

# The Final Frontier for Humanity

by Dr L S Chan, Department of Earth Sciences

**"Fossil fuels supply can last for another 40 years and there is no need to panic for now!"**  
**"Global warming is just a theory. Even if it is real, we can still adapt to higher temperatures!"**  
**"Our Victoria Harbour is 900 m wide, still about half of its original width, and reclamation is necessary."**  
**"Asia still has about 5% of its indigenous forests, which is fine!"**  
**"We can continue to build more landfills, as long as they don't put them near my district!"**

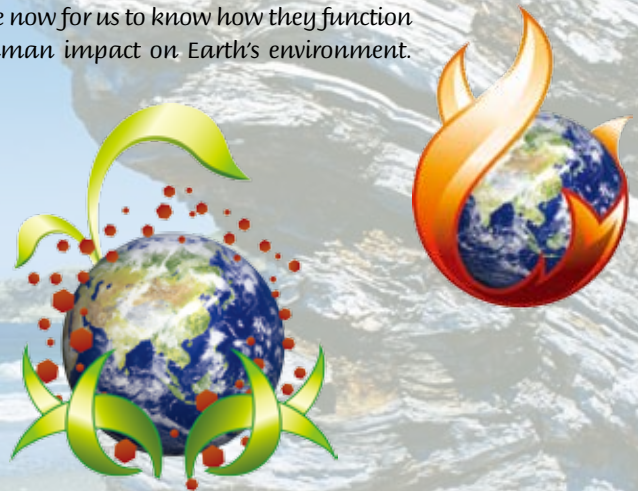
I hope you did not subscribe to any of these attitudes.

In about 50 years, humanity will face an unprecedented crisis. Problems related to shortage of energy resources, water supply, waste treatment, air and water pollution, species extinctions, climatic calamities, sea level rises and desertification will have worsened to a critical state at about the same time. Worst of all, there are no ready solutions for any of these problems yet.

Development requires resources and generates wastes. Earth scientists know all too well that just about everything we use comes from Earth, and it takes millions of years for oil and mineral resources to be replenished in nature. There is really no such thing as sustainable development. What we should do, however, is to borrow from future generations as little as possible, to manage the exploitation and use of our finite resources wisely, and to safeguard the quality of our air and waters. This would require profound knowledge of the Earth systems and fundamental changes to the mentality and habits of people.

Earth's natural systems – the atmosphere, the oceans and the lands – are sensitive and fragile, and each is spontaneously affected by others. It is critically imperative now for us to know how they function and interact with each other, and recognize the severity of human impact on Earth's environment. Unfortunately even in our home city, reckless reclamation and construction continue, often at the expense of our natural heritage. Politicians keep telling people to have more babies, naively ignoring overpopulation being the root of the many problems threatening humanity. Till now, Earth has been taking care of us. What should we do to take care of her?

Over the past 50 years, great advances have been made in many fields of science. Our spacecrafts have ventured beyond the most distant planet. The real final frontier for humanity, however, is not the outer space – it's right here on Earth and in the mindset of the people.



## FROM THE EDITOR

Dear Readers,

The United Nations General Assembly has proclaimed 2008 to be the United Nations International Year of Planet Earth. Its aims are to promote better understanding of the importance of the study of Science of Earth in dealing with issues such as reduction of the risks caused by natural and artificial hazards, better utilization of natural resources in a sustainable way, and the encouragement of the study and understanding of Earth sciences in universities and in society

at large. In this issue of science@HKU, Earth scientists in HKU will introduce their major and tell you the various researches they are conducting.

Yours sincerely,  
Dr H F Chau  
Chief Editor

To subscribe newsletter online, please visit <http://web.science.hku.hk/ mailing/>

# Typhoons, Storms and Tsunami in the Geological Record

by Dr A D Switzer, Department of Earth Sciences

Using the geological record to investigate the recurrence interval of storms and tsunami on coastal communities is a relatively new endeavour. These types of studies can be collectively called 'washover studies'. Washover studies incorporate the fields of paleotempestology (storms) and palaeotsunami studies and look at prehistoric evidence for large storms or tsunami. Such work often involves analysis of coastal sediments including sand, boulders and coral clasts on coastlines affected by either or both types of event.

