

Danh sách GVHD (Senior Design Project)

STT	GV hướng dẫn	Hướng đề tài (tham khảo – SV có thể thảo luận thêm với GV để có thêm chi tiết)	Email	Liên hệ
1	PhD. Tran Hoang Linh	Digital IC Design (Computer Architecture, Computer Arithmetic, ...) FPGA (Apps/Games: Paint, Tetris, Audio Player, ...) Embedded Systems Design (IoT, Smarthome, Tracking Car, ...)	linhtran@hcmut.edu.vn	Bộ môn Điện Tử
2	Associate Professor PhD. Hoang Trang	+ Digital IC design (Arithmetic, Application: Verilog HDL) + Analog IC design (Cadence tools) + AI system (C, Matlab, Python, Verilog HDL), + Asynchronous design, Encrytion/Decryption design + Design Embedded system for A.I in Security router + Quantum computation + Được huấn luyện, làm việc chuyên môn, chuyên nghiệp theo chuẩn công nghiệp, NCKH + Được train cách viết report, các viết paper khoa học. + Tham gia các dự án lớn, các chủ đề hot, như: tính toán lượng tử, thiết kế cấu trúc vi mạch cho AI, thiết kế hệ thống nhúng AI-AI trên FPGA cho thiết bị router bảo mật, chống các loại hình tấn công mạng, .v.v.v, AI trong nhận dạng, trong tạo nhạc-tạo ảnh, .v.v.v + Được tài trợ kinh phí, học bổng khi có kết quả nghiên cứu tốt, hỗ trợ tối thiểu 12-15 triệu/năm, có thể lên đến 70 triệu/năm. http://www4.hcmut.edu.vn/~hoangtrang http://www.iheartech.hcmut.edu.vn Hỗ trợ học bổng, viết bài báo KH, huấn luyện chuyên môn, kỹ năng,	hoangtrang@hcmut.edu.vn	Bộ môn Điện Tử
3	PhD. Truong Quang Vinh	Digital Systems Design (Video/Image Processing, Applications using FPGA) Embedded Systems Design (IoT, Smart City, Indoor Positioning, ...)	tqvinh@hcmut.edu.vn	Bộ môn Điện Tử
4	PhD. Nguyen Ly Thien Truong	Digital Systems Design (FPGA) Embedded Systems Design (IoT, Smart home, Smart city, ...)	truongnguyen@hcmut.edu.vn	Bộ môn Điện Tử
5	Msc. Bui Quoc Bao	Embedded System (IoT, Smart Agricututal, Power metter, SmartHome, Smart City, Security System, RFID system, Finger Print Recognition)	buiquocbao@hcmut.edu.vn	Bộ môn Điện Tử
6	Msc. Tran Hoang Quan	Internet of Things, Smart Devices (with Wifi, Bluetooth or Cellular connections)	thquan@hcmut.edu.vn	Bộ môn Điện Tử
7	Professor, PhD. Le Tien Thuong	- Digital Communications - Electronics Engineering - Signal Processing (Speech and images) - Wavelets and Applications	thuongle@hcmut.edu.vn thuongle@yahoo.com	Bộ môn Viễn Thông

8	Associate Professor PhD. Do Hong Tuan	<ul style="list-style-type: none"> - Smart Antennas - Mobile and Wireless Communications - Linear and Nonlinear - Microwave Circuits - Digital Image Processing 	do-hong@hcmut.edu.vn	Bộ môn Viễn Thông
9	Associate Professor PhD. Ha Hoang Kha	<ul style="list-style-type: none"> - Machine Learning and Applications - Computer Vision and Image Processing - Wireless Digital Communications (MIMO systems, cooperative relay networks, cognitive radio) 	hhkha@hcmut.edu.vn	Bộ môn Viễn Thông
10	Associate Professor PhD. Ho Van Khuong	<ul style="list-style-type: none"> - Diversity techniques - Coding, modulation, multiple access techniques - Cognitive radio - Energy harvesting - Physical layer security 	khuong.hovan@gmail.com	Bộ môn Viễn Thông
11	PhD. Huynh Phu Minh Cuong	<ul style="list-style-type: none"> - CMOS/BiCMOS Analog/RF IC Design and Systems - RF/Microwave Engineering and Circuits - Concurrent Multi-Band Circuits and Systems - Radar, Sensing and Wireless Communications 	hpmcuong@hcmut.edu.vn	Bộ môn Viễn Thông
12	PhD. Vo Que Son	<ul style="list-style-type: none"> - Mobile and Wireless Communications - Performance Analysis of Wireless Networks - Wireless Sensor Networks, Internet of Things - Wireless Embedded Systems 	sonvq@hcmut.edu.vn	Bộ môn Viễn Thông
13	PhD. Pham Quang Thai	<ul style="list-style-type: none"> - Photonic systems: Microwave photonics and Spectroscopy - Optical communications: Passive optical networks and Visible light communications 	pqthai.hcmut@gmail.com	Bộ môn Viễn Thông
14	PhD. Nguyen Chi Ngoc	<ul style="list-style-type: none"> - Fault Tolerance and Security for Wireless Communication - Steganography and Information Hiding - Fault Tolerance and Security for Ubiquitous Computing - Routing on Parallel Computing 	ncngoc@hcmut.edu.vn	Bộ môn Viễn Thông
15	PhD. Trinh Xuan Dung	<ul style="list-style-type: none"> - Computational methods for electromagnetic wave scattering and propagation. - Acceleration techniques for Method of Moments. - Microwave remote sensing. 	dung.trinh@hcmut.edu.vn	Bộ môn Viễn Thông
16	PhD. Vo Tuan Kiet	<ul style="list-style-type: none"> - Digital Signal Processing - Digital Image and Video Processing - Computer Vision - Machine Learning - Deep Learning - Applications in Medical Imaging, Autonomous Driving - Object Detection, Tracking and Localization. 	kietvo@hcmut.edu.vn	Bộ môn Viễn Thông
17	PhD. Truong Dinh Chau	<ol style="list-style-type: none"> 1. Virtual commissioning 2. Digital twin 3. SCADA and control systems 4. Industrial digitalization 	chau.truong@hcmut.edu.vn	Bộ môn Tự Động

