清華大學土木水利学院

SCHOOL OF CIVIL ENGINEERING
TSINGHUA UNIVERSITY

2021

CATALOGUE

清華大学土木水利学院
SCHOOL OF CIVIL ENGINEERING
TSINGHUA UNIVERSITY

—Faculty

—Education

—Research

—Alumni

—New Civil Engineering Building

Department of Civil Engineering & Department of Construction Management (CE & CM), Tsinghua University 2021

The School of Civil Engineering offers programs in civil and hydraulic engineering, one of the most time-honored engineering disciplines at Tsinghua University. In 1916, the School began to provide preparatory training for civil engineering students to go and study in the United States. In 1926, the Department of Engineering, including the civil engineering major, was formally founded in Tsinghua University, and was renamed the Department of Civil Engineering in 1929. The Department offers two programs, namely railway & roadway engineering and hydraulic engineering & municipal sanitation. In 1952, during the nationwide reorganization of colleges and departments, the Department of Hydraulic Engineering was founded. In 2000, the School of Civil Engineering was formally established, and so was the Department of Construction Management.

The Department of Civil Engineering and the Department of Construction Management of Tsinghua University seek to "serve the country, contribute to the world, and lead the future," and strive to become a thinker, innovator, and leader in the field of civil engineering and cultivate creators, builders, and guardians of a better life. The Departments have achieved a range of significant progress in teaching, scientific research, and social contribution. For the past many years, they have maintained a position in the global top ten in a variety of subject rankings across the world.

It takes ten years to grow a tree but a hundred years to educate people. In the past 95 years, the School of Civil Engineering, Tsinghua University has trained nearly 10,000 undergraduates and almost 5,000 postgraduates for the country. They contribute to the national progress in places and industries across the country. Many have grown into academic masters, entrepreneurs, and government leaders. The wisdom, hard work and selfless dedication of generations of people from the School have brought great glory and pride to the University, the School, and the teachers!

The Department of Civil Engineering and the Department of Construction Management will continue to meet the strategic needs of national development and build world-class disciplines. They focus on solving the fundamental science issues in civil engineering and the critical technical problems in China's urbanization and infrastructure construction. They cultivate students into future leaders with patriotism, high humanistic quality, outstanding innovation capabilities, expansive international vision, and excellent integrated ability in technology and management.

The people's ever-increasing aspiration for a better life is our new goal. Higher standards on industrialized, intelligent, and green city had been raised from updated China's new urbanization strategy. The related science and technology, construction methods, operating modes, operation management, and industry governance will all experience massive changes. Civil engineering, a discipline most closely related to national development, will take on more arduous tasks and face more significant challenges. The world is undergoing political and economic changes. There were substantial transformations in the past a hundred years; people worldwide, especially those coming from countries along the Belt and Road, still strongly demand a better life and infrastructure construction. The demand for infrastructure maintenance and upgrading is also massive in developed countries as the aging of their infrastructure is becoming more severe day by day. The School of Civil Engineering fully grasp the connotation change and future development of the discipline from the six aspects of science, systematization, greenness, intelligence, socialization, and humanism, and fulfill our glorious mission to "serve the country, contribute to the world, and lead the future."

Professor Fang Dongping

Dean, Department of Civil Engineering of Tsinghua University

Faculty

The Department of Civil Engineering and the Department of Construction Management currently has 84 faculty members with public institution staffing status. There are 69 full-time teachers, including 38 teaching and research members (including 18 tenured professors, 11 tenured associate professors, eight tenure-track associate professors, and one assistant professor), 12 research members (including one research fellow, six associate research fellows, and five assistant research fellows), two teaching members (including two associate professors), and 17 undetermined position members (including 11 professors/research fellows, six associate professors/associate research fellows).

Un-determined fellow

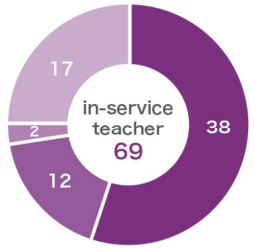
- Professor/ Research fellow (11)
- Associate professor/Associate research fellow (6)

Teaching fellow

- Associate professor/Associate research fellow (2)

Research fellow

- Research fellow (1)
- Associate research fellow (6)
- Assitant research fellow (5)



Teaching and Research fellow

- Tenured full professor (18)
- Tenured associate professor (11)
- Pre-tenure associate professor (8)
- Assitant professor (1)

