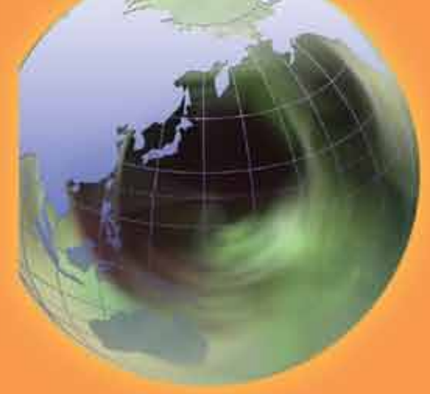

Geoinformation and Earth Sciences

Strategic Development of a Laboratory for Tropical Monsoon Environmental Remote Sensing

Natural disasters, environmental pollution and rapid urbanization constantly remind us of the growing importance of remote sensing in helping to understand the planet earth.

Investment into Five Focused Areas of Research

The Chinese University of Hong Kong, on the threshold of its sixth decade, has distinguished itself in many aspects of teaching and research. Academic staff engage in scholarly inquiry of world-class standard which has led to findings of regional and global impact. The University also strives to complement this breadth of scholarship with focus on a number of selected areas. In its **Strategic Plan 2006**, five key areas have been identified for strategic research investment. Substantial new resources are being devoted to these areas.

- Chinese Studies
- Biomedical Sciences
- Information Sciences
- Economics and Finance
- **Geoinformation and Earth Sciences**

Other Related Units

Office of Institutional Advancement
Phone: (852) 3943 8648
Fax: (852) 3943 8647
Email: oia@cuhk.edu.hk
Address: The Chinese University of Hong Kong
Shatin, N.T., Hong Kong SAR
The People's Republic of China

Office of Academic Links
Phone: (852) 3943 8722
Fax: (852) 2603 5402
Email: oal@cuhk.edu.hk
Address: The Chinese University of Hong Kong
Shatin, N.T., Hong Kong SAR
The People's Republic of China

香港中文大學
The Chinese University of Hong Kong

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Some of Our Partners

- Ministry of Science and Technology of China
- Ministry of Construction of China
- Ministry of Education of China
- Ministry of Agriculture of China
- China National Space Administration
- State Oceanic Administration
- Chinese Academy of Sciences

Vision and Mission

To become a national leader and global hub for the research, application and technology transfer of remote sensing by:

- Advancing scientific knowledge of remote sensing
- Maximizing the benefits of such technology through research, teaching and public service

Background

The Institute of Space and Earth Information Science (ISEIS) is the only national base for satellite remote sensing in Hong Kong. The Institute's major initiative, a Laboratory for Tropical Monsoon Environmental Remote Sensing, is a groundbreaking, state-of-the-art, comprehensive laboratory in geoinformation and earth sciences.

Our Focus

We strive to improve life, the environment and the economy through:

- Cutting-edge research: advanced by adopting an Earth System Science approach
- Scientific solutions: applied to important 21st century issues, e.g., climate change, pollution, energy, disaster warning and precision farming
- Expertise for the future: nurtured through postgraduate programmes
- Technology transfer: promoted through the efforts of scientists of regional and global influence

Our Edge

We are poised for greater excellence thanks to:

- A team of interdisciplinary professionals with a strong track record of securing competitive grants: over 30 grants from the Research Grants Council and the Innovation and Technology Commission totaling over HK$60 million
- Cooperative programmes spanning a spectrum of disciplines, e.g., emerging infectious diseases, early warning systems and logistical management, climate science
- Close partnerships with top authorities in the field in China and the world
- High-level collaborations with key state bodies in China
- Hong Kong's geographical advantage and international linkage

Our Achievements

Key achievements of the ISEIS include:

2009 Launching the minor programme in Earth System Science

2007 Launching the programme of Master of Science in Earth System Science

2005 Establishing the Division of Geoinformation Science for MPhil and PhD programmes

Hong Kong's first high/medium-resolution satellite remote-sensing receiving station, and the latest habitat mapping for Hong Kong

2001 Designated by the UN Economic and Social Commission for Asia and the Pacific as the Hong Kong contact point of the Working Group of Remote Sensing, GIS and Satellite Navigation

2000 Approved by the Ministry of Science and Technology of China to form the Hong Kong base of the National Remote Sensing Centre of China

Our Strategy for the Next Decade

To seek breakthroughs on important earth and environmental issues in Hong Kong, the Pearl River Delta, South China, and Southeast Asia by leveraging our strengths to:

- Develop new theory, methods and tools for monitoring the environment
- Advance research in natural resources, environmental and climate change issues
- Advance research in management of emergency responses to natural hazards, disaster management and land use by space science and technology
- Integrate remote sensing with virtual geographic environments
- Train postgraduate students to identify and solve key scientific, environmental and climate issues
- Develop an evaluation mechanism to ensure the quality of the remote sensing programme

How We Can Contribute

We can serve Hong Kong, China and the world by:

- Delivering timely, all-weather disaster information through data gathering, management and dissemination
- Giving scientific and technical support to governments and policy-makers
- Providing innovative service to the public and private sectors in the region
- Becoming a regional leader in research, as measured by success in publications, competitive grants and service to academic societies
- Grooming the young through first-class postgraduate programmes

Investing in Our Future

To deliver our promises in the next decade, we need, on top of University investment, generous external donations and support for the following:

- Experts with state-of-the-art knowledge to form a core team specializing in the major fields of earth and geoinformation science
- Fellows of different disciplines to initiate new research and to encourage interdisciplinary exchange
- A library collection
- Enhancement of existing equipment
- Launch of general education courses in earth environment and space exploration to enrich the curriculum of the Chinese University

More Firsts (1998–2010)

- Hong Kong's first airborne colour infrared remote sensing mission for environmental studies
- First TV broadcast of ocean surface temperature for the South China Sea
- First rock spectrum database development for Hong Kong
- First airborne radar remote sensing mission for geological studies in Hong Kong
- First COMPASS (Beidou) Maritime Application Studies outside mainland China

Image: ESA/ENVISAT satellite

Contact

Enquiries about research or activities may be directed to:

Prof. Lin Hui
Director
Institute of Space and Earth Information Science

Phone: (852) 3943 6538
Fax: (852) 2603 7470
Email: iseis@cuhk.edu.hk
Address: The Chinese University of Hong Kong
Shatin, N.T., Hong Kong SAR
The People's Republic of China