- Center for Advanced Microsystems Packaging
- Center for Asian Financial Markets
- Center for Cancer Research
- Center for Chinese Linguistics
- Center for Cultural Studies
- Center for Display Research
- Center for Economic Development
- Center for Electronic Commerce
- Center for Experimental Business Research
- Center for Fund Management
- Center for Marketing and Distribution
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- Center for Sustainable Energy Technology
- Center for Wireless Information Technology
- Center on China's Transnational Relations
- China Corporate Governance Center
- Consumer Media Center
- Cyberspace Center
- Hang Lung Center for Organizational Research
- Molecular Neuroscience Center
- Multimedia Technology Research Center
- Smart and Sustainable Infrastructure Research Center
- South China Research Center
- Survey Research Center

Center for Advanced Microsystems Packaging

Director:

Philip Ching-Ho CHAN, BS Univ of California, Davis; MS, PhD Univ of Illinois, Urbana-Champaign

(Chair Professor of Electronic and Computer Engineering)

Associate Directors:

David Chuen-Chun LAM, BSc Univ of California, Berkeley; PhD Univ of California, Santa Barbara

(Associate Professor of Mechanical Engineering)

Ricky Shi-Wei LEE, BS National Taiwan, MS Virginia Polytech Inst & State Univ; PhD Purdue

- (Associate Professor of Mechanical Engineering)
- K. K. David YOUNG, BS, MS, PhD Univ of Illinois, Urbana-Champaign
 - (Director of Applied Technology Center)

The Center for Advanced Microsystems Packaging (CAMP) was established to strengthen collaborative R&D across different departments and research laboratories. It aims to promote technology transfer between HKUST and the electronics packaging industries. It will provide the focus and necessary support to assist the existing electronics manufacturing and packaging companies to further expand their global market shares.

The Center builds upon the existing research and development strengths at HKUST on electronics packaging, display research, and manufacturing automation. It will establish technology outreach activities in the Nansha Information Technology Park (NITP) to enhance technology transfer and commercialization to benefit the Hong Kong and the Pearl River Delta (PRD) economy.

The Center's objectives are:

- To develop a platform to enable faculty, staff and students to translate basic and applied research outputs into prototype development, pilotization, and productization.
- To leverage on our teaching resources and training expertise to train and educate the needed manpower for the electronics system packaging industries in PRD and the Chinese Mainland.
- To provide a base for launching industrial partnerships, strategic alliances, and joint ventures with Hong Kong and China business entities in NITP and in the PRD.

Center for Asian Financial Markets

Director:

John K. C. WEI, BS National Taiwan Inst of Tech; MBA National Chengchi; PhD Univ of Illinois, Urbana-Champaign

(Chair Professor of Finance)

The Center for Asian Financial Markets is formed to develop a data and knowledge base on Asian financial markets to facilitate research and the dissemination of knowledge and expertise. It will also provide an academic interface with government and business. Activities will include publications, provisions of expertise, development of new data and teaching materials, a bi-annual newsletter, a working paper series, seminars and public lectures, executive education, consulting services, and contract research.

Center for Cancer Research

Director:

Maria Li LUNG, BA&Sc Cornell; PhD Stanford (Chair Professor of Biology)

Associate Director:

Chun LIANG, BSc Zhongshan; MSc Miami; PhD Brown (Associate Professor of Biochemistry)

The Center for Cancer Research comprises a multidisciplinary research team from the Departments of Biochemistry, Biology, and Chemistry with complementary expertise in many key areas of cancer research, giving us high potential for synergistic collaboration on both basic and applied aspects of cancer research.

Our goals are to promote basic and translational research on various aspects of cancer. This will be achieved by concerted collaborative efforts in both basic and clinically relevant projects. These endeavors should lead to advances in understanding cancer development, improvements in diagnostic and prognostic methods, and identification/further development of cancer drug leads. We envision that this Center will serve as a platform for several members together or in synergy with other institutions to develop powerful diagnostic tools and to design novel therapeutic and preventive strategies for several key cancers of interest. Since cancer is such an important medical problem in Hong Kong, we hope our efforts will contribute significantly or reduce cancer morbidity in the community.