New teachers

Li Shen

Li Shen joined the Future Transportation Research Team of the Future Transportation Research Center of the Department of Civil Engineering in September 2021 as an assistant research fellow in the research position. Li started his study in the Department of Automotive Engineering of Jilin University in 2008 for a bachelor's degree. After finishing his undergraduate study at Jilin University in 2012, he entered the Department of Civil and Environmental Engineering of the University of Wisconsin-Madison for a Ph.D. and graduated in 2018. In the same year, he entered the Traffic Operations and Safety (TOPS) Laboratory at the University of Wisconsin-Madison and worked there as a postdoctoral fellow. He then joined Tsinghua University in September. Li Shen has long been engaged in research on traffic big data and Connected Automated Vehicle Highway Systems (CAVH). His main research includes: detecting traffic status based on mobile phone data, systemic and architectural design of the control system of intelligent IOV-connected traffic, and intersection traffic trajectory planning.

Gu Chen

Gu Chen joined the Institute of Disaster Prevention and Mitigation Engineering of the Department of Civil Engineering in October 2021 as an assistant professor in the teaching research position. Gu Chen received her bachelor's degree from the School of Earth Sciences and Engineering at Nanjing University in 2010. In the same year, she started her Ph.D. in the Department of Earth, Atmospheric & Planetary Sciences of the Massachusetts Institute of Technology. Gu obtained her doctorate in geophysics and seismology in 2016. Her doctoral thesis was supervised by seismologist M. Nafi Toksöz and petrophysicist J. Brian Evans. After finishing her study as a Ph.D. candidate, in addition to collaborating with the supervisors of her doctoral thesis, she also had a close interdisciplinary collaboration with Professor Oral Büyüköztürk at the MIT Department of Civil and Environmental Engineering, Professor Youssef M. Marzouk at the Department of Aeronautics and Astronautics, and Professor James R. Rice at the Harvard School of Engineering and Applied Sciences (SEAS). Dr. Gu Chen's research orientation is numerical simulation and inversion theory and its extensive scientific and engineering applications. The main application scenarios include ground motion simulation, oil and gas reservoir exploration, and acoustic emission tracking of crack evolution.

Awards of teachers

Wang Shouqing

Professor Wang Shouqing won the IPMA Research Achievement Award

On May 14th, 2021, the IPMA (International Project Management Association) Global Research Award Review Committee announced the winner of the Global Research Award "Research Achievement Award". This prestigious award was given to Professor Wang Shouqing this year to recognize his achievements in project management for more than 30 years. He has made outstanding contributions in global project management, especially in academic research, public service, education, and training projects under public-private partnerships.

Pan Peng

Professor Pan Peng won the XPLORER Prize

Professor Pan Peng won the XPLORER Prize 2021 for his achievements in building structure resistance to earthquake collapse and resilience improvement. The XPLORER Prize is a public-interest award led by scientists funded by the Tencent Foundation. It is currently one of China's most generous talent funding programs for young scientists. As a public-interest program led by scientists, the award adheres to the three main principles of being "future, potential and exploration - oriented," encouraging young scientists to explore the "untouched areas" of basic science and cutting-edge technology. It also explores continuous and stable investment mechanisms as social support for basic science researchers.

Li Wei

Associate Professor Li Wei won the National May 1 Labor Medal

On April 25th, the 2021 National May 1 Labor Award and National Workers Pioneer Title were announced. The 2021 National May 1 Labor Award aims to enhance the pride and commitment of labors and create a social atmosphere that values labor, knowledge, talents, and creation. The All-China Federation of Trade Unions awards the National May 1 Labor Certificate to 397 organizations, the National May 1 Labor Medal to 1,197 workers, and the National Workers Pioneer Title to 1,297 teams and groups. Dr. Li Wei from the Department of Civil Engineering of Tsinghua University won the National May 1 Labor Medal in 2021.

Ban Huiyong

Associate Professor Ban Huiyong won Tsinghua University Academic Award for Young Teachers

The Tsinghua University Academic Award for Young Teachers was set up in 1995 to reward young teachers with innovative thinking and outstanding research results in academic research. Associate Professor Ban Huiyong won the THU Academic Award for Young Teachers 2020.

Mr. Ban Huiyong is mainly engaged in the teaching and scientific research in high-performance steel and steel structures. His research aims to balance performance, cost and efficiency, at the same time, to solve the comprehensive challenges faced by steel structures. He tries to maximize the utility of steel and focuses on developing the basic stress mechanism of bimetallic composite steel and steel structures and critical technical issues in engineering applications. He has presided over six national-level scientific research projects in related fields and one teaching reform and research project of Tsinghua University. He serves as the editor-in-chief of 2 group standards (in editing).

