

## Faculty

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**Philip Ching-Ho CHAN ( 陳 正 豪 )**

BS *Univ of California, Davis*; MS, PhD *Univ of Illinois, Urbana-Champaign*  
Professor, Head of Department, Director of Microelectronics Fabrication Facility, and Director of Center for Advanced Electronics System Packaging

Research Interests:

VLSI devices, circuits and systems; microelectronics, electronic packaging, integrated sensors.

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**Khaled BEN LETAIEF ( 李 德 富 )**

BS, MS, PhD *Purdue*  
Professor, Director of Hongkong Telecom Institute of Information Technology, and Director of Center for Wireless Information Technology.

Research Interests:

Mobile communications; OFDM; space-time processing; broadband wireless networks; multiuser detection; wireless multimedia; CDMA systems.

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**Xiren CAO ( 曹 希 仁 )**

BS *Chinese Univ of Sc & Tech, Beijing*; MS, PhD *Harvard*  
Professor, and Co-Principal Investigator of ATM/IP Telephony Solution Cooperative Research Center

Research Interests:

Discrete event system theory and applications; optical communications; signal processing; queuing theory; optimization.

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**Tony R. EASTHAM ( 易 東 萊 )**

BSc *London*; PhD *Surrey*  
Professor, and Associate Vice-President for Research and Development

Research Interests:

Advanced ground transportation; modeling and analysis of electric drives; research and development policy issues.

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**Ping K. KO ( 高 秉 強 )**

BSc *Hong Kong*; MS, PhD *Univ of California, Berkeley*  
Professor

Research Interests:

High-speed VLSI devices, technology, and circuits; MOS device modeling for circuit simulation; CAD tools for integrated circuit design.

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**Hoi-Sing KWOK ( 鄧 海 成 )**

BS *Northwestern*; MS, PhD *Harvard*  
Professor, and Director of Center for Display Research, and Principal Investigator of Active Matrix Organic Light Emitting Diode Displays Cooperative Research Center

Research Interests:

Display technologies; thin film materials; organic light emitting devices.

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**Kei May LAU ( 劉 紀 美 )**

BSc, MSc *Minnesota*; PhD *Rice*  
Professor, and Director of Photonics Technology Center

Research Interests:

Compound semiconductor materials and devices for photonic and high-frequency applications; organometallic chemical vapor deposition.



**Chin-Tau LEA ( 李 景 濤 )**

BS, MS *National Taiwan*; PhD *Univ of Washington*  
Professor, and Principal Investigator of Internet Switching Technology Center

Research Interests:

Broadband and wireless network architectures; high-speed electronic and photonic switching; network protocols.

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**Johnny K. O. SIN ( 單 建 安 )**

BS, MS, PhD *Toronto*  
Professor, Associate Director of Microelectronics Fabrication Facility, and Principal Investigator of Semiconductor Product Analysis and Design Enhancement Center

Research Interests:

Integrated microsystem technologies: power semiconductor devices and ICs, thin film transistors, RF SOI devices and technology; integrated sensors; semiconductor failure analysis.

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**Kang L. WANG ( 王 康 隆 )**

BS *National Cheng Kung*; MS, PhD *Massachusetts Inst of Tech*  
Professor, and Dean of Engineering

Research Interests:

Nanotechnology; quantum information systems; molecular beam epitaxy; microwave power amplifier; optoelectronics for wireless and optical communications.

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**Huey-Liang HWANG ( 黃 惠 良 )**

BSE, MSE *National Cheng Kung*; PhD *Brown*  
Adjunct Professor

Research Interests:

Solid-state electronics; optoelectronics; VLSI; solar cells.

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**Oscar C. AU ( 區 子 廉 )**

BS *Toronto*; MA, PhD *Princeton*  
Associate Professor

Research Interests:

Video compression (MPEG-1/2/4/7), motion estimation, transcoding, pre-processing, post-processing, error concealment; inverse halftoning; watermarking.

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**Mansun J. CHAN ( 陳 文 新 )**

BS *Univ of California, San Diego*; MS, PhD *Univ of California, Berkeley*  
Associate Professor

Research Interests:

Nanometric device physics; SOI technology for high-speed circuits; compact device modeling (BSIM); automated device characterization systems; biosensors; RF circuits; multimedia applications.

