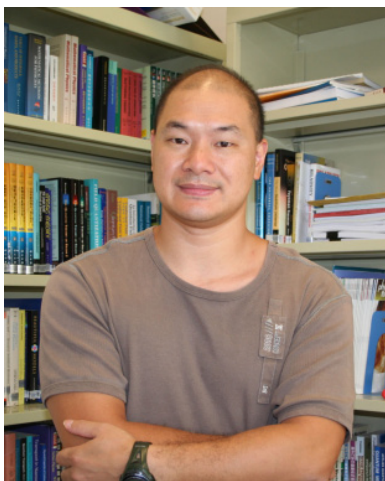


Quantum Science Research Makes Cover Story



Prof. LIU Renbao and his research team's latest discovery brings us yet another step closer to quantum computers.

The research was the cover story in the April issue of *Nature Nanotechnology*.

A research team led by **Prof. LIU Renbao** from the Physics Department has developed a way to improve the sensitivity of nuclear magnetic resonance to the single-molecule level, helping to advance the development of quantum computers with exceptional c o m p u t i n g

In the last 15 years, scientists have strived to develop quantum computers with super computing power through the use of nuclear magnetic resonance technology. However, nuclear compasses are extremely weak, and only a large amount of molecules can produce detectable signals.

Professor Liu's team found that in high-purity diamond, electron spins of impurities have very long quantum-state lifetime and is therefore very sensitive to even an extremely weak magnetic field. Their discovery may help push the sensitivity of nuclear magnetic resonance to unprecedented atomic scale. CUHK has recently established the Centre for Quantum Coherence to facilitate related research.

Credit: CUHK Newsletter No. 377 (4 May 2011). For the full issue, please click [here](#).

Marine Biology Research Featured in The New York Times

After years of research, **Prof. CHU Ka Hou** (School of Life Sciences, CUHK) and colleagues from the Chinese University of Hong Kong, National Taiwan Ocean University and the Australian Museum in Sydney, have shown convincingly that hermit crab ancestors not only gave rise to king crabs, but also to the "so-called squat lobsters, free-living crabs with a lobsterlike form that are not directly related to lobsters." This recent finding, to appear in the journal *Systematic Biology*, caught the attention of Prof. Sean B. Carroll of the University of Wisconsin at Madison, who featured the news in his column "Remarkable Creatures" in The New York Times.

REMARKABLE CREATURES

A Lesson of Genealogy: Looks Can Be Deceiving



Tin-Yam Chan/National Taiwan Ocean University

COUSINS As different as the red king crab, above, and the electric blue hermit crab appear at first glance, DNA evidence links them more closely to each other than to other crabs. Details of their anatomy and habits bear out this resemblance.

By SEAN B. CARROLL
Published: May 23, 2011

Courtesy: Sean B. Carroll, D2, The New York Times, 24 May 2011.





Vice-Minister of Science and Technology Visits CUHK

A delegation led by Mr. ZHANG Laiwu, Vice-Minister of the Ministry of Science and Technology (MOST) of China, visited the State Key Laboratory of Agrobiotechnology (CUHK) (SKL) on 30 March.

Prof. Samuel SUN Sai-ming, director of the SKL, gave the delegation an overview of the recent developments and the latest research achievements of the SKL. Guided by Professor Sun and Prof. LAM Hon-ming, deputy director of the SKL, the delegation toured the laboratory to learn about the collaborations between the SKL and prominent institutions in mainland China.

Mr. Zhang was impressed by the high impact research of the SKL. He emphasized that MOST would continue to support the SKL and encouraged the



From right: Mr. ZHANG Laiwu, Vice-Minister of the Ministry of Science and Technology of China; Prof. Samuel SUN Sai-ming; Prof. Jack C.Y. CHENG, CUHK Pro-Vice Chancellor; Mr. MA Linru, Assistant Director General, Department of International Cooperation, the Ministry of Science and Technology of China; Prof. LAM Hon-ming.

research team to play a leading role in promoting collaborations with different research institutes on the mainland.

Credit: CUHK Newsletter No. 377 (4 May 2011). For the full issue, please click [here](#).

CUHK Bolsters Ties with CAS Shanghai Branch



The CUHK delegation led by Vice-Chancellor Prof. Joseph J.Y. SUNG officiated at the opening ceremony of the plaque-unveiling ceremony of the CUHK-CAS Shanghai Branch Collaboration Centre, reinforcing the fruitful friendship between the two institutions that dates back to the 1980s.

Prof. Joseph J.Y. SUNG, CUHK Vice-Chancellor, led a delegation to the Chinese Academy of Science (CAS) Shanghai Branch on 31 March to conclude a collaboration agreement and officiate at the plaque-unveiling ceremony of the CUHK-CAS Shanghai Branch Collaboration Centre. The core function of the centre will be to coordinate all projects under the collaboration framework between CUHK and CAS Shanghai Branch.

At a seminar on cutting-edge science, Professor Sung,

Prof. WONG Ching-ping (Dean of Engineering) and Prof. NG Cheuk-yiu (Dean of Science) gave talks and shared their insights into research with many mainland scholars and researchers. Professor Sung said, "We are strengthening our ties to start a variety of projects and the centre is established to enhance the efficiency and construct a more solid and systematic partnership."

