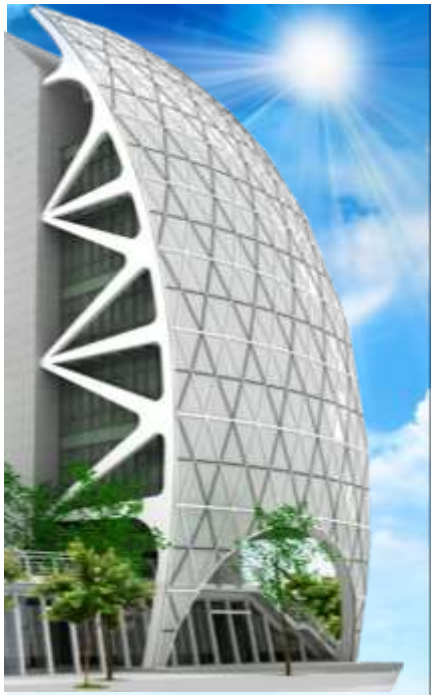
Department of Electrical Engineering

http://www.ee.ntust.edu.tw



NTUST National Taiwan University of Science and Technology | Electrical Engineering Department & Graduate Programs

INTRODUCTION

The Department of Electrical Engineering was founded in 1978. Since then, this department has evolved to be one of the most prestigious institutes of Electrical Engineering in Asia from the perspectives of research and education. With substantial amounts of research funding granted by government institutions for a diversity of projects and also provided by industrials for a variety of collaboration, the department focuses on and is prominent in the following fields: ***Power and Energy***, ***Power Electronics***, ***System Engineering***, ***Integrated Circuits and Systems***, ***Computer and Networks***, and ***Communication and Electromagnetic Engineering***.

There are 42 full-time faculty and 5 project faculty members specializing in six research groups that compose the solid research entity in the Department of Electrical Engineering in NTUST. The faculty members and their expertise in these six research groups are summarized as follows:

✧ Power and Energy

Wu, Chi-Jui, *Professor*: power engineering, electromagnetic interferences, electrical machinery.

Chang, Hong-Chan, *Professor*: power engineering, distribution automation, power quality.

Gu, Jyh-Cherng, *Professor*: distributed generation, system protection, power quality, intelligent devices.

Wu Ruay-Nan, *Professor*: power system engineering, high voltage engineering, recycling energy.

Kuo, Cheng-Chien, *Professor*: energy management system, electromagnetic transient analysis, partial discharge detection.

Liu, Yi-Hua, *Professor*: power electronics, renewable energy, digital power.

Hwang, Jonq-Chin, *Professor*: electrical control, power electronic, electrical machine engineering.

Hsiao, Horng-Ching, *Associate Professor*: distribution power system, lighting engineering, electric testing.

Kuo, Ming-Tse, *Associate Professor*: power system stability analysis, photovoltaic power systems.

Lian, Kuo-Lung, *Associate Professor*: power electronic modeling and control, harmonic analysis, simulation.

Nien-Che Yang, *Associate Professor*: power systems engineering, power distribution engineering, microgrid, smart grid, building energy conservation, renewable energy, distributed generation, power quality, smart electric vehicle.

✧ Power Electronics

Chang, Hong-Chan, *Professor*: power engineering, distribution automation, power quality.

Liu, Tian-Hua, *Professor*: power electronics, motor drives.

Liu, Yi-Hua, *Professor*: power electronics, renewable energy, digital power.

Young, Chung-Ming, *Professor*: power electronic converters, linear circuits, sensors.

Hwang, Jonq-Chin, *Professor*: control, power electronic, electrical machine Engineering.

Lin, Chang-Hua, *Professor:* high voltage converter, estimation of battery SOC, power electronic applications.

✧ System Engineering

Su, Shun-Feng, *Chair Professor*: computational intelligence, intelligent control, automation, robotics, bioinformatics, intelligent transportation systems.

Chung, Sheng-Luen, *Professor*: Deep learning, data science.

Guo, Jing-Ming, *Professor*: multimedia signal processing, digital image and video processing.

Shen, Che-Chou, *Professor*: image processing, ultrasonic beam-forming, ultrasonic flow detection.

Huang, Teng-Yi, *Professor*: magnetic resonance imaging.

Kuo, Chung-Hsien, *Professor*: autonomous robots, autonomous driving, artificial intelligence, deep learning.

Chen Jiann-Jone, *Associate Professor*: image/video coding, image retrieval.
Lu, Ching-Hu, *Associate Professor*: AIoT-enabled smart living with gamification, machine learning, edge computing, blockchain-enabled IoT services.

✧ Integrated Circuits and Systems

Shih, Ching-Long, *Professor*: robotics, motion control, mechatronics.