Wang Qiang

Associate Professor Wang Qiang won the Engineering Category First Prize in Group A at the 12th Session of the Young Teachers' Competition on Basic Teaching Skills among Universities in Beijing

At the 12th Session of the Young Teachers' Competition on Basic Teaching Skills among Universities in Beijing, Associate Professor Wang Qiang from the Department of Civil Engineering won the Engineering Category First Prize. Wang Qiang's competing course is called "Building Materials". Through more than three months of preparation, eight intensive training sessions, and more than ten trial lectures, he demonstrated the professional teaching skills of young civil engineering teachers of Tsinghua University. His confidence and style with excellent performance at the competition earned him the First prize, Best Teaching Plan Award, Best Live Demonstration Award, and Most Popular Award by Students.

Xing Qinyan

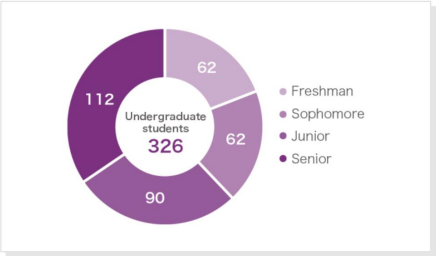
Associate Professor Xing Qinyan's *Structural Mechanics (1) (Chinese)* was chosen as a benchmark course at Tsinghua University

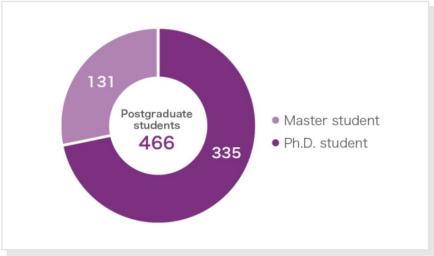
The course Structural Mechanics (1) (Chinese) lectured by Associate Professor Xing Qinyan, Department of Civil Engineering, was chosen into the fourth batch of the benchmark courses evaluated and unveiled at Tsinghua University. As a major course for undergraduates studying civil engineering at Tsinghua, it is an important bridge connecting basic mechanics to civil engineering practice and science innovation.

On the basis of the Department's existing superior teaching resources in structural mechanics, Xing continued to update and refine the course objectives, teaching content and teaching methods, and employed conceptual and methodological knowledge to cultivate students' abilities in logical analysis and practice-based innovation, arousing their interests in specialized academic study. She also built the sense of responsibility and mission in students by lecturing on the development of Chinese engineering theory and practice.

This course is one of the main components in the national quality courses, the "structural mechanics series," and was rated as the Ideological and Political Demonstration Course at Tsinghua University in 2021 and a valuable course recognized by the undergraduates finishing their study at the University in 2020. In addition to this course, Xing also teaches several other courses including the Introduction to Elasticity Mechanics and Finite Element as a specialized course in civil engineering, the Structural Mechanics (Chinese) for the study of construction management and traffic under the broad civil engineering category, and the Writing and Communication, a general course for all freshmen at the University. Xing directed the editing of the online courseware of Structural Mechanics as an integrated textbook, which was selected as a "Quality Undergraduate Textbook Courseware" among Beijing's universities in 2020. She also won the title of Tsinghua University Model Teacher for Ideological and Political Courses 2021, two first prizes of Tsinghua University Teaching Achievement Awards, Tsinghua University Annual Award for Teaching Excellence, and Tsinghua University Young Teachers Award for Teaching Excellence, etc.

Education





Undergraduate students

The Department of Civil Engineering and the Department of Construction Management currently have 326 undergraduate students, including 62 first-year students, 62 sophomores, 90 junior and 112 senior students. There are 16 international students among the undergraduates. In addition, Xingjian College and Weiyang College have about 240 students majoring in civil engineering, hydraulic engineering and Marine engineering.

Postgraduate students

The Department of Civil Engineering and the Department of Construction Management currently have 466 postgraduate students, including 335 doctoral students (including 52 in engineering) and 131 master students; 11 students are from Hong Kong SAR, Macao SAR, and Taiwan Province, and 42 are international students (including 13 under the ICPM program).

