



清华大学
Tsinghua University

Tsinghua Newsletter

Issue 16
April 2011

*Celebrating the Centenary of
Tsinghua University*



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Centenary Celebration



清华大学百年校庆
TSINGHUA UNIVERSITY
CENTENARY CELEBRATION

Celebration Events in Tsinghua's Centenary Year

April 2010 – May 2011

Centenary Celebrations and Ceremonies

● Centenary Celebration Ceremony of Tsinghua University	(Apr. 24, 2011)
● Centenary Celebration Gala	(Apr. 24, 2011)
● Centenary Celebration Reception for Alumni	(Apr. 23, 2011)
● Tsinghua Graduates Alumni Conference	(Apr. 23, 2011)
● Unveiling Ceremony of Tsinghua Stamp for Centenary Celebration	(Apr. 23, 2011)
● 2011 Students Sports Games	(Apr. 22, 2011)
● Opening Ceremony of the Lee Shau Kee Science Building	(Apr. 22, 2011)
● Opening Ceremony of the Tsinghua-ROHM Electronic Hall	(Apr. 22, 2011)
● 2010-2011 Tsinghua Alumni Scholarship Awarding Ceremony	(Apr. 22, 2011)
● Naming Ceremony of the “Tsinghua Planet”	(Apr. 18, 2011)
● The Retrospective Poetry Performance of Tsinghua University's One-Hundred-Year History	(Apr. 17, 2011)
● Opening Ceremony of International Sculpture Exhibition	(Apr. 9, 2011)
● Concert “the Centenary Hope” by Tsinghua Student Art Troupe	(Apr. 4, 2011)
● Opening Ceremony of the Cheng Yu-tung Medical Sciences Building	(Mar. 10, 2011)
● Celebrations of Alumni Organizations	
- Tsinghua Alumni Centenary Celebration in Silicon Valley	(May 21- 23, 2011)
- Centenary Celebration Collective Wedding Ceremony	(Apr. 29-30, 2011)
- Tsinghua Alumni Celebration Galas	(Apr. 24, 2011)
- Overseas Alumni Tour to Shenzhen, Shanghai and Zhejiang Province	(Apr. 24-29, 2011)
- Tsinghua Alumni in France and Germany Centenary Celebration Receptions	(Feb. 12, 2011)
- Hong Kong Tsinghua Alumni Centenary Celebration Forum	(Oct. 23, 2010)
- Tsinghua Alumni Forum – Talent Cultivation in the New Century	(Apr. 25, 2010)

Academic Activities

● The 29th Challenge Cup Competition and Exhibition of Extracurricular Academic Works	(Apr. 23, 2011)
● 2011 Tsinghua-ROHM International Industry-University Forum	(Apr. 23, 2011)
● The Forum on Industry-Academy Interactions & China-Japan Economy	(Apr. 23, 2011)
● 2011 Directors' Conference of International University Consortium for Executive Education (UNICON)	(Apr. 22-25, 2011)
● International Conference on Building Life Cycle Carbon Emission and Policy Issue	(Apr. 20, 2011)
● Seminar on Epigraph Mirrors in Western Han Dynasty and Ancient Mirrors	(Apr. 18, 2011)
● International Symposium on Legal Education	(Apr. 16-17, 2011)
● 2011 “China's Water Strategy and Safety” Forum	(Apr. 15, 2011)
● International Workshop on Bio/Nano-manufacturing and Integration	(Apr. 11, 2011)
● The 4 th Tsinghua Symposium on Advances of Cardiovascular Disease	(Apr. 8-10, 2011)
● International Forum on Business Plan Tournament and Youth Entrepreneurship	(Mar., 2011)
● Joint Academic Forum of Doctoral Students from Tsinghua University in Beijing and Tsing Hua University in Hsinchu	(Mar. 11, 2011)
● International Symposium on Isaiah Berlin and Contemporary China	(Mar. 10-12, 2011)
● Trends in Theoretical Cryptography	(Jan. 10-12, 2011)
● Innovations in Computer Science, ICS 2011	(Jan. 7-9, 2011)
● Tsinghua Forum	
- “A business and its ideas” by Mr. Samuel J Palmisano, Chairman of the Board, President and CEO of IBM	(May, 10, 2011)
- “The partnership between China and MIT and its role in advancing innovation” by MIT President Susan Hockfield	(Jun. 21, 2010)
- 100 Years of Engagement in Culture, Science and Technology	(Apr. 25, 2010)

