

# Tsinghua Newsletter

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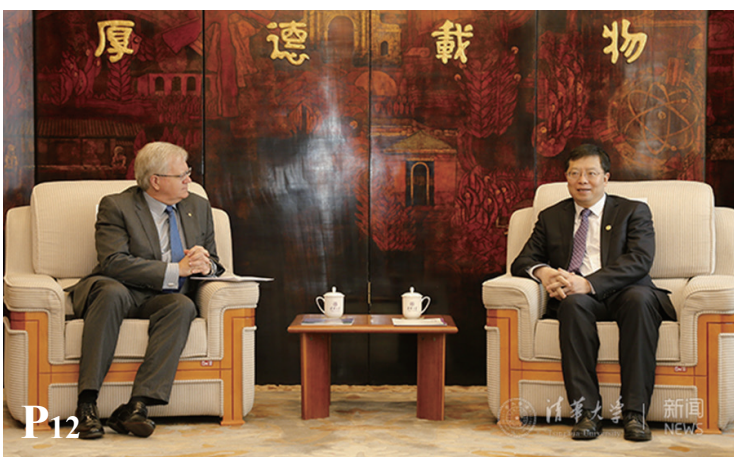
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# Opening up of China means win-win cooperation for world: President Xi

President Xi Jinping said Monday that China is a contributor to economic globalization and its opening up is a win-win outcome for China and the world.

Xi's comment came while meeting with an advisory board of Tsinghua University school of economics and management, at the Great Hall of the People in Beijing.

Xi said the 19th Communist Party of China (CPC) National Congress is of great significance, and has enhanced China's confidence on the path of socialism with Chinese characteristics.

China is pushing forward comprehensive reform with unprecedented determination and efforts and will continue to boost reform and development through opening up, Xi said

While ensuring China's sovereignty, security and development interests, the country will remain committed to reform and opening up and adopt a mutually-beneficial and higher-quality approach to opening up, the president said.

"As a beneficiary of and contributor to economic globalization, China's development is the opportunity for the world. China's opening up is not a zero-sum game but win-win cooperation," Xi said.

Chinese President Xi Jinping meets with members of the advisory board of the elite Tsinghua University's School of Economics and Management at the Great Hall of the People in Beijing, capital of China, Oct. 30, 2017.



As a Chinese saying goes, our friendship remains despite a failed deal. China will not set unfair clauses or take advantage of others, Xi said, adding that China will actively take part in the reform and construction of the global governance system, and promote the establishment of a community of shared future for mankind.

Talent is the foundation and core element of innovation, said Xi, noting that constructors and successors of socialism with Chinese characteristics, rather than bystanders or opponents, should be trained through education.

Xi said that China has made strategic decisions to speed up the construction of world-class universities and world-class academic subjects to enhance the country's core competitiveness.

Xi said he is looking forward to receiving U.S. President Donald Trump in Beijing early next month.

China is willing to work with the U.S. side to look far ahead and aim high, take each other's interests and concerns into consideration, properly solve differences and jointly promote China-U.S. cooperation so as to realize a mutually beneficial and win-win situation, Xi said.

"We are optimistic about the prospects for China-U.S. relations," he said.

Xi encouraged his guests to provide more advice on China's development, conduct more cooperation with the Chinese side, and offer a more objective and comprehensive introduction of China to the world.

Breyer Capital's Founder and CEO Jim Breyer, chairman of the advisory board, and some other members, including Paulson Institute Chairman Henry Paulson, Chairman of the Blackstone Group Stephen Schwarzman, Apple CEO Tim Cook, Facebook CEO Mark Zuckerberg spoke at the meeting.

They said they were deeply impressed by President Xi's report to the opening session of the 19th CPC National Congress, noting that China deserves praise for its achievement in poverty relief and efforts to promote innovation and development, as well as its robust development in economic and social areas.

The guests expressed confidence in China's future, saying that the international community expects to deepen cooperation with China in its reform and opening up process.

They also hoped to see fruitful outcome from Trump's visit and the meeting between the two presidents in Beijing in November.

The advisory board was founded in 2000 and consists of scholars and entrepreneurs from multinationals, as well as Chinese officials.

