

# Tsinghua Newsletter

ISSUE  
36

April  
2018



President's Message for Tsinghua's 107th Anniversary



The Unveiling Ceremony of the China-Italy Design Innovation Hub and the Tsinghua Arts and Design Institute in Milan



The Higher Education Roundtable, with the theme of the Rise of Asian Universities, held during the Boao Forum For Asia Annual Conference

# President's Message for Tsinghua's 107th Anniversary

At this time of Tsinghua's majestic spring, it gives me great pleasure to extend cordial greetings and best wishes to all Tsinghua students, faculty and staff, as well as alumni, at home and abroad. My heartfelt appreciation is extended to all friends of Tsinghua, throughout the world, who have contributed to Tsinghua's development over the years.

The past year has been truly remarkable and fruitful. Major tasks have come to fruition and solid progress in advancing the comprehensive reform has been made, and we've stepped up the implementation of our global strategy. In addition, the Institutional Evaluation on Undergraduate Education was concluded with a strong endorsement by the experts of the evaluation committee of Ministry of Education. With renewed confidence and strengthened resolve, Tsinghua is poised for excellence.

***Breakthroughs have been made in advancing the Education and Teaching Reform***

Tsinghua has given top priority to the Education and Teaching Reform. We have fully adopted the multi-disciplinary admission process. 49 majors are consolidated into 16 multi-disciplinary categories. This admission reform helps break down disciplinary barriers and promote general education. Led by 16 distinguished scholars, a university-level Supervision Committee was established to oversee this implementation. Furthermore, we have restructured the undergraduate education curricula across the board, in order to give students greater academic flexibility, and support students to excel in multiple disciplines.

In replacement of the traditional examination based admission, we have adopted the application based admission process for Ph.D. programs, which includes a comprehensive review of the application materials and interview performance. This is designed to carry out a sound evaluation of the comprehensive quality of doctoral applicants, and facilitate the emergence of innovative talents that possess great academic potential.

For the first time in the university history, Tsinghua introduced the New Centennial Achievements Award and the Annual Award for Excellence in Teaching to recognize the extraordinary commitment of best performing teachers. The Center for Faculty Development has also been established to enhance professional skills and encourage world's best teaching practices.

***Reform on the scientific research system and mechanisms has been accelerated across the board***

Higher education is a natural place for innovation to thrive. Tsinghua has set its sights on the frontiers of science and technology together with the national strategic objectives. We will continue to strengthen our innovative capabilities and strive to produce more advanced research outcomes. Tsinghua has brought forward its reform program related to

the scientific research system and mechanisms that focus on a few key areas, including interdisciplinary research, cutting-edge technologies, and technology transfer.

In 2017, five interdisciplinary research institutes have been established: the Center for Intelligent Autonomous Systems; the Center for Intelligent & Connected Vehicles

and Transportation; the Center for Flexible Electronics Technology; the Laboratory of Brain and Intelligence; and the Future Laboratory.

Policy reform measures have been implemented to break the traditional silos that separate schools and departments. By promoting interdisciplinary research across the board, allowing faculty to work across departments, conferring interdisciplinary degrees and establishing special funds earmarked for interdisciplinary studies, we will enhance our reputation as a university that places great attention to academic innovation and the cultivation of creative talents. In 2017, Tsinghua received 11 National Science and Technology Awards, including the first prize for the State Scientific and Technological Progress Awards, and 16 major research grants from the National Social Science Fund.

***The Implementation of the Global Strategy has moved forward in leaps and bounds***

Openness is one of the defining features of higher education in the 21st century. In line with China's increasing role in world affairs, Tsinghua must actively participate in the knowledge sharing and common development of global higher education. By implementing the Global Strategy, we will continue to cultivate

talents with global competence.

In February 2017, witnessed by Chinese President Xi Jinping and Italian President Sergio Mattarella, Tsinghua University and Politecnico di Milano signed an agreement to establish the China-Italy Design Innovation Hub in Milan. On April 17th 2018, the Design Innovation Hub was officially opened, and the Tsinghua Arts and Design Institute in Milan was formally established.

In April 2017, Tsinghua initiated and jointly established the Asian Universities Alliance with 15 founding members, aiming at addressing regional and global challenges, specifically related to higher education and economic, scientific and technological development. In April 2018, the AUA founding members attended a higher education roundtable “The Rise of Asian Universities” at the Boao Forum for Asia. The first annual report on Asian higher education will be released this July.