- “Phasing in nuclear power, phasing out nuclear weapons” by Hans Blix, Former Director General of the International Atomic Energy Agency	(May 10, 2010)
● Tsinghua Global Vision Lectures Series	
- “The Spirit of Discovery” by Leszek Borysiewicz, Vice-Chancellor of the University of Cambridge	(Apr. 7, 2011)
- “Cloud Computing @ Yahoo!” by Raghu Ramakrishnan, Chief Scientist of Cloud Computing in Yahoo	(Apr. 1, 2011)
- “International Collaboration on Climate Change and the New Energy-Industrial Revolution” by Lord Nicholas Stern, Chairman of Grantham	(Mar. 21, 2011)
- “From the International Space Station to See the Future of Human Space Flight” by Yuri Michailovich Baturin, Russian cosmonaut	(Mar. 4, 2011)
- “Interpretation Skills≠Interpretation Capacity-The Cultivation of Professional Interpreters” by Philip Priestley, Senior Diplomat of the UK	(Dec. 10, 2010)
- “Gene and RNAi Based Therapeutics” by Mark Kay, Chair Professor of Stanford University	(Dec. 9, 2010)
- “Impacts of the U.S. Subprime Debacle” by Ken Wilcox, CEO of SVB Financial Group	(Dec. 2, 2010)
- “The Impact of Biomaterials on Global Health Care and Medical Industry” by David F. Williams, Academician of Royal Academy of Engineering	(Nov.12, 2010)
- “The Significance of the U.S.A. Century” by Akira Iriye, Professor of Harvard University	(Nov.12, 2010)
- “Violation of Matter-antimatter Symmetry” by Makoto Kobayashi, 2008 Nobel Laureate in Physics	(Oct. 21, 2010)
- “Mitigating the Effects of Climate Change without Harming Economic Development” by Woodrow W. Clark II, 2007 Nobel Laureate in Peace	(Oct. 11, 2010)
- “Neo-Confucianism in Historical Perspectives” by Peter K. Bol, Professor of Harvard University	(Sep. 9, 2010)
- “Advancing Open Government Information around the World” by Jimmy Carter, 39 th U.S. President	(Sep. 6, 2010)
- “Molecular Photovoltaics and Mesoscopic Solar Cells” by Graetzel Michael, Professor of EPFL	(Aug. 24, 2010)
- “Future of China-Canada Relations” by Michael Ignatieff, leader of the Liberal Party of Canada	(Jul. 5, 2010)
- “Transaction Cost Economics in Historical Perspective and the Road to the Nobel Prize” by Oliver Eaton Williamson, 2005 Nobel Laureate in Economics	(Jun. 29, 2010)
- “How to succeed in scientific research” by Richard N. Zare, Wolf Prize Winner	(Jun. 9, 2010)
- “A Sybil-proof Distributed Hash Table” by Frans Kaashoek, Professor of MIT and EMC Chair Professor of Tsinghua University	(May 26, 2010)
- “U.S. and China: Meeting the Clean Energy Needs of the 21st Century” by Gary Locke, U.S. Secretary of Commerce	(May 21, 2010)
- “Life, Extended Mind and the World” by Brian D. Joseph, 1973 Nobel Laureate in Physics	(May 13, 2010)
- “Game Theory & Global Financial Crisis” by Robert John Aumann, 2005 Nobel Laureate in Economics	(May 11, 2010)
- “Israel China Economic Cooperation & Win-win Strategy” by Yuval Steinitz, Minister of Finance of Israel	(May 11, 2010)
- “35 years of EU-China Relations” by J. M. D. Barroso, President of the European Commission	(Apr. 30, 2010)
● Tradition on Anthropology at Tsinghua University	(Dec. 28, 2010)
● International Congress of Chinese Mathematicians	(Dec. 17-22, 2010)
● Harvard – Tsinghua Forum on Rethinking Urbanism	(Nov. 28-31, 2010)
● IEEE Asian Solid-state Circuit Conference	(Nov.8-10, 2010)
● International Conference on IETF 79	(Nov.7-12, 2010)
● Symposium on Technology and Policy for Low Carbon Society	(Nov., 2010)
● International Symposium on Green University	(Oct. 27-28, 2010)
● Humanity and Value: International Conference of ZHU XI Learning	(Oct. 18-21, 2010)
● 2010 International Conference on Animation Education	(Oct. 15-17, 2010)
● 15 th International Conference on Solid Film and Surface (ICSFS15)	(Oct. 5-10, 2010)
● 2010 international conference on FRP Composite	(Sep. 27-29, 2010)
● Migrating Ideas of Governance and Emerging Bureaucracies between Europe and Asia since the Early Modern Era	(Sep. 20-22, 2010)
● China International Workshop on Surface Texturing	(Sep. 19-21, 2010)
● Third China-US Workshop on Nanostructured Materials for Global Energy and Environmental Challenges	(Sep. 20-22, 2010)
● China Theory Week 2010 by Institute for Theoretical Computer Science	(Sep.12-17, 2010)
● International Lipid Symposium: Cell Biology and Metabolism	(Sep. 3-5, 2010)
● Positive Psychology in Chinese Cultural Contexts: The First China International Conference on Positive Psychology	(Aug. 7-10, 2010)
● International Symposium on Mathematical-based System Simulation and Education Technologies, 2010	(Jul. 16-18, 2010)
● TNList Academic Summit on IT Vision 2020	(Jul. 12-14, 2010)
● Lost in Nature - The Architecture Design of Jarmund/ Vigsnaes from Norway	(May 24-Jun. 5, 2010)
● The 33 rd International Symposium on Combustion	(Jun. 9, 2010)
● IEEE International Conference on Cognitive Informatics	(Jul. 7-9, 2010)
● 2010 China International Conference in Finance	(Jul. 4-7, 2010)

Social Services

- Students of Tsinghua University volunteer activity with Taiwan Cheng Kung University in Tainan City, Taiwan (Aug., 2010)
- “Heart to Heart across Taiwan Strait” – Undergraduates from Taiwan and Tsinghua volunteer activities in reconstruction areas after the Wenchuan earthquake in Sichuan Province (Jul., 2010)
- Completion Ceremony of Tsinghua-sponsored Construction of Xu Jia Primary School in Sichuan Province (Apr., 2010)

