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<th>Country</th>
<th>Position</th>
<th>Ranking</th>
<th>Category</th>
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<tr>
<td>Hong Kong</td>
<td>1st</td>
<td>20th</td>
<td>in Electrical and Electronic Engineering</td>
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<td>U.S. News Best Global Universities Rankings 2021</td>
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<tr>
<td>Hong Kong</td>
<td>1st</td>
<td>13th</td>
<td>in Electrical Engineering</td>
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<td>Performance Ranking of Scientific Papers for World Universities</td>
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<td>National Taiwan University Ranking 2020</td>
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<td>HIGHEST “expected output index” Worldwide</td>
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<td>Times Higher Education World University Rankings 2018</td>
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<td>Hong Kong</td>
<td>1st</td>
<td>18th</td>
<td>in Engineering</td>
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<td>Prof Ron Chen on Top Scientist List in Computer Science and Electronics</td>
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<td>by h-Index, Google Scholar 2021</td>
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<tr>
<td>World’s</td>
<td>Top 2%</td>
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<td>23 EE faculty are listed as the top 2% of the world’s most highly cited</td>
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<td>scientists by a study led by Stanford University</td>
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Alumni EE loves to stay connected with students after they graduated. We organize social gatherings, conferences, seminars, workshops, sharing sessions, etc. We help to strengthen ties among alumni, EE and CityU.
We nurture and groom new generations of talents and professionals to compete at the technological frontier.
Electrical Engineering

with us every day and everywhere
ELECTRIFYING THE FUTURE

Facilitating people living in a Technology-Driven World

- Autonomous car
- Artificial intelligence
- Sensor
- Internet of things
- Biomedical diagnostics & treatment

Improving the lives of people across the world

We focus on professional education and research excellence on rigorous science and technology, while extending ground-breaking findings to serve industry and our society. We have a vision for a better tomorrow through constant innovation and discovery. We endeavor to bring together students, faculty and collaborators in a multidisciplinary work environment that supports open-ended thinking in science, engineering and entrepreneurship.
Message from the Head

Pushing boundaries and transforming

Technology nowadays is advancing in an unprecedented rate in human history and has brought dramatic new options in all aspects of everyday life – health care, education, entertainment, communication, commerce, etc. Only our imagination is the limit.

Almost all the goods and services people use depend on technology related to electrical engineering (EE).
EE Department is an exciting hub of discovery and innovation led by a group of passionate and knowledgeable faculty working in the fields of Antenna Design; Big Data, Machine Learning, and Artificial Intelligence; Bioinformatics; Biomedical Systems, Biosensors and Bioelectronics; Computer Engineering; Control Systems and Optimization; Microelectronic Devices and Circuits; Nanotechnology and Nanodevices; Networking and Internet of Things; Photonics; Power Electronics and Systems; Signal and Image Processing; Terahertz and Millimeter Waves; and Wireless Communications, to make innovation happen by embracing the importance of multidisciplinary approaches in technology.

Nurturing new stars of EE profession is one of our top goals to achieve. There is absolutely a competitive edge for a graduate with Electrical Engineering background to excel in a full range of careers in a technology-driven economy.

We will continue to focus on professional education and research excellence on rigorous science and technology, while extending groundbreaking findings to serve industry and our society. We endeavor to bring together students, faculty and other collaborators in a multidisciplinary work environment that supports open-ended thinking in science, engineering and entrepreneurship.

I look forward to working with you all – students, researchers, colleagues at EE and around the world, alumni, industry partners, government and entrepreneurs to explore and build a better future in this thriving and exciting field of electrical engineering.