The Global Innovation Exchange (GIX) institute, a joint initiative with University of Washington and Microsoft based in Seattle has continued to attract leading innovators and build global competence to tackle complex problems. In September 2017, the GIX teaching and research building was officially opened.

***“Double First-Class” Initiative has moved into a new phase***

In 2017, Tsinghua officially released its “Double First-Class (First-Class University & First-Class Disciplines)” development plan, in which a three-tiered discipline development system has been put in place, outlining four key disciplinary areas and 28 discipline groups and subjects. In the fourth round of national assessment of disciplines, 21 disciplines of Tsinghua University were graded A+. Tsinghua has established the School of Clinical Medicine and the Department of the History of Science, expanding its discipline layout. We

have launched the “Double P” Plan (Plateau and Peak) to strengthen the development of the liberal arts and announced the first group of distinguished professors of arts, humanities and social sciences.

Tsinghua continues to be a source of inspiration for talented young people. In 2017, we have successfully attracted 49 young scholars who were approved to join the “National Thousand Talents Plan” for young scholars, and eight scholars were elected as Academicians of the Chinese Academy of Sciences or the Chinese Academy of Engineering.

In the past year, Tsinghua University has forged ahead in a comprehensive, orderly and coordinated way, and reached new milestones across the board. As we celebrate the 107th anniversary, we can reflect on Tsinghua’s enduring vitality and dynamism. With more than 100 years of combined effort,

Tsinghua is in full bloom.

Building on past success, Tsinghua will push ahead and make solid progress in its comprehensive reform, with a strengthened sense of responsibility and mission. We will make sustained efforts to tackle grand societal challenges head-on and make concrete, meticulous, and effective efforts in all our work.

It is my firm belief that, with the joint efforts of our faculty, staff, students and all stakeholders, 2018 will be the starting point for Tsinghua’s new era of even greater endeavors and achievements!

**Qiu Yong**

President of Tsinghua University  
President of Tsinghua Alumni Association



# The Unveiling Ceremony of the China-Italy Design Innovation Hub and the Tsinghua Arts and Design Institute in Milan

On the afternoon of April 17th (local time), the China-Italy Design Innovation Hub and the Tsinghua Arts and Design Institute in Milan were officially unveiled in Milan, Italy. This is an important constituent part of Tsinghua's Global Strategy, and the first teaching and research base Tsinghua has established in Europe. Simultaneously, the Tsinghua University Alumni Center in Italy was also inaugurated. The China-Italy Design Innovation Exhibition, co-organized by Tsinghua's Academy of Arts & Design, the Politecnico di Milano, and the China-Italy Design Innovation Hub, formally commenced during Milan Design Week 2018.



Chen Xu delivers an address

Chen Xu, Secretary of the CPC Tsinghua Committee and Chairperson of the University Council, Song Xuefeng, the Chinese Consul General in Milan, Giuseppe Sala, the Mayor of Milan, and Ferruccio Resta, Rector of the Politecnico di Milano, along with other distinguished guests, took part in the opening ceremony.

Chen Xu noted that the inauguration of the China-Italy Design Innovation Hub is an important step in the implementation of Tsinghua's Global Strategy in Europe. It will make the most of the advantages of Tsinghua and the Politecnico di Milano in arts and design, forge a comprehensive platform for the Sino-Italian cooperation in design and innovation, and endeavor to become a design and innovation center with global influence.

As a crucial part of the University's Global Strategy, the Tsinghua Arts and Design Institute in Milan will integrate excellent educational resources worldwide, provide interregional, interdisciplinary, and intercultural research opportunities and vacancies for practice to students from all over the world, and cultivate innovative talents who possess a global competence and are capable of dealing with global challenges.



Song Xuefeng delivers an address



# 博鳌亚洲论坛2018年年会 BOAO FORUM FOR ASIA ANNUAL CONFERENCE 2018



## The Higher Education Roundtable, with the theme of the Rise of Asian Universities, held during the Boao Forum For Asia Annual Conference

*---Qiu Yong, President of Tsinghua and the Founding President of the AUA, expounds the role of Asian universities*

The Boao Forum For Asia (BFA) Annual Conference 2018 was held from April 8th to 11th in Boao, Hainan Province. Chinese President Xi Jinping delivered a keynote speech at the opening ceremony. The theme of this year's BFA Annual Conference was "An Open and Innovative Asia for a World of Greater Prosperity."

On April 10th, as one of the official sessions of the BFA Annual Conference 2018, the Higher Education Roundtable, with the theme of the Rise of Asian Universities, was held.