Exhibitions

- Exhibition of University Library History (Apr., 2011)
- Tsinghua Education-Themed Art Exhibition (Apr. 16 – 30, 2011)
- Centenary Celebration Exhibitions on Campus
 - The History of Tsinghua (Apr. 15, 2011)
 - Research Achievements at Tsinghua (Apr. 15-Jul., 2011)
 - Physical Education at Tsinghua (Apr. 22, 2011)
- Exhibitions on Tsinghua University, held in five countries in America, Europe and Asia (Oct., 2010 - May, 2011)
- Exhibition of Centenary Achievements of Tsinghua University in Hong Kong (Oct. 23, 2010)
- Education and Architecture Studies, Tsinghua University - Tsinghua Week at Today (May 12-14, 2010)

International Events

- Global Summit of University Presidents (GSUP) and the Association of Pacific Rim Universities’ (APRU) 15th Annual Presidents Meeting (Apr. 23, 2011)
- 2011 Directors’ Conference of International University Consortium for Executive Education (UNICON) (Apr. 22-25, 2011)
- Annual Meeting of Association of East Asian Research Universities (AEARU) (Oct. 27-28, 2010)
- Tsinghua Week at TODAI (May 12-14, 2010)

Tsinghua Celebrates Centenary in France and Germany

Tsinghua University alumni in France and Germany celebrated their alma mater’s centenary in February.

A centenary reception was held on February 10th in Paris. A delegation led by Professor Hu Heping, Chairman of the University Council, and 150 guests from the French Ministry of Education, the Chinese Embassy in France, higher education institutions, and business circles attended this reception.

At the event, Professor Hu introduced the historical development of Tsinghua University and its significant role in bridging the East and the West. He concluded his speech with Chinese New Year greetings to all guests and invited alumni in France to return to the Tsinghua campus for centenary celebrations. Mr. Marc Rolland, Deputy Director of the Department of International Cooperation at the French Ministry of Education, and the Education Minister Counsellor of China’s Embassy in France, Ms. Zhu Xiaoyu, both extended their congratulations.

The Tsinghua alumni association in Germany launched a centenary celebration on February 12th in Düsseldorf. One hundred and forty alumni living in Germany, the United Kingdom, Belgium, the Netherlands, France, Sweden, Denmark, Switzerland, and Austria attended. Professor Hu Heping delivered a speech introducing Tsinghua’s present educational policy, its international position, and the vision of its development. Minister Counsellor Mr. Jiang Feng from the Department of Education of the Chinese Embassy in



Professor Hu Heping (first left), Chairman of the University Council, with distinguished guests from the French Ministry of Education and the Chinese Embassy in France



Tsinghua University Centenary Celebration in Germany

Germany felicitated Tsinghua’s centenary in his speech.

During the next few months, 200 Tsinghua alumni associations around the world will organize various events to celebrate the centennial of their Alma Mater.

Tsinghua University Centenary Celebration Held in Hong Kong

Tsinghua University launched its centenary celebration in Hong Kong at the Conrad Hong Kong Hotel on October 23rd, 2010. Nearly 500 Tsinghua alumni and friends from all circles in Hong Kong gathered with Tsinghua faculty members and student representatives to participate in the event.



Tsinghua alumni and distinguished guests at the Tsinghua University Centenary Celebration in Hong Kong

As one of the celebrations organized by Tsinghua alumni during the centenary year, the event included an opening ceremony, an exhibition of the achievements of Tsinghua University during its 100 years of development, an alumni forum, and a dinner party with performance by alumni. “Tsinghua’s centenary history is a developmental



The Exhibition of Tsinghua University's Achievements

history featuring actions speak louder than words. It is also a history of Tsinghua students’ diligence and contributions to national prosperity and the progress of humanity,” said Tsinghua President Gu Binglin. He also called on the alumni to make even greater efforts in contributing to the nation and society. He emphasized that Tsinghua people will continue to shoulder the burden of being an important force in developing the country and remain on the frontier of advanced research.

The celebration in Hong Kong was organized by the local Tsinghua Alumni Association and co-organized by the Tsinghua Alumni Association of Hong Kong Civil Servants, the Tsinghua Alumni Association of Hong Kong (Business Sector), the Tsinghua EMBA Alumni Association of Hong Kong and Macau, the Tsinghua Law School Alumni Association of Hong Kong, and the Tsinghua University (Hong Kong Special Administrative Region) Education Foundation.

100 Social Service Projects in the Centenary Year

Tsinghua University is active in social service and philanthropic activities all the time. Some 100 social service projects are scheduled as an integral part of its Centenary Celebration. Early in July 2010, ten students from Tsinghua University and 30 students from five universities in Taiwan set out for Dujiangyan, a earthquake-stricken area in Sichuan Province as volunteer teachers. This marked the beginning of Tsinghua’s 100 social service projects in the centenary year.

The 100 projects are of four kinds: service projects concerning education, science and technology, culture, and the public interest. Thousands of Tsinghua students and faculty members are participating in them.

Over 30 educational projects have been launched, including Education-Aiding-the-Poor Projects, distance education network construction covering 500 economically underdeveloped counties, and schools run by retired Tsinghua faculty members for migrant workers’ children.