Center for Chinese Linguistics

Director:

Min ZHANG, BA, PhD *Peking* (Associate Professor of Humanities)

As a major center in the global network of research on the Chinese language, the Center for Chinese Linguistics promotes the study of the history and evolution of the Chinese language, with an emphasis on the theoretical implications of the investigation as well as its relevance to practical applications.

Personnel of the Center consist of the linguistics faculty and also visiting scholars in the Division of Humanities, School of Humanities and Social Science. The Center aims at achieving the following objectives:

- To conduct intensive research on the Chinese language by (a) analyzing data on contemporary Chinese dialects, (b) scrutinizing historical documentation of all regional varieties of Chinese, (c) reconstructing the history of the Chinese language in relation to other languages of the Sino-Tibetan family, (d) studying the cognitive and social aspects of language, and (e) testing and refining methods, hypotheses and theories of modern linguistics.
- To house major databases and corpuses pertaining to languages in China, thereby facilitating effective use of computer technology to store and process linguistic data.
- To offer a rigorous postgraduate program in Chinese linguistics, attracting outstanding students not only from the Greater China region but also from other parts of the world.
- To make expertise in the Center available to other teaching and research units at HKUST, as well as to society at large.
- To serve as a regional hub in the study of Chinese, thereby enhancing HKUST's standing in relevant disciplines and promoting the cooperation among scholars in the Greater China region and in other countries.

Center for Cultural Studies

Director:

Angelina Chun-Chu YEE, BA Univ of California, Berkeley; AM, PhD Harvard (Associate Professor of Humanities)

The Center aims at achieving the following objectives:

- bring more cohesion to the interdisciplinary nature of the Humanities and Social Science programs;
- stimulate research and intellectual discussions from a global perspective through conferences, workshops and seminars;
- serve as a regional impetus for contemporary cultural and social criticism in Hong Kong and other Asian societies; and
- provide intellectual underpinnings for the University's artistic and cultural life.

Center for Display Research

Director:

Hoi-Sing KWOK, BS Northwestern; SM, PhD Harvard (Dr William M. W. Mong Professor of Nanotechnology)

Associate Director:

Man WONG, BS, MS Massachusetts Inst of Tech; PhD Stanford (Associate Professor of Electronic and Computer Engineering)

The Center for Display Research (CDR) was established by the then Hong Kong Government Industry Department at HKUST in August of 1994. The goal of CDR is to provide basic research support for the local Liquid Crystal Display (LCD) industry. Funding received was used to establish a unique LCD laboratory with active matrix fabrication capabilities. CDR concentrates on many areas of display research such as thin-film-transistor materials and devices, organic light emitting diode display, microfabrication technology, bistable LCD and photoalignent technology. Many faculty members from the Departments of Electronic and Computer Engineering, Physics and Chemistry are involved in CDR. They have collectively published over 300 journal papers and applied for 40 US patents during the past few years. Several technologies have been transferred successfully to local industry.

Center for Economic Development

Director:

Francis T. LUI, BA Chicago; PhD Minnesota (Professor of Economics)

Formally established in 1995, the Center for Economic Development promotes strong research programs concentrating on the study of economic development, particularly in the Asia-Pacific region. Emphasis is given to the study of topics such as China's economic reform and open door policy; the economic integration of Hong Kong and Pearl River Delta; the emergence of regional economies in China, in particular the region comprised of the southern coastal provinces. The Center also supports theoretical research on economic growth and transitional economies, and has been active in public policy debates in Hong Kong.

Center for Electronic Commerce

Director:

Kar-Yan TAM, BS Univ of Illinois, Urbana-Champaign; MS, PhD Purdue (Chair Professor of Information and Systems Management)

The mission of the Center is to advance the theory and practice of conducting business over an electronic media with an aim to contribute to the economic development of Hong Kong by:

- Enabling Electronic Commerce through frontier research in the integration of technology, organization, and market structure;
- Upgrading the manpower of Hong Kong through high-end executive and online programs on Electronic Commerce topics; and
- Collaborating closely with industrial partners to transfer and assist implementation of technologies and process innovations developed by the center.