Typhoons and tsunami often leave deposits of sand (see photo) or boulders in their wake. If these deposits are not eroded away they can be recorded in the geological record.



The author with colleagues investigating tsunami deposits on the southeast Indian coast from the 2004 Indian Ocean Tsunami. Inset photo: A storm (typhoon) deposit at Gou Leng Chung on Lantau Island. The laminated appearance is due to individual wave pulses. The brown material is the soil that formed on the top of the dune before the typhoon.

Such deposits are usually identified as sandsheets in lagoons or floodplains behind beaches and dunes (see inset photo). If the layers of sand can be accurately dated then a long history of washover events can be obtained. In some areas of the world including Japan, records up to 6000 years long have been obtained.

Although this technique has been applied to many coastlines around the world recent work in Hong Kong on Lantau Island and in Sai Kung, indicates that the not all large storms (typhoons) leave deposits that are preserved in the geological record. This work has cast some doubt on the reliability of this technique.

## Astrobiology

by Dr Y L Li, Department of Earth Sciences

Are we alone? Is our Earth, the tiny blue star in this infinite Universe the only harbor for life? This oldest philosophical question frequently appears in scientific fictions and now becomes a science.

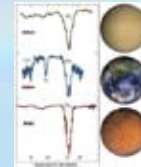
Astrobiology concerns the study of the origin, evolution and destiny of life in the Universe. The emergence of this science is the natural outcome of the great advances in astronomy, biology and geology. The development of molecular biology has revealed the unitary origin and DNA-coding of all life on Earth, despite the great diversity after a long Darwinian evolution.

Geologists dated the origin of life back to about 3.8 billion years ago. Planetary explorations in our solar system have indicated abundant life materials being stored in the planetesimal zone and beyond. Furthermore, the detection of exoplanets has practically extended life exploration to the deep Universe. The astrobiological studies can be classified into cosmic, planetary, ecosystematic scales on a space dimension and, stellar and interstellar evolution, chemical evolution of prelife on Earth and modern ecosystem on a time dimension.



Life as the result of integrated evolution of Universe.

(Courtesy of Mars Now Team and the California Space Institute)



What is the biosignature of Earth?

(Courtesy of [www.markelowitz.com](http://www.markelowitz.com))



Darwin project: the searching for Earth-like exoplanet

(Courtesy of [www.delftoutlook.tudelft.nl](http://www.delftoutlook.tudelft.nl))

Stellar nucleosynthesis and the evolution of galactic chemistry tell us about the formation of life-essential elements such as H, C-O-N-S-P and Fe-peaked transition metals. So, believe it or not, the elements in our body are much older than Earth! The breakthrough in exoplanet detection is a great step in searching a second life and scientists began to develop techniques to examine the atmosphere composition of Earth-like exoplanets.

Based on our understanding of life origin on Earth, a body of liquid water, enough carbon and a silicate crust on a planet with a right distance to its sun are enough premises to make a planet habitable. When these conditions are met, life may start in hundred million years or even shorter time. We now understand that life deeply changes the surface spheres of Earth and our current atmosphere is pretty much the result of biological respiration. We also wonder that the great events happened on Earth, such as the appearance of free oxygen, the starting of plate tectonics, the appearance of ice ages, planet-wide formation of banded iron may have either stimulated the evolution of life, or on the contrary, resulted in mass extinction.

Now we are on a fast lane going forward but have a quite unpredictable future. How long can our Gaia last? Can our offspring find another oasis in the Universe? Astrobiology cannot answer these questions but will give you a way to think about them.

# Submarine Groundwater: a Potential Source of Water Supply for Hong Kong

by Dr J J Jiao, Department of Earth Sciences

## Groundwater in coastal sea

Coastal areas are the ultimate discharge zones of terrestrial groundwater. Groundwater can discharge to the sea in a diffused way through the coastal aquifers. Locally groundwater may discharge to the sea in a concentrated way such as submarine springs. One striking example of submarine groundwater spring is the one near northeastern Florida, USA. The spring is 4 kilometers away from the beach and has a flow discharge of about 40 m<sup>3</sup>/s (note the water consumption in 2005 estimated by the Government in Hong Kong was 760 million m<sup>3</sup>, which was equivalent to about 24 m<sup>3</sup>/s). There are also some springs reported in the coastal areas of Shangdong and Guangdong provinces.