Professor Stella W. Pang
Head of Department and
Chair Professor of Electronic Engineering

Stella Pang
Delivering excellence through passionate and knowledgeable faculty

An outstanding team of SI academics actively engaging in quality teaching and frontier research.
1. Prof Way KUO
   University Distinguished Professor
2. Prof Ron CHEN
   Chair Professor
3. Prof Stella PANG
   Head of Department and Chair Professor
4. Prof Chi CHAN
   Chair Professor
5. Prof K M LUK
   Chair Professor
6. Prof Michael TSE
   Chair Professor
7. Prof Hong YAN
   Chair Professor
8. Prof Jie CHEN
   Chair Professor
9. Prof Moshe ZUKERMAN
   Chair Professor
10. Prof Ping LI
    Chair Professor
11. Prof Ben LEUNG
    Chair Professor
12. Prof Din-Ping TSAI
    Chair Professor
13. Prof H C SO
    Professor
14. Prof Henry CHUNG
    Chair Professor
15. Prof Tommy CHOW
    Professor
Fellow of the World Academy of Sciences 2015
Member of Academia Europaea 2014

Prof Ron CHEN
Chair Professor

Fellow of the UK Royal Academy of Engineering 2018

Prof K M LUK
Chair Professor

Member of the European Academy of Sciences and Arts 2019

Prof Hong YAN
Chair Professor

Croucher Innovation Award 2020
National Natural Science Foundation of China (NSFC) - Excellent Young Scientists Fund (Hong Kong and Macao) 2019

Dr Cheng WANG
Assistant Professor
IEEE Society Award Winners

IEEE SMC-S Norbert Wiener Award 2016
Prof Hong YAN
Chair Professor

IEEE AP-S John Kraus Antenna Award 2017
Prof K M LUK
Chair Professor

IEEE AP-S Harrington-Mittra Computational Electromagnetics Award 2019
Prof Chi CHAN
Chair Professor

IEEE PEL-S R. David Middlebrook Achievement Award 2021
Prof Henry CHUNG
Chair Professor
EE Faculty Teams

Teaming up to excel in education, innovation and entrepreneurship.

Head, Associate Heads and Leads

Undergraduate Programmes Management Team

Postgraduate Programmes Management Team
FACULTY

Optoelectronics, Electronics, Power, Nanotechnology and Biosystems

Computer Engineering and Control Systems

Networking and Wireless Communications

Applied Electromagnetics
Faculty Highlights

We are proud to present distinguished faculty who achieved multiple world-class recognitions.

Prof Ron CHEN
Chair Professor

- EE Outstanding Teacher Award 2020/21
- Top Scientist by h-Index in Computer Science and Electronics 2021
- Highly-cited Researcher in “Engineering” (7 years) and “Mathematics” (4 years)
- Chinese Institute of Electronics Best Paper Award 2020
- The President’s Award 2018
- Fellow of The World Academy of Sciences 2015
- Member of the Academia Europaea 2014

Prof K M LUK
Chair Professor

- Prize for Scientific and Technological Progress by the Ho Leung Ho Lee Foundation 2019
- Fellow of the UK Royal Academy of Engineering 2018
- IEEE AP-S John Kraus Antenna Award 2017
- CityU Outstanding Research Award 2017
Prof Hong YAN
Chair Professor

- Centre for Intelligent Multidimensional Data Analysis 2021
- Member of the European Academy of Sciences and Arts 2019
- Wong Chung Hong Professor of Data Engineering 2019
- IEEE SMC-S Norbert Wiener Award 2016

Prof Chi CHAN
Chair Professor

- ECE Distinguished Alumni Award University of Illinois at Urbana-Champaign 2019
- IEEE AP-S Harrington-Mittra Computational Electromagnetics Award 2019
- The President’s Award 2017

Dr Cheng WANG
Assistant Professor

- EE Outstanding Teacher Awards 2020/21 and 2019/20
- CENG Outstanding Teaching Award 2020/21
- Croucher Innovation Award 2020
- The President’s Award 2020
- National Natural Science Foundation of China (NSFC) - Excellent Young Scientists Fund (Hong Kong and Macao) 2019
World's Top 2% Scientists 2020

23 EE faculty are listed as the top 2% of the world’s most highly cited scientists according to a study led by Stanford University. This is based on publicly available database including information on citations, h-index, co-authorship, authorship positions and a composite indicator.

Outstanding Teacher Awards 2021

Six EE faculty have been conferred Outstanding Teacher Awards in 2021 by the College of Engineering or Department of Electrical Engineering in recognition of their excellence in teaching as well as promoting effective teaching and learning in the engineering community.

