NGO MINH KHANG

ngominhkhang20032002@gmail.com +84 816-131-346 | +82 10-7510-0320
https://www.linkedin.com/in/ngominhkhang20032002/

OBJECTIVE

Ngo Minh Khang, 23 years old. Mechanical Engineering Ph.D. candidate at Hanyang University with strong research experience in robotics, computer vision, and intelligent automation systems.

EDUCATION

Hanyang University – Korea 2025 – Present

Ph.D. Candidate of Mechanical Engineering – Advisor: Prof. Jonghun Yoon.

GPA: 4.31/4.5.

Ho Chi Minh City University of Technology - Vietnam National University 2020 – 2024

Bachelor of Mechanical Engineering - Office for International Study Programs (OISP).

Position: Vice President of the Vietnamese Students' Association of Class CC20CK12, Faculty of Mechanical Engineering, Ho Chi Minh City University of Technology, since 2022.

SKILLS

Technical skills:

CAD: AutoCAD, Inventor, SolidWorks, MATLAB, Python.

Analysis skills:

Using **ANSYS** for 3D design, **FEM** (Finite Element Method), **CFD** (Computational Fluid Dynamics), and **DOE** (Design of Experiments). Using **Minitab** for DOE and Statistics.

Computing Skills:

Word, Excel, PowerPoint, Visio.

Soft skills:

Teamwork, communication, time management, and multi-tasking Skills.

RESEARCH INTERESTS

- Computational Finite Element Analysis, Computational Fluid Dynamics.
- Advanced Manufacturing.
- Machine Learning, Machine Vision.
- Robotics.

PUBLICATIONS

[1] **Minh Khang Ngo**, Chanhee Won, HyunKyo Lim, Dae Young Lim, Than Trong Khanh Dat, Jonghun Yoon. Vision-guided gripping process with minimizing folding for flexible fabric materials by integrating a sequential optimization algorithm and FEM analysis. *Robotics and Autonomous Systems*, Volume 198, April 2026,

105349; https://doi.org/10.1016/j.robot.2026.105349.

[2] Duong, L., Tran, N. H., Vu, T. C., & **Ngo, K. M.** (2025). Investigation of factors affecting the channel sealing processing mode of microfluidic chips using spin coating technology. *VNUHCM Journal of Engineering and Technology*, *8*(2), 2540-2547. https://doi.org/10.32508/stdjet.v8i2.1445.

CONFERENCE PROCEEDINGS

[1] **Minh Khang Ngo**, ChanHee Won, Jonghun Yoon (2025), Data-driven vision and FEM-based sequential optimization for fold-minimized robotic fabric gripping. *2025 IEEE International Conference on Big Data.*

[2] Duong, L.H., Tran, N.H., Vu, T.C., **Ngo, K.M.** (2024). Structural Modifications for Vibration-Assisted Spin Coating: Enhancing Coating Thickness Uniformity. *2nd EAI International Conference on Renewable Energy and Sustainable Manufacturing. ICRESM 2024*. EAI/Springer Innovations in Communication and Computing. Springer, Cham. https://doi.org/10.1007/978-3-031-90629-9_37.

RELEVANT CERTIFICATIONS

2024:

Cornell University FEA and CFD Certificate endorsed by **ANSYS**. https://courses.edx.org/certificates/ce9e8384a5c7442c99c2b281cbc316f4.

Python Certificate awarded by **University of Michigan**. https://coursera.org/verify/HPQHT3K5XNQU.

MATLAB Certificate awarded by **Vanderbilt University**. https://coursera.org/verify/99MPFHHNJS5L.

PROFESSIONAL EXPERIENCE

CHAMP's lab Mar 2025 – Present

Full-time Researcher

- Collaborated with KITECH to develop a vision-guided robotic gripping system for fabric materials using FEM and sequential optimization.
- Partnered with POSCO to engineer AI-driven image segmentation models and GUIs for automated powder particle analysis.
- Implemented hand gesture and facial recognition algorithms for the SoulCube intelligent interaction platform.
- Published and presented research findings in Q1 journals and international conferences.

iSMART Education Sep 2023 – Jun 2024

Teaching Assistant

- Coordinated with Vietnamese and international instructors to manage classroom activities.
- Facilitated communication between teachers and students.
- Supported lesson planning, task allocation, and performance assessment.
- Improved teamwork, creativity, and professional English communication skills.

IDEA Technology Corporation Joint Stock Company Jun 2023 – Aug 2023

Mechanical Design Intern

- Designed a 174-component sheet forming machine based on MISUMI standards.
- Created JIS-compliant 2D drawings and technical documentation.
- Performed mechanical calculations, 3D modeling, and BOM compilation.
- Internship evaluation score: 9/10.

HONORS & AWARDS

OUTSTANDING PAPER

- Nov 2024: **Best Paper Award** at EAI International Conference on Renewable Energy and Sustainable Manufacturing 2024, in the section: Sustainable Manufacturing.
- Jul 2024: One of the papers presented at the Bach Khoa Youths Science and Technology Conference 2024 (BKYST) was selected for publication in the Science and Technology Development Journal (VNU-HCM Press).

COMPETITION PRIZES

- 2022 – 2023: 2 years entered the top 20 potential projects in the BK Innovation contest (Skeleton support, Delivery robot).
- 2022: Consolation prize of BK Robocup, an Inter-school competition organized by HCMUT.
- 2020: 5th place overall of faculty-level competition - "Launch time 4th".

SCHOLARSHIPS

- 2025–2029: 50% tuition scholarship, Hanyang University.
- 2020 – 2021: 2 years received Incentive Scholarships and the Honorary Certificate from OISP.

REFERENCES

Dr. Tran Hai Nam

- Head of Department of Manufacturing Engineering (HCMUT).
- Email: namth@hcmut.edu.vn.

Professor Jonghun Yoon

- Professor in Department of Mechanical Engineering, Hanyang University ERICA.
- Email: jyoon@hanyang.ac.kr.
- Homepage: http://champ.hanyang.ac.kr.