

# Dinh Hai Nam

## <CURRICULUM VITAE>

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Automation and Control    Sep,8th 2000    Hanoi

Motivated engineer with a Master’s degree in Automation and Control, specializing in Power Electronics, and 2+ years of experience across design, development, and project management. Proficient in both hardware and software integration, with experience spanning from circuit design to system implementation, along with additional experience as a quoting engineer and inspection engineer. Recognized for adaptability, collaborative mindset, and a commitment to finding effective solutions in automation and power electronics

## Competences & Languages

- Hardware Design** Altium Designer, Orcad
- Programming** C, C++
- Simulation Tools** PSIM, LTspice, MATLAB/Simulink, Plescs, Ansys, etc..
- Soft Skills** Capable of instructing and transferring knowledge in an engaging manner(especially in Power Electronics), Event Management.
- Languages** Vietnamese(native), English(fluent), Chinese(fluent),

## Education

September 2018	School of Electrical and Electronic Engineering, <b>Hanoi University of Science and Technology</b>
September 2022	Bachelor in Automation and Control
June 2023	School of Electrical and Electronic Engineering, <b>Hanoi University of Science and Technology</b>
June 2025	Master in Automation and Control

## Hardware Skills

- **Power Electronics Expertise:** Strong foundation in electronics with a focus on power electronics, including the design and application of advanced components such as MOSFETs, IGBTs, diodes, and associated semiconductor circuits.
- **Circuit Design:** Skilled in designing driver circuits, snubber circuits, desaturation protection circuits, and auxiliary circuits for semiconductor devices.
- **Passive Components:** Strong understanding of passive component design, including resistors, capacitors, inductors, and transformers.
- **Analog Components:** Proficient in designing and working with operational amplifiers, comparators, and transistors.
- **Measurement & Testing:** Experience in designing and implementing measurement circuits for power electronic converters, with a strong focus on ensuring accuracy and reliability.
- **Cross-referencing & Commercialization:** Adept at cross-referencing designs for commercial power electronic products, ensuring manufacturability and adherence to industry standards.

## Firmware Skills

- Confident in applying C++ programming of object-oriented programming.
- Experienced in programming STM32 and C2000 microcontrollers using C

## Work

- Institute for Control Engineering and Automation(ICEA) — Researcher    November 2022 — August 2024
- ATC — Researcher    August 2024 — Present

## Projects

February 2022 August 2022	<b>Design a statistic wireless charger for Automated Guided Vehicle</b> <ul style="list-style-type: none"><li>› Conducted extensive research on Wireless Power Transfer (WPT) technology to enhance power transfer efficiency and system performance.</li><li>› Used a phase shift full bridge combined with a two-sided LCC compensation circuit to improve transmission efficiency.</li><li>› Successfully created a 1.5 kW prototype for a wireless power transfer (WPT) charger.</li></ul>
June 2023 June 2025	<b>Design isolated resonant DC/DC converter for DC charger station</b> <ul style="list-style-type: none"><li>› Learned about the structure of DC fast charging stations to understand their design and functionality.</li><li>› Designed a high-performance DC/DC isolated converter featuring a constant input voltage of 700VDC, an adjustable output voltage range from 150VDC to 1000VDC, and a power rating of 30kW.</li><li>› Proposed a resonant DC/DC converter structure using an LLC resonant circuit. The design features a series connection to split the DC-link voltage, and an output configuration that can be adjusted between parallel or series states by switching relays, allowing for an adjustable voltage range from 150VDC to 1000VDC.</li><li>› Successfully operated the converter in (Constant Current)-(Constant Voltage) CC-CV mode, achieving an efficiency of up to 97.6%.</li></ul>
October 2023 Present	<b>Design 7,2 kW Two-State V2L converter</b> <ul style="list-style-type: none"><li>› Researched various structures of V2L (Vehicle-to-Load) converters and examined their applications.</li><li>› The V2L converter, designed for vehicles with a 400V battery system, operates with an input voltage range of 280V to 470V DC, provides output voltages of 120V and 240V AC at 56/60Hz, and delivers 7.2kW of power with an estimated efficiency of 98%.</li><li>› Proposed a two-stage structure: a full bridge LLC resonant DC/DC converter isolates the battery system, followed by two half bridge DC/AC converters, each generating 120VAC for a combined output of 240VAC.</li><li>› Remained under testing.</li></ul>

## Experiments

November 2022 June 2025	<b>Research and design of a 15kW charging station for electric vehicles</b> <ul style="list-style-type: none"><li>› We conducted extensive research on Wireless Power Transfer (WPT) technology to enhance power transfer efficiency and system performance.</li><li>› Used a phase shift full bridge combined with a two-sided LCC compensation</li></ul>
November 2022 June 2025	<b>Research and design of non-thermal plasma devices power</b> <ul style="list-style-type: none"><li>› We conducted extensive research on Wireless Power Transfer (WPT) technology to enhance power transfer efficiency and system performance.</li><li>› Used a phase shift full bridge combined with a two-sided LCC compensation</li></ul>
November 2024 June 2025	<b>Design ground power unit for Vietnam People's Army</b> <ul style="list-style-type: none"><li>› Classified</li></ul>

## Certifications

## References

- › Assoc. Prof. Dr. Nguyen Kien Trung      School of Electrical and Electronic Engineering  
Hanoi University of Science and Technologies, Hanoi, Vietnam