A volunteer team in the Education Aiding-the-Poor Project in Dujiangyan, an earthquake-stricken area

Some 20 science and technology projects include 100 Tsinghua professors’ visits and assistance to areas in need, graduate students’ social practices during their summer vacation, science and technology service competitions for college students, the doctoral students’ team offering science



Undergraduates investigate health care system in rural areas.

and technology services, volunteer medical consultation by hospitals affiliated to Tsinghua, and medical care projects in rural areas.

There are about 20 cultural promotion projects like

regional cooperation and development forums, National University Contests on Public Interest Entrepreneurship, exhibitions of scientific and technological achievements, and “Tsinghua Day at the World Expo”.

Among the 30 public service projects are “low-carbon life” promotion, Tsinghua alumni’s assistance projects to their hometowns’ development, and overseas alumni serving the country.

Tsinghua students are enthusiastic to participate in these activities. Cui Wenhan, a student from the Department of Materials Science and Engineering, is looking forward to joining in the Education-Aiding-the-Poor Project. “Maybe the project won’t change anything in a short time, and what we can do is limited,” he says, “but I believe that with our continuous efforts they’ll surely get more help and care from more people.”

Tsinghua History

The campus of Tsinghua University is situated on the site of former imperial gardens of the Qing Dynasty and is surrounded by a number of historical sites in northwestern Beijing. As one of China’s most renowned universities, Tsinghua is an important institution for fostering talent and scientific research.

Tsinghua University was established in 1911 under the name "Tsing Hua Imperial College", initially as a preparatory school for Chinese graduates who would pursue further studies at American universities. The university section was founded in 1925, and undergraduates were then enrolled. Its Academy of Chinese Learning was also set up that year. The name "National Tsing Hua University" was adopted in 1928. The Graduate School was set up in the autumn of 1929 and was followed by several research institutes in departments.

During the Resistance War against the Japanese Invasion, Tsinghua University moved to Changsha and merged with Peking University and Nankai University to form National Changsha Temporary University in 1937. This institution moved to Kunming in 1938 and was renamed National Southwest Associated University.

After World War II ended, Tsinghua University moved back in 1946 to its original site at Tsinghua Garden in Beijing. It had five faculties, namely humanities, law, science, engineering, and agriculture, and 26 departments at that time.

As part of the nationwide restructuring of higher education in 1952, Tsinghua became a multi-disciplinary technological university, mainly engaged in the cultivation of technological talents. Since 1978 Tsinghua has gradually expanded and established more departments in natural



Tsinghua Council members (1932), from left: Ye Qisun, Chen Daisun, Feng Youlan, Mei Yi-chi, Yang Gongzhao, and Zhang Zigao



Tsinghua with Peking University and Nankai University formed National Southwest Associated University during the years 1938-1946.

sciences, economics, management, and the humanities. In 1984, Tsinghua established the first graduate school in China. Between 1984 and 1999, the School of Economics and Management, the School of Sciences, the School of Humanities and Social Sciences, and the School of Law were founded. In 1999, the former Central Academy of Arts and Design of China joined Tsinghua, and the Academy of Arts and Design was established. From 2000 to 2009, the School of Public Policy and Management, the School of Medicine, the School of Journalism and Communication, the School of Aerospace, the School of Marxism, and the School of Life Sciences were established.

Currently, Tsinghua has 16 schools and 56 departments with faculties of science, engineering, the humanities, arts, economics, management, law, education, and medicine.



The Old Gate

Strengthening Practical Ability in Education

Tsinghua University has always given high priority to strengthening its students' practical abilities. Students are encouraged to participate in projects to meet the needs of social development and gain practical experience. In the 1950s, Tsinghua initiated the integration of teaching, research and production. Classroom courses were linked to practical projects. Faculty members supervised their final-year students who worked on their graduation designs in concert with projects in national key construction areas.

For instance, students from the Department of Hydraulic Engineering who graduated in 1958 created the preliminary design of the Miyun Reservoir, the largest artificial lake in northern China. A design team was assigned to stay on the construction site to create technical designs and draft detailed blueprints. They worked there until 1960, when the reservoir was completed.

For decades, the university has maintained its valuable good tradition of involving sufficient practice sections in its curricula. Students, especially engineering majors, are required to do internships in stages as cognition practice, production practice and graduation practice. Tsinghua graduates have gained a reputation in China for their solid knowledge, well-developed practical skills and motivation in solving real problems.

In 2005, the University held its 22nd Symposium on Education with the theme "strengthening practical education and cultivating innovative students". At that time, the administration put forth its Proposal for Improving Practical Education at Tsinghua University and formulated supporting measures and regulations. An extensive system of practical



A field study class held at the construction site of Miyun Reservoir



Tsinghua students gain hands-on experience as short-term lathe workers.

education has been subsequently developed.

In recent years, 4,000 undergraduate students have conducted professional practice in over 200 enterprises and organizations across the country. Since 2006, all students have usually spent four weeks doing off-campus professional work

every year. The university encourages practice in key national industries, major regions, and high-tech enterprises, while at the same time expecting students to understand the actual conditions of China through field trips to grassroots areas—all to nurture a sense of social responsibility. Tsinghua's practical education has become an effective form of educating top-notch, innovative students.