Broad category-based training: majors with wide applications, multiple programs, and inter-disciplinary courses

[Majors with wide applications]

The reshaping of undergraduate majors and undergraduate education in the broad civil engineering category shall conform to the new connotation of civil engineering majors. To cultivate excellent talents with long-term development and innovation potential, the department "uses materials and energy, and based on mechanics, economics, management science, and aesthetics, to create human engineering miracles in science, technology, and arts." The essence of reshaping the majors of the broad civil engineering category in undergraduate education is to enrich and reconstruct civil engineering majors' education and teaching system. The broad civil engineering category in Tsinghua University integrates five undergraduate majors, including **civil engineering, hydraulic science and engineering, traffic engineering, engineering management, and marine science and engineering**. It has been gradually implementing broad category-based training with undergraduate majors since 2017.

[Multiple programs]

The training of high-level professionals in the broad civil engineering category includes both undergraduate majors with wide applications and high-level postgraduate education. The general education of undergraduates is connected with postgraduate education, which achieves "**undergraduate-postgraduate integrated education**" and thereby optimizes the undergraduate training path. Superior resources are used to develop the nine dominant orientations in master programs, including high-performance structures and materials, disaster prevention and mitigation science, and engineering. These programs are connected with hot technologies and advantageous employment directions in civil engineering. Under the background of the "Pilot Reform Program of Enrollment for Basic Subjects," the broad civil engineering category is connected with science education. The "science-engineering integrated" training path is implemented, and the double bachelor's degree training programs of "mathematics plus civil engineering, hydraulic and ocean engineering" and "mechanics plus civil engineering, hydraulic and ocean engineering" are developed.

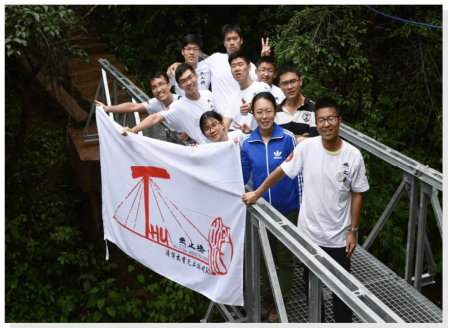
[Inter-disciplinary courses]

Based on the orientation of "value and ability" and the feature of "technology + management," **a three-tiered course system including "university level-broad category-major"** is established. University-level platform courses are specially designed, and broad category-based development courses are set up to connect with the frontiers of scientific and technological development and improve students' literacy and accomplishments in the expanded disciplines of economics, laws, energy, environment, and aesthetics.

Social practice: footprints across the country

Social practice is a vital part of the education at Tsinghua University. The School of Civil Engineering has always maintained an excellent social practice tradition.

The Department of Civil Engineering and the Department of Construction Management set up school-level and department-level service-oriented construction projects such as the Great Country with One Heart, Wu Zhi Qiao Bridge to China, and Flying Box to guide students to the forefront of the industry and grasp the new industry development trends in civil engineering and construction management, and at the same time, apply what they have learned to serve the development and construction of the country. In the past four years, the Department of Civil Engineering and the Department of Construction Management have organized nearly **100** practice teams with more than **800** participants. They have traveled in more than **20** provinces and cities and seven overseas countries and regions, including Singapore, Malaysia, and Kuwait. The students "were **educated, gained abilities and made contributions**" through social practice, and a good atmosphere of active participation in social practice has been formed. Relying on social practice, many undergraduates carried out scientific research and innovation projects such as analyzing fires in ancient buildings and analyzing airflow in isolation wards of cabin hospitals. They achieved good results in the Challenge Cup.



The Wu Zhi Qiao Team Builds Footbridge for Poor Mountainous Areas to Benefit Local People

Academic sci-tech innovation: innovative thinking and endless inspiration

For the broad civil engineering category, active efforts have been made to construct a sci-tech innovation competition platform made up of various sci-tech innovation competitions such as Structure Design Competition, Hydraulic Innovation Competition, Future City and Infrastructure Innovation Competition, Innovation Competition in Construction Engineering and Management (ICCEM), Hydraulic Interest Competition, Transportation Technology Competition, and Campus Underground Space Creativity Competition. Active efforts have been made to organize and participate in nationwide and international competitions such as the Mao Yi-Sheng Charity Bridge Innovation Competition and the Asian Structure Design Competition.

There are a structure model club, a future city construction club, and a future disaster control club. Club members organize regular lectures, training, and competitions to foster sci-tech innovation talents across disciplines.

The student innovation platform integrating sci-tech competitions, SRT, interest teams, and one-on-one guidance by mentors covers various disciplines under the broad civil engineering category. It has played a full role in motivating students to innovate, improving their subject literacy, and enhancing their academic enthusiasm.

