

# Mechanical, Materials and Mechatronic Engineering

## Prof. Dr. Vu Trieu Minh

**Head of Mechanosystem - Department of Mechatronics**Building V, Room 313

**Tallinn University of Technology** 

Email: vutrieuminh@yahoo.com



#### My brief CV

See my full C.V including Career, Research Activity, and Publications in the below link: <a href="https://www.etis.ee/portaal/isikuCV.aspx?PersonVID=70559&lang=%3E%3E&lang=en">https://www.etis.ee/portaal/isikuCV.aspx?PersonVID=70559&lang=%3E%3E&lang=en</a>

## Prof., Dr. VU TRIEU MINH

Dept. of Mechatronics, Tallinn University of Technology, Ehitajate tee 5, 19086, Tallinn, **Estonia** 



## **Education:**





**Ph.D.** Mechatronics, Asian Institute of Technology (AIT), Thailand, 2004.

Dissertation: Studies of Model Predictive Control.

Awarded with full scholarship from Austrian Government.

Master Manufacturing System of Engineering, Asian Institute of Technology (AIT),

Thailand, **1999**.

Thesis: Development of a Distributed Process Control Model for

Petrochemical Industry.

Awarded with full scholarship from Vietnam Petroleum Corporation.

**Bachelor** Mechanical Engineering, Hanoi University of Technology (HUT), 1983.

Major: Machine Tools.

Awarded with full scholarship from the Vietnamese Government.



## Industrial Experience: Almost 20 years working in real industries as senior engineer of Automation and Coun

2000 – 2001	Head of Technical Department, Petro Vietnam Investment Consultancy and
	Engineering Joint Stock Company (PVE), Vietnam Petroleum Corporation, Ho
	Chi Minh City, Vietnam.
	http://www.pvengineering.com.vn/
1995 – 1998	Senior Engineer on Automation & Control at VietGas Engineering Joint Stock
	Company (VGE), Vietnam Petroleum Corporation, Vung Tau City, Vietnam.
	www.petrovietnam.com.vn/
1989-1995	Senior Researcher at National Institute of Statistics & Informatics, Hanoi,
	Vietnam.
	Visiting faculty at Hanoi National University of Vietnam, Hanoi, Vietnam.
	http://www.vnu.edu.vn/en/
1983-1989	Senior Mechanical Design Engineer at Industrial Department, Hanoi, Vietnam.
	http://www.ypvn.com/en/

# Industrial Experience: Design of SCADA (supervisory control and data acquisition) for 3 real projects

July 2005	Block B52 – Omon Gas Pipeline Project: Coordinator for the B52 – Omon
	Gas Pipeline Project, part of Gas Power Fertilizer Coordination Project to
	supply natural gas to a planned integrated power and fertilizer plant in Ca
	Mau province of Vietnam. The gas pipeline originates from the
	overlapping Vietnam-Malaysia area of the gulf of Thailand.

- 2000-2001 Rang Dong Bach Ho Gas Pipeline Project: Development of a 40 Km offshore gas pipeline from Rang Dong to Bach Ho.
- 1995-1998 Bach Ho Dinh Co Gas Pipeline Project: Design of the Control and SCADA systems for the 108 Km subsea transmission associate gas from Bach Ho offsea oil field to Dinh Co landing station at Vung Tau (South of Vietnam)

Dinh Co Gas Processing Plant Project: Design of the Control System and Fire Fighting Systems for a gas processing plant. The outcome products are light gas (C1, C2), LPG (C3, C4), and Condensate (C5).

Mechanical and Mechatronics Engineering

Academic Experience: Teaching in university from 2001-2014 in Thailand, Germany, Malaysia and Estonia.