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**Roger CHENG ( 鄭 樹 坤 )**

BS *Drexel*; MA, PhD *Princeton*  
Associate Professor, and Associate Director of Consumer Media Center

Research Interests:

Wireless communications; spread spectrum CDMA systems; information theory and coding; digital VLSI implementation of communication algorithm.



**Ho-Chi HUANG (黃河楫)**  
BSc, MSc *National Taiwan*; PhD *Univ of Washington*  
Associate Professor

Research Interests:  
Integrated guided-wave optics; silicon-based optoelectronic technologies;  
CMOS AMLCD technology; ASIC design.

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**Wing-Hung KI (暨永雄)**  
BS *Univ of California, San Diego*; MS *California Inst of Tech*; PhD *Univ of California, Los Angeles*  
Associate Professor

Research Interests:  
Analysis and design of switch mode and switched-capacitor power converters, low voltage switched op-amp, switched-capacitor circuits and fundamental analog integrated circuits.

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**Jack LAU (廖家俊)**  
BS, MS *Univ of California, Berkeley*; PhD *Hong Kong Univ of Sc & Tech*  
Associate Professor

Research Interests:  
Consumer electronics; high frequency analog integrated circuits for wireless applications.

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**Zexiang LI (李澤湘)**  
BS *Carnegie-Mellon*; MS, PhD *Univ of California, Berkeley*  
Associate Professor, and Principal Investigator of Automation Technology Cooperative Research Center

Research Interests:  
Robot manipulation; multifingered robotic hands; geometric analysis of robotic mechanisms; intelligent control and nonlinear systems; motion control and manufacturing.

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**Howard Cam LUONG (梁錦和)**  
BS, MS, PhD *Univ of California, Berkeley*  
Associate Professor

Research Interests:  
Low-power, low-voltage, high-speed analog integrated circuits; RF integrated circuits for wireless communications.

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**Ross David MURCH (穆樂思)**  
BS, PhD *Univ of Canterbury, Christchurch*  
Associate Professor

Research Interests:  
Wireless communication systems; MIMO antenna systems; antenna design; wireless packet data.

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**Li QIU (丘立)**  
BS *Hunan*; MS, PhD *Toronto*  
Associate Professor

Research Interests:  
Systems control theory; signal processing; motor control; process control.



**Bertram SHI (施毅明)**

BS, MS *Stanford*; PhD *Univ of California, Berkeley*  
Associate Professor, and Director of Consumer Media Center

Research Interests:

Analog VLSI neural networks; cellular neural networks; neuromorphic and biologically inspired engineering; image processing; computer vision; speech recognition.

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**Danny H. K. TSANG (曾憲國)**

BS *Winnipeg*; BEng, MS *Technical Univ of Nova Scotia*; PhD *Pennsylvania*  
Associate Professor

Research Interests:

BISDN/ATM networks; congestion controls; routing in high-speed networks; broadband applications; quality of services guarantee in Internet; IP multicast; multimedia networking.

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**Chi-Ying TSUI (崔志英)**

BSc *Hong Kong*; MS, PhD *Southern California*  
Associate Professor, and Associate Director of Consumer Media Center

Research Interests:

VLSI design and CAD algorithms for energy efficient high-performance microprocessors; low-power embedded systems; low-energy wireless multimedia systems.

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**Li-Xin WANG (王立新)**

BS, MS *Northeastern Polytechnical Univ, Xian*; PhD *Southern California*  
Associate Professor

Research Interests:

Intelligent control; fuzzy systems; industrial process control; data mining.

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**Man WONG (王文)**

BS, MS *Massachusetts Inst of Tech*; PhD *Stanford*  
Associate Professor

Research Interests:

Advanced device fabrication technology; thin film transistors and general device physics; micro-electromechanical systems.

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**Bing ZENG (曾兵)**

BS, MS *Univ of Electronic Sc & Tech of China*; PhD *Tampere Univ of Tech*  
Associate Professor, and Associate Director of Multimedia Technology Research Center

Research Interests:

Digital signal and image processing; image and video coding; arbitrarily-shaped object representation and coding; real-time streaming of multimedia contents over Internet and wireless; texture synthesis and its applications.