A student class in factory internship

Tsinghua Alumni

Tsinghua University has fostered many outstanding scholars, successful entrepreneurs and distinguished statesmen who are widely esteemed in China and abroad. It has more than 170,000 alumni, who have worked diligently and made significant contributions to the development of the nation's economy, culture, science, and technology.

Many renowned scientists in modern China are Tsinghua alumni. One-fourth of the Chinese Academy of Sciences members and one-fifth of the Chinese Academy of Engineering members are Tsinghua alumni. Thousands of Tsinghua graduates now work as professors at universities and chief engineers in research institutes and companies all around the world. The university has not only cultivated numerous scientists and engineers, but also nurtured generations of ideologists, literary scholars, historians, economists, legal scholars, and over 140 designated national model workers.

Many Tsinghua alumni count among the founders and key figures in various industries, such as nuclear research, automotive, aerospace, hydraulic engineering, iron and steel, machinery, building construction, petroleum, electric power, electronic communication, finance, and environmental engineering. With their intelligence and diligence, they have made great contributions to China and the world.

In recent decades, many alumni have become distinguished statesmen and government officials who have served as President and Vice President of the People's Republic of China (PRC), General Secretary of the Communist Party of China (CPC), members of the Political Bureau Standing Committee of CPC Central Committee, members of the Political Bureau of the CPC Central Committee, Premier and Vice Premiers of the State Council of the PRC, Chairman and Vice Chairman of the National People's Congress, nearly 300 governor- and minister-level

government officials, and more than 90 generals (including civilian officials).

Tsinghua alumni live and work all over the world. About 20,000 alumni are abroad. In accordance with the university's strong background in engineering, a large proportion of them have settled in California's Silicon Valley. Almost 50 alumni organizations have been established in over 10 countries.

Tsinghua alumni have made many contributions to their alma mater to support its educational and research endeavors and to improve the service facilities on campus. For example, since the Annual Donation Project was launched in 2003, numerous alumni have made donations. The annual donation rate surpassed 30% in 2010. The University Alumni Association initiated the Tsinghua Alumni Scholarship Program in 2006 to advocate more alumni help



A donation drive for the Sichuan Earthquake-hit areas initiated by Tsinghua alumni in Silicon Valley in May 2008

for students from low-income families. Under this program, many Tsinghua graduates, either as individuals or through organizations, have donated money to establish over 330 scholarships.

Research at Tsinghua

As one of China's leading institutions for teaching and research, Tsinghua University has a strong commitment to basic research, applied research, and scientific innovation. It leads China's universities in the number of papers indexed in SCI, EI, and ISTP.

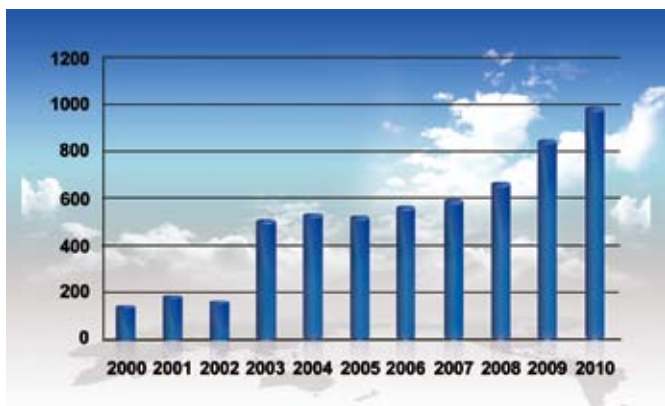
Tsinghua University has 272 research institutes, including one National Laboratory, 12 State Key Laboratories, six National Engineering Research Centers, 17 Ministry of Education (MOE) Laboratories, five Beijing Key Laboratories, and six MOE Engineering Research Centers.

The research faculty includes 37 members of the Chinese Academy of Sciences, 34 members of the Chinese Academy of Engineering, and over 2,800 professors and research fellows. Currently they are actively working on over 4,109 research projects. In 2010, 1,023 patents were granted to

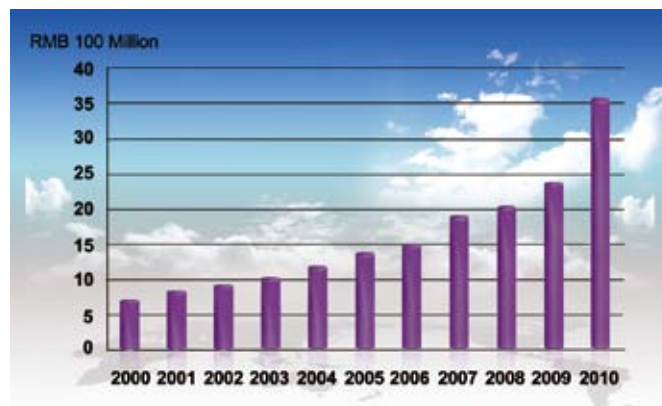
Tsinghua University. By the end of 2010, the Tsinghua faculty had won 419 National Scientific and Technological Awards, ranking first among China's universities.

Tsinghua also promotes collaboration with overseas partners in various ways. In 2010, Tsinghua signed 537 cooperative agreements with overseas partners which brought in RMB 314 million research fund.