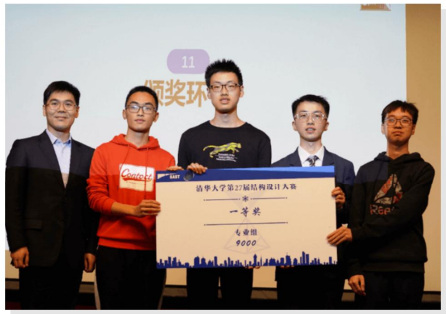
[Tsinghua University Structure Design Competition ("Structure Competition"for short)] is a sci-tech innovation competition for all undergraduates in THU. Initiated and hosted by Departments of Civil Engineering and Construction Management THU, it is one of the five three-star competitions in THU. The Structure Competition was first held in 1994 and has been successfully held for 27 sessions. A novelty section was first set up at the 5th session. The attractive propositions and simple competition system attracted students from all schools and departments. A shaking table was used to simulate earthquake loads at the 13th session for the first time. "Building a City Overnight", the 20th session, innovatively adopted 3D printing technology to complete the model production. The 23rd session, "Building Shells", marked the first co-organization of the event with the School of Architecture. The 27th session, "Snow Box" emphasized the architectural and structural designs for a comprehensive indoor snowboarding stadium, and aimed to boost the development of ice and snow sports in the 2022 Beijing Winter Olympics.

The Structure Competition aims to guide contemporary college students to apply in-class knowledge and theory with engineering practice. This competition examines students' comprehensive application of knowledge, innovation awareness, and teamwork, through stimulating students' intellectual curiosity, enhancing teamwork spirit, improving communication skills, and building open minds for innovation. This competition continuously trains a new generation of civil engineers with comprehensive competencies for the country.

In the last 27 years of the Structure Competition, the building materials used cover a variety of traditional and new materials such as paper, paulownia wood, playing cards, PVC boards, fiberglass mesh, etc.. the building types involved range from bridges to various industrial and civil buildings; the structural forms include a wide range of modern structures such as large spans and high-rises; the loading equipment ranges from weights, iron sand, trolleys to fans and shaking tables , all to simulate multiple types of real loads.

The Structure Competition has continuously incorporated new connotations besides new competition forms. Covering the snow disaster in the south, the earthquake in Wenchuan, and the Beijing Winter Olympics, the propositions of the competition are often based on actual projects and connected with the hot topics and pain spots of the era, which reflects the down-to-earth quality of the civil engineering profession in carrying out scientific research.

For civil engineering students at THU, the Structure Competition is more than just a competition but also a kind of memory and inheritance. It carries each bit of the developments in the civil engineering industry. It will guide us to move forward and explore more possibilities in the future.



Outstanding Contestants and Works at the 27th Tsinghua University Structure Design Competition

Cultural life: cultural and sports activities inspiring vitality of the young

The School of Civil Engineering launched cultural activities to improve cohesion, enrich students' extracurricular life, and strengthen inter-disciplinary exchanges with other universities. The School has also achieved good results at several cultural and sports events of the university level and has organized a variety of creative and unique school-level and department-level activities.

2021 Running Club Winter Olympics Running activities

The Baseball Team of Department of Civil Engineering and Department of Construction Management Wins the 9th the Championship at Ma Yuehan Cup in Ten Years

2021 Badminton League

Research

THU Department of Civil Engineering held its 95th anniversary and the theme forum "Future Cities and Infrastructure"