Top Scientist in Computer Science and Electronics 2021 – 1st in HK and Asia

Prof Ron CHEN has been put on World’s Top 1000 Scientist List according to the 2021 7th edition of Top Scientists Ranking for Computer Science & Electronics prepared by Guide2Research. Prof Chen is ranked 18th worldwide and ranked 1st in Hong Kong and in Asia by h-index of 154 with 106,779 citations.
Prof K M LUK, Prof Chi CHAN and Dr Steve WONG have been awarded by the Department of Science and Technology of Guangdong Province for establishing The Greater Bay Area Joint Laboratory of Big Data Imaging and Communications, the first joint laboratory in the field of information and communication technology, to promote Guangdong and Hong Kong as an international innovation and technology hub.

Dr Cheng WANG has received the Croucher Innovation Award 2020 which aims to identify exceptionally talented scientists from all countries working at an internationally competitive level and to offer support to these “rising stars” at a formative stage in their careers. Dr Wang’s current research focuses on realising integrated lithium niobate photonic circuits for applications in optical communications and nonlinear optics.

Dr Ray CHEUNG has been awarded the Gifted Education Fund by the Education Bureau to provide gifted students year-long advanced learning in the topic “AIoT Coding and Engineering Skills Education” with hands-on training in software, hardware, mathematics and engineering skills.
HKSTP’s Technology Leaders of Tomorrow Programme 2020

The Hong Kong Science and Technology Park (HKSTP) InnoAcademy develops forward-looking learning and training programmes to upskill talents for innovation and technology careers in Hong Kong. Two EE graduates, Mr Chun Kit LAW and Dr Ho Chun LEUNG, are selected to be two of the eight talents to join its inaugural Technology Leaders of Tomorrow Programme among 600 applicants from 50 top universities.

Second Prize in Contemporary Undergraduate Mathematical Contest in Modeling 2020

Mr Boxun YAN and Mr Feng CHENG teaming up with a student from Department of Mathematics have won the Second Prize in Contemporary Undergraduate Mathematical Contest in Modeling 2020. The winning project is titled “Furnace Temperature Curve Analysis and Optimization”.

Two Prizes in Pan-Pearl River Delta Region IT Project Competition 2020

Miss Wing Yan LAM, supervised by Dr Yixuan YUAN, has been awarded the First Prize and Best Innovation Award in Pan-Pearl River Delta Region IT Project Competition 2020. The winning project is titled “Sign Language Translator with Deep Learning”.

Student Awards
Undergraduates
The Institute of Engineering and Technology Prize 2020

Miss Yuyan RUAN has won the Institute of Engineering and Technology (IET) Prize 2020 which aims to recognize students with extraordinary performance and achievement.

China Youth Science and Technology Innovation Award 2020

Mr Yiqing ZHANG, supervised by Dr Ray CHEUNG and Dr Alan LAM, has won the 12th China Youth Science and Technology Innovation Award among 91 awardees and Mr Zhang is one of the two awardees from Hong Kong.

HK$100K each for 2 Teams from The Cyberport University Partnership Programme 2020-21

Two teams of EE students and graduates are awarded HK$100K each of seed fund to develop their start-up projects by The Cyberport University Partnership Programme (CUPP) 2020-21. The winners are Mr Nikil SENTHIL KUMAR, Mr Kwok Woon YIM, Mr Ajay RAJNIKANTH, Mr Kin Yam LAU and Mr Tsz Kit CHU, supervised by Dr Ray CHEUNG and others.
Paper Awards in the 21st IEEE (HK) AP/MTT Postgraduate Conference 2020

Four teams comprising PhD students and graduates have won the Antenna and Propagation (AP) Student Paper Award and Microwave Theory and Techniques (MTT) Student Paper Award in the 21st IEEE (HK) AP/MTT Postgraduate Conference.