Chung, Shun-Ping, *Professor*: queuing theory, wireless/mobile communications, broadband networks.

Lu , Shyue-Kung, *Professor*: VLSI design and testing, fault-tolerant computing, digital IP design, video coding, architectures design, encryption/decryption systems.

Hwang, Chih-Lyang, *Professor:* humanoid robot, unmanned aerial vehicle, electrical bicycle, wheeled mobile robot.

Yao, Chia-Yu, *Professor*: digital filter design, CMOS integrated circuit design, delta-sigma A/D converter design, RFID.

Wang, Nai-Jian, *Associate Professor*: signal processing, intelligent computing and optimization, digital IC design, artificial intelligence, embedded systems.

Chen, Jiann-Jone, *Associate Professor*: image/video coding, image retrieval.

Chen, Ya-Shu, *Associate Professor*: real-time operating system, embedded system, hardware/software co-design.

Chen, Hsiao-Chin, *Associate Professor*: CMOS RFICs, biomedical SoC..

Peng, Sheng-Yu, *Associate Professor*: power-efficient reconfigurable integrated circuits and systems for biomedical applications.

Fang, Shao-Yun, *Associate Professor*: computer aided design, electronic design automation.

✧ Computer and Network

Wu, Chwan-Chia, *Professor*: video coding, multimedia systems, spread spectrum communications.

Lee, Bih-Hwang, *Professor*: wireless, wideband and high-speed networks.

Chen, Jiann-Liang, *Professor*: computer networks, wireless networking, software engineering.

Chung, Sheng-Luen, *Professor*: Deep learning, data science.

Guo, Jing-Ming, *Professor*: multimedia signal processing, digital image and video processing.

Kuo, Chung-Hsien, *Professor*: autonomous robots, autonomous driving, artificial intelligence, deep learning.

Yang, Ying-Kuei, *Professor*: artificial intelligence, fuzzy theory, neural networks.

✧ Communication and Electromagnetic Engineering

Yang, Chang-Fa, *Professor*: antenna, wave propagation, RFID, internet of things (IoT), microwave circuit, electromagnetic compatibility.

Chung, Shun-Ping, *Professor*: wireless/mobile communications, broadband networks, queuing theory.

Ma, Tzyh-Ghuang, *Professor*: compact antenna design, microwave circuit, ultrawideband circuit, RFID system, TDR RF front-end.

Liao, Wen-Jiao, *Professor*: antenna, numerical EM methods, radar, EM wave propagation, electromagnetic compatibility.

Liu, Hsin-Chin, *Professor*: wireless communication systems, localization, radio frequency identification systems (RFID), smart antennas.

Wang, Nai-Jian, *Associate Professor*: signal processing, intelligent computing and optimization, digital IC design , artificial Intelligence, embedded system.

Tseng, Der-Feng, *Associate Professor*: wireless communication system, digital signal processing, spread spectrum, channel coding.

Chang, Li-Chung, *Assistant Professor*: wireless communications, physical layer transmission technologies, communication security.

Project Faculty

Chang, Chien-Kuo, *Assistant Professor*: partial discharges and insulation diagnosis, smart grid, renewable energy and power system analysis, demand response and smart home.

Luo, Yi-Feng, *Assistant Professor*: Battery Management System, Fast Charging Algorithms, Power Electronics

Ma, Yi-Wei, *Assistant Professor*: Internet of Things, Wireless Communications

Chu, Huy Nam. Assistant Professor: reconfigurable circuit components, phased array, millimeter wave antennas, synthesized transmission line, miniaturized microwave circuits.

Hsiao,Chun-Yu, *Assistant Professor*: science and technology of renewable energy, electric machinery, high performance motor design, lighting engineering and fixture design

AVAILABLE GRADUATE PROGRAMS

The department offers **master** and **doctoral** degree programs in English. These programs are running two semesters per year. Spring semester is scheduled from February to June, while fall semester is from September to January of the following year.

An international student advisor and a thesis advisor are available for counseling living and academic inquiries.

FINANCIAL SUPPORTS

Three types of **NTUST Scholarship** for International Students are available for application:

1. Full scholarship: a monthly stipend of NT$15,000 for Ph.D. and NT $10,000 for Master's students.
2. Half scholarship: a monthly stipend of NT$11,000 for Ph.D. and NT $8,000 for Master's students.
3. Tuition Waive.

Prospective students are also encouraged to apply for **Taiwan Scholarship** and other financial supports issued by local government or private organizations. Some information can be found in the following link. http://www.oia.ntust.edu.tw/home.php?Lang=en

APPLICATION PERIODS

Spring Semester: August 1 ~ October 31
Fall Semester: February 1 ~March 31

Detailed information related to application and financial supports can be found at http://www.admission.ntust.edu.tw/home.php?Lang=en.

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