In many cases, the presence of a near-offshore freshwater tongue off the coastline can be explained by present-day terrestrial recharge to confined aquifers which outcrop on land. In this case, the groundwater below the sea bed is just an offshore extension of the modern terrestrial groundwater system. In some other cases, the offshore groundwater may be palaeo-groundwater that was emplaced during Pleistocene sea-level low stands which somehow escaped salinization during Holocene sea-level rise. The groundwater was isolated from the modern recharge system and can be regarded as "fossil" groundwater. Palaeo-groundwater is usually brackish. For example, the salinity of the groundwater deep below the sea bed in the Yinggehai Basin near Hainan Island in South China Sea is about 1/3 of the modern seawater.

## Possible marine groundwater in Hong Kong waters

It is hypothesized that submarine groundwater below the seabed may be another possible source for water supply in Hong Kong. It is well known that fresh or brackish groundwater may exist below the sea in some coastal areas due to complex geological environment and history. The sea level around Hong Kong has fluctuated significantly in recent geological time. During the Quaternary period, major glaciations in Polar Regions affected global sea level. In about 10,000 years BP, the sea level fell to over 100 meters below the present level. The palaeo-coastline was over 100 kilometers away from the current coastal line. At that time, the flat areas between what are now the islands of Hong Kong were part of an extended Pearl River flood plain. In interglacial periods, such as at the present time, the global sea level rose to its present level and higher, and marine sediments were deposited. It is believed that the aquifers, which are now below the current seabed but once

exposed above the palaeo sea level may still preserve fresh groundwater or blackish water with salinity much lower than that of current sea water.

The typical geological profile from top to bottom in Hong Kong waters consists of soft marine mud (10 m), consolidated clay or silty (3-10 m) and sand and gravel aquifers and decomposed igneous rock. The aquifer thickness varies and in the area south to Cheung Chau Island it can be up to 50 m. The consolidated clay and the aquifers below were exposed to the ground surface for a few thousand years about 10,000 years BP. The up to 20 meter mud and clay of low permeability overlying the aquifers may effectively impede the hydraulic connection between the seawater and the underlying groundwater and preserve the fresh water in the aquifers. Although the water is not fresh enough to be directly drinkable, the salinity may be significantly below that of the seawater. Desalination of this brackish water may be much cheaper than the seawater if the cost of the seawater desalination is inversely proportional to the salinity of the raw water.

## Future research to identify submarine groundwater

Before exploiting fresh submarine groundwater for watersupply or brackish marine groundwater for desalinization, the marine hydrogeology of the offshore aquifer system should be well investigated. Marine hydrogeology is a new subject and so far only a few studies have been carried out to address the offshore groundwater problems. Here are some research topics for marine hydrogeology in Hong Kong waters:



Photo taken in 1963  
(Hong Kong's water, WSD, 1996)

- Effect of the sea level change on coastline locations in the past 20,000 years.
- Spatial distributions of aquifers and aquitards below the sea using the existing seismic survey profiles and borehole information accumulated from various offshore engineering activities before planning for more comprehensive offshore hydrogeological studies.
- Hydrogeochemical characterization of existing borehole cores from the seabed.
- Possible dynamic interaction between seawater and submarine groundwater.
- Isotope dating of the submarine groundwater age.
- Environmental and ecological impact of the marine groundwater.

# Five Things I Must See or Experience in Life

by Dr L S Chan, Department of Earth Sciences

Several natural phenomena have always fascinated me ever since I was a kid. Now being an Earth scientist, I religiously believe I must see or experience these five phenomena before I could leave this world with a sense of satisfaction: earthquake, volcanic eruption, tornado, meteor shower and northern lights.