Qiu Yong, President of Tsinghua University and the Founding President of the Asian Universities Alliance (AUA), attended the Roundtable, together with Muhammad Anis, Rector of Universitas Indonesia and the Executive President of the AUA for 2018-2019, as well as other distinguished guests including Tan Eng Chye, President of the National University of Singapore, Sung Nak-in, President of Seoul National University, Bundhit Eua-arporn, President of Chulalongkorn University, Devang Khakhar, Director of the Indian

Institute of Technology Bombay, Abdul Rahim Hashim, Vice-Chancellor of the University of Malaya, Lakshman Dissanayake, Vice-Chancellor of the University of Colombo, Shigeo Katsu, President of Nazarbayev University, Sabrina Lin, Vice-President for Institutional Advancement of the Hong Kong University of Science and Technology, Abdullah Alsalman, Vice Rector of King Saud University, and Omar Kyaw, Pro Rector of the University of Yangon.

The participants in the Roundtable conducted a thorough



communication, focusing on issues such as the responsibilities and missions of Asian universities, the impact of Asian universities in the Fourth Industrial Revolution, innovation, and the transfer of technology.

President Qiu, reflecting on

the role of the Asian universities in a fast-changing world, noted in his address at the Roundtable that in recent years, Asian universities have made significant progress, both in quantity and quality. In today's era of rapid global change, he believes that

they will have three important roles to play -- facilitating innovation in Asia, promoting global cooperation in higher education, and contributing unique educational ideas to the global higher education community.

In the discussion and the following Q&A session, Qiu Yong expounded the role of Asian universities in the broader context of a rising Asia, the significance of the AUA, the role of openness in Asian higher education, and Tsinghua's Global Strategy.

# AUA Board Meeting 2018 held in Sanya



On April 9th, the Asian Universities Alliance (AUA) Board Meeting 2018 was held in Sanya, Hainan Province. Qiu Yong, President of Tsinghua University, and Yang Bin, Vice President and Provost of Tsinghua, attended the meeting. The other attendees included presidents, representatives, and professors from the member universities of the Alliance.

Qiu Yong, also the AUA President, presented the AUA Review 2017-2018 during the meeting.

The Board Meeting also reviewed and approved the AUA Financial

Report 2017-2018, the budget for 2018-2019, and the programs of the Alliance for 2018-2019 in the domains of mobility, research collaboration, and strategy & policy, among others.

At the end of the meeting, all member universities voted that the University of Colombo would hold the Executive Presidency for 2019-2020. For 2018-2019, the Executive Presidency will be held by Universitas Indonesia.

Vice President Pomthong Malakul of Chulalongkorn University, on behalf of President Bundhit

Eua-arporn who served as the AUA Executive President for 2017-2018, and Rector Muhammad Anis of Universitas Indonesia, who will serve as the AUA Executive President for 2018-2019, each delivered an address.

In his closing remarks, Qiu Yong extended his thanks to all the member institutions and the AUA Secretariat for their passionate and persistent dedication and noted that the Board Meeting was very productive. A good review of AUA's progress and important decisions for the coming year were made. "I think we all agree that



we had a wonderful start for AUA. A good beginning is half done,” said Qiu.

He also noted that more progress would be achieved in the coming year, and there would be many more exchanges of scholars and staff among the member universities. Qiu hoped all members could continue to support AUA just as they did in the first year. He is sure that in future, the AUA will attract more attention.

On the evening of the previous day, Qiu met with Wang Lu, Vice Governor of the Hainan Provincial Government, together with the representatives of the AUA member universities. In his address, Qiu noted that the AUA will work to enhance connectivity, promote knowledge exchange, nurture global leaders, and raise member universities’ regional and global impact. He believed that every member institution will benefit

from the growth of the AUA.

Last April, board members and delegates of the fifteen AUA founding institutions gathered in Beijing and jointly launched the AUA. It was a significant milestone in Asian higher education. From that day on, the fifteen founding universities have been working towards the mission of jointly addressing regional and global challenges by strengthening collaboration among each other.

# Tsinghua Celebrates 107th Anniversary



Tsinghua celebrated its 107th anniversary on April 29th, bringing together alumni from around the country and abroad for a weekend of reunions.

The celebration was highlighted by art exhibitions and various celebrations scheduled by different departments. A series of student activities including concerts, field and track events, and the technological innovation exhibition were also held throughout the weekend in honor of the returning alumni.