On the morning of April 24th, 2021, the Department of Civil Engineering of Tsinghua University held its 95th anniversary and the theme forum "Future Cities, Towns and Infrastructure" in Multi-function Hall 201, Ho Sin-Hang Building. The forum was conducted online and offline, moderated by Professor Feng Peng, Head of the Department of Civil Engineering. The guests and alumni present on site include Dr. Nie Jianguo, member of the Chinese Academy of Engineering, Director of the Academic Committee of Tsinghua University, and President of Tsinghua University Research Institute of Future Cities, Towns and Infrastructure, Yuan Si, Deputy Director of the Council of Tsinghua University, former Head of the Department of Civil Engineering, and the first Dean of the School of Civil Engineering, Liu Xila, Professor of Shanghai Jiaotong University and former Head of THU Department of Civil Engineering, Fang Dongping, Dean of THU School of Civil Engineering, Liu Hongyu, Director of THU Institute of Real Estate, Ye Yangsheng, Secretary of the Party Committee and Chairperson of China Academy of Railway Sciences Corporation Limited, and an alumnus graduating from THU Department of Civil Engineering in 1989, Xiao Congzhen, National Master of Survey and Design, President of China Academy of Building Research Architecture Design Institute, and an alumnus graduating from THU Department of Civil Engineering in 1991, Zhu Rongbin, Executive Chairperson and President of Yango Group and an alumnus graduating from THU Department of Civil Engineering in 1993, Ma Xin, Chairperson and President of Co-Create Golden Technique Project Management (Beijing) Co., Ltd., and an alumnus graduating from THU Department of Civil Engineering in 1998, Professor Song Erxiang, Professor Ma Zhiliang, and Research Fellow Yang Jun from the Departments of Civil Engineering and Construction Management, and retired professors Wang Lusheng, Lian Huizhen, Guo Jingjun and others from the Department of Civil Engineering. Mr. Long Yuqiu, member of the Chinese Academy of Engineering and Professor of THU Department of Civil Engineering, and Xiao Xuwen, member of the Chinese Academy of Engineering, Chief Expert at China State Construction Engineering Corporation Limited, and Honorary President of THU Alumni Association CE & CM Branch, delivered speeches online. Wang Yinhai, Professor of the University of Washington and an alumnus graduating from THU Department of Civil Engineering in 1989, made a special presentation online. About over 600 teachers, students, alumni, and people from various sectors watched the event's live broadcast.

Previous and Incumbent Leaders, In-service Teachers,
and Outstanding Alumni of the Department of Civil Engineering

Based on primary national development needs, the forum discussed engineering sci-tech innovation, and new urbanization and infrastructure development in the future. It celebrated the 110th anniversary of Tsinghua University and the 95th anniversary of the Department of Civil Engineering with grand, simple, and enthusiastic academic discussions. The seven extraordinary special presentations covered multiple cutting-edge topics such as high-speed rail, high-rise buildings, real estate, and project management in several areas, including structural engineering, traffic engineering, construction management, etc.

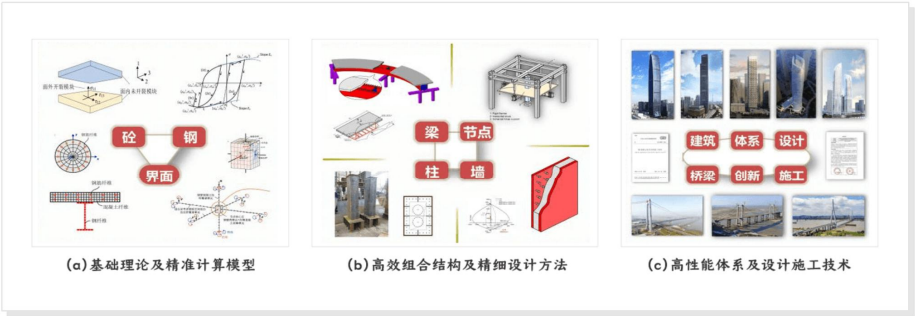
The project Basic Theory on Steel-Concrete Composite Structures under Complex Stress and Key Technologies of High-performance Structure System led by Professor Fan Jiansheng won the National Science and Technology Progress Awards

The project Basic Theory on Steel-Concrete Composite Structures under Complex Stress and Key Technologies of High-performance Structure System led by Professor Fan Jiansheng from THU Department of Civil Engineering won the second prize of the 2020 National Science and Technology Progress Awards. The project studied the analytic methodology of the steel-concrete composite structures, concentrated on improving the component performance and system innovation. Applying a precise calculation model, the project members further revealed the stress mechanism considering the materials and interfaces' multi-dimensional and strong nonlinear course. Multiple high-performance composite components are established for spatial complex stress conditions and sophisticated design methods. The project developed a new high-performance composite structure system for large-scale complex engineering. The design and construction methods have breakthroughs in basic theory, design methods, and construction technology at the levels of materials, interfaces, components, and systems.

Since the beginning of the 21st century, the scale and difficulty level of infrastructure construction in China have continued to increase, and the development needs for large-scale and complex engineering structures have become increasingly prominent, especially in the face of a series of new challenges such as more stringent performance index requirements, more comprehensive functional and quality requirements, and more diverse social environment requirements. In the past 30 years, the steel-concrete composite structure has developed rapidly due to its significant technical and economic advantages. Many results have been achieved in its scientific research and engineering applications. However, traditional composite structures and related analysis theories, design methods, and complete construction technologies still fall behind engineering development needs.