Center for Experimental Business Research

Director:

Rami ZWICK, BA Hebrew Univ of Jerusalem; MA Haifa; PhD Univ of North Carolina, Chapel Hill

(Chair Professor of Marketing)

Associate Director:

Soo-Hong CHEW, MA Claremont Grad School; PhD British Columbia (Chair Professor of Economics)

The mission of the Center for Experimental Business Research (cEBR) is to promote the use of experimental methods in business research, expand experimental methodology through research and teaching, and apply this methodology to solve practical problems faced by firms, corporations, and governmental agencies.

The Center focuses on three main areas:

- Experimental work concerning the dialogue between experimenters and policymakers. Experiments in this category are motivated by questions raised, for example, by government agencies about the effects of new policies on some markets.
- Experimental work motivated by well-articulated formal theories.
- Experimental work motivated by interesting unexplained business phenomena.

Recent research activities include:

- Bargaining, coordination, and public good provision in experimental markets
- Strategic uncertainty in market entry games with fixed capacity
- Alternative mechanisms for reducing exploitation of uncertain resources
- · Value of information in bilateral trading with alternatives
- Experimental investigation of bargaining efficiency improvement
- Sequential search with relative ranks

cEBR web address: http://cebr.ust.hk/

Center for Fund Management

Director:

Kalok CHAN, BSSc Chinese Univ of Hong Kong; PhD Ohio State (Chair Professor of Finance)

Associate Director:

John K. C. WEI, BS National Taiwan Inst of Tech; MBA National Chengchi; PhD Univ of Illinois, Urbana-Champaign

(Chair Professor of Finance)

The Center for Fund Management (CFM) was established in October 2003. It aims to promote original and applied research on fund management, and to foster the development of the fund management industry in Hong Kong and the Chinese Mainland. The Center provides training and education programs to the fund industry and undertakes related research and consultancy services.

The objectives of the Center are:

- To promote and conduct high quality research in fund management areas;
- To provide a forum for academics and practitioners to interact and to encourage collaboration between the two, resulting in innovative products and practices useful to the fund industry;
- To provide training and consultancy services to the fund industry;
- To facilitate the development of course materials for fund management in the undergraduate and postgraduate curriculum at HKUST.

Center for Marketing and Distribution

Director:

Wilfried R. VANHONACKER, Licentiate Univ Faculties St Ignatius, Antwerp; PhD Purdue (Chair Professor of Marketing)

Associate Director:

Shu-Ming NG, BA, MPhil Hong Kong; MS Stanford; PhD Carnegie Mellon (Associate Professor of Information and Systems Management)

The Center for Marketing and Distribution, established in April 2005 with the generous support of the Fung Foundation Ltd, promotes high quality research on the interface of marketing, distributions and supply chain management, with a focus on the applications to the China market.

The mission of the Center is to influence the future business practices in marketing and distribution in or related to China. To this end, the activities will target people that are influencing the industry - policy setters, industry leaders, prominent academics, and people that will be making an influence - university students, budding researchers.

The goal of the Center is to promote and support research in marketing, distribution, supply chain management and related technologies at the HKUST Business School, with the goal of (a) increasing the visibility and prestige of the School's leadership in these areas, (b) further cementing the global academic leadership of the HKUST Business School in the areas of marketing, distribution, and supply chain management, and (c) enhancing the competitiveness of companies in the afore-mentioned areas, particularly in the China market.

The objectives of the Center are to:

- Stimulate and support research on the interface of marketing, distribution and supply chain management, with a focus on applications to the China market;
- Support curriculum development;
- Enrich the contribution of the HKUST Business School as a knowledge center serving the China market.

Center for Scientific Computation

Director:

Xiao-Ping WANG, BSc, MSc Peking; PhD New York (Professor of Mathematics)

Scientific Computation has grown over the past decades to become an important new approach to studying science and technology, adding to the traditional experimental and theoretical approach. It uses large scale computation to solve complex problems in science and technology. The Center is dedicated to the development and innovation of computational algorithms that are reliable, accurate and efficient, with attention to their applications. There are 39 participating faculty members from 10 academic departments. Current research programs include computational fluid dynamics, computational logistics, computational finance, computational material sciences, parallel computation, computational hydraulics, computational chemistry and biology, simulation of complex systems, and software development.