18	PhD. Nguyen Vinh Hao	<ol style="list-style-type: none"> Indoor/outdoor autonomous mobile robots <ul style="list-style-type: none"> Using encoder, lidar, camera, IMU/GPS. Mapping and navigation for robot on ROS platform SLAM and Obstacle avoidance. Self-driving electric vehicles <ul style="list-style-type: none"> Using encoder, lidar, radar, camera, IMU/GPS. Objects detection, classification, and tracking Lane detection and self-driving control Industrial manipulator and vision control <ul style="list-style-type: none"> Robot programming on Yaskawa Moto-Mini Servo control, HMI programming, Inverter Vision for object pick and place applications Camera stabilizer platform <ul style="list-style-type: none"> Understanding gyro-stabilized platform Control theory and applications: PID, adaptive, optimal, robust control Object tracking using vision and radar 	vinhhao @hcmut.edu.vn	Bộ môn Tự Động
19	Associate Professor PhD. Huynh Thai Hoang	<ol style="list-style-type: none"> Intelligent control of dynamic systems (motors, mobile robots, robot arm, temperature process,...) Computer vision applied in control systems. Speech recognition applied in control systems. 	hthoang @hcmut.edu.vn	Bộ môn Tự Động
20	PhD. Nguyen Trong Tai	<ul style="list-style-type: none"> Modern control, Intelligent control, Sliding mode control, Fuzzy logic, Neural network Shape Memory Alloy, Smart material Mobile Harbor Crane Stabilizer Control Quad-rotor robot, Climbing robot, Power Assistance robot 	nttai @hcmut.edu.vn	Bộ môn Tự Động
21	PhD. Tran Ngoc Huy	<ol style="list-style-type: none"> Robotics Mechatronics System Automation System www.viamlab.com	tnhuy @hcmut.edu.vn	Bộ môn Tự Động
22	PhD. Nguyen Hoang Giap	<ul style="list-style-type: none"> Motion control system Robotics Industrial Control system 	nhgiap @hcmut.edu.vn	Bộ môn Tự Động
23	PhD. Pham Viet Cuong	<ul style="list-style-type: none"> Định vị (localization), lập bản đồ (mapping), định vị và lập bản đồ đồng thời (SLAM – Simultaneous Localization and Mapping), thám hiểm (exploration), phối hợp (cooperation) cho mobile robot, UAV Computer vision & machine learning: nhận diện khuôn mặt, xe tự lái, . . . Nhận dạng giọng nói và ứng dụng Ứng dụng thuật toán tối ưu: GA, differential evolution, ant colony, PSO, . . Bút quán tính (inertial pen): https://ieeexplore.ieee.org/document/6035/ 	pvcuong @hcmut.edu.vn	Bộ môn Tự Động