Targeting the key problems facing steel-concrete composite structures, project members revealed the stress mechanism considering the materials and interfaces' multi-dimensional and strong nonlinear course. The key problems are the analysis and design methods, component performance improvement, and system innovation. The project has been directly applied to more than 30 large and complex buildings and bridge projects, such as Canton East Tower, Wuhan Center, Shenzhen KingKey 100 Tower,

Beijing Olympic Tower, Bridge of the Yueyang Dongting Lake, and Chongqing Yongchuan Yangtze River Bridge. With its significant economic and social benefits and broad application prospects, the project has contributed to the industry's progress.



(a)基础理论及精准计算模型　(b)高效组合结构及精细设计方法　(c)高性能体系及设计施工技术

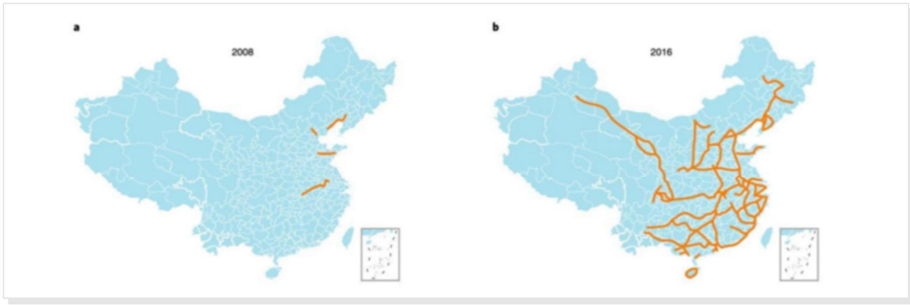
Main Sci-tech Innovations of the Project

Project Team

Nature Climate Change published a paper by teachers and students of the Department of Construction Management on the promotion of carbon emission reduction by high-speed rail

On October 25th 2021, Nature Climate Change, a sub-journal of Nature, published online the research results ***Impact of high-speed rail on road traffic and greenhouse gas emissions*** by **Wu Jing**, a tenured associate professor at the THU Department of Construction Management, and others. The study pointed out that after operating high-speed rail in China, parallel expressway traffic decreased, which reduced the transportation industry's carbon emissions. At the same time, the "News and Views" column of Nature published a commentary article, The hidden benefits of high-speed rail, by Professor Armin Schmutzler from the University of Zurich in Switzerland, stating that this study is "**the first contribution to the analysis of the effect of high-speed rail on the reduction of GHG emissions**" and has provided "**very important insights.**"

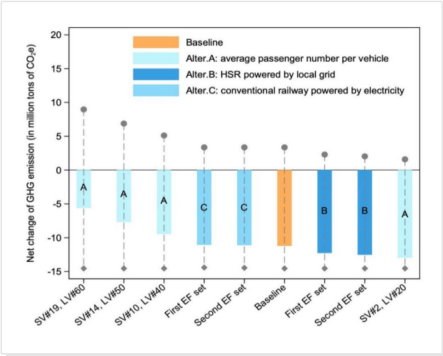
Globally, high-speed rail networks in East Asia and Europe are relatively developed. Among them, China ranks first worldwide in terms of the total mileage of high-speed rail. As an essential means of passenger transportation in China in recent years, high-speed railways are carrying more and more transportation capacity. Although high-speed rail is generally considered more energy-efficient and environment-friendly than road transportation and traditional rail, few empirical studies have revealed the extent to which the newly opened high-speed rail network can reduce carbon emissions from the transportation industry. **This study has filled this gap**.



Development of High-speed Rail Network in China in 2008-2016

This study, making use of China's national traffic monitoring data and statistical quantitative research methods, finds that the rapid development of China's high-speed rail network has significantly reduced the volume of road transportation of passengers and cargo, thereby reducing GHG emissions by an equivalent of 11.18 million tons of CO2 each year, a figure that is equivalent to 1.33% of the total GHG emissions in China's transportation industry in 2016. The realization of emission reduction is mainly due to the shift of cargo transportation from roads to traditional railways. This is because the transportation capacity of traditional railways is released as passengers transfer from traditional railways to high-speed rail and high-speed rail networks. The substitution effect on road traffic is the main source of the overall contribution of high-speed rail to GHG emission reduction. Further research finds that the environmental benefits of China's high-speed rail have not been fully realized, which is mainly constrained by China's thermal power-dominated generation structure. In the context of the "double carbon targets" of peaking carbon emissions by 2030 and achieving carbon neutrality by 2060, research forecasts indicate that as the proportion of clean energy increases in China's power generation structure in the future, the emission reduction effect of high-speed rail will see great improvement.

