

CENTER FOR ADVANCED POWER TECHNOLOGIES

Department of Electrical Engineering
National Tsing Hua University
Hsinchu, TAIWAN

CENTER FOR ADVANCED POWER TECHNOLOGIES (CAPT) is established in April 17, 2004 in the Department of Electrical Engineering, National Tsing Hua University (NTHU), Taiwan. The goal of CAPT is to promote research cooperation with industries in the fields of power systems, power semiconductor devices, power electronics, and motor drives. The academic-industry consortium can further integrate the research and education resources within the university and serve as a platform for research collaboration. CAPT will also cooperate with other power engineering related institutes to advocate this field of study and to boost participation of undergraduate students.

To encourage exchange activities between the university and industries, CAPT organizes the annual review meeting and short courses on various topics. Engineers from industrial partners can participate in these events to catch up on the latest development of power technologies, and also to visit the laboratory facilities of the CAPT to see the progress of the research work.

Professor Ching-Tsai Pan is the founding director of CAPT. Currently, the center has 18 faculty members (10 from NTHU, 8 from other institutes), and 150+ graduate students. More than 10 industrial partners have joined.



Faculty members

The faculty members of CAPT are from National Tsing Hua University (NTHU), National United University (NUU), Chung Yuan Christian University (CYCU), Ta Hua Institute of Technologies (THIT), Chin-Yi Institute of Technologies (CYIT), and Industry Technology Research Institute (ITRI). There are 100+ master students and 50+ PhD students in CAPT.

Power semiconductor devices



Chen-Hsin Lien, NTHU
high frequency IC components,
analog ICs.



Jeng Gong, NTHU
noise analysis of semiconduc-
tor devices, power semiconduc-
tor and ICs.



Ching-Hsiang Hsu, NTHU
power semiconductor devices
and ICs, flash memory.

Power Systems



Shi-Lin Chen, NTHU
electric power and energy sys-
tem design, automated distribu-
tion, digital relay.



Shi-Shong Yen, ITRI
high voltage engineering, power
quality.



Ji-Ru Chou, CYCU
grounding system, surge protec-
tion.



Feng-Jang Lu, THIT
de-regulation, power distribu-
tion.

Electromagnetic compatibility



Pei-Jen Wang, NTHU
PFC circuit analysis, analysis of
electromagnetic field.



Jeh-Liang Yeh, NTHU
analysis power electronics de-
vices, computer analysis of elec-
tromagnetic field.



Sheng-Ming Huang, NUU
magnetic coupling system de-
sign, computer analysis of elec-
tromagnetic field.



Liang-Yuan Wang, NUU
magnetic levitation, computer
analysis of electromagnetic
field.

Motor Drives



Chang-Ming Liaw, NTHU
power electronics, motor drives
systems.



Ching-Tsai Pan, NTHU
power electronics, motor drives,
control systems.



Shuan-Jang Jiang, NUU
power electronics, motor drives.



Kuei-Hsiang Chao, CYIT
power electronics, drives con-
trol, electric machines.

Power Converters



Po-Tai Cheng, NTHU
power electronics, converter
designs, power quality.



Ching-Tsai Pan, NTHU
power electronics, motor drives,
control systems.



Tai-Lang Jong, NTHU
digital signal processing, micro-
processors.



Jen-Jong Hsieh, THIT
power electronics, motor drives
control.

Membership

To become a industry partner of CAPT, the annual membership fee is NTD 60,000 (approximately USD 1,750) per sponsoring unit. Each sponsoring unit of industrial partners can send upto 5 people to attend the annual review meeting and short courses without any registration fee. The contributions are used to organize the CAPT events and to support research of interest to our industrial partners.

Contact

The CAPT website is located at www.ee.nthu.edu.tw/~CAPT.

If any questions, please contact:

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