## **Current teaching courses in Tallinn:**

- MHE0030 Automotive Mechatronics (Master)
- MHK0011 Microcontrollers and Practical Robotics (Bachelor)
- MHK0035 Robot Systems and Sensor Technique Project (Master)
- MHD9090 Multibody Systems Dynamics (PhD)
- MHD0050 Differential Equations for Machine Mechanics (Master)
- MHD0071 Statics and Kinematics (Bachelor)
- MXX9040 Professional Training (PhD)



**Academic Experience:** Areas of Research Study

Mechatronics
Robotics and Automation
Automotive Engineering
Advanced Control Systems



Fuzzy NeuroNet, Intelligent Artificial Microcontrollers, Embedded Systems

**Mechatronics applications** 

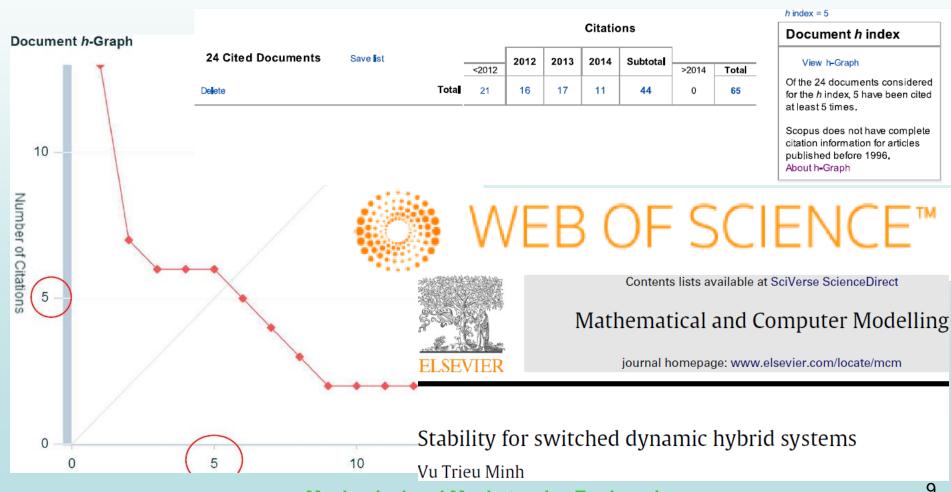


<u>Academic Experience:</u> Have taught almost of courses in mechanical engnineering. Supervised a dozen of master students and four doctoral sutdents (completed)





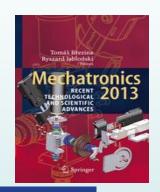
# <u>Publications:</u> First Author in 25 journal papers indexed by Web of Science, total 85 citations, H-Graph Index = 5

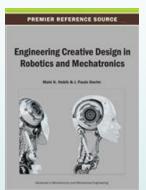


#### **Publications: 2 books and 6 book chapters**

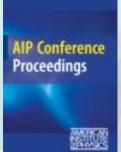
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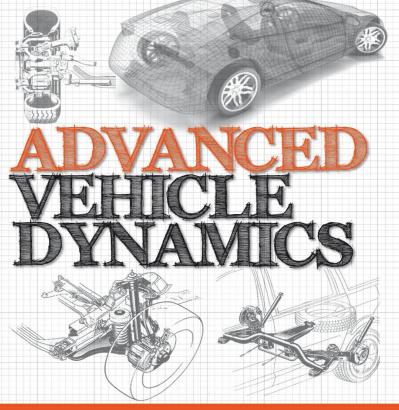






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**Vu Trieu Minh** 



## **Editorial Board in 2 Journals and Reviewing Committee in**

Mechanical and Mechatronics End

8 journals



Global Journal of

#### TECHNOLOGY and OPTIMIZATION

Worldwide coverage: Power, Energy, Controllers, Computing, Biotechnology, Informatics, Healthcare, Schedding, Nano Physics, Chaos, Hybrid Optimization



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#### Welcome Letter for Editor Board Members

#### **Editorial Board in:**

Global Journal of Technology and **Optimization** 

Science and **Engineering** 





# International Award to Professor Trieu Minh Vu from Faculty of Mechanical Engineering

http://www.ttu.ee/news/news-2/university-2/international-award-to-professor-trieu-minh-vu-from-faculty-of-mechanical-

engineering/



#### Categories



## International award to Professor Trieu Minh Vu from Faculty of Mechanical Engineering

12.02.14 @ 08.11 University

Last changed: Kersti Vähi, 12.02.2014 08:13 E-mail to author

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Head of Chair of Mechanosystem Components from Department of Mechatronics Professor Trieu Minh Vu has been awarded the Mechatronics, Informatics and Control Group's Donald Julius Groen Prize.