- “A Terahertz On-Chip Antenna with Wide Impedance and Gain Bandwidths” by Mr Shangcheng KONG and Mr Kam Man SHUM, supervised by Prof Chi CHAN.
- “Terahertz High-Gain Open Resonator Antenna Based on Silicon-Etching and Imprinting” by Mr Yuan Long LI and Dr Shu Yan ZHU, supervised by Prof K M LUK and Prof Stella PANG.
- “A Dual-Polarized Lens Antenna Using Gradient Refractive Index (GRIN) Metasurface” by Mr Yat Sing TO and Dr Quenwei LIN, supervised by Dr Steve WONG.
- “Highly Reconfigurable Dual-Band Coupler with Independently Tunable Frequency and Coupling Coefficient at the Lower Band” by Mr Ye YANG, Mr Yufei PAN and Dr Shaoyong ZHENG, supervised by Dr Wing CHAN.
Best Fintech Award in International Blockchain Olympiad 2020

Mr Chi Ho LAU and Mr Kwok Woon YIM, supervised by Dr Ray CHEUNG and teamed up with students from Department of Biomedical Science, School of Data Science and Department of Finance, have won the Best Fintech Award in International Blockchain Olympiad (IBCOL) 2020.

Chinese Institute of Electronics Best Paper Award 2020

Prof Ron CHEN and Dr Yang LOU have received the Chinese Institute of Electronics Best Paper Award 2020 with the paper titled “Enhancing Controllability Robustness of Q-Snapback Networks through Redirecting Edges”.

CCF Big Data & Computing Intelligence Contest and Zhejiang Lab Cup Global AI Competition 2020

Mr Shaomian ZHENG, who teamed up with a member from a company in China, has won the First Prize in the 8th China Computer Federation (CCF) Big Data & Computing Intelligence Contest among 1483 teams. He has also won the Second Prize in Zhejiang Lab Cup Global AI Competition-Video Generation Challenge 2020 among 327 teams. He was supervised by Dr Yanni SUN.
Undergraduate Programmes

JUPAS Catalogue No. JS1205

Department of Electrical Engineering, City University of Hong Kong
Our Majors

- Common first year
- Students choose a major after one year of study
- Majors offered:
  - BEng in Computer and Data Engineering (CDE)
  - BEng in Electronic and Electrical Engineering (ELEL)
  - BEng in Information Engineering (INFE)

Upcoming New Major
BEng in Microelectronics Engineering (MEE)

The department provides direct applications to admit local and international students.

Programme Highlights

**CDE – Computer and Data Engineering**
- Hardware and Software Design
- Data Analytics and Security
- Cloud Computing Systems
- Machine Learning
- Control and Internet of Things

**ELEL – Electronic and Electrical Engineering**
- Wireless Communications and Data Technology
- Terahertz and Optical Technologies
- Photonic, Electronic and Sensor Devices
- Smart Control and Power Systems
- Bioelectronics and Bioinformatics

**INFE – Information Engineering**
- Networking and Communications
- Algorithms and Optimization
- Cybersecurity
- Artificial Intelligence
- Signal Processing

Career Prospects

**Engineering companies, telecommunications, major utilities (CLP, PCCW)**
- Engineer (Computer/Technical/Telecommunication/Electronic/Electrical/High Tech Equipment)
- Scientific Consultant/Technologist

**Banking & financial institutions, software and IT companies, transportation (airlines, shipping), government**
- IT Specialist/Network Administrator
- Analyst/Programmer/Software Engineer
- Application Developer/Game Developer

Salary Trend
(2012-2019 graduates)

- 2019 graduates
  - 40% > $20,000
  - 60% > $19,000
Graduate Programmes

Master of Science in Electronic Information Engineering (MScEIE)
Master of Science in Multimedia Information Technology (MScMIT)

The two Master programmes aim to advance EE professionals their knowledge in strategically selected areas that are relevant to the current and anticipated future industrial and societal needs. Students are exposed to various interactive learning activities, equipping them with in-depth technical knowledge and the necessary soft skills for conducting high-end development to meet the global challenges, as well as facilitating their professional and career advancement in the rapidly changing technology industry.

Programme Features
• Business Management or Industrial Research Option
• Dissertation for research exposure
• Internship at local or overseas research institutions or companies
• Exchange programme with University of Limoges, France
• Fellowship awards for local students in EIE programme

More Programme Information
Graduate Programmes

Research Degree Programmes (PhD/MPhil)

The Department offers research degree programme in a wide range of research areas to suit individuals’ research interests, which cover (1) Antenna Design; (2) Big Data, Machine Learning and Artificial Intelligence; (3) Bioinformatics; (4) Biomedical Systems, Biosensors and Bioelectronics; (5) Computer Engineering; (6) Control Systems and Optimization; (7) Microelectronic Devices and Circuits; (8) Nanotechnology and Nanodevices; (9) Networking and Internet of Things; (10) Photonics; (11) Power Electronics and Systems; (12) Signal and Image Processing; (13) Terahertz and Millimeter Waves; and (14) Wireless Communications. The programme (4 years for PhD and 2 years for MPhil) consists of both coursework and independent research studies culminating in the submission of a thesis.