Center for Sustainable Energy Technology

Interim Director:

Philip Ching-Ho CHAN, BS Univ of California, Davis; MS, PhD Univ of Illinois, Urbana-Champaign

(Chair Professor of Electronic and Computer Engineering)

Associate Director:

Tian-Shou ZHAO, BS, MS *Tianjin*; PhD *Hawaii* (Professor of Mechanical Engineering)

Mission

The mission of this Center is to promote and enhance collaborative efforts on education, research, and services in advanced energy technology and management for the betterment of the industry and economic growth in Hong Kong, Pearl River Delta and Southern China.

Objectives

- To provide a state-of-the-art education program for training students in broad field of energy science and technology.
- To promote and conduct leading-edge multidisciplinary research in innovative energy systems and devices for sustainable power generation and efficient unitization.
- To provide services to industries and government for certificated energy-efficiency tests of electrical home appliances, and thermal and energy systems.

Current research programs

- Energy systems and devices: fuel cells, renewable energy systems, distributed energy systems.
- Air-conditioning and refrigeration: trans-critical CO₂ refrigeration, magnetic refrigeration, dehumidifiers, compact heat exchangers.
- Energy efficiency in built environment: indoor air quality and ventilation, clean room technology, filtration technology, LED lighting.
- Electronic cooling: heat pipes, thermo-electric coolers, cryo-coolers, micro-cooling systems.
- Fundamental energy and thermal science studies: heat/mass transfer in micro/nano systems, optical diagnostics in microfluidics, smoldering combustion, combustion dynamics over fuel soaked beds, flame spread over building materials, heat transfer in porous media, heat transfer in manufacturing processes.

Center for Wireless Information Technology

Director:

Khaled BEN LETAIEF, BS, MS, PhD Purdue

(Chair Professor of Electronic and Computer Engineering)

Wireless information technology is undoubtedly the technology of the future. It is essential for Hong Kong tertiary institutions to play a leadership role in this area of applied research and lay the foundation for future technological advancement. To meet this challenge the Center for Wireless Information Technology (CenWIT) was set up in September 1997 at HKUST. The mission of CenWIT is to establish a center for wireless information technology which:

- Performs high caliber research and development;
- Offers excellent training and education for undergraduate and graduate students;
- Provides technology transfer and consultant services for industry and government; and
- Addresses unique issues confronting the Asia Pacific region and China.

CenWIT is currently funded by several sources spanning government, industry and also HKUST. It relies on facilities in the Department of Electronic and Computer Engineering, including the wireless communications, DSP and communication, and the video technology laboratories.

Center on China's Transnational Relations

Director:

David ZWEIG, BA, MA York Univ, Toronto; PhD Michigan (Chair Professor of Social Science)

Associate Director:

Alvin Y. SO, BA Chinese Univ of Hong Kong; MA, PhD Univ of California, Los Angeles (Chair Professor of Social Science)

Mission

Through the generosity of the Chang Tseng-Hsi Foundation, the Center on China's Transnational Relations (CCTR) was officially set up on 1 September 2004. The goal of the Center is to advance research and discussions about issues in China that transcend the country's borders.

Objectives

- To study the intense interaction between China and the world and the flow of influence in both directions.
- To attract outside projects that would help inform the business community about changes in China's outward policy.
- To further develop the international stature, visibility and research capabilities of the Division of Social Science and the CCTR.

Progress

- In the academic year 2005-06, CCTR offered a post-doctoral fellowship, a visiting scholarship, and a student travel grant to facilitate research projects related to the center's theme.
- Between September 2005 and May 2006, CCTR organized 4 research workshops and 3 lunch seminars. Topics included China's economic development, energy outlook, SOE reform, production networks, foreign and military policy.
- In October 2005, CCTR organized an international conference "Chinese People on the Move: The Transnational Flow of Chinese Human Capital." Selected papers will be published in two special volumes in the *Journal of International Migration* and Integration and Pacific Affairs.
- CCTR is currently working on various funded research projects: "Do Educational Exchanges Promote Sino-Japanese Trade," "Hong Kong's Role in the Mainland's Modernization," and "Haidai and the Problem of Unemployed Returnees".