(Source:Xinhua)



# The members' list of the Advisory Board of Tsinghua University School of Economics and Management for the academic year 2017-2018 announced

Tsinghua University School of Economics and Management (Tsinghua SEM) has recently announced its Advisory Board member list for the academic year 2017-2018. The Advisory Board includes three new members and one member taking over from his predecessor. The three new members are Michael Dell, Chairman and CEO of Dell Technologies, Harald Krüger, Chairman of the Board of Management, BMW AG, and Masayoshi Son, Chairman & CEO, SoftBank Group Corp. Ratan N. Tata, Chairman Emeritus of Tata Sons, Tata Industries, Tata Motors, Tata Steel, and Tata Chemicals, replaced his predecessor to become a Board member.

Michael Dell is the Chairman and CEO of Dell Technologies. He founded Dell in 1984 and made it private in 2013, setting the stage to complete the largest technology deal in history with a combination of Dell, EMC and VMware in 2016. With revenues of \$74B, and 138,000 team members, Dell Technologies is one of the world's largest IT companies serving the needs of global corporations and governments down to small businesses and consumers. Michael Dell was on the Forbes 2016 World's Most Powerful People List, and on the CRN magazine Most Powerful CEOs List 2017.

Harald Krüger joined BMW AG in 1992, and he has been a Member of the Board of Management of BMW AG since 2008. He took charge of a variety of assignments within BMW AG involving human resources, MINI, Motorrad, Rolls-Royce, aftersales, production, amongst others. As of 2015, Mr. Krüger has officially been Chairman of the Board of Management, BMW AG. BMW Group is the world's leading premium manufacturer of automobiles and motorcycles and also provides premium financial and mobility services. As a global company, the BMW Group operates 31 production and assembly facilities in 14 countries and has a global sales network in more than 140 countries.

Masayoshi Son founded Softbank Corp. Japan in 1981, and now acts as Chairman & CEO of SoftBank Group Corp. SoftBank Group is an integrated venture capital firm focusing on IT industry, and has invested in more than 600 companies worldwide, covering the network and telecommunication sectors. The most representative investments by Masayoshi Son are Yahoo and Alibaba. He also invested into a variety of Chinese enterprises including UTStarcom, Sina, Netease, Ctrip, Focus Media, Dangdang, and Shanda Group, etc. Masayoshi Son was named the world's 45th most powerful person in Forbes Magazine's List of the World's Most Powerful People in 2013.

Ratan N. Tata is Chairman Emeritus of Tata Sons, Tata Industries, Tata Motors, Tata Steel, and Tata Chemicals. The Tata Group is the largest group company in India, with a business presence all over the world and operations involving such sectors as communications and information technology, engineering, material, service, energy, consumer products, and chemical products, etc. As the fourth-generation leader of the Group, Ratan N. Tata has been Chairman of the Group since 1991, in charge of a variety of reforms and innovations by breaking the family management style and advocating diversification and internationalization for the Group and transforming the Tata Group into a genuine, globalized business giant.

The Tsinghua SEM Advisory Board was established in October 2000, and consists of leading business executives, business school deans, renowned scholars including Nobel laureates in Economics, and Chinese government officials for economic and financial affairs. Zhu Rongji, the founding Dean of Tsinghua SEM, is the Honorary Chairman. The Advisory Board aims to strengthen the external relations of the School, improve its overall accomplishments in education and research, and help to build it into a world-class school of economics and management.

# President Qiu Yong receives honorary academic title of Honorary Fellow from RWTH Aachen University

On October 27th, RWTH Aachen University held a ceremony at the German Embassy in Beijing to confer the honorary academic title of Honorary Fellow on the President of Tsinghua University Qiu Yong. The German ambassador to China, Herr Michael Clauss, had a meeting with President Qiu, attended the ceremony and delivered a speech. Also among the guests attending the occasion was Prof. Dr.-Ing. Ernst Schmachtenberg, Rector of RWTH Aachen.





The cooperation and communication between Tsinghua University and RWTH Aachen University dates back to the beginning of the 1980s. For a long time, the two universities have been actively engaged in promoting a strategic partnership, with fruitful results in the fields of scholar and personnel exchange, collaborative research, and cultural communication. The joint Master's degree program developed by the two universities is a successful example of this Sino-German higher education cooperation.

