoka, Japan, August 18-21, 2009 (ISBN: 978-4-270-55584-4)

Conference Proceedings 2

5. Cao, Z., Ngo, Q. H., Nguyen, Q. C., and Hong, K.-S., "Sway control of the crane mounted on a ship with rolling motion," Proceedings of the International Conference on Mechatronics and Information Technology, pp. 430-435, Gwangju, Korea, December 3-5, 2011 (ISBN: 978-1-4244-2000-0)

Conference Proceedings 3

9. Nguyen, Q. C., Hong, K.-S., and Ge, S. S., "Transverse vibration control of axially moving beams by regulation of axial velocity," Proceedings of the 18th World Congress of the International Federation of Automatic Control, pp. 5579-5584, Milan, Italy, August 28-September 2, 2011 (ISBN: 978-3-902661-92-4)

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Fukuoka, Japan, August 18-21, 2009 (ISBN: 978-4-907764-34-0).

2. Nguyen, Q. C., Ngo, Q. H., and Hong, K.-S., "Adaptive control of an axially moving string under spatiotemporally varying tension via a hydraulic actuator," Proceedings of ICROS-SICE International Joint Conference 2009, pp. 293-297, Fukuoka, Japan, August 18-21, 2009 (ISBN: 978-4-907764-34-0).

3. Ngo, Q. H., Nguyen, Q. C., and Hong, K.-S., "Adaptive boundary control of an axially moving string under the effect of boundary disturbance," Proceedings of ICROS-SICE International Joint Conference 2009, pp. 304-309, Fukuoka, Japan, August 18-21, 2009 (ISBN: 978-4-907764-34-0).

4. Hong, K.-S., Cao, Z., Nguyen, Q. C., and Ngo, Q. H., "Modeling of a container crane for mobile harbor," Proceedings of the Annual Conference KSME, pp. 48-51, Dajeon, Korea, December 3-5, 2009.

Technology, pp. 430-433, Gwangju, Korea, December 3-5, 2009 (ISBN: 978-0-819478-11-5).

6. Nguyen, Q. C., Ngo, Q. H., and Hong, K.-S., "Adaptive control for a rewinding process of a high-speed roll-to-roll system," Proceedings of the 10th International Conference on Motion and Vibration Control, pp. (2B11) 1-10, Tokyo, Japan, August 17-20, 2010.

7. Ngo, Q. H., Nguyen, Q. C., and Hong, K.-S., "Nonlinear control of an offshore container crane," Proceedings of the 10th International Conference on Motion and Vibration Control, pp. (1C15) 1-7, Tokyo, Japan, August 17-20, 2010.

8. Nguyen, Q. C., Ngo, Q. H., and Hong, K.-S., "Transverse vibration control of axially moving webs by regulation of axial tension," Proceedings of the International Conference on Control, Automation and Systems, pp. 1936-1940, KINTEX, Korea, October 27-30, 2010 (ISBN: 978-89-93215-02-198560).

2009, Milan, Italy, August 26-September 2, 2011 (ISBN: 978-9-902661-93-7).

10. Nguyen, Q. C., and Hong, K.-S., "Longitudinal and transverse vibration control of an axially moving string," Proceedings of the 5th International Conference on Cybernetics and Intelligence Systems, pp. 24-29, Qingdao, China, September 17-19, 2011 (ISBN: 978-1-61284-250-9).

11. Truong, Q. T., Vo, A. H. and Nguyen, Q. C., "Nonlinear adaptive control of a 3D overhead crane," Proceedings of the 6th Vietnam Conference on Mechatronics, pp. 296-306, Hanoi, Vietnam, December 14-15, 2012 (ISBN: 978-604-62-0753-5).

12. Nguyen, Q. C., Le, H. Q. and Hong, K.-S., "Improving control performance of a container crane using adaptive friction compensation," Proceedings of the 14th International Conference on Control, Automation and Systems, pp. 158-162, Seoul, Korea, Oct. 22-24, 2014 (ISBN: 978-89-93215-0).

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.... Conference Proceedings

Conference Proceedings 4

13. Ho, D. T, Nguyen, H. and Nguyen, Q. C., "Input shaping control of an overhead crane," Proceedings of the 7th Vietnam Conference on Mechatronics, pp. 303-311, Bien Hoa, Vietnam, November 21-22, 2014.

Conference Proceedings 5

14. Nguyen, Q. C., Thinh, N. H. Q., and Kim, W. H., "Nonlinear adaptive control of a 3D overhead crane," Proceedings of the 15th International Conference on Control, Automation and Systems, pp. 41-47, Seoul, Korea, Oct. 13-16, 2015 (ISBN: 978-89-93215-090-0)

Conference Proceedings 6

15. Thinh, N. H. Q., Nguyen, Q. C., and Kim, W. H., "Input shaping control to reduce residual vibration," Proceedings of the 15th International Conference on Control, Automation and Systems, pp. 1693-1698, Seoul, Korea, Oct. 13-16, 2015 (ISBN: 978- 89-93215-090-0)

16. Nguyen, T. T. and Nguyen, Q. C., "Modeling of a high-speed 2 DOF Delta Robot," Proceedings of the National Conference on Machines and Mechanisms 2015, pp. 85-93, Ho Chi Minh City, Vietnam, Oct. 30-Nov. 1, 2015 (ISBN: 987-604-73-3752-1)

HR- valuable assets of an enterprise