24	PhD. Nguyen Ngoc Tu	<ul style="list-style-type: none"> - Motor control (Induction motor, Synchronous motor, BLDC motor) (Simulation using Matlab/Simulink and Implementation using dSpace 1104 or other microcontrollers) - Power management systems - Solar energy systems (simulation, design, and implementation) - Wind power system (Simulation using Matlab/Simulink) 	nntu@hcmut.edu.vn	Bộ môn Thiết Bị Điện
25	Associate Professor PhD. Nguyen Huu Phuc	<p>1/ Short Circuit Analysis- OverCurrent Protection Integrated with FLISR Technique on Distribution Power Systems (Phân Tích Ngắn Mạch, Bảo Vệ Quá Dòng và Kỹ thuật Tự động Phát hiện, Cô lập Sự Cố và Tái Lập Cấp Điện trong Lưới Điện Phân Phối)</p> <ul style="list-style-type: none"> -Applications of PSS-ADEPT, ETAP softwares in Distribution Systems Analyses (Short Circuit Analysis- OverCurrent Protection) - Distribution Automation System (DAS) with FLISR Technique (Fault, Location, Isolation and Service Restoration) using SCADA-Survalent. <p>2/ Power Flow Analysis- Integrated with Power Factor Control Technique on Distribution Power Systems (Tính toán phân bố công suất trên lưới điện phân phối - Áp dụng kỹ thuật Power Factor Control trong phần mềm SCADA Survalent)</p> <ul style="list-style-type: none"> -Applications of PSS-ADEPT, ETAP softwares in Distribution Systems Analyses (Power Flow Analysis) with SCADA Survalent Power Factor Control application (DMS= Distribution Management System) - Reduction of power system losses and power factor penalties by monitoring and correcting the power factor at specified locations within the distribution network and issuing controls to the appropriate substation-level and feeder- level capacitor bank controllers. <p>3/ Design/ Analysis of PhotoVoltaic (PV) Systems and Large-Scale PV Power Plants (Thiết kế, tính toán kỹ thuật - kinh tế cho hệ thống tích hợp năng lượng mặt trời, nhà máy điện mặt trời sử dụng, EnergyPlus, PSIM, PVSyst/)</p> <ul style="list-style-type: none"> - Calculation of Small/ Medium-Scale PV Systems (stand-alone, grid-connected) - Analysis of Large-Scale PV Power Plants Integrated into Power Grid (applications of PVSys, EnergyPlus,...) - Impacts of High Penetration of Large-Scale PV Power Plants Integrated into Existing Power Grid (steady-state and transient stability) <p>4/ MPPT (Maximum Power Point Tracking Techniques) in PV Systems Under Partial Shading (Các kỹ thuật dò tìm điểm công suất cực đại (MPPT) trong hệ thống năng lượng mặt trời trường hợp che bóng).</p> <p>Applications of various MPPT (Maximum Power Point Tracking) Techniques in PV Systems Considering Shading Phenomenon (traditional techniques, machine learning applications)</p> <p>5/ Integration of Green Energy into Microgrids (Vấn đề tích hợp các hệ thống năng lượng xanh vào lưới điện microgrids)</p> <ul style="list-style-type: none"> - Integration of PV power, wind power, back-up generators, storage powers into MicroGrids - Power Flow and Voltage Quality of MicroGrids Power Flow and Voltage Quality of MicroGrid 	nhphuc@hcmut.edu.vn nhphuc123@yahoo.com	Bộ môn Thiết Bị Điện

26	PhD. Mai Ba Loc	<ul style="list-style-type: none"> - Solar Photovoltaic Systems - Metering and Energy Monitoring - Smart Home Systems and Automation - Electric Motors and Drives 	mbloc@hcmut.edu.vn maibalocmail@yahoo.com	Bộ môn Thiết Bị Điện
27	PhD. Nguyen Quang Nam	<ul style="list-style-type: none"> - Smart converters (power electronics converters with communication extensions) - Energy management systems (SCADA, smart meters, ...) - Solar energy systems (design and implementation of devices and systems, MPPT and high efficiency) - Advanced power electronics converters (soft switching technique, industrial applications) - Transient analysis in power electronics converters 	nqnam@hcmut.edu.vn	Bộ môn Thiết Bị Điện
28	PhD. Trinh Hoang Hon	<ul style="list-style-type: none"> - Solar energy systems (design and implementation of devices and systems, MPPT and high efficiency) - Wind generator (MPPT and high efficiency) - I-home - Motor control (BLDC motor, Induction motor, DC motor) - Computer Vision (voice recognition, face recognition, template detection and recognition, character detection and recognition) - Robotics design 	trinhhoanghon09@gmail.com	Bộ môn Thiết Bị Điện
29	Associate Professor PhD. Phan Thi Thanh Binh	<ul style="list-style-type: none"> a) Design of supply electricity for factories and civil works b) Smart grid c) Data mining in electrical engineering d) Wind generator, solar power e) Electricity market forecast <p>For more informations, please refer: http://www.pgs.hcmut.edu.vn/vi/doi-ngu-dao-tao</p>	thanhbinh055@yahoo.com	Bộ môn Cung Cấp Điện
30	Associate Professor PhD. Phan Quoc Dung	<ul style="list-style-type: none"> a) Design of supply electricity for factories and civil works b) Studying application power converters in DG, Microgrid, Smartgrid c) PWM method and Multilevel Inverter d) Control electrical machines in industry and renewable energy <p>For more informations, please refer: http://www.pgs.hcmut.edu.vn/vi/doi-ngu-dao-tao</p>	pqdung@hcmut.edu.vn	Bộ môn Cung Cấp Điện
31	Associate Professor PhD. Nguyen Dinh Tuyen	<ul style="list-style-type: none"> a) Design of supply electricity for factories and civil works b) Design and control of low power inverter c) Control algorithms for indirect matrix converters d) Design and control application power converters in renewable energy, lighting and industrial e) Control and supervise electrical equipment via internet applications in smart home, i-home 	ndtuyen@hcmut.edu.vn	Bộ môn Cung Cấp Điện
32	PhD. Truong Phuoc Hoa	<ul style="list-style-type: none"> a) Design of supply electricity for factories and civil works b) Design and optimal control for synchronous motors c) Studying application power converters in solar power system <p>For more informations, please refer: http://www.pgs.hcmut.edu.vn/vi/doi-ngu-dao-tao</p>	tphoa@hcmut.edu.vn	Bộ môn Cung Cấp Điện

