VIET NAM NATIONAL UNIVERSITY HO CHI MINH CITY

BK TP.HCM

MSCA GLOPOL

Marie Skłodowska-Curie Actions

Global cooperation: Policy enhancement and Strategic promotion

From Marie Curie Fellowship to Sustainable Research Leadership in Vietnam

HO CHI MINH CITY UNIVERSITY OF TECHNOLOGY

QUOC - CHI NGUYEN (nqchi@hcmut.edu.vn)

VIETNAM NATIONAL UNIVERSITY, HO CHI MINH CITY

TRƯỜNG ĐẠI HỌC BÁCH KHO HO CHI MINH

FIND US ON THE MAP

HO CHI MINH CITY
ECONOMIC & CULTURAL HUB
IN ASEAN

Academic Profile & Leadership

Assoc. Prof. Quoc-Chi Nguyen, PhD
Vice Dean, Faculty of Mechanical Engineering – Ho Chi Minh City University of Technology (Vietnam)

🔬 **Research Areas**
- Robotics & Intelligent Control
- Digital Twin & Smart Manufacturing
- AI-based Modeling for Industrial Systems

🌍 **International Collaboration**
- Research partnerships across **Asia – Europe – Australia**
- Strong engagement with industry in automation, precision manufacturing, and intelligent inspection

🎯 **Professional Mission**
•Bridging **fundamental control theory** and **industrial implementation**
•Driving digital transformation through advanced robotics and Digital Twin technologies

🏛️ **Academic & Leadership Roles**
- Vice Dean, Faculty of Mechanical Engineering, HCMUT
- Former Head, Department of Mechatronics Engineering
- Associate Editor, *International Journal of Control, Automation and Systems*
- Steering Committee Member, Asian Control Association

🎓 **Prestigious International Fellowship**
- **Marie Curie Fellow (EU-funded Programme)**
- *Awarded in 2013 under the project:* **"Vibro-Impact Machines Based on Parametric Resonance (PARM-2)"**

RESEARCH INTERESTS

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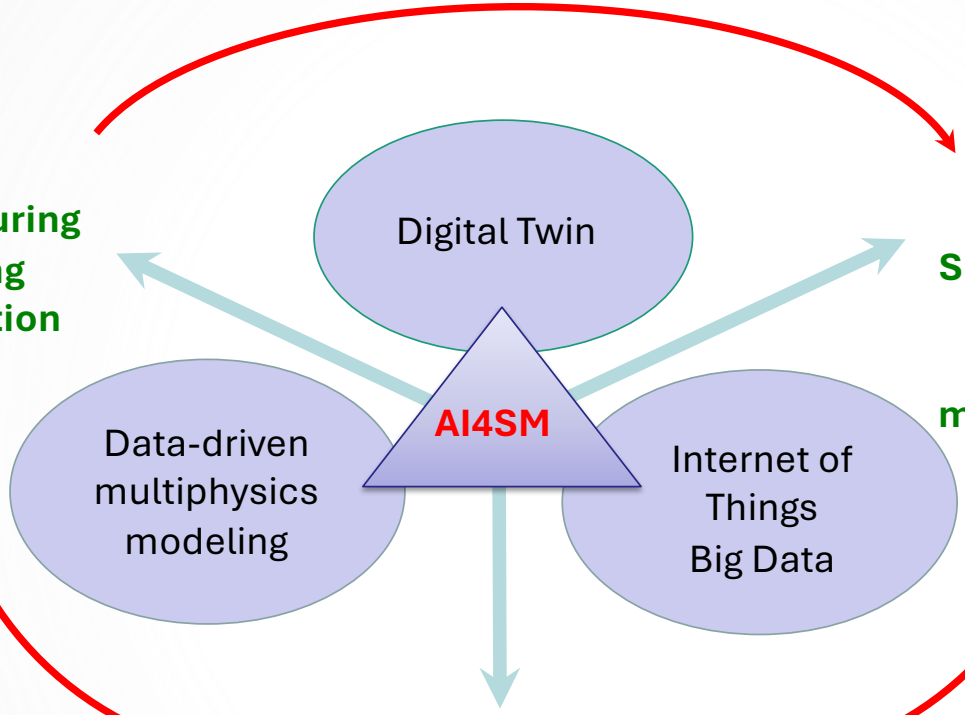
Smart manufacturing planning optimization

AI – Agent for Manufacturing **Naturalize the engineering language**



Smart monitoring Smart Quality control Smart maintainance

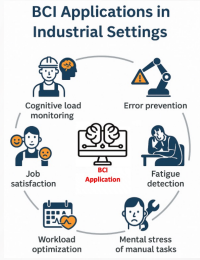
DIGITAL TWIN FOR DRONE

Predictive maintenance

MENTAL HEALTH FOR WORKER

Industrial metaverse

Industry 5.0: Human-Machine Collaboration



AI AGENT FOR MECHANICAL MANUFACTURING

VIET NAM NATIONAL UNIVERSITY HO CHI MINH CITY

BK TPHCM

Research Group AI4SM

Members

Assoc. Prof. Nguyen, Quoc Chi
HCMUT, Vietnam

Dr. Tran, Van Xuan
EDF R&D UK Centre

Dr. Phung, Thanh Huy
HCMUT, Vietnam

Dr. Nguyen, Duy Anh
HCMUT, Vietnam

Dr. Pham, Phuong Tung
HCMUT, Vietnam

Dr. Nguyen, Dinh Son
Pittsburgh Univ, USA

Dr. Do, Van Huong
AsicLand Co Ltd, Korea

Dr. Pham, Quy Duc Thinh
University of Liège, Belgium

Dr. Truong, Ngoc Cuong
HCMUT, Vietnam

Tran, Ngoc Hoang
Thu Dau Mot University, Vietnam

Mentors

Prof. Anne-Marie Habraken (University of Liege, Belgium)