**Earthquakes** While there are about 1-2 felt earthquakes in Hong Kong each year, I have never felt any of them, perhaps either because of my dysfunctional sensory system or because I was not sitting still on the high floors when they happened. My first earthquake experience came about ironically in the middle of a structural geology lesson in Berkeley, when a magnitude 5.5 event broke out on a strand of the San Andreas Fault in California. The earthquake was located sufficiently far away from us so that what we felt was dominantly a slow rolling motion. What did we do then? All the preparation and instructions on how we should duck immediately under tables during an earthquake were ignored; the entire class just ran downstairs towards the seismograph, for we were more interested in knowing the magnitude of the earthquake, and if that was The Big One we had been anticipating in California.



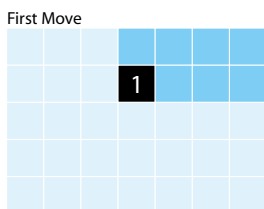
Collapsed dam in a Taiwan Earthquake

**Volcanic Eruptions** The best time to observe volcanic eruptions in Hong Kong was some 160 million years ago during the Jurassic Period, when Hong Kong was pockmarked by volcanoes all over its landscape. Unfortunately I wasn't there. I also missed a very good chance when I declined to join some friends to see the eruption of Mt St Helens in Washington in 1980. While in Hawaii basaltic lavas pour out continuously from several fissures and vents, the 'Hawaiian-type' volcanic eruptions are non-explosive and predictable. The 'Plinian-type' volcanic eruptions like those of Mt St Helens or Mt Pinatubo, which may last for a few weeks, are violent and deadly, but relatively infrequent.



Mt St Helens, photo courtesy of USGS

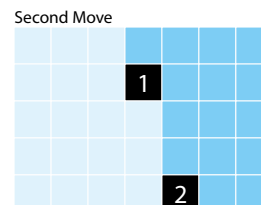
## Make a Guess:



This is a game called Chomp which is played with a rectangular  $m$  by  $n$  grid by two players. Once a player selects a certain square, all squares above and to the right of that square will be removed. The winner is the one who forces the opponent to take the square in the lower left corner.

For the particular case when  $m = n$ , which player has a winning strategy, and what is the strategy?

1 = 1<sup>st</sup> move, 2 = 2<sup>nd</sup> move



Prize: \$50 book token      Deadline: Friday, November 30, 2007

Please email your answer together with your name and school (for students), to [scinews@hku.hk](mailto:scinews@hku.hk). FIVE winners will be drawn randomly from the contestants who give the correct answer.

## Answer to Last Issue's Quiz:

The feature is an impact crater. In fact, all circular-shaped hills in that picture are impact craters. They were formed when dust or rocks from outer space hit the lunar surface. There are far more impact craters on the Moon than on the Earth partly because most dust and rocks will burn up completely as they pass through the Earth's atmosphere.

Winners of the last issue's quiz will be informed individually.



Dust devil in Cyprus



Comet

Photo courtesy of NASA/JPL-Caltech

**Tomadoes** I never witnessed a good-sized twister, but once we encountered a 'dust devil', more like a localized wind vortex, in Cyprus during a summer field camp for the Earth Science students. One of these summers I shall commit some time chasing after tornadoes, most likely in the 'Tornado Corridor' of the US, where cold and warm air masses often collide to produce intense thunderstorms and funnel clouds along the frontal system.

**Meteor Showers** Seen it! During the 2001 Leonid Meteor Shower. The best fireball I saw that time was one that literally broke up into many small pieces in a 'pop', leaving a trail of sparks across the sky. While the Earth still cuts across the same dust trail of the comet Tempel-Tuttle every year, we would have to wait about 30 years before the trail is replenished with more dust and debris for the next great Leonid Meteor Shower. However, similar meteor showers



Aurora borealis,  
photo courtesy of NASA

and impacts are quite common, and could have led to several mass extinctions, including the one of the dinosaurs, in Earth's history.