During the ceremony, Rector Prof. Dr.-Ing. Ernst Schmachtenberg conferred the certificate of the honorary academic title of Honorary Fellow on President Qiu, who is the first scientist and scholar awarded this title.

In his speech, the German ambassador Herr Michael Clauss extended his congratulations to President Qiu on his being conferred with the honorary title. He also noted that the strategic partnership between the two universities provided a platform of communication for the top scholars from both institutions. Herr Clauss believed the cooperation between Tsinghua and RWTH Aachen would have a splendid future.

Rector Prof. Dr.-Ing. Ernst Schmachtenberg noted in his speech that scientific collaboration is the foundation of social progress, and that RWTH Aachen University was very glad to confer the honorary title on President Qiu. He hoped the future cooperation between the two universities would deepen, elevating their research collaboration to a new level.

President Qiu expressed his sense of honor at receiving the honorary title from RWTH Aachen University in his speech. He also noted that the decision of RWTH Aachen to make a Chinese person the first recipient of such a title displayed their willingness to attach great importance to the development of Sino-German cooperation in education and scientific research. The conferment also reflected the long history of collaboration and deep friendship between the two universities. President Qiu also noted his intention to continue his efforts in promoting their cooperation, and to make further contributions, together with Rector Prof. Schmachtenberg, to the people-to-people, educational and technological exchanges between China and Germany.

President Qiu further expressed his belief that the two universities would broaden their fields of collaboration in the future, and that the Sino-German people-to-people, scientific and educational communications would definitely achieve a higher level.

After the conferment ceremony, President Qiu and Rector Prof. Schmachtenberg together signed a Letter of Intent with the main purpose of establishing a new joint Master's degree program.

# Tsinghua alumnus Xie Zhenhua awarded Lui Che Woo Prize 2017

On October 3rd, the second Lui Che Woo Prize—Prize for World Civilization was presented at the Hong Kong Convention and Exhibition Center (HKCEC), and the President of Tsinghua University Qiu Yong attended the ceremony. Also attending the ceremony were more than 1,000 guests, including Dr. Lui Che Woo, Founder and Chairman of the Board of Governors cum Prize Council, The Hon. Mrs. Carrie Lam Cheng Yuet-ngor, Chief Executive of the Hong Kong Special Administrative Region, The Hon. Tung Chee-hwa, Prize Council member and Vice Chairman of the 12th National Committee of the Chinese People's Political Consultative Conference, together with other related guests and media reporters.

The first award presented in the ceremony was in the Sustainability category, whose aim is to reward the accomplishments of any person or group that works toward the maintenance of ecological balance, the promotion of sustainable use of natural resources, and for the benefit of posterity. This year the prize was awarded to Mr. Xie Zhenhua, a Tsinghua alumnus and Vice Chairman for the Committee of Environmental Protection of the Chinese People's Political Consultative Conference, commending his outstanding contribution to the "prevention of climate change". Mr. Xie had engaged actively in the promotion of measures dealing with climate change both domestically and internationally, and facilitated the final conclusion of the Paris Agreement in 2015.





During the ceremony, Dr. Lui, Mrs. Carrie Lam, and Prof. Sir Colin Lucas, Vice-Chancellor Emeritus of the University of Oxford and member of the Prize Recommendation Committee, delivered their speeches and highly praised Mr. Xie's accomplishments in the field of environmental protection.

In his speech, Dr. Lui said the recipient's efforts displayed a "heart full of gratitude" to nature, setting an example for the other developing economies. Mrs. Carrie Lam called Mr. Xie a key figure in the conclusion of the Paris Agreement, and one who had played an irreplaceable role in the negotiation process.

For ten consecutive years since 2007, Mr. Xie has been the head of the Chinese delegation to UN Climate Conferences, having thus brought about a series of significant results in the multilateral negotiations. To facilitate the final signing of the agreement, Mr. Xie made constructive proposals that took into consideration the respective interests of the participating countries. His courage, sense of responsibility, and remarkable achievements have won him general acclaim and made him a worthy recipient of the prize.