Tsinghua University Science Park (TusPark), founded in 1994 as the only Class A university science park in China and one of the world's largest university science parks, is positioned to be a base for incubating startups, fostering innovation, and commercializing intellectual property. More than 1,000 enterprises operate in TusPark with more than 30,000 R&D staff members. The annual output of TusPark enterprises has reached RMB 40 billion.



Patents granted to Tsinghua



Research incomes in recent years

International Exchange and Cooperation

Tsinghua University actively promotes its international collaboration programs. The ongoing programs include student exchanges (degree and credit transfer), joint education programs, summer programs, faculty member exchanges, joint research projects, and international conferences.

Tsinghua University has been actively developing partnerships with universities, international organizations and enterprises throughout the world. The University has established cooperative relationships with 207 prestigious universities in 39 countries. Each year, over 800 distinguished overseas scholars and experts are invited to Tsinghua to teach or do research. The University hosts 70-80 international conferences annually, with over 8,000 participants from abroad and throughout China.



Partner universities in the world

To enlarge students' vision and keep pace with the development of cutting-edge research, many distinguished scientists and scholars are invited to lecture at Tsinghua. Seventy-six Nobel laureates visited Tsinghua and gave

lectures to Tsinghua students between 2001 and 2010. Tsinghua Forum and the Tsinghua Global Vision Lecture Series are open to both students and faculty members from Tsinghua as well as other universities.

The University runs more than 300 study abroad programs and over 80 student exchange programs with prestigious universities overseas. Every year over 3,000 students are sent abroad for various kinds of international activities, including working on research projects and participating in internships and contests. By 2011, over 30% of the undergraduate students at Tsinghua have obtained overseas experience. Among Ph.D. candidates, this reaches 43%.

Tsinghua University welcomes students from around the world to participate in its undergraduate, graduate, and Chinese language and culture programs. The number of



International students at a laboratory of Tsinghua University

international students at Tsinghua has increased by 20% annually during the past decade. The annual increase in graduate students is more than 30%. Currently there are 3,219 international students from 122 countries at Tsinghua University. Among the 2,263 full-time degree candidates, 1,068 are in graduate programs.

To attract more international students to study at Tsinghua, the University has developed hundreds of graduate and undergraduate courses which are taught in English. In the academic year 2010-2011, twelve master's degree programs are being conducted fully in English which enrolled students from over 70 countries. These programs cover areas of engineering, computing, management, business, architecture, law, international relations, business journalism, and public administration.

Tsinghua University has always promoted cooperative research with international institutions and companies. The annual income from international research contracts in 2010 reached RMB 284 million with an increase of 17% each year.



Research income from international contracts between 2002 and 2010

News & Events

Tsinghua Students Donate for Earthquake Victims

The Student Union and Graduates' Union of Tsinghua University initiated a donation from March 14th to 16th, 2011 to collect money for the earthquake victims in both Japan and Yunnan Province of China.

Despite the strong wind, many students came to the site to make donations in the hope of offering a little help. Many faculty members also joined the students' activity to contribute money for the quake-stricken areas. A student from Yunnan Province who missed the donation-collection activity went specially to the Graduates' Union to donate RMB 100 and remarked, "Thank you for initiating the activity and donating for my hometown victims! Thanks a lot." Japanese students at Tsinghua also took part in the activity. They bowed to every donor to express their gratitude.

The student delegates handed all the collected money to the Red Cross Society of China which would send it to the victims.



19 Projects Win 2010 National Science and Technology Awards

Tsinghua faculty members won 19 prizes at the 2010 National Science and Technology Awards ceremony held on January 14th in the Great Hall of the People. These are the highest scientific and technological honors awarded in China.

The 19 prizes include one National Natural Science Award (NNSA), six National Technological Invention Awards (NTIA) and 12 National Science and Technology Progress Awards (NSTPA).

Among the 19 projects, Radiation Inspection Technology for Large Equipment led by Professor Kang Kejun from the Department of Engineering Physics won an NTIA first prize. Equipments of Platform Systems Emergency Response led by Professor Fan Weicheng, also from the Department of Engineering Physics, won an NSTPA first prize.

Other awardees from Tsinghua include Professor Fang Daining from the School of Aerospace, Professor Lian Xiaomin and Professor Ouyang Minggao from the Department of Automotive Engineering, Professor Zhang Shulian from the Department of Precision Instruments and Mechanology, Professor Tang Guoyi from the Graduate School in Shenzhen, Professor Bai Jing from the School of Medicine, Professor Hao Jiming from the School of Environment, Professor Zhang Xinrong from the Department of Chemistry, Professor Shi Yuanchun from the Department of Computer Science and Technology, Professor Ji Xiangyang from the Department of Automation, Professor Yang Qiang, Liu Yaoru, Fu Xudong, Han Wenliang, and Jin Feng from the Department of Hydraulic Engineering, Professor Liu Shifeng from the Department of Mechanical Engineering, and Professor Guo Jingjun from the Department of Civil Engineering.

Up to now, Tsinghua faculty members have won 44 National Natural Science Prizes, 120 National Technological Invention Prizes, and 255 National Science and Technology Progress Prizes, the most among all universities in China.