**Northern Lights (aurora borealis):**

I lived for a while in Wisconsin at magnetic latitude of about 55° N where northern lights could be seen 5-6 times a year. These lights are produced as charged particles from the sun collide with oxygen and nitrogen atoms in the Earth's atmosphere, which

occur year-round at magnetic latitude of about 67°. Most of the northern lights I saw were simply a fussy, whitish glow in the sky. The best aurora I have ever seen was one like a reddish-greenish silky curtain, which draped, warped and swayed slowly across the sky, and was bright enough to be seen over the city lights. It was absolutely beautiful and fantastic! I can't describe it well — that's the job for the poet.

## Earth Sciences Major

The BSc Earth Sciences curriculum at the University of Hong Kong aims to enhance students' understanding of the nature of Earth systems and Earth processes. The core curriculum in Earth Sciences is designed to introduce students to a wide variety of topics and to prepare them for the workforce as well as for further studies. Students can follow the basic curriculum of Earth Sciences or enroll in one of the themes: (1) Geology, (2) Atmospheric and oceanic sciences and (3) Environmental geology.

Earth Sciences graduates are trained to fill a variety of positions in universities, government and industries. Many graduates find employment in the development of natural resources such as oil, gas, minerals and groundwater. Many former graduates are working in the geotechnical industry in Hong Kong as engineering geologists. Recently there has been an increase in demand for mining geologists and for school teachers with Earth Sciences background.

# Decoding Food Labels: Key to Healthy Eating

by Ms Clara Cheng & Dr E T S Li, School of Biological Sciences

At the supermarket, you may buy a pre-packed food because it has attractive packaging and impressive claims. But have you ever read the details on the package? An informed consumer will make better decision in selecting a healthy diet. This is the direction governments around the world are doing to educate the public – through the use of nutrition labeling.

At the supermarket, some but not all food products carry a label. This is because nutrition information panel is not mandatory in Hong Kong at present. A Labeling Scheme on Nutrition Information for Prepackaged Food has been proposed and the legislative amendments will be put forward to the Legislative Council this year.

On the enactment of the relevant legislation, there will be a two-year grace period before the implementation of the scheme. The proposed labeling scheme has suggested all prepackaged food need to label energy plus nine core nutrients, namely protein, carbohydrate, total fat, saturated fat, sodium, cholesterol, sugars, dietary fibre and calcium.

The example above highlights the basic techniques to interpret the nutrition information on the panel.

At this stage, if there is no nutrition information panel like the one below, a quick way to make an estimate of how much fat or sugar is to go through the ingredient list. In which, ingredients are listed in descending order of quantity.

Food labels are a source of very useful information. But, they are useless if consumers don't read them. As part of a healthy lifestyle, make it a habit to read before you buy.

## Saltines with Sesame

Net weight 120g

### Nutrition Information

Serving Package: 4  
Serving size: 30g (per small pack)

	Per Serving
Energy	133 kcal
Protein	4 g
Fat, total	5g
- Saturated fat	2.3 g
Cholesterol	0 mg
Carbohydrate	18 g
- Sugars	3 g
Dietary fibre	1 g
Sodium	168 mg
Calcium	100 mg

There are 4 small packs in the whole pack each weighing 30g.

Each small pack saltine supplies 133 kcal (Or 556kJ, for 1kcal ~ 4.2kJ), which comes from 4g protein, 5g fat and 18g carbohydrate.

Each small pack supplies 5g fat, of which 2.3g is saturated. 5g fat is about 1 teaspoon of oil. Low fat: less than 3g fat per 100g solid food. Saturated fat should be low as it is bad fat, which increases blood cholesterol level.

It is cholesterol free. Recommended daily cholesterol intake is <300mg.

Each small pack supplies 18g carbohydrate, of which 3g is sugar. 5g Sugar is about a teaspoon of sugar.

Each small pack supplies 1g fibre.

According to WHO's recommendation, 25g per day should be taken. Each small pack supplies 168mg sodium. It is recommended sodium intake should not exceed 2400mg.

Each small pack supplies 100mg calcium. No less than 1000mg is recommended per day.

### Small quiz

What is meant by "light" or "lite"?