Prof. Pai-Chen Lin (National Chung-Cheng University, Taiwan)

Assoc. Prof. Hoai Quoc Le (President, Ho Chi Minh City Automation Association)

05 PhD students

05 Msc students

10 members
4 Professors & 8 PhDs
6 members living in VN
4 members from UK, USA, Belgium, Korea

Networks

BACH KHOA ALUMNI

HAuA

Marie Curie Fellowship Experience: Lessons Learned

⚖️ Research Ethics

- Ethics approval and compliance
- Responsible for data and IP management
- **Ethics as a core research value**

📊 Project Management

- Structured project management (WPs, milestones, KPIs)
- Partner coordination
- Balanced quality, cost, and risk

📝 Proposal Writing

- Excellence- and impact-oriented research design
- Clear objectives and risk-aware methodology
- Interdisciplinary and industry-relevant focus

🌍 Networking & Long-Term Collaboration

- Strong international research networks
- Joint outputs and mobility pathways
- From individual fellowship to institutional partnership

Impact of Marie Curie Fellows on Vietnam

🇪🇺 **Marie Curie Fellows - European research ecosystem to Vietnam — transparent, ethical, data-driven, and sustainable.**

🌍 **SYSTEM – TRANSPARENCY – SUSTAINABILITY**
- Transparent governance
-Data-driven decisions
- Strong ethics
👉 Sustainable institutional strength

🤝 **HUMAN-CENTERED & ETHICAL RESEARCH CULTURE**
- Mandatory ethics compliance
- Diversity and equal opportunities
- IP and research data protection
👉 A responsible and trustworthy research environment

📊 **EVIDENCE-BASED SCIENCE & QUALITY ASSURANCE**
- Rigorous review and validation
- Reproducible and reliable research
- High publication standards
👉 Long-term research excellence

🚀 **CAPACITY BUILDING & KNOWLEDGE TRANSFER**
- EU-standard training
- Global mobility and networks
- Future research leaders
👉 Sustainable national capacity

🏭 **INDUSTRY LINKAGE & SOCIETAL IMPACT**
- Industry–academia collaboration
- Applied and translational research
- Digital innovation support
👉 Societal and economic impact

The Future Impact of Marie Curie Fellowship on Vietnam's Development

🚀 **Vietnam's Emerging Development Era**
- Modernization and innovation-driven growth
- Knowledge-based, high-value economy

👉 Strong research capacity and global integration

🌍 **Marie Curie Fellowship as a Catalyst for Change**
- Internationally competitive researchers
- European research standards
- Global academic–industry networks
- Innovation-oriented collaboration

👉 Long-term institutional transformation

🇪🇺 **Europe as a Strategic Knowledge Partner**
- Europe offers advanced technologies and a proven research ecosystem
- Transparency and accountability
- Evidence-based governance
- Strong research ethics
- Long-term sustainability

👉 Essential for strengthening Vietnam's scientific and institutional foundations

🎯 **Long-Term Impact on Vietnam's Research Ecosystem**
- Globally trained research leaders
- International science integration
- Sustainable innovation and technology transfer
- High-tech and digital competitiveness

Building EU–Vietnam Research Pipelines

🎓 PhD & Postdoctoral Exchange
- Two-way mobility programmes for PhD candidates and postdoctoral researchers
- Joint training under EU research standards
- Development of globally competitive young scientists

👥 Co-Supervision & Joint Mentorship
- Joint supervision of PhD and MSc students
- Harmonized academic standards and evaluation systems
- Strengthening international research training quality

🏛️ Joint Research Laboratories
- Establishment of shared research platforms and testbeds
- Integration of European and Vietnamese infrastructures
- Long-term cooperation in Digital Twin, Robotics, and Smart Manufacturing

💶 Joint Funding & Collaborative Projects
- Joint proposals for MSCA, Horizon Europe, Erasmus+, and national programmes
- Co-funded projects with industry participation
- Sustainable financial models for long-term cooperation

🌍 Integrated Collaboration Framework
- Connecting education, research, and industry
- Linking individual mobility to institutional partnerships
- Building a continuous pipeline from training to innovation

Call for Partnership

🤝 Why Cooperate

- Shared commitment to **research excellence, ethics, and sustainability**
- Complementary strengths between **European research systems** and **Vietnam's fast-growing innovation ecosystem**
- Strong alignment with global challenges in **digital manufacturing, robotics, and Industry 5.0**

🚀 What We Offer

- Proven expertise in **Digital Twin, intelligent control, robotics, and AI-driven manufacturing**
- EU-trained research leadership with **Marie Curie experience**
- Access to industrial testbeds, real-world applications, and regional networks in Asia
- Strong engagement in **education–research–industry integration**

🔍 What We Seek

- Long-term academic partners for **joint research and co-supervision**
- Collaboration on **MSCA, Horizon Europe, Erasmus+, and bilateral programmes**
- Industrial partners interested in **translational research and innovation deployment**

Shared vision for **capacity building and sustainable impact**

🧭 Next Steps

- Identify common research themes and complementary expertise
- Initiate joint PhD/Postdoc supervision and mobility schemes
- Prepare joint proposals and pilot projects

Establish a roadmap toward **sustainable EU–Vietnam research pipelines**

THANK YOU FOR YOUR ATTENTION