# Van Thanh Nguyen

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Sex: Male | Date of birth: 30/05/1996 | Nationality: Vietnamese

## Education

**Mar 2020 - Feb 2022** — Sejong University, South Korea.
**Master's Degree in Mechanical Engineering**
GPA: 4.25/4.5 (3.0/3.0)
Thesis: Design and Control of an Anthropomorphic Test Dummy Robot (ATDR) for Testing Upper-limb Wearable Assistive Robots.

**Aug 2014 - Jun 2018** — University of Transport and Communications, Vietnam.
**Bachelor's in Mechanical Engineering**
Major: Mechatronics Engineering.
GPA: 3.67/4 (8.73/10).
Thesis: Dynamics Calculations and Motion Simulations of a 3-Axis Delta Parallel Robot.

## Personal Skills

***Research Interests***

- Mechatronic System Design, Analysis and Synthesis
- Dynamical System Modeling and Control
- Robotic Mechanism Design, Analysis and Synthesis.

***Languages***

- English: 6.5 IELTS overall - Oct 2023

***Computer Skills***

- Matlab/Simulink: Dynamical System Modeling and Simulation, Simscape Multibody Modeling, Controller Design and Simulation, Simulink Embedded Toolbox for Realtime Processors.
- Programming Languages: C/C++, C#.
- Mechanical CAD design: SolidWorks, Fusion 360 (2D,3D, Assembly), AutoCAD (2D).
- Office programs: Microsoft Office, LaTeX.

***Relevant Experiences***

- *Control System Implementation*: Servo Motor Control System, PLC and Industrial Networks (CANopen, Modbus/TCP), Microprocessor Programming (STM32 MCU).
- *Serial Manipulator (4 dofs) - Master's Project*: Mechanical Design and Implementation, Kinematics and Dynamics Modeling, Controller Design and Real-time Implementation.

- *Delta Parallel Manipulator - Bachelor's Project*: Kinematics and Dynamics Modeling, Trajectory Planning and Motion Simulation.

***Relevant background***

- Control Theory (Linear Control: SISO, MIMO system, LQR control, State Observer; Nonlinear Control)
- Mechanic Engineerings: Mechanical Vibrations, Mechanism and Machine Design, Finite Element Method.
- Mathematics: Analytics, Algebra
- Optimization Theory

## Work Experience

**Mar 2022 - Jul 2024** **Research Engineer**
Space Liintech, South Korea
Design and Implement the Control System for a Gravity Compensation System based on Servo Motor Control (C++ programming for STM32 Processors and GUI programming based on C#.net).

**Apr 2020 - Feb 2022** **Research Assistant, Masters' Student**
Controls and Mechatronics Lab, Sejong University, South Korea.
Design and Implement Mechatronic Systems (human-arm-like manipulator, cable parallel robot).

**Dec 2018 - Dec 2019** **Assistant Lecturer at Department of Mechanical Engineering**
University of Transport and Communications, Vietnam
Giving lectures on ***Automatic Control Theory, Mechanism and Machine Theory.***

## Honors and Awards

1. Second Prize in Calculus - National Mathematics Olympiad for Students (2018,2016).
2. Third Prize in Mechanics Engineering - National Mechanics Olympiad (2017).
3. Scholarship by Toyota Motor Vietnam for Excellent Students (2017).

## References

1. **Kwan-Woong Gwak, Professor (Masters' Advisor)**
   Department of Mechanical Engineering
   Sejong University, Republic Of Korea.
   Email: kwgwak@sejong.ac.kr
2. **Dinh Thi Thanh Huyen, Associate Professor (Undergraduate & Internship Advisor)**
   Department of Mechanical Engineering
   University of Transport and Communications, Vietnam.
   Email: huyentdinh@utc.edu.vn