# Tsinghua holds opening ceremony for the 61st Ma Yuehan Cup

Writer: Galia Popov



The Opening Ceremony for Tsinghua University's 61st Ma Yuehan Cup began at 8:00 in the morning on April 29th. Alumni, current Tsinghua students, faculty, classes from Tsinghua's primary and high schools and other observers all crowded into the seating area at the East Stadium to watch the ceremony. The atmosphere was cheerful, and many alumni brought their children along to enjoy the festivities.

Qiu Yong, President of Tsinghua University, Chen Xu, Chairperson of the University Council, and other leaders as well as former leaders of Tsinghua, together attended the Opening Ceremony.

The ceremony began with the entrance of the Chinese national flag and the Tsinghua flag, followed by cohorts of students representing each of the academic departments. The students waved to the audience and demonstrated their pride in their department with group chants. The international students also had their own cohort. Tsinghua's alumni entered last and were enthusiastically cheered on by the students and other alumni in the audience.

The ceremony also included dance performances, synchronized jump rope and martial arts demonstrations. They were all very well

received by the audience. After the performances, the Chinese national anthem played and Qiu Yong formally announced the opening of the event.

After the ceremony, many alumni mingled on the track while waiting for the games to start. Several

older alumni commented that Tsinghua has changed a lot since they were in school more than thirty years ago, and also expressed their wish that today's students will go on to become even better than those who came before them.

---

## Chinese artist awarded Coubertin Medal at IOC headquarters in Lausanne

Source: Xinhua  
Editor: Zhu Lvhe

LAUSANNE, Switzerland, April 24 -- Thomas Bach, the president of the International Olympic Committee (IOC), on Tuesday issued the "Pierre de Coubertin Medal" to Chinese artist Han Meilin, Professor from the Academy of Arts & Design, Tsinghua University, at the IOC Headquarters in Lausanne to commend

his outstanding contribution to the development of the Olympic movement.

Bach said at the prize presentation ceremony that the Olympic spirit is to blend sports with culture and art, and the award of the Medal to Han Meilin showed the appreciation of IOC for his contribution and

achievements in this regard.

A famous Chinese painter, sculptor and designer, Han's most famous creations are the Fuwa ("good-luck doll") mascots, which debuted at the 2008 Beijing Olympics.

The 82-year-old Chinese artist said after receiving the award that for him, the Olympic spirit not only meant "higher, faster and stronger", but also meant a young vitality for everyone.

"The Olympic Spirit, in my view, endows this world with youth and vigor," he said.

"As I see, youth has nothing to do with age, has nothing to do with race, or gender, or skin color, and has everything to do with love for life, awe for nature and passion for innovation," he explained.

"As I receive this Pierre de Coubertin Award, my greatest wish is that our world is forever young," he added.



During the award ceremony, Han also donated his manuscripts during the creating of the Olympic mascots "Fuwa" to IOC.

The Pierre de Coubertin medal, also known as the De Coubertin medal or the True Spirit of Sportsmanship medal, is a special decoration awarded

by the IOC to those athletes, former athletes, sports promoters, sporting officials and others who exemplify the spirit of sportsmanship in Olympic events or through exceptional service to the Olympic movement.

# Tsinghua Launches Center for Global Competence Development

On April 27th, the Center for Global Competence Development, Tsinghua University, was launched.

Guo Yong, Vice Chairperson of the University Council, and Gao Hong, Vice Provost for International Education, unveiled the Center.

On behalf of the University, Guo Yong congratulated everyone

involved on the establishment of the Center. He noted that its establishment forms an important part of Tsinghua's Global Strategy. He hoped that the future development of the Center would provide all students with more opportunities to improve their global competence. The Center would endeavor to explore and enrich

the meaning of global competence. It should also be committed to strengthening the cultural confidence and shaping the values of the students.

Gao Hong also extended her congratulations on the establishment of the Center.

Liao Ying, the Center's Director, introduced its aims to the audience.

The Center for Global Competence Development would target six core competencies, namely a knowledge of world culture and global issues, foreign language skills, openness and respect for differences, aptitude in



communication and collaboration, a sense of ethics and responsibility, and a heightened self-awareness and self-confidence.

Tsinghua strives to equip its students with the capability to learn, work and live with people from different cultures, and the readiness to embrace opportunities and challenges in the future. Global competence has been promoted as an integral component of Tsinghua's education.



