

**BA-HAI NGUYEN****Ph.D. candidate**

Biorobotics Laboratory, School of Mechanical Engineering,
Korea University of Technology and Education (KUT)

Lecturer in Automotive Department

Hochiminh University of Technical Education (UTE)

Group Leader

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RESEARCH INTERESTS

System modeling, simulation and control

Human-vehicle interaction

Vehicular Robotics

Haptics

EDUCATION

Bachelor [Sep. 2001 – May 2006]

Hochiminh University of Technical Education, Hochiminh, Vietnam

Major: Automotive Engineering

GPA 7.56/10

Advisor: Prof. Do Van Dung

Master [Sep. 2006 – Sep. 2008]

Korea University of Technology and Education, Choeran City, Vietnam.

Major: Mechanical Engineering (Biorobotics Laboratory).

GPA: 4.32/5.

Advisor: Prof. Jee-Hwan Ryu

Thesis: A Study on The Realistic Haptic Feedback of Steer-By-Wire Systems Based on a Direct Current Measurement Method.

Ph.D., [Sep. 2008 – Present]

Korea University of Technology and Education, Choeran, Korea

Major: Mechanical Engineering (Biorobotics Laboratory)

Advisor: Prof. Jee-Hwan Ryu

HONORS AND AWARDS

Sep. 2010 322-Vietnam Ministry of Education scholarship for Ph.D program in Korea (2 years)

Sep. 2006 Korea Government scholarship for master course of mechanical engineering

Sep. 2009 Korea Ministry of Education scholarship

Sep. 2006 Korea Government scholarship for master course of mechanical engineering

May 2006 First-class honor in Automotive Engineering, UTE

May 2005 Certificates of merit of social activity, 2003, 2004, 2005 given by the Youth association of HochiminhCity.

May 2004 Certificate of research activity given by Vietnam Ministry of Education

Feb. 2005 TOYOTA BIEN HOA scholarship

Aug. 2001 Vietnam Ministry of Education scholarship for four years.

RESEARCH EXPERIENCE

Wheeled, tracked robots teleoperation, 2010

Vehicle teleoperation, 2009

Development of a steer-by-wire system for vehicles, 2006-2009.

Electronic power steering systems (EPS) for commercial vehicles, 2009.

Robust control of DC motor, 2008.

Adaptive control of DC motor, 2008.

Emission control of diesel engines, 2006.

Design of robot for Robocon contest organized by Asia-Pacific Broadcasting Union (ABU), 2005, 2006.

PUBLICATIONS

2009

Ba Hai Nguyen, Jee-Hwan Ryu, "Semi-Experimental Results on a Measured Current Based Method for Reproducing Realistic Steering Feel of Steer-By-Wire Systems," presented in 15th Asia Pacific Automotive Engineering Conference in Hanoi-Vietnam, 26-28 October 2009 (APAC15), Hanoi, Vietnam, 2009.

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Ba Hai Nguyen, Jee-Hwan Ryu, Van-Dung Do, "Velocity Estimation For Haptic Applications," The 2009 International Forum on Strategic Technologies (IFOST2009), Hochiminh, Vietnam, 2009.

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Ba Hai Nguyen, Hai-Bac Ngo, Jee-Hwan Ryu, "Novel Robust Control Algorithm of DC Motors," The 6th International Conference on Ubiquitous Robots and Ambient Intelligence (URAI 2009), Seoul, Korea, 2009.

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Van-Dung Do, Thanh-Thuong Tran, Ba-Hai Nguyen, "Simulation and Experimental Results on Study of Automotive Airflow Meter Swappability," accepted to be presented in 15th Asia Pacific Automotive Engineering Conference in Hanoi-Vietnam, 26-28 October 2009 (APAC15), Hanoi, Vietnam, 2009.

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Ba Hai Nguyen, Jee-Hwan Ryu, "Direct Current Measurement Based Steer-By-Wire Systems for Realistic Driving Feeling," Proceedings of the IEEE International Symposium on Industrial Electronics 2009, Seoul, Korea.

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2008

Ba Hai Nguyen, Jee-Hwan Ryu, "Development of a Observe-By-Wire System for Forklifts Using Haptic Interfaces," ISBN: 978-89-950038-8-6, International Conference on Smart Manufacturing Application, April. 9-11, 2008 in KINTEX, Gyeonggi , Korea.
([Download PDF](#)).

Velocity Estimation of DC motor based on its dynamics, hocdelam workshop, Sep. 11, 2008 in Choeran,Chungnam, Korea.

PATENTS

A robust electromechanical apparatus for steer-by-wire systems
Inventor: Ba-Hai Nguyen,Jee-Hwan Ryu.
2008, Korea (pending)

A Multifunctional Haptic Seat for Automotive Driving Assistance and Driver's Comfort
Inventor: Ba-Hai Nguyen,Jee-Hwan Ryu, Yesl Kim.
2008, Korea

A Regenerative Suspension System for Vehicles.
Inventor: Ba-Hai Nguyen,Jee-Hwan Ryu, Yesl Kim.
2008, Korea.

Steer-By-Wire Development and Control Based on a Direct Current Measurement Method.
Inventor: Ba-Hai Nguyen,Jee-Hwan Ryu, Yesl Kim.
2008, Korea.

INVITED TALKS

LabVIEW-based applications, UTE, Hochiminh city, Vietnam, 2008
Graphical Programming for Mechatronics Applications, Hochiminh University of Technology, Hochiminh City, Vietnam.
Virtual Instrumentations for Mechatronic Engineering

COURSES-TUTORIALS-BOOKS

Tutorial on DC motor control using LabVIEW and PCI-7356 ([link](#))
LabVIEW programming
Vehicle Dynamics (Introduction and Advanced)
Introduction to Automatic Control
Experimental mechatronics

ACTIVITIES

- Assistant lecturer of Department of Automotive Engineering, UTE, 2006 – present.
- Online instructor in science and engineering at Hocdelam center, 2006 – present.
- Founder & chairman of English Speaking Club, Hochiminh University of Technical Education. 2003-2005.
- Founder & co-leader of VAGAM (<http://vagam.dieukhien.net>), 2007 – present.
- Founder & group leader of HOCDELAM (<http://hocdelam.com>), 2008 – present.
- Co-founder & co-group leader of DIEUKHIENTUDONG (<http://dieukhientudong.com>), 2007- present.
- Board member of student association, UTE, 2003-2005.
- Resident assistance of International dormitory of KUT, 2008 – present

- Team leader of of CKD01 (2005, and CKD (2006) in ROBOCON contest, organized by Asia-Pacific Broadcasting Union (ABU), 2005, 2006.

REFERENCE

Prof. Do Van Dung

Vice-Rector of Hochiminh University of Technical Education, 01- Vo van ngan street, Thuduc district, Hochiminh, Vietnam.

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Prof. Jee-Hwan Ryu

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