China Corporate Governance Center

Director:

Gary C. BIDDLE, BA Ohio State; MBA, PhD Chicago (Synergis-Geoffrey YEH Professor of Accounting)

The mission of the China Corporate Governance Center (CCGC) is to promote and advance high-quality academic research, conduct seminars, and participate in teaching that enhance the knowledge and practice of corporate governance and accounting in China. CCGC will focus on corporate governance topics of particular relevance to China, including the governance of closely held enterprises, forensic accounting, and performance measurement and valuation in the China context. This mission is accomplished by HKUST faculty working in partnership with academic experts at other universities in China and worldwide, and with practitioners including accounting, finance, and legal professionals, executives, standard setters and regulators.

Consumer Media Center

Director:

Bertram SHI, BS, MS Stanford; PhD Univ of California, Berkeley (Associate Professor of Electronic and Computer Engineering)

Associate Directors:

Roger CHENG, BS Drexel; MA, PhD Princeton (Associate Professor of Electronic and Computer Engineering)

Chi-Ying TSUI, BSc Hong Kong; MS, PhD Southern California

(Associate Professor of Electronic and Computer Engineering)

The Consumer Media Center (CMC) is concerned with helping local industries in areas of research and development. It creates a closer link between the University and the home electronics industry. By developing or enabling new technology on a medium scale timeframe, and demonstrating the technology in a working platform, the CMC is able to transfer this technology quickly and efficiently to local companies for the development of new and exciting products, thus helping Hong Kong industry to move into heavier design oriented products. CMC was founded with support from the Industry Support Fund (ISF) of the Hong Kong Government Industry Department, company members, and the HKUST.

Cyberspace Center

Director:

(To be appointed)

Associate Directors:

Shing-Chi CHEUNG, BSc(Eng) Hong Kong; MSc, PhD London

(Associate Professor of Computer Science and Engineering) Dit-Yan YEUNG, BSc(Eng), MPhil Hong Kong; MSc, PhD Southern California (Associate Professor of Computer Science and Engineering)

The Cyberspace Center was established in March 1996 with a grant from the then Hong Kong Government Industry Department. It has been supported by ITF grants and industrial contracts ever since. The Center engages in research and development in applied Internet technologies with emphases in Internet security, electronic-commerce, mobile-commerce, RFID and smart card technologies and applications. The objective is to transfer the technologies and applications to local industry. Our current projects are on banking applications and business web conferencing on 3-G phones and blackberry devices.

Hang Lung Center for Organizational Research

Director:

(To be appointed)

The mission of the Hang Lung Center for Organizational Research is to improve the practice of management in Chinese and multinational firms doing business in Greater China (i.e., Chinese Mainland, Hong Kong and Taiwan), and Chinese companies doing business globally, by conducting rigorous research and engaging in exchanges among network of business leaders and university scholars. Our vision is to be the world's center of excellence for knowledge on China-related organizational and management practices.

Our objective is to facilitate, sponsor and publish high quality research on organization and management issues within the Greater China context. The Center represents an effort to apply the department's emphasis on rigorous academic research to addressing pressing management challenges of business and other organizations in the region. By studying critical organizational issues and discovering factors related to effective management of organizations in this context, we hope to contribute to knowledge creations as well as the economic development of Greater China through improving management practices.

Molecular Neuroscience Center

Co-Directors:

Nancy Y. IP, BSc Simmons Coll; PhD Harvard; CAS (Chair Professor of Biochemistry)

Yung-Hou WONG, BSc London; MPhil, PhD Cambridge (Professor of Biochemistry)

Neuroscience, the study of the brain, constitutes one of the leading areas of scientific investigation currently at the forefront of modern biomedical research. The field of neuroscience encompasses many scientific disciplines dealing with the structure, development, regeneration, function, chemistry, pharmacology and pathology of the nervous system. One of the field's major areas of scientific investigation relates to the unraveling of the processes involved in neurodegenerative diseases. By understanding the mechanisms involved in the progression of these diseases and other neuropathologies, scientists hope to identify novel molecular targets useful for the development of novel and effective therapies and diagnostics.

Established in 1999, the Molecular Neuroscience Center (MNC) has the mission to obtain international recognition as a center of excellence for its scientific contributions to the field of molecular neuroscience relating to the areas of: (i) brain function, (ii) neuropathies, and (iii) neuro-drug discovery. By establishing basic research collaborations among its team scientists, as well as with other leading international neuroscientists, the Center aims to provide a vehicle for strong scientific exchange and ultimately to attract new pharmaceutical ventures to Hong Kong.