The recognition has been given for a paper: 'Clutch control and vibration reduction for a hybrid electric vehicle', published in Proceedings of the Institution of Mechanical Engineers, Part I: Journal of Systems and Control Engineering. Donald Julius Groen Prize is issued by the Institution of Mechanical Engineers (IMechE) every year for one outstanding paper with an official certificate and a cheque of £250. IMechE is an independent engineering society based in London, representing mechanical engineers. It represents over 100,000 members in 139 countries in industries including rail, automotive, aerospace, manufacturing, energy, medicine and construction.

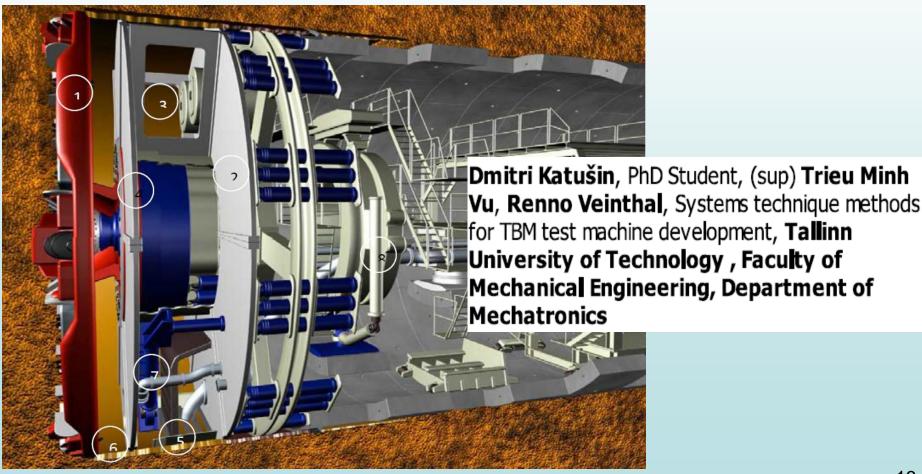
Donald Julius Groen Prize



## **Current Project 1:** European Project NeTTUN 2012-2018

#### **Robotics for TBM Tunnel Boring Machine**

https://www.etis.ee/portaal/isikuCV.aspx?PersonVID=70559&lang=&lang=en



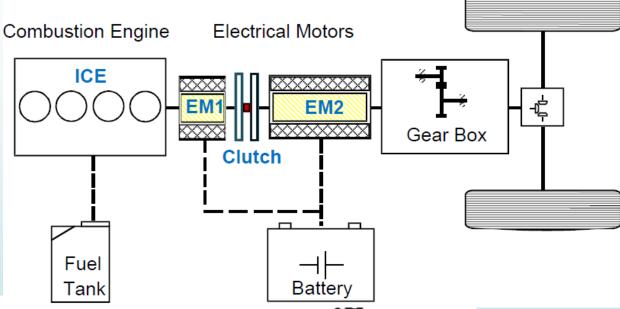
**Nettun** 



### **Current Project 2:** Automated Clutch Controller for Parallel

**Hybrid Vehicle** 





Institution of MECHANICAL ENGINEERS



Original Article

## Clutch control and vibration reduction for a hybrid electric vehicle

Proc IMechE Part E

J Systems and Control Engineering

0(0) 1–8

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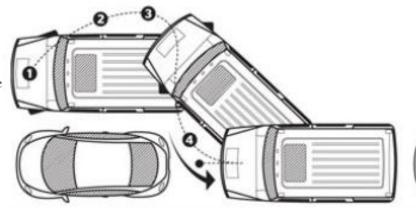
## <u>Current Project 3:</u> European FP7-ICT-2012 (Future Program – Information and Communication Technologies)

http://cordis.europa.eu/programme/acronym/FP7-ICT\_en.html

## Integration of autonomous and non-autonomous vehicles in the future traffic

#### (IAVFT)

Hindawi Publishing Corporation Mathematical Problems in Engineering Volume 2014, Article ID 317494, 12 page http://dx.doi.org/10.1155/2014/317494