- Low fat or less fat
- Low sugar or less sugar
- Low energy
- Lighter colour
- All of the above

Ans: e

## Year of Success for Undergraduate Admission 2007

by Professor A S C Cheung, Associate Dean and Admission Tutor

The new common admission to the 6901 BSc programme in 2007 has proven to be a success. This new policy made simple the application procedures and provided flexibility for students to select their major discipline after admission. It was the most attractive programme to secondary school students, attracting the largest number of students applying since the JUPAS came into being. The quality of the students admitted to this programme has also improved considerably as compared with that of last year. A total of 429 students were admitted to the new 6901 BSc programme in 2007. In addition, 85 students were admitted to the 6729 BSc (Actuarial Science) programme. In terms of the intake quality, the BSc (Actuarial Science) programme remains to be one of the best programmes in Hong Kong and attracted students with the most outstanding academic results.

In 2008, two new majors: Astronomy and Microbiology will be added to the list of Science majors offered. Students who wish to study any of the 16 Science majors need only to include 6901 BSc programme in their application.



A glance of the Information Day for freshmen.

The 16 Science majors offered in 2008 are:

Astronomy	Food & Nutritional Science
Biochemistry	Materials Science
Biology	Mathematics
Biotechnology	Mathematics/Physics
Chemistry	Microbiology
Earth Sciences	Physics
Ecology & Biodiversity	Risk Management
Environmental Protection	Statistics

# Summer Research Fellowship and Overseas Research Fellowship Schemes 2007

by Dr Ann Lau, Faculty of Science

In order to provide research-based learning experience to our science students, the Faculty introduced Summer Research Fellowship (SRF) and Overseas Research Fellowship (ORF) Schemes this summer. Fifteen students accepted by the SRF Scheme were given the opportunity to conduct in-Faculty research on Biological, Chemical, Physical, Mathematical and Earth Sciences, whereas three participants supported by the ORF Scheme conducted research projects in Stanford and Peking University. Upon the completion of the scheme, the students presented their research findings at a Poster Presentation and Research Colloquium.

## Participants' sharing:

### Leung Hoi Tik Alvin

Year 3, Mathematics/Physics Programme

ORF participant in Department of Physics, Stanford University



*During my 10-week stay at Stanford University, I had learnt not only the technical knowledge essential in handling my research project, but also experienced, for the first time in my life, the true American lifestyle. My research project was mainly on computer simulations of phospholipid bilayers, so normally I had to spend at least 7 hours a day in front of my laptop. Every Tuesday afternoon, I joined the seminars specially designed for undergraduate summer research*

*students and normally small laboratory visits followed. Unlike normal lectures in which course materials are usually presented in a clear way, research projects often involve solving problems that nobody has ever tackled before. Perseverance is one of the key qualities I believe researchers need to possess. Despite all the hard work, I feel so privileged to be a participant of this highly prestigious programme at HKU!*

### Lam Yan Yu Sarah

Year 3, Chemistry Programme

SRF participant – Department of Chemistry, HKU



*It is my great pleasure to participate in the Summer Research Fellowship Scheme 2007. It provided me a chance to do a real research project on my own, from writing the proposal, performing experimentation to writing*

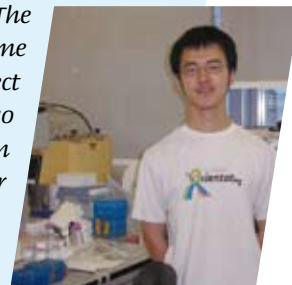
*a scientific report and doing a poster presentation. Research life is actually not that easy and, from time to time, through discussing with my supervisor and lab mates, I was able to find out the possible answer. The best thing about joining this programme is that I was able to meet so many good lab mates and friends. After all, it's been FUN!!!*