---

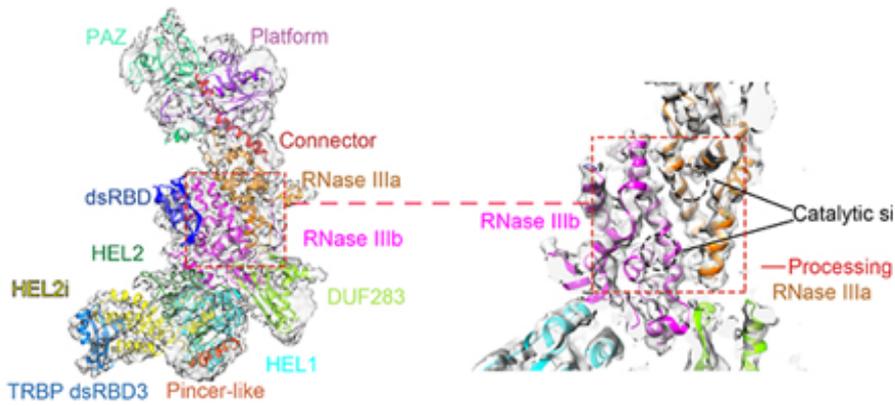
# Atomic structures of human Dicer and its complexes with pre-miRNA revealed by Cryo-EM

A research article describing the first atomic models of human Dicer and its complexes with a pre-miRNA substrate was published online in *Cell* on April 26th, 2018. This is work from Hong-Wei Wang's group in the School of Life Sciences at Tsinghua University and the Beijing Advanced Innovation Center for Structural Biology. In this article, named "Cryo-EM structure of human Dicer and its complexes with a pre-miRNA substrate", the high resolution structure of full length human Dicer (220 kDa) was determined for the first time<sup>[1]</sup>.

Furthermore, this work reported two different conformers of Dicer-TRBP bound with its pre-miRNA substrate pre-let-7.

RNA interference (RNAi) pathway is a major gene regulation process in eukaryotic cells and is a widely used and powerful tool in knocking-down gene expression. In 2006, scientists Andrew Fire and Craig Mello won the Nobel prize in physiology or medicine for their discovery of the RNAi mechanism. The mostly studied endogenous small RNAs for RNAi are miRNAs. Till now, there have been

more than 1,800 miRNA genes discovered in human cells. Now, more and more data verified that tumors are highly related with an abnormal level of miRNAs. In human cells, most miRNAs are generated by an RNase enzyme called Dicer. It is very interesting that there is only one copy of Dicer in human cells. This means that human Dicer protein plays a pivotal role in the maturation process of most miRNAs. Dicer protein is a double stranded RNA specific RNase consisting of multi-domains. Some domains are responsible for binding



**Figure 1. Cryo-EM structure of a human Dicer-TRBP complex**

RNA substrates, some domains take charge of cleaving RNA substrates and others serve as a ruler for the precise cleavage. Human Dicer can recognize and process variant precursor miRNAs into mature miRNAs with common features characterized by ~22 bp in length and a 3-terminal bearing 2 nt overhangs. However, there is no three-dimensional structure with a high resolution of the whole human Dicer protein and the mechanism underlying Dicer's precise RNA processing remains elusive.

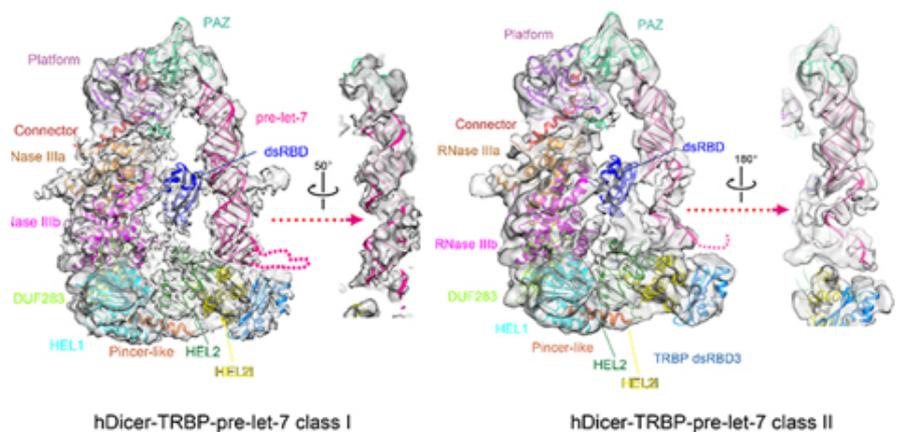
The challenge in revealing the 3D structure of full-length human Dicer at high resolution lies in the following: human Dicer is a 220kDa protein without symmetry, relatively small for single particle cryo-EM reconstruction; it is hard to get monodispersed human Dicer protein molecules in a homogeneous distribution in vitreous ice; and human Dicer suffers from low contrast and preferential orientation in the cryo-EM specimens.