In his own speech, Mr. Xie said he was honored to receive the prize, which recognized their collective efforts in environmental protection and sustainability. He also expressed his sincere thanks for the trust of the country and all the attention and support from the wider public. Moreover, Mr. Xie donated the award money to his alma mater Tsinghua University, to further facilitate related projects dealing with climate change and other non-profit social works benefitting posterity.



# Opening ceremony of Zhang Ding's centennial birth exhibition held at Tsinghua University Art Museum

On October 15th, the opening ceremony of Zhang Ding's Centennial Birth Exhibition was held in the hall of Tsinghua University Art Museum. Those in attendance and who delivered speeches included Professor Qiu Yong, the President of Tsinghua University, Professor Feng Yuan, the Vice President of the China Federation of Literary and Art Circles and curator of Tsinghua University Art Museum, Mr. Xu Li, Vice President of the China Artists Association, Professor Chang Shana, the former Dean of the former Central Academy of Craft Art, and Mrs. Lizhao, the widow of Professor Zhang Ding. The ceremony was hosted by Prof. Lu Xiaobo, Dean of the Academy of Arts & Design, Tsinghua University.

President Qiu stated that Prof. Zhang Ding founded and pioneered the education of art and design in modern China and made great contributions in many art fields. Professor Zhang Ding cultivated numerous art talents, and won respect from teachers, students, artists, and the public alike.

The president also noted that cultivating talents has always been the most significant task of a university. Art plays an indispensable role in nurturing students' integrity and establishing a humane environment. Tsinghua University would further promote the development of art and art education, and spread the spirit of the artists of the older generation to enrich students' knowledge and elevate their taste in art.

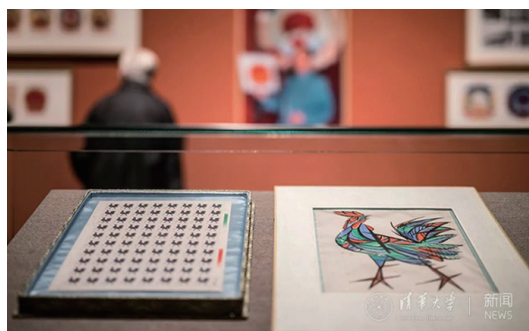




Throughout Prof. Zhang Ding's life, he witnessed and experienced the various artistic trends and important events in the development of modern art in China.

He independently designed or created jointly with other people the National Emblem and the emblem of the Chinese People's Political Consultative Conference (CPPCC). As a pioneer, he was the first artist to hold a traditional painting exhibition in a western country and his meeting with Picasso bridged the cultural barriers between China and the West.

Zhang's art influenced not only a whole historic era but also the education of art and design. He was also the chief promoter in the renaissance of Chinese frescoes.



# Prof. Jianbin Luo elected a member of the GEDC Executive Committee

Prof. Jianbin Luo, the Dean of the School of Mechanical Engineering and a member of the Chinese Academy of Sciences, was elected onto the Global Engineering Deans Council (GEDC) Executive Committee.

The GEDC aims to serve as a global network of engineering deans, enhancing their collective strength for the progress of engineering education and research.

The chief objectives of the GEDC include the provision of a worldwide platform for the exchange of information and the sharing of experiences in leading an engineering program and the provision of possibilities for the deans to cooperate in curriculum development and to build partnerships with each other. The GEDC also helps the deans to have a louder voice in the decision-making process at various levels, and facilitates the development of quality standards for engineering education.

Prof. Jianbin Luo was born in Huxian, Shaanxi Province, in 1961. He received his BEng degree in Metal Working from Northeastern University in 1982 in China, and finished his study at Master's level at Xi'an University of Architecture and Technology in 1988. In 1994, he received his PhD degree in Mechanical Design and Theory from Tsinghua University and then joined the faculty.

He won the National Science Fund for Distinguished Young Scholars of the National Natural Science Foundation of China (NSFC) funding in 1999, was honored as the Distinguished Professor for the Chang Jiang Scholar Program in 2002 and was elected a member of the Chinese Academy of Sciences in 2011.

He is currently the Dean of the School of Mechanical Engineering.





# Australian National University Vice-Chancellor Brian Schmidt visits Tsinghua

On the morning of October 13th, the President of Tsinghua University Qiu Yong met with Vice-Chancellor Brian Schmidt, winner of the 2011 Nobel Prize in Physics, from the Australian National University (ANU) in the Main Building. Professor Schmidt then delivered a speech entitled "The State of Universe" to the Tsinghua Global Vision Lectures Series.