33	Associate Professor PhD. Vo Ngoc Dieu	<ul style="list-style-type: none"> - Electricity market - Power system analysis - Economic dispatch of power plants - Optimal power flow in power systems - Power loss reduction in power system - Optimal placement of wind turbine in wind farms - Optimal size of microgrids - Optimal digital relay coordination - Forecast for PV power plants 	vndieu@gmail.com vndieu@hcmut.edu.vn	Bộ môn Hệ Thống Điện
34	Associate Professor PhD. Pham Dinh Anh Khoi	<ul style="list-style-type: none"> - High-voltage engineering - Condition monitoring & Failure diagnostics of power equipment - Power transformers modeling 	khoipham@hcmut.edu.vn dak.pham@gmail.com	Bộ môn Hệ Thống Điện
35	Associate Professor PhD. Nguyen Van Liem	<ul style="list-style-type: none"> - Power system analysis and modelling - Power system stability - Application of FACTS devices in power system 	nvliem@hcmut.edu.vn	Bộ môn Hệ Thống Điện
36	PhD. Huynh Quang Minh	<ul style="list-style-type: none"> - Analysis and design of solar system - Analysis and design of lighting system 	hqminh@hcmut.edu.vn	Bộ môn Hệ Thống Điện
37	PhD. Nguyen Nhat Nam	<ul style="list-style-type: none"> - Lightning Protection for Power System (Power Plants, Substations, Transmission Lines, PV Farms, Wind Farms...) - Application of ATP-EMTP Software in Analyzing Power System - Design and Analysis of Grounding System - Reliability Evaluation of Power System - Analysis of Electromagnetic field in power system apparatus 	nannam@hcmut.edu.vn	Bộ môn Hệ Thống Điện
38	PhD. Nguyen Phuc Khai	<ul style="list-style-type: none"> - SCADA System in Power system - Optimization in Power System: Minimize Power Loss, Optimal power flow,.. - Forecasting power load - Analysis and design of Solar system 	phuckhai@hcmut.edu.vn	Bộ môn Hệ Thống Điện
39	PhD. Huynh Quoc Viet	<ul style="list-style-type: none"> - Analysis and Design of electric Power system (transmission, distribution, and substation) - Analysis and Design of grounding system - Lightning protection - Partial discharge in Power systems (Power cables, gas insulated systems, transformers) - PV Power plant - Power system quality assessment - Power system stability - Economics and planning of Power systems 	hqviet@hcmut.edu.vn	Bộ môn Hệ Thống Điện

40	Professor , PhD. Ho Pham Huy Anh	Control systems Intelligent control (Fuzzy, Neural controller) Renewable energy (Wind, Solar) control Electrical machine (IM, BLDC, PMSM) control Nonlinear system (robot arm, pendubot, mobile robot) control Applications of Optimization algorithms (GA, PSO, DE, Jaya,...) Smart-grid implementation and optimization	hphanh@hcmut.edu.vn	Phòng Thực Tập Điện
41	Associate Professor PhD. Duong Hoai Nghia	1. Control of a two degree of freedom manipulator 2. Control of a brushless DC motor	dhnghia@hcmut.edu.vn	Bộ môn Cơ Sở KTD
42	Associate Professor PhD. Nguyen Van Nho	1. Study of frequency power converter 50Hz/400Hz 2. Control of 3f ac-ac matrix converters 3. Control of Multilevel inverters	nvnho@hcmut.edu.vn	PTN Hệ Thống NL
43	Associate Professor PhD. Dang Thanh Tin	1. Medical image processing 2. Image restoration 3. Data compression 4. Pattern recognition 5. Designing medical equipments	dttin@hcmut.edu.vn	Phòng Máy Tính