There were few 3D structures of full-length human Dicer reported at rather low resolution using single particle EM analysis [2][3][4]. Through a decade's effort, Hong-Wei Wang's group conquered the technical obstacles one by one to achieve a high-resolution structure of human

Dicer. They established biochemical procedures to purify human Dicer in a complex with its cofactor protein TRBP by co-expressing the two proteins in 293F mammalian cell lines. They tried different kinds of cryo-EM grids and parameters to optimize the cryo-EM specimen preparation conditions for the molecules to be distributed evenly with less preferential orientations in vitreous ice. Using an optimized image processing procedure, they were able to solve the structure of human Dicer complexed with TRBP at 4.4 Angstrom resolution by cryo-EM. In this structure, almost all the domains within human Dicer are determined and located precisely for the first time (Figure 1).

To understand the processing of human Dicer over its RNA substrates, a complex consisting of human Dicer, TRBP and pre-let-7 RNA was assembled via *in vitro* reconstitution. Using cryo-EM, the Wang group also obtained 3D reconstructions of such a complex at a high enough resolution to identify two different conformers of pre-let-7 RNA present in the complex (Figure 2). In the first conformer, the stem of pre-let-7 adopted a perfect base-paired A form helix, while in the second conformer, the stem of pre-let-7 is partially splayed. In collaboration with Qiangfeng Cliff Zhang's group at Tsinghua University with expertise in icSHAPE technology, the research team found that the stem of pre-let-7 RNA adopted multiple conformations in free states but the loading of pre-let-7 onto human Dicer and TRBP complex may promote the stem of pre-let-7 into a stable base-paired state. These structures therefore revealed a function of the hDicer-TRBP complex in stabilizing the stem duplex of pre-let-7 in a substrate-loading state and revealed a mechanism that human Dicer uses to warrant precise dicing on pre-miRNAs with various structural features.

Furthermore, the high-resolution structure revealed that human Dicer's DEXD/H-box helicase domain presented a C-shaped architecture



**Figure 2. Two conformers of human Dicer-TRBP-pre-let-7 complex**

composed of Helicase 1, Helicase 2i and Helicase 2 subdomains. Based on sequence alignment and secondary structural analysis, the DExD/H-box helicase domain proved to be conserved with those of RIG-I and MDA5 proteins, also involved in RNA trans-action. Similar to the latter two, human Dicer's DExD/H-box helicase domain proved to play an important role in regulating the dicing activity of human Dicer protein. This work opened new doors to investigate the mechanism and regulation of small RNA biogenesis in more detail in the future and may lead to the development of new RNAi tools.

Professor Hong-Wei Wang is the corresponding author of this article. Postdoctoral fellows Dr. Zhongmin Liu and Dr. Jia Wang, graduate students Hang Cheng and Ke Xin of Tsinghua University are co-first authors. Professor Qiangfeng Cliff Zhang and his graduate student Lei Sun performed the RNA sequencing and data analysis. The project was performed on the cryo-EM facility and high-performance computational facility of Tsinghua University Branch of the National Center for Protein Sciences (Beijing). This work was supported by research funds from the National Natural Science Foundation of China, the Ministry of Science and Technology, Beijing Municipal Science and Technology Commission, Tsinghua-Peking Joint Center of Life Sciences, and Beijing Advanced Innovation Center of Structural Biology.

## President Qiu Yong meets Rector of the University of Oslo and confers Honorary Professorship on Norwegian scholar



On April 17th, Qiu Yong, President of Tsinghua University, received Professor Svein Stolen, Rector of the University of Oslo (UiO), at Gongziting of Tsinghua, and exchanged views on future cooperation between the two institutions.

During the meeting, Qiu extended his welcome to Prof. Stolen and thanked him for his support for the cooperation between Tsinghua and the UiO. The two institutions have already signed a Memorandum of Understanding and a student exchange agreement in 2017, facilitating student mobility and the possibilities of collaborative research. Qiu hoped that in the future the existing areas of collaboration between Tsinghua and UiO could be extended.