During the talk, President Qiu Yong extended his welcome to Vice-Chancellor Brian Schmidt for his second visit and briefed him on the recent developments of the university, especially the important progress made in international cooperation. President Qiu noted that Tsinghua attached great importance to establishing close cooperation with leading international universities, including the Australian National University. The cooperation between Tsinghua and ANU has already achieved fruitful results with their cooperative project. President Qiu hoped that with the support of Vice-Chancellor Schmidt, both universities would conduct high-level communication and cooperation in fields such as astrophysics, to further promote people-to-people exchanges between China and Australia.

Vice-Chancellor Schmidt noted that both ANU and Tsinghua University are prestigious academic institutions. He hoped that the two universities would strengthen their communication and cooperation in fields such as supercomputers, and continue to promote exchanges and reciprocal visits at a high level.

Following the meeting, Vice-Chancellor Schmidt delivered a speech entitled "The State of Universe".



# PhD candidate from the Department of Electronic Engineering wins IEEE VTC 2017-Fall Best Student Paper award

From Sep 24th to 27th, the 2017 IEEE 86th Vehicular Technology Conference (IEEE VTC 2017-Fall) was held in Toronto, Canada, hosted by the Institute of Electrical and Electronics Engineers (IEEE). The paper, entitled Beamspace MIMO-NOMA for Millimeter-Wave Communications Using Lens Antenna Arrays, with Bichai Wang, PhD candidate from the Department of Electronic Engineering of Tsinghua University as its first author, won the only IEEE VTC 2017-Fall Best Student Paper Award.

The IEEE Vehicular Technology Conference is an important academic conference in the domain of wireless communication technologies. The research areas of this conference include wireless communication, cognitive radio, cooperative communications, positioning technology, vehicular communications, and similar related fields. The conference is organized twice each year, in Spring and Fall, and has a history of 43 years until the present. The conference this year (the 86th session) has a record-setting number of submissions with 475 papers accepted. At the end, one paper received the Best Paper Award, and one paper received the Best Student Paper Award. The percentage of winning papers was 0.4%.





In future 5G millimeter-wave (mmWave) communications, beamspace MIMO technology can significantly reduce the number of required radio-frequency (RF) chains in mmWave massive MIMO systems, thereby significantly reducing system power consumption. However, a fundamental limit of beamspace MIMO is that the maximum number of users that can be supported cannot exceed the number of RF chains, which limits the further improvement of system capacity. This paper aims to break this fundamental limit by proposing a spectrum and energy efficient mmWave transmission scheme that integrates the new concept of non-orthogonal multiple access (NOMA) with beamspace MIMO, i.e., beamspace MIMO-NOMA. In the proposed beamspace MIMO-NOMA scheme, the number of users can exceed the number of RF chains, and the system capacity can be also significantly improved. Furthermore, this paper proposes a corresponding precoding design and power optimization algorithm to maximize the achievable sum rate. The proposed scheme can also be directly applied to the hybrid precoding structure, which provides important ideas and solutions for the practical application of mmWave massive MIMO technology.

Bichai Wang obtained a bachelor's degree from the Department of Electronic Engineering of Tsinghua University in 2015, and was granted direct entry without examination to the postgraduate program of the same department in September of the same year. In the past two years, Bichai Wang has focused on research into non-orthogonal multiple access (NOMA), and has published four journal papers in IEEE Journal on Selected Areas in Communications, IEEE Communications Magazine, and IEEE Communications Letters. In 2016, Bichai Wang was awarded the National Scholarship for Graduate Students.

Associate Professor Linglong Dai of the Department of Electronic Engineering is her supervisor as well as the second author of the winning paper. His team has engaged in continuous and in-depth research into wireless communication technologies for 5G, and has achieved fruitful results. The co-authors of the winning paper also include Professor Gao Xiqi from Southeast University, China, and Professor Lajos Hanzo from the University of Southampton, UK.

# Global Communication Office Hg]b[ \ i UI b]j Yfg]hm

Photographers: Song Tianyu, Zhang Yu,  
Zhang Yi