Credit: CUHK Newsletter No. 377 (4 May 2011). For the full issue, please click [here](#).





Science Students Shine in Scholarship Award Scheme and International Mathematics Competition

Three Science students - **LEUNG Tsz Him** (Physics, Year 2), **Tsui Ka Ming** (Physics, Year 2) and **WONG Sze Wai** (Mathematics, Year 2) - are among the 25 outstanding undergraduates from local universities that have been nominated as awardees of the pioneering Innovation and Technology Scholarship Award Scheme on 28 April 2011.

The newly established Scheme is jointly sponsored and supported by the Innovation and Technology Commission and The Hong Kong Bank Foundation, while the Hong Kong Federation of Youth Groups is the organizer. It aims to give recognition to high-achieving science undergraduates from local universities and encourage them to pursue science and technology as a lifelong career. The awardees, nominated by

the Vice-Chancellor or President of their respective university and selected by an Awardee Selection Committee with members from various sectors, will each be awarded a scholarship of HKD100,000 to participate in a comprehensive series of programmes, including Overseas Attachment Programme, Local Internship Programme, Mentorship Programme and Service Project Programme. Through these programmes, awardees will be able to widen their international exposure and gain industry experience.

In the **previous issue**, the Science Faculty e-Newsletter reported that **WANG Xinyang** (Mathematics, Year 2) was a meritorious winner along with two high school classmates in the 2010 Consortium for Mathematics and Its Applications (COMAP) Mathematical Contest in Modeling. Recently, Wang and two other CUHK students have once again achieved good results in the 2011 COMAP Mathematical Contest in Modeling. HUANG Dawei (Computer Science), **SHAO Yiqun** (Mathematics, Year 2), and WANG Xinyang, under the supervision of **Dr. CHEUNG Leung-fu** of the Mathematics Department, obtained a Meritorious Winner award.



Awardees of the pioneering Innovation and Technology Scholarship Award Scheme took a photo with the key attending guests at the Award Presentation Ceremony. (Courtesy: Hong Kong Federation of Youth Groups)

For more details on the Innovation and Technology Scholarship Award Scheme, please click [here](#).



Hearty congratulations to all!

334 New Curriculum and Broad-based Admission

The Science Faculty is committed to excellence in education, and has remained in open communication with staff and students throughout the preparations for the 334 New Curriculum and Broad-based Admission (BBA). The Broad-based Admission scheme was first introduced to the Faculty in 2008 by the Office of Admissions and Financial Aid (Oafa). The first BBA admission line of

the Faculty was that of the Life Sciences, which was introduced back in 2009. Since then, BBA has been discussed both formally and informally in various meetings and occasions of the Faculty. The following page summarizes all the meetings and discussions held with Science faculty members and students on the new curriculum and BBA. For more information about the 334 New Curriculum, please click [here](#).





Consultations with Students in 2010-2011

Date, Time & Venue	Affiliation (and Total No.) of Students Involved	Staff	Matters Discussed
9 Sept. 2010 Lunchtime, Franklin Chinese Restaurant	Committee Members of Science Society (8)	Dean 3 Associate Deans 2 Assistant Deans	Current Development, Future Direction, Activities, Life Science Programme, BBA
13 Oct. 2010 Lunchtime, Franklin Chinese Restaurant	Committee Members of Science Society and various Programme Student Societies (7)	Associate Dean (DHL Ng) Assistant Dean (KB Wong)	Boat Cruise, BBA
20 Oct. 2010 Lunchtime, University Guest House	Committee Members of Science Society and various Programme Student Societies (13)	Associate Deans (DHL Ng, WY Poon) Assistant Deans (PM Hui, KN Leung, KB Wong)	Teaching & Learning, BBA, Implementation Plan after Admission, Faculty Package
3 Mar. 2011 2:00p.m., SC128	President and members of Science Society (6)	Dean 3 Associate Deans 3 Assistant Deans	Future Activities, Students' Activities Centre O'Camp, BBA
1 Apr. 2011 4:30p.m., SC157	President of Science Society and Committee Members of various Programme Student Societies (10)	Dean 2 Associate Deans 4 Assistant Deans	O'Camp (2011 and 2012), Faculty Package, Implementation Plan, BBA

Consultations with Staff in 2010-2011

Date	Occasion	Matter(s) Discussed
20 Mar. 2010	275 th Faculty Execo	BBA
23 Jun. 2010	138 th Faculty Board	BBA was deliberated during the discussion of the Triennium Planning of 2012-15
9 Sept. 2010	1 st Meeting (2010-11) of the Science Faculty Admissions Committee, and Curriculum Committee members were invited to the meeting	Current Development, Future Direction, Activities, Life Science Programme, BBA
29 Sept. 2010	139 th Faculty Board	BBA was discussed under the item ADP for 2012-15
29 Sept. 2010	278 th Faculty Execo	Funding issues regarding BBA
25 Oct. 2010	Town Hall Meeting	BBA
29 Sept. - 30 Oct. 2010	Invited feedback from all programmes	
30 Oct. 2010	Faculty Retreat	Admission and Recruitment Strategy
24 Nov. 2010	279 th Faculty Execo	Decision was made by the Faculty Execo that BBA was one of Faculty's strategic planning goals

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