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**Mark Sze-Fong YAU (游思放)**

BSc *Hong Kong*; MS *Boston*; PhD *Univ of Illinois, Urbana-Champaign*  
Adjunct Associate Professor

Research Interests:

Sensor array processing; medical signal and image processing; statistical signal processing and application to inverse problems.



**Vladimir Grigorievic CHIGRINOV**

MSc, DSc *Russia*  
Visiting Associate Professor

Research Interests:

Electrooptical effects in liquid crystals (LCs); LC surface alignment; optical elements and materials for LC devices (LCDs); modeling and optimization of LCD response; new LCD configurations; LC application in fiber optics.

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**Albert Kai-Sun WONG (王啟新)**

BS, MS, PhD *Massachusetts Inst of Tech*  
Visiting Associate Professor

Research Interests:

Data and optical networking; packet switching systems; performance analysis.

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**Amine BERMAK**

Engineer *Polytechnical Schl of Algeria*; MSc, PhD *Paul Sabatier*  
Visiting Associate Professor

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**Kevin J. CHEN (陳敬)**

BS *Beijing*; PhD *Maryland*  
Assistant Professor

Research Interests:

RF/microwave devices and circuits: design, fabrication and characterization; RF/microwave power amplifiers; RF micro-electromechanical systems (MEMS).

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**Pascale FUNG (馮雁)**

BS *Worcester Polytech Inst*; MS, PhD *Columbia*  
Assistant Professor

Research Interests:

Speech and speaker recognition; understanding and dialogue strategies in speech recognition; multilinguality in speech and language; machine translation; cross-language information processing.

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**Ted Chi-Wah KOK (郭志華)**

BEng *City Univ of Hong Kong*; MSc, PhD *Univ of Wisconsin, Madison*  
Assistant Professor

Research Interests:

Signal processing and multirate techniques, and their applications in wireless and multimedia communications.

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**Philip MOK (莫國泰)**

BS, MS, PhD *Toronto*  
Assistant Professor

Research Interests:

Analog integrated circuits for telecommunications and power electronics applications; power integrated circuits and systems.



**Wai Ho MOW ( 繆 偉 豪 )**  
BSc, MEng, PhD *Chinese Univ of Hong Kong*  
Assistant Professor

Research Interests:  
Decoding and detection algorithms for wireless communications and storage applications; sequence design for radars and CDMA systems; communications, coding and information theory.



**Andrew Wing On POON ( 潘 永 安 )**  
BA *Chicago*; MPhil, PhD *Yale*  
Assistant Professor

Research Interests:  
Micro-optics devices; fiber optics; photonics; optical communications.



**Vincent M. C. POON ( 潘 明 昌 )**  
BSc, MPhil, PhD *Chinese Univ of Hong Kong*  
Assistant Professor

Research Interests:  
Advanced microelectronic devices: physics, technology, modeling, characterization, design and fabrication.



**Jianan QU ( 瞿 佳 男 )**  
BS, MS *Huazhong Univ of Sc & Tech*; PhD *Chinese Acad of Sc*  
Assistant Professor

Research Interests:  
Applications of optics in medicine; biomedical instrumentation; analytical laser spectroscopy; laser technology and optical design.



**Pengcheng SHI ( 施 鵬 程 )**  
BSc *Shanghai Jiao Tong*; MSc, PhD *Yale*  
Assistant Professor

Research Interests:  
Visual information processing and its biomedical applications: medical imaging, computer vision; image analysis; virtual and augmented reality.



**Man Hung SIU ( 蕭 文 洪 )**  
BS, PhD *Boston*; MS *California Inst of Tech*  
Assistant Professor

Research Interests:  
Pattern recognition; digital speech processing, speech and speaker recognition; spoken language systems; information extraction; neural networks.

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**Alex Ka Nang LEUNG ( 梁 加 能 )**  
BEng, MPhil, PhD, *Hong Kong Univ of Sc & Tech*  
Visiting Assistant Professor

Research Interests:  
Analogue integrated circuits and circuit techniques for telecommunications; power management integrated circuits.



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Tommy CHEUNG (張敬賢)

BSc, PhD *New South Wales*  
Part-time Lecturer

Research Interests:

System level specification, modeling and simulation; hardware/software co-design of embedded systems; VLSI designs.

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King Wai CHOW

BSc *Boston*; MPhil, PhD *Princeton*  
Part-time Lecturer