The research activities of the MNC are being directed at the use of molecular biological approaches to investigate various neuronal processes including: (i) neuronal differentiation and cell cycle regulation, (ii) synapse development and regeneration, (iii) cellular signal transduction in neurons, (iv) neurodegenerative diseases, and (v) learning and memory. The Center also investigates the structure-function relationships of neuroproteins that are found to play critical roles in these neurobiological processes. Furthermore, the MNC scientists are developing strategies for screening and/or designing potential neuro-drug candidates.

Through the establishment of the MNC, the foundation for an Area of Excellence (AoE) has been laid at HKUST. In 2001, HKUST received an Area of Excellence award of \$26.8M from the University Grants Committee to conduct leading edge research in molecular neuroscience. Through the AoE program, collaboration among individual scientists has been further extended to involve other team members in a co-ordinated effort to study key scientific problems.

Currently, the Center is comprised of a multidisciplinary group of faculty from the Departments of Biochemistry, Biology, Chemical Engineering, Chemistry, Electronic and Computer Engineering, Mathematics, Mechanical Engineering, and Physics.

MNC's website address: http://www.ust.hk/~mnc/

Multimedia Technology Research Center

Director:

Oscar C. AU, BS Toronto; MA, PhD Princeton

(Associate Professor of Electronic and Computer Engineering)

The Multimedia Technology Research Center (MTReC) aims to stimulate universityindustry collaboration and to promote technology transfer to local industry as well as to maintain world-class academic excellence. Housed in a state-of-the-art facility with high-performance audio-visual and computing equipment, the Center is funded by granting agencies and industrial partners. The Center is home to faculty members from the Department of Computer Science and Engineering and the Department of Electronic and Computer Engineering, research scientists, engineers, and graduate students. The Center is launching a research initiative with emphasis on audio/video processing and versatility in information technology in Hong Kong and the region during the 21st century.

Smart and Sustainable Infrastructure Research Center

Director:

M. S. CHEUNG, BSc Chu Hai Coll; MSc, PhD Calgary (Chair Professor of Civil Engineering)

Associate Director:

Chih-Chen CHANG, BSc National Taiwan; MS, PhD Purdue (Associate Professor of Civil Engineering)

The Smart and Sustainable Infrastructure Research Center was established with the following missions and objectives:

- To promote research collaboration on innovative technology for designing, constructing, safeguarding, and maintaining infrastructures;
- To develop a critical mass of research capability which leads to possible pursuit of block grant of research funding;
- To provide regional and international visibility for attracting external funding;
- To promote applications of innovative technology for civil infrastructures; and
- To educate students and engineers on the sustainable development and the potentials of innovative technology.

The Center aims to facilitate and coordinate the research, and subsequently the technology transfer, of relevant aspects that are pertinent to the infrastructure development in Hong Kong and the Pearl River Delta region.

South China Research Center

Director:

Tik-Sang LIU, BSocSc, DipEd Chinese Univ of Hong Kong; PhD Pittsburgh (Associate Professor of Humanities)

The South China Research Center was established in 1997 to serve as the nodal center for scholars and institutions in South China studies to exchange findings, share archival and folk documents, hold conferences and organize field research in South China.

The Center collaborates with specialists in South China studies to collect source materials that are not available in libraries or archives, to publish research aids, and to organize workshops and field-site visits. Its bi-annual Journal of History and Anthropology, and quarterly newsletter promote intellectual dialogues and exchanges.

The Center provides a research environment and training programs for undergraduate and postgraduate students. It also acts as a resource center for teachers, students and the public to explore the teaching and learning of the history, culture and society of Hong Kong and South China.

Survey Research Center

Acting Director:

Jow-Ching TU, BA Chung-Hsing; MA Pennsylvania and West Virginia; PhD Tennessee (Associate Professor of Social Science)

Established in 1999, the Survey Research Center promotes and coordinates survey research projects in Hong Kong and the Chinese Mainland. Its long-term goal is to serve as an international forum for scholarly debates and exchanges based on survey and other researches on Chinese societies. Current activities include a summer research practicum program for graduate students in the School of Humanities and Social Science, a survey data archive on Chinese societies, collaborative research with Zhongshan University to study social change and regional development in Hong Kong and Guangdong, and a collaborative general social survey with the People's University of China in the Chinese mainland.