The Department is well equipped with state-of-the-art laboratories to support high-quality teaching and research activities. A number of co-curricular activities such as research seminars, soft skills workshops and research student symposium are offered to prepare students the all-roundness for the pursuit of professional career in the academia or in the industry. The stipend for PhD students in 2021/22 is HK$17,510 per month up to 4 years.

Hong Kong PhD Fellowship Scheme

With the aim to recruit the brightest students from around the world to pursue their PhD studies in Hong Kong, the Government of Hong Kong has established the Hong Kong PhD Fellowship Scheme (HKPFS). In 2021/22, HKPFS provides a monthly stipend of HK$26,900 (~US$3,449), and conference and research-related travel allowance of HK$13,500 (~US$1,731) per year for the awardees.

2019 HKPFS Awardees

Mr WAN Tsz Kin
Miss LI Xiaoting

More Programme Information
EE students are encouraged to learn by doing and playing. Their university experiences are enriched with much of hands-on learning through various student activities.

**Competitions**

*Final Year Project and Product Design Competitions*

*Underwater Robot Challenge*

*ACM International Collegiate Programming Contest*

*Robocon Hong Kong Contest*

**EE Honor Society**

EE Honor Society recruits top 5% of EE students as members. Through organizing and participating meaningful, fulfilling and creative initiatives under the coaching of EE professors, students are nurtured to be all-rounded students with positive mindset to influence and support peers in the pursuit of university and future life.

**EE Student Chapter**

EE Student Chapter is a student organization that all EE students are welcome to join. It aims to nurture members' professional status and help members develop professional autonomy through a diverse spectrum of programmes and activities.
Research Projects and Internships

Undergraduate Research Fellowship

The EE Departmental Undergraduate Research Fellowship programme aims to encourage and provide financial support for selected undergraduate students to participate and obtain in-depth experience in academic research. Students will engage in 250 to 300 hours of research work under the supervision of a faculty.

Internship Opportunities

In collaboration with industry, the Department aims to equip students with real work experience before graduation through different internship schemes held locally or overseas. A student successfully matched with a renowned enterprise or institution will be jointly supervised by a company mentor and a faculty mentor. Monthly allowance and funding support are available through the following internship options:

Professional One-Year Internship (EE4081) is an 8- to 12-month long professional internship programme. One day per week release is in place to allow students taking courses and graduating on time. Course waiver is available and a hundred industrial positions are open to students yearly.

Overseas Internship Scheme allows students to widen their horizon by engaging in internship opportunities abroad. Around 40 EE students are selected yearly to join the Scheme to work in France, Korea, Singapore, USA, UK and Canada. Students will mostly work as interns in institution setting in addition to some in companies.

Industrial Attachment Scheme offers students a 9-13 weeks of local internship opportunity. About 50-60 EE students participate in the scheme yearly.
Global Outreach

Uplifting students’ global outreach and international competitiveness through STUDENT EXCHANGE is one of the Department’s goals. Each year 80 EE students study in top international universities in Australia, Belgium, Canada, Czech Republic, Denmark, Finland, France, Japan, Korea, Mainland China, Netherlands, New Zealand, Spain, Norway, Sweden, Taiwan, UK and USA come for semester-long exchange or summer exchange with scholarships and funding support. Currently, we have over 230 partner universities.

The semester exchange works so significantly for me to gain the ability on how to overcome fear when stepping out of your comfort zone and become an international talented youth.

I really love my friends and teachers there. They encouraged and inspired me so much. Their devotion to knowledge always reminds me of the importance of learning.