This study represents the joint efforts by Lin Yatang, Assistant Professor at the Department of Economics, Hong Kong University of Science and Technology, Qin Yu, Associate Professor at the Department of Real Estate, National University of Singapore Business School, Wu Jing, Associate Professor at the Department of Construction Management, Tsinghua University and Director of Hang Lung Center for Real Estate at Tsinghua University, and Xu Mandi, a doctoral candidate from the Department of Construction Management, Tsinghua University (in alphabetic order of surnames), and all the four are co-first authors. This study was supported by the National Natural Science Foundation of China.



Changes in GHG Emissions under Baseline Assumption and Other Assumptions

Up to now, the research results of this article have been reported by China Daily, Science and Technology Daily, People's Daily (English edition), and other official media, and reprinted by English.gov.cn (English edition), stdaily.com, Chinanews.com, the official website of China State Railway Group Co., Ltd. and other media outlets, drawing widespread attention.

Article address: **https://www.nature.com/articles/s41558-021-01190-8**

Professor Wu Jianping delivered a speech at the United Nations Climate Change Conference (COP26)

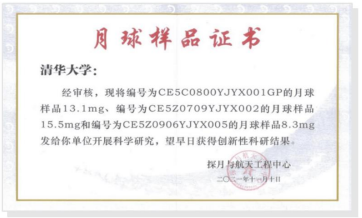
At this year's United Nations Climate Change Conference (COP26), a sub-forum organized by the Committee on Engineering and the Environment (CEE) of the World Federation of Engineering Organizations (WFEO) was held in Glasgow, UK, on November 6th. As one of the conference speakers, Professor **Wu Jianping** was unable to attend the conference in person due to the COVID-19 pandemic and recorded a particular video clip in advance. He talked about the purpose and the latest developments of WFEO's "Best Engineering Practice Project for Mitigating Climate Change" at the conference site in front of the whole world.

The WFEO Best Practice Project was initiated by the CEE of WFEO and authorized by the chairperson of WFEO. Professor Wu Jianping, Director of the Tsinghua-Cambridge-MIT Future Transportation Research Center, was the project team leader and was responsible for implementing the project. The project mainly has five tasks: **establishing a database, regularly publishing project reports, putting forth technical guidance, holding international conferences and forums, and providing training courses.** It mainly aims to study and summarize more scientific and effective engineering techniques to mitigate global climate change. On the issue of how to achieve this, Professor Wu emphasized that the cases and experiences of successful engineering projects (including design and materials) on mitigating climate change will be collected from more than 100 WFEO member states. The data will be sorted, analyzed, summarized, and shared with all WFEO member states as project and technical guidance reports.

The joint research team of the School of Civil Engineering and the Department of Mechanical Engineering got the approval for borrowing the lunar samples collected by Chang'e-5 lunar probe for research purpose

On October 8th, 2021, the CNSA Lunar Exploration and Space Program Center (Lunar Sample Management Office) organized a review meeting on applications for borrowing lunar samples for research purposes in Beijing. After going through expert review, the application jointly submitted by **Cui Yifei** from Department of Hydraulic Engineering, **Feng Peng** from Department of Civil Engineering, and **Xie Guoxin** from Department of Mechanical Engineering was approved. They will be allowed to borrow lunar rock debris samples coded CE5C0800YJYX001GP, CE5Z0709YJYX002, and CE5Z0906YJYX005 with a total weight of 36.9mg. These are the first samples approved for and used by Tsinghua University in related research.

On November 24th 2020, the Long March-5 carrier rocket with the Chang'e-5 lunar probe was launched. The Chang'e-5 landed on December 1st in the pre-selected landing area on the front of the moon and completed lunar drilling, sampling, and packing tasks. The Chang'e-5 returner landed on Earth with lunar samples on the early morning of December 17th. The Chang'e-5 mission is the sixth mission of China's lunar exploration project, which achieved unmanned sampling and returning from the moon for the first time in China.


月球样品证书

清华大学：

经审核，现将编号为CE5C0800YJYX001GP的月球样品13.1mg、编号为CE5Z0709YJYX002的月球样品15.5mg和编号为CE5Z0906YJYX005的月球样品8.3mg发给你单位开展科学研究，望