Qiu Yong also congratulated Professor Nils Christian Stenseth for becoming an Honorary Professor of Tsinghua and hoped he would become a bridge between the two institutions.

Qiu noted that in the future Tsinghua will pay more attention to its internationalization and its cooperation with partner institutions. The University of Oslo is an important partner of Tsinghua. He hoped that in the future Tsinghua will conduct closer cooperation with UiO in more areas.

Prof. Stolen noted that he is honored to be at Tsinghua, and the collaboration with Tsinghua is crucial for the UiO. The UiO is also an international university. It welcomes more Chinese students and will send more Norwegians to China in the future.

At the end of the meeting, Qiu Yong formally conferred the title of Honorary Professorship of Tsinghua on Professor Stenseth.

Afterwards, the Norwegian guests also attended the opening ceremony of the "Tsinghua-Norway Collaboration-Workshop Series".

### Link:

<https://doi.org/10.1016/j.cell.2018.03.080>

On April 12th and 13th, Chen Xu, Chairperson of the University Council of Tsinghua, visited Israel and paid visits to both Tel Aviv University and the Hebrew University of Jerusalem,

further deepening cooperation and exchange between Tsinghua and the Israeli universities in fields such as education, economy, and culture.

Chen Xu met with Professor Joseph Klafter, President of Tel Aviv University, and exchanged views on expanding the cooperation between the two institutions. Chen said she was very glad to see that the two sides have achieved substantial progress in technological innovation and collaborative research, as well as faculty and student exchange. Based on their research capabilities and their leadership positions in higher education, the two universities jointly established the XIN Center in 2014, a joint center of innovation, and have already made substantial progress. The two universities have held two China Israel Innovation Forums in 2016 and 2017 respectively, offering a high-level platform for the academic circles and the enterprises of both countries to exchange ideas and promote innovation.

# Chen Xu Visits Israel

----To Promote In-depth Cooperation between  
*Tsinghua and Israeli Universities*

Professor Klafter noted that Tsinghua is a strategic partner of Tel Aviv University. The two sides have maintained close cooperation in student exchange and collaborative research conducted by the faculty members. He hoped that the two institutions could accomplish more fruitful results from their cooperation.

During her visit to the Hebrew University of Jerusalem, Chen Xu talked with Professor Asher Cohen, President of the University, Professor Oron Shagrir, Vice President for Global Affairs, and Professor Reem Sari, Vice President for Research and Development. Chen Xu noted that Tsinghua and the Hebrew University of Jerusalem both have their distinctive features. The two institutions signed a university-level student exchange agreement in 2014. Communication between young people is essential for cooperation between the two universities. Cohen noted that the Hebrew University attaches importance to its cooperation with Tsinghua

and hoped that a new round of exchange and dialogue would be initiated to explore a greater space for cooperation.

During Chen Xu's visit, Professor Hanoch Gutfreund, former President of the Hebrew University of Jerusalem, accompanied her in a visit to the Albert Einstein Archives.

On April 13th, Chen Xu paid a visit to the Chinese Embassy in Israel and held a talk with Ambassador Zhan Yongxin. Chen Xu noted that Tsinghua and the Israeli universities could make the most of their respective research capabilities and build an interdisciplinary platform for international cooperation and innovation. They could jointly train innovative talents and contribute to the continuous and in-depth development of Sino-Israeli relations. Ambassador Zhan noted that the Chinese Embassy in Israel would continue to actively support exchanges between Tsinghua and the Israeli higher education institutions in order to further raise the level of Sino-Israeli cooperation in higher education.



# Tsinghua and University of Waterloo Launch Joint Research Center

On March 29th, Professor Feridun Hamdullahpur, President and Vice-Chancellor of the University of Waterloo of Canada, visited Tsinghua University. Chen Xu, Chairperson of the University Council, received him at Gongziting in Tsinghua. The two sides exchanged views on the further promotion of collaborative research, and together unveiled the Tsinghua University-University of Waterloo Joint Research Center for Micro/Nano Energy & Environment Technology.

Chen noted that Tsinghua and the University of Waterloo are engaged in a long-term partnership. Tsinghua attaches importance to this cooperative partnership. The decision to establish this joint research center, endorsed by the two universities, is an important measure to deal with and solve global issues such as energy shortage and environmental pollution, and thus contribute to



the sustainable development of the world. Tsinghua will fully support the Center and hopes more innovative contributions will be achieved in clean energy technology and environmental governance.