Research Article

Feasible Path Planning for Autonomous Vehicles



# **Current Project 4:** European IUT33-35 Project 2015-2020 (Smart Sensing for Mechatronics and Production Systems)

3/19/2014 Print





IUT taot usvormi arendamiseks on kasutatud Euroopa Sotsiaa fondi vahendeid

IUT määrus
IUT eelarve koostamise juhend 2014-01-23
IUT uurimistoetuse taotluste menetlemise kirjeldus 2014-01-23
IUT hindamisjuhend 2014-01-23

#### **IUT 2015 Application IUT33-25**

#### Institutional research funding

Application type

R&D institution

Relevant structural unit

Research topic in Estonian

Research topic in English Application for funding of a research topic

Tallinn University of Technology

Tallinn University of Technology, Faculty of Mechanical Engineering, Departmen

Arukas mehhatroonika ja tootmissüsteemide sensoorika

Smart sensing for mechatronics and production systems

# Sattelite Link to Headquarters Site Base Station Intelligent sensors on products Distributed Intelligent sensors Identification Tag iiWatch robots

#### Annual budget

Personnel related expenses

Travel related expenses.

Expenses related to acquisition of fixed assets.

Expenses related to publication, research popularisation and protecting the IPR

Subcontracting and other services to be purchased.

Other direct expenses relevant for the implementation of the research topic.

Proposed budget

General expense

Mechanical and Mechanics Engineering

130 000,00 EUR (2 034 058

EEK)

5 000,00 EUR (78 233 EEK)

10 000,00 EUR (156 466 EEK)

500,00 EUR (7 823 EEK)

0,00 EUR (0 EEK)

2 000,00 EUR (31 293 EEK)

147 500,00 EUR (2 307 874

EEK)

41 300,00 EUR (646 205 EEK)

188 800,00 EUR (2 954 078

EEK)



## Current Project 5: Project IUT 19-35 for 2014-2017 (Human-

**Robot Interface for Teleoperations)** 

Project title Human-robot interface for teleoperations

Head of the research group Vu Trieu Minh

**Project start** 01.07.2014

**Project end** 01.07.2017





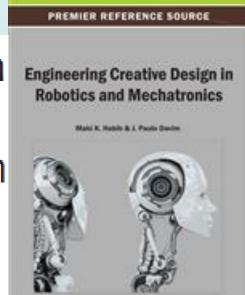


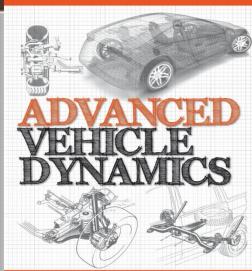


# How can my research interests strengthen the OMICS Global Journal of Technology and Optimization?

- OMICS Global Journal of Technology and Optimization has strong and high prestige
- Experiences in industries for almost 18 years
- Expereiences in publications, research projects
- Interantional relationships

Development and Simulation of an Adaptive Control System for the Teleoperation of Medical Robots







# What are my capabilities, interests, short-term and long-term goals for OMICS?

- Sottwares: Matlab, PLC, C, IAR and Keil for Microcontroller, MEMS, Automations and Robotics
- Advanced Control Techniques, MPC, Adaptive, Robust, Deterministic, Schochatic, IA, Fuzzy, Neuro network, Wireless communication systems
- Operation of almost types of CNC machines and welding.
- Supervision of Master and PhD students, publications, research projects on smart systems
- Interantional experiences in Vietnam, Thailand, Malaysia, Germany, Finland, and Estonia.



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