A large container scanner in operation at a custom



Mobile emergency response platform made by Tsinghua's Center for Public Safety Research

Topological Insulator Research Leads China's Top Ten Scientific Progresses in 2010

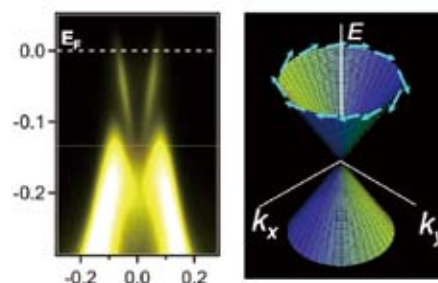
Research achievements on topological insulators carried out by Professor Xue Qi-Kun and Professor Chen Xi with their partners in the Chinese Academy of Sciences ranked first among the China's Top Ten Major Scientific Progresses in 2010. The selection, based on the polls from experts, was organized by the Department of Basic Research in the Ministry of Science and Technology.

Professor Xue and Professor Chen, both from the Department of Physics at Tsinghua University, revealed the growth dynamics of molecular beam epitaxy (MBE) films of topological insulators. Their work on characterizing the nontrivial surface states of topological insulators using scanning tunneling microscopy (STM)/ spectroscopy (STS) will help to realize theoretical predictions, such as quantum anomalous Hall effect, giant thermoelectric effect, and exciton condensation.

In their study, they identified the optimal conditions for layer-by-layer growth of stoichiometric Bi_2Te_3 and Bi_2Se_3 films by real-time reflection high-energy electron diffraction and angle-resolved photoemission spectroscopy (ARPES). They demonstrated the atomically flat morphology and intrinsic topological property of the resulting films by STM/STS. By direct imaging the standing waves associated with nonmagnetic impurities and steps on Bi_2Te_3 surfaces, they

found that the topological states have a surface nature and are protected by time-reversal symmetry.

For a very thin slab of a three-dimensional topological insulator, the states on the top and bottom surfaces may couple, leading to a thickness-dependent energy gap in the electronic spectrum. Professor Xue's team reported such effect in the Bi_2Se_3 films using ARPES. The gap opening is clearly seen when the film thickness is below six quintuple layers.



Dirac cone of Bi_2Te_3 film revealed by ARPES

The gapped surface states also exhibit sizeable Rashba-type spin-orbit splitting because of the substrate-induced potential difference between the two surfaces. The tunable gap and the spin-orbit coupling make these topological thin films ideal for electronic and spintronic device applications.

Their findings bring the frontier of research on topological insulators to a new extend and have a profound influence.

The World's Deepest Underground Laboratory Put into Use

China's first extremely deep underground laboratory, the China Jinping Underground Laboratory (CJPL), was put into use on December 12th, 2010. Jointly constructed by Tsinghua University and Ertan Hydropower Development Company (Ertan), the laboratory was excavated from a 17-kilometer transporting tunnel in Jinping Mountain.

Covered by 2,400 meters of rock, CJPL surpasses all other underground laboratories and becomes the deepest one in the world. The covering rock helps to shield physics experiments from cosmic ray particles that would swamp detectors looking for rare matters. Performance evaluation found that the radionuclide content is low in the lab. The cosmic ray flux there can be reduced to just 1/100,000,000 of what it is at ground level.

A deep underground laboratory is of great importance for forefront basic research topics, such as dark matter detection, double beta decay, and neutrino physics. It is also an ideal location for research on rock mechanics, earth structure, ecology, and low-level radioactive materials measurement.

Deep underground labs have been built in many countries like Canada, the United States of America, France, Russia, and Italy. Previously, the Sudbury Neutrino Observatory Lab in Canada was the only deep laboratory operating at 2,000 meters below the surface. With the opening of the CJPL, China has an outstanding clean and low-radiation research platform and can carry out cutting-edge basic research topics.

Faculty members from Tsinghua began their research on dark matter detection with a high-purity germanium detector (HPGe) in 2003. Last year, the first 1kg-mass point-contact HPGe detector in the world was installed in CJPL and began its search for dark matter. A project named the China Dark Matter Experiment (CDEX) has been launched. Scientists from Tsinghua University, Sichuan University, China Institute of Atomic Energy, Nankai University, Ertan Hydropower Development Company, and partner universities overseas will work together in the project. They plan to set up the ton scale HPGe array detector in CJPL and take the search to unlock the secrets of dark matter to new extremes.



The China Jinping underground laboratory was unveiled



Scientists work in China Jinping Underground Laboratory

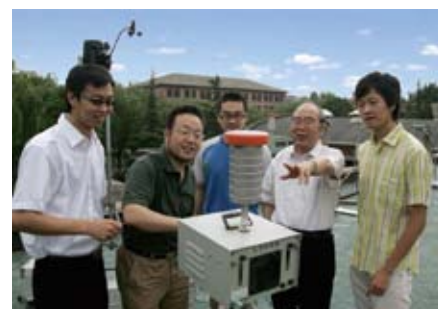
General Manager of Ertan Chen Yunhua and Tsinghua Vice President Kang Kejun, a professor of engineering physics, serve as Director and Deputy Director, respectively, of the CJPL Management Committee. Tsinghua Vice President Cheng Jianping, also a professor of engineering physics, has been appointed as Director of CJPL.

Green China Annual Figure Awards Given to Tsinghua People

The awards ceremony for the Green China Annual Figures was held in the theatre of the Beijing Exhibition Center on November 25th, 2010. Professor Hao Jiming from the Department of Environmental Science and Engineering and the Student Green Association of Tsinghua University received awards for their achievements in 2008 and 2009, respectively.