Prof. Hamdullahpur was glad to have come to Tsinghua for the second time. He noted that both the University of Waterloo and Tsinghua

University are top higher education institutions of their respective countries. The two universities are engaged in close collaboration for the shared future of humanity. He hopes the newly established Center will unite the scholars from both institutions and provide solutions for major global issues related to energy and the environment.

## Tsinghua signs dual-degree agreement with Johns Hopkins

On April 12th, Tsinghua University and Johns Hopkins University of the US signed a memorandum of agreement (MOA) at Tsinghua, which offers a dual-degree graduate program in Biomedical Engineering and Electronic Engineering. Yang Bin, Vice President and Provost of Tsinghua, Yao Qiang, Dean of the Graduate School, Wang Xiaoqin, Director of

the Tsinghua Laboratory of Brain and Intelligence, Prof. Hong Bo, Chairman of the Department Council of Biomedical Engineering, attended the signing ceremony.

Huang Yidong, head of the Department of Electronic Engineering, Wang Guangzhi, head of the Department of Biomedical Engineering, and Michael Miller, head of the

Department of Biomedical Engineering of Johns Hopkins, together signed the MOA.

The program allows students to complete the Johns Hopkins Master of Engineering (MSE) and Tsinghua Master of Science in Engineering concurrently. The program provides students with in-depth knowledge of how to solve important biomedical problems through the application of engineering principles, prepares them to become global leaders in biomedical research, and facilitates the transfer of the research results into applications.

# Tsinghua University and Alibaba Group Announce Joint Lab on Natural Human- Computer Interaction Research

On April 3rd, Tsinghua University and the Alibaba Group announced that they will together establish a joint research lab that focuses on the natural experience for human-computer interaction (HCI).

This is the first HCI-focused joint research lab that Alibaba has unveiled since the company launched an innovative global research program, “Alibaba DAMO Academy”, in October last year. The program will focus on both fundamental and disruptive research, with HCI as one of the key areas among others.

The partnership will see both parties collaborating on frontier technologies including multi-source emotion data analysis, affective computing, tangible interaction, and multimodal perception and interaction, which are fundamental in driving forward the advancement of HCI study. Researchers from both parties with a diversity of expertise in cognitive science, linguistics, physiology and aesthetics will join forces in spearheading different research projects. Prof. Xu Yingqing, Director of the Future Lab at Tsinghua University, and Paul Fu, Senior Director of User Experience for Alibaba Group, will lead the lab’s operation and research directions.

Prof. Yang Bin, Vice President of Tsinghua University, said: “by making machines better understand and communicate with humans, HCI is expected to revolutionize various industries and have a profound impact on how we work and live.” Yang added, “Tsinghua University is a global research institute with a cutting edge in a wide array of fields including computer science,

engineering, liberal arts and design, while Alibaba has rich experience in product development and design in the HCI field. We are confident that the joint lab with global talents will yield fruitful research results in the near future.”

Jeff Zhang, Chief Technology Officer, Alibaba Group, said: “Graphic interfaces and the touchscreen have demonstrated how new ways of interaction could lead to an unprecedented information revolution. As artificial intelligence and data technologies advance, humans’ senses and emotions will be further digitalized and become the new mode of interaction with machines.” Zhang added: “we are excited about the prospects of another wave of the information revolution based on new HCI, and it is our honor to have a distinguished partner like Tsinghua University to join us in leading a breakthrough in next-generation HCI research.”

The lab’s technological innovation is expected to be applied in a wide array of commercial scenarios, including new retail, autonomous driving and smart living in the future, where human emotions or affective states are better understood, while multi-module interaction that involves two or more of the five senses - visual, auditory, speech, touch and

smell - will become a dominant mode of interaction with machines.

For example, consumers’ preferences for a product can be digitalized to help merchants with better product design and personal recommendations based on feedback from consumers’ affective states. Also, studies have shown that drivers’ reaction to touch stimulation is much faster than their reaction to visual signals, implying prospects for auto cockpit redesign that combines both visual and touch interfaces for safer driving.

Alibaba has been a pioneer in both fundamental technological research and its commercial application in areas such as speech recognition and visual recognition. Last December, Alibaba introduced far-field voice-recognition technology to the ticketing kiosks in Shanghai metro stations to enable faster ticket purchasing. Through combining signal-processing and computer-vision technology, Alibaba is able to better identify sound sources and solve the problem of intense noise disturbance.

As a global research institute, Tsinghua University has solid research background in areas including natural interaction experience, multimedia computing, multi-user sharing interface management and multimodal human-computer interaction.