Exchange at KTH Royal Institute of Technology, Sweden

Exchange at University of Illinois at Urbana-Champaign, USA
EE has organized a **4-WEEK SUMMER EXCHANGE PROGRAMME** since 2014. Through a series of technical workshops, hands-on trainings, seminars, company visits, mini-projects and presentations, students will gain technical know-how relevant to their major studies. Over 320 EE students joined this exchange programme between 2014 to 2019 summer. Reciprocally, EE has received a similar number of students from the partner universities.

Current partners include:
- Dankook University (DKU), South Korea
- National Cheng Kung University (NCKU), Taiwan
- University of Hradec Kralove (UHK), Czech Republic
- University of Limoges, France

"It is really an unforgettable experience and it changed me a lot. In these 6 months, I have studied and lived with people from different cultures. There are too many things we could learn – time management for work-life balance, how to cook, and how to bike, etc. I’m glad that I had a chance to experience all these in my University life."

**Exchange at Aarhus University, Denmark**

**The Cultural and Language Immersion Scheme** supports undergraduate students to go overseas staying with premier universities for a period of 28 consecutive days with financial support to develop their global outlook and improve foreign language skills. EE students are arranged to visit the UK through immersion in the British culture and classroom learning.
Research Themes

Electrical Engineering has diverse areas of outstanding research strengths with world-renowned faculty members.

- Antenna Design
- Big Data, Machine Learning and Artificial Intelligence
- Bioinformatics
- Biomedical Systems, Biosensors and Bioelectronics
- Computer Engineering
- Control Systems and Optimization
- Microelectronic Devices and Circuits
- Nanotechnology and Nanodevices
- Networking and Internet of Things
- Photonics
- Power Electronics and Systems
- Signal and Image Processing
- Terahertz and Millimeter Waves
- Wireless Communications
Research Highlights

EE faculty are committed to performing high-impact research to meet the global challenges.

Network Control and Synchronization of Multi-Agent Dynamical Systems

Prof Ron CHEN

Network science and engineering, nonlinear dynamics and control systems.

Antenna Magicians in the Era of Wireless Connectivity

Prof K M LUK

Wideband and multi-band antennas, reconfigurable antennas, high-gain THz antennas, compact antennas.

Pre-Clinical Assessment of High-Performance Flexible Micro Electrode Arrays for Artificial Retina

Dr Leanne CHAN

A pre-clinical microelectrode array development for neural interface applications.
Research Highlights
EE faculty are committed to performing high-impact research to meet the global challenges.

A Microfluidic Biosensing System for Improved Cancer Diagnostic and Screening

Prof Stella PANG

A portable microfluidic apparatus with a plasmonic biosensor to provide fast, highly sensitive and low cost cancer screening.

Smart Reconfigurable Surfaces for 6G

Dr Steve WONG

Reconfigurable coding metasurfaces enabling wideband beam forming, titling and steering features at terahertz frequency spectrum for future 6G applications.

Artificial Intelligence Powered Healthcare

Dr Yixuan YUAN

Deep learning in medical image diagnosis, segmentation and anomaly detection.
The model integrates available travel, testing and control data for prediction and identification of factors affecting the scope of outbreak.

High-speed components for next-generation optical communication networks/millimeter wave and terahertz photonic devices/quantum integrated photonic circuits.

Modeling, performance analysis and optimal access design of next-generation wireless communication networks.
State Key Laboratory and Research Centres

State Key Laboratory and research centres are integral part of EE’s research infrastructure fostering synergy and collaboration for interdisciplinary research.

**State Key Laboratory of Terahertz and Millimeter Waves (SKLTMW)**

The establishment of the State Key Laboratory of Terahertz and Millimeter Waves (SKLTMW) at CityU was approved by the Ministry of Science and Technology of the People’s Republic of China in 2008. It is the first laboratory of its kind in the engineering discipline in Hong Kong. Research activities in the Laboratory focus on the advancements and applications of millimeter wave and terahertz technologies.

**Centre for Biosystems, Neuroscience and Nanotechnology (CBNN)**

The Centre for Biosystems, Neuroscience and Nanotechnology (CBNN) merges nanotechnology with biosystems and neuroscience to create a revolutionary impact on many aspects of medicine. The centre aims at developing materials, structures, devices and microsystems with nanometre precision for single molecule and cell interactions.
Centre for Chaos and Complex Networks (CCCN)

The Centre for Chaos and Complex Networks (CCCN) aims to promote fundamental and applied research on the emerging and cutting-edge technology of chaos control and synchronization, as well as complex dynamical networks, targeting academic leadership and commercial and industrial applications.