Professor Hao, a member of the Chinese Academy of Engineering, was recognized for his significant contribution to achieving a green Olympic Games in Beijing. He served as a leading expert in the working team of air quality assurance for the 2008 Olympics.

The Student Green Association of Tsinghua University was recognized as the



Professor Hao Jiming (second right) with his team

only team winner in 2009. It was cited for its long-term efforts to conserve energy and promote low-carbon living both on and off campus with activities which attracted thousands of people. To advance the green concept, its member initiated courses on the environment in primary and middle schools, conducted educational programs on how we deal with climate change, and organized the first International Youth Summit on Energy and Climate Change.

Launched in 2005, the Green China Annual Figure Award is conferred jointly by seven national organizations, including the Ministry of Environmental Protection, the Ministry of Culture, and five other organizations. It is also supported by the United Nations Environment Program.



The Student Green Association of Tsinghua University

AEARU Presidents' Annual Meeting Held at Tsinghua

The 16th Annual General Meeting of the Association of East Asian Research Universities (AEARU) was held at Tsinghua University from October 27th to 29th, 2010. Nine presidents and 11 vice presidents from all 17 member universities attended and shared ideas on future research and higher educational issues.

Tsinghua President Gu Binglin outlined Tsinghua University's recent development in his welcome address and chaired the Member University Presentation session, which focused on research and undergraduate education. Vice President Akinori Nishihara of Tokyo Institute of Technology shared his institution's experience on multidisciplinary research. University of Tsukuba Vice President Kazuko Shiojiri discussed the role of a university

in realizing a sustainable mature society through research and innovation in Life. Kyoto University Vice President Junichi Mori introduced its international programs with partner universities. Vice President Kiichiro Tsuji of Osaka University summarized its education programs, focusing on its new frontier laboratory programs for interactive and experimental learning. University of Science and Technology of China Vice President Chen Chusheng shared its experience in high-quality education in partnership with other top research institutes. Korea Advanced Institute of Science and Technology Associate Vice President Yong Taek Im, Taiwan University President Si-Chen Lee and Pohang University of Science and Technology President Sunggi Baik also contributed their ideas on education and research with their comments and questions.

Through the discussion, AEARU members reached a consensus that universities should encourage innovation, promote research, and contribute to sustainable development and solving global challenges; they should promote international education and cooperation, and cultivate talents capable of coping future challenges.

AEARU is a regional organization founded in January 1996 with the goals of providing a forum for the presidents of leading research-oriented universities in East Asia and carrying out mutual exchanges between the major universities in the region. It is the first time that its Annual General Meeting was convened in Beijing.



Tsinghua Launches Joint Research Center with Boeing

The Tsinghua-Boeing Joint Research Center was established on October 20th, 2010. Tsinghua Vice President Kang Kejun and Vice President and General Manager of Boeing Research & Technology Matthew Ganz signed the agreement to develop aviation application technologies on behalf of the two partners.

The five-year agreement, with a funding of \$5 million, will support collaborative research that involves airplane cabin environments and designs, advanced materials, computer science and industrial design.

"Technology development is critical to the success of future aviation systems, and Boeing is reaching around

the world to work with the brightest minds to find the most innovative and affordable solutions possible for our customers," said Dr. Ganz.

"Unlike previous studies which are program-oriented, the center will bring up research topics that are mutually interesting to the committee for approval every year," said Professor Kang Kejun. Professor Fan Weicheng of the Department of Engineering Physics, a member of the Chinese Academy of Engineering, was appointed the first director of the research center. Faculty members from several other schools and departments, such as the Department of Materials Science and Engineering, the School of Aerospace, the Department of Industrial Engineering, the School of Software, and the School of Architecture, will also join the work in the Center.



Vice President Kang Kejun (second left) and Dr. Matthew Ganz (second right) at the signing ceremony

Professor Wu Guanying Designs Rabbit Zodiac Stamp

The first postage stamp issued annually in China is the zodiac symbol of the lunar Chinese year. When the Year of the Rabbit arrived, a stamp designed by Professor Wu Guanying from the Academy of Arts and Design at Tsinghua University was unveiled to the public.

Adding to the complexity and interest of the design, Professor Wu's unique style incorporates design elements of propitious flowers in the body of the main figure of the rabbit. He included a moon in the background which was etched

with auspicious clouds and colored light blue to emphasize peace and calmness. The overall effect of the colorful picture conveys to people a Chinese blessing: blooming flowers and a full moon signify a nice and harmonious life.

As its designer, Professor Wu hopes this stamp will convey the spirit of Chinese happiness and harmony by highlighting the distinctive qualities of the rabbit expressed in his delightful and whimsical design. According to Professor Wu, traditional porcelain production processes have



Professor Wu Guanying with his design of the rabbit zodiac postage stamp

influenced the decorative style of this stamp. His image design matches well with the whole series of the 12 zodiac animals, with the rabbit shown in a moment between movement and rest.

Professor Wu was also the originator and major designer of the Beijing Olympic Games mascots in 2008 and the designer of the Beijing Paralympic Games mascot, a cartoon cow.

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Tsinghua University

Tsinghua alumni celebrate the centenary of their Alma Mater



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