### Xie Qian

Year 3, Major in Biochemistry, Minor in Chemistry

SRF participant – Department of Biochemistry, HKU

*My project aims to construct a novel expression system in the psychrophilic bacteria, *P.haloplanktis* TAC125. In contrast with the ordinary expression system in *E.coli*, the one being studied is expected to yield protein of comparable quantity and higher activity in an inducible manner, all features strongly favored in both research studies and bioengineering. The project is easily accessible in principle and in practice includes molecular cloning, inducible gene expression and protein/enzyme assays. The seemingly straightforwardness deceived me into believing that I understood the project fully before I launched it. However, two months' experiment challenged me from almost every detail, and it became clear that a much greater effort was needed to be smart and knowledgeable in the laboratory. In retrospect, critical thinking, good time management and data-recording habits all need to be improved in future studies. Hopefully, though, it is not too late to mark the beginning.*



## Outreach Activity

### Summer Science Institute 2007: A Touch of Science for Secondary School Students

by Ms Cindy Chan, Faculty of Science



The Summer Science Institute 2007 (SSI) is a residential summer programme organized by the Faculty for secondary school students. With over 900 scientifically-talented graduates, SSI has become a centerpiece of summer science learning activities in Hong Kong since its first launch in 2002. As a leader in science education, the Faculty continues to organize exciting programmes such as the SSI to broaden students' horizon in science by introducing a wide range of science-related topics in different disciplines.

To address the imminent environmental issues around us, the theme of SSI 2007, was "Science and Nature". This year, SSI was held from July 24 to 27, 2007, we had 130 local and overseas students

from 68 secondary schools joining the SSI. The Science journey for our participants was first embarked by two stimulating plenary lectures "Darwin, Science and Understanding Nature" by Professor D Dudgeon from our School of Biological Sciences, and "Observing the Earth from Space" by Professor Long-Sang Chiu of the Chinese University of Hong Kong.

Other indulging activities include the forum "Science, Society and Development" hosted by Greenpeace China, high table dinner, sports night, hands-on workshops and projects on various scientific fields ranging from Chemistry, Physics, Mathematics, Biological Sciences to Earth Sciences. It is our hope that, through the various activities of the SSI, students can learn more about and appreciate the complex interplay of Science and Nature and experience the University life.



#### Feedback of Participants

"I like SSI as it combines academic, teamwork and HKU life style."

"It really broadened my horizon in science."

## Congratulations...

### To our teacher

- **Professor C M Che**, Hui Wai Hann Chair of Chemistry, Department of Chemistry, was granted the Ho Leung Ho Lee Advancement Prize 2007

### To our students

- **Mr GU Qilin**, a year 3 BSc student from Department of Physics, was granted the Best Poster Award of the 4th International Conference on Materials for Advanced Technologies (ICMAT 2007)
- **Mr TAI Hoi-lun Allen**, MPhil student from Department of Mathematics, was granted the Award for Outstanding Research Postgraduate Student (2005-2006) by the Board of Examination for Graduate Studies

### Co-organized Public Lecture

- September 12, 2007: "Three Easy Pieces: Examples of Chaos in the Solar System" by Professor Peter Goldreich, winner of the Shaw Prize in Astronomy 2007

## Upcoming Events

- Information Day for Undergraduate Admissions and the University Open Day

The annual Information Day for Undergraduate Admissions and the triennial University Open Day will be held together this year. It aims at introducing the University's programmes and facilities to secondary school students, their parents and school career masters, and the general public; and to promote the University's link with school as well as the local community. The joint Information Day and University Open Day will be held on Saturday, October 27 and Sunday, October 28, 2007.

- The 15<sup>th</sup> Annual Conference of Hong Kong Institution of Science – "Recent Advances in Food Science – Meeting the Challenges"  
Date: November 3, 2007 (Saturday)  
Time: 9.15 am – 6 pm  
Venue: Rayson Huang Theatre, The University of Hong Kong
  - Public Lecture "Celebrating the 300<sup>th</sup> Anniversary of Leonhard Euler's Birth – Euler and His Path from the 18<sup>th</sup> to the 21<sup>st</sup> Century"  
Speaker: Professor M K Siu, Department of Mathematics  
Date: November 23, 2007 (Thursday)  
Time: 5.30 pm (Light refreshment from 5.00 pm)  
Venue: Theatre T1, LG 1, Meng Wah Complex Building, The University of Hong Kong
- For details, please visit [www.hku.hk/science/](http://www.hku.hk/science/)

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