Centre for Smart Energy Conversion and Utilization Research (CSCR)

The Centre for Smart Energy Conversion and Utilization Research (CSCR) focuses on the fundamental and applied research in power electronics and its applications. It plays an effective role in the development of energy conversion and utilization technologies in conjunction with the industry and to provide extension services contributing to the social and economic development of Hong Kong.
Industrial Collaboration and Knowledge Transfer

EE forges close ties with industry on exchange and collaboration for nurturing future engineering professionals and fostering applied research as well as entrepreneurship.

Departmental Advisory Committee

Chairman

Mr M Y WONG
Founding Director
InnoLink Investments

Ms Cally S S CHAN
General Manager
Microsoft
(Hong Kong and Macau)

Mr Stephen K K CHAU
Executive Director & Chief Technology Officer
SmarTone Telecommunications

Mr David C C CHEUNG
Independent Non-Executive Director
Wong’s International

Mr C W CHEUNG
President and Chief Executive Officer
Compass Technology

Mr Thomas T Y CHEUNG
Chairman
Chinagrowth Group

Members

Mr Matthew P H LEUNG
Director
Huawei Hong Kong Research Center

Mr Peter H Y NG
Vice President
ASM Pacific Technology

Dr Alfred M C NG
Executive Director & Chief Technology Officer
Suga International

Ir Andrew M C YOUNG
Associate Director (Innovation)
Sino Group

Mr Wilson Y F YUEN
Chief Executive Officer
TFI Digital Media
Knowledge Transfer

EE faculty actively apply their expertise and innovations to benefit the industry and the community through various knowledge transfer activities such as applied research, contract research, consultancy, start-up, publications, conferences, exhibitions, seminars, etc.

Notable Impact Cases

High-Performance Antennas for Wireless Communications

- Supporting the growth of the base station antenna industry in China through the establishment of a joint venture Higain-HiTech Co. Ltd. in Shandong Province in 2002 for the design and production of 2G and 3G wideband base station antennas that have been widely used in the country. The developed antenna technology, L-probe patch antenna, has become a classic one which has been employed for various wireless applications globally.
- Developing novel small antennas for numerous pieces of receiving terminals of the BeiDou Navigation Satellite System of China through a spin-off company in Shenzhen founded in 2002 for far-reaching impact beyond conventional communication applications.
- Advancing millimeter-wave and terahertz antenna technology for 5G, 6G and beyond through the establishment of the State Key Laboratory of Terahertz and Millimeter Waves since 2008.

![Antenna Diagram](image_url)

<table>
<thead>
<tr>
<th>Year</th>
<th>Antenna Type</th>
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<tr>
<td>1998</td>
<td>L-probe patch antenna</td>
</tr>
<tr>
<td>2006</td>
<td>Magneto-electric dipole</td>
</tr>
<tr>
<td>2010</td>
<td>Small CP antenna</td>
</tr>
<tr>
<td>2015</td>
<td>Water-patch antenna All transparent antenna</td>
</tr>
<tr>
<td>2017</td>
<td>Terahertz antenna High efficiency at THz frequencies</td>
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</tbody>
</table>
Emerging Technologies for Energy Conversion and Utilization

- Development of advanced machine learning algorithms for diagnosing power electronics equipment, leading to significant resource saving in site inspection and reduction in electronic waste.
- Development of large-scale energy management systems for indoor and outdoor lighting equipment used in residential estates and roads, achieving an energy saving of 20% to 40%.
- Development of a cost-effective energy recycling technology for a power supply manufacturer for reducing energy loss in power supply burn-in systems, leading such technology to advanced inverter technologies for distributed power generation systems.

CityU EE Joint Lab is a “Government-Industry-Academic-Research Centre” scheme to promote collaboration between EE Department and industrial associations, research centres, corporates and organizations. It aims to empower recruitment, research collaboration, commercialisation and technology transfer. Since its establishment in 2019, the CityU EE Joint Lab Scheme has connected with a total of 22 partners.
CityU EE Joint Lab Ceremonies

Phase 1
September 2019

Phase 2
September 2020

Phase 3
January 2021

Phase 4
June 2021

Partners

- Automotive Platforms and Application Systems R&D Centre
- Electrical and Mechanical Services Department
- Hong Kong Applied Science and Technology Research Institute
- Hong Kong Electronic Industries Association
- Hong Kong Productivity Council
- Huawei Technologies
- Microchip Technology
- Sengital
- Shenzhen Corerain Technologies
- Xilinx
- ASM Pacific Technology
- Gold Peak Industries
- Microsoft Hong Kong
- Sino Group
- SmarTone Telecommunications
- SUGA International
- Compass Technology
- Hewlett Packard
- Intel Corporation
- Pong Yuen
- Provista
- United Microelectronics Center (Hong Kong)
Quotes from CityU President and Joint Lab's Partners

Prof Way Kuo
President
City University of Hong Kong

"CityU is striving to communicate and collaborate with the industry to promote research breakthroughs as well as to foster the development and application of science and technology."

Mr Peter NG
Vice-President
ASM Pacific Technology

"With the establishment of the ASMPT-CityU EE Joint Lab, ASMPT looks forward to forging a long-term collaborative relationship to foster innovation, explore emerging technologies and create positive societal impact."

Dr Brian Li
Executive Director and Executive Vice-President
Gold Peak Industries

"We look forward to working with the EE Joint Lab to resolve a number of technology challenges and identify good EE graduates to help our Group’s further development."

Ms Cally Chan
General Manager
Microsoft (Hong Kong and Macau)

"We are pleased to be part of CityU EE Joint Lab and provide technological support in areas of Cloud and AI for our partners. We hope this partnership will fuel students’ innovation and empower CityU EE to achieve more in R&D."

We look forward to accelerating innovation through close cooperation with the CityU EE Joint Laboratory and promoting the development of new fields through the development of the latest technology.

Dr Meikei IEONG
Chief Executive Officer
United Microelectronics Center (Hong Kong)

The Joint Lab enables our mutual effort in the cutting-edge technology research and nurture of tech talents and domain experts, that support the industry growth in the long run. We are very much looking forward to the strong synergies with CityU EE!

Mr K C FUNG
Chief Technology Advisor
Hewlett Packard (Hong Kong and Macau)

With our knowledge sharing efforts, graduate hiring and internship opportunities, we hope to inspire a new generation of IT talent in Hong Kong and look forward to seeing CityU’s bright future.

Mr Ben WONG
Business Development Manager
ProVista

It once again confirms the far-sighted vision of the Department of Electrical Engineering of City University of Hong Kong. At the same time, it shows that Hong Kong scientific research responds with a close cooperation between industry, academia and research.
Alumni

EE loves to stay connected with students after they graduated. We organize social gatherings, conferences, seminars, workshops, sharing sessions, etc. We help to strengthen ties among alumni, EE and CityU.

The First International CityU EE Alumni Conference

Get Together with Alumni
Our Graduates

EE has nurtured graduates who thrive in a diverse range of professions for the betterment of the society.

1. Miss NG Chak Lam Rica (2020 BEng)
   Graduate Engineer, MTR Corporation
2. Mr MEW Kin Ni (2012 BEng)
   CEO and Founder, MINDLAYER
3. Dr CHEN Jiashu (2007 BEng)
   Founder, Calterah Semiconductor
4. Miss MISHRA Ishita (2020 MSc)
   Engineer, Hong Kong Applied Science and Technology Research Institute
5. Dr GUO Yongxin (2001 PhD)
   Professor, Department of Electrical and Computer Engineering, National University of Singapore
6. Dr TONG Kin Fai (1993 BEng, 1997 PhD)
   Reader, Department of Electronic and Engineering, University College London
7. Dr WANG Huai (2012 PhD)
   Professor, Aalborg University

EE Annual Awards

EE Annual Awards has been launched in 2021 to honor outstanding alumni/individuals who had made remarkable contributions to their professions, CityU EE community, or the society. Outstanding Alumni Awards, Outstanding Service Awards and Young Alumni Awards are set up to celebrate the achievements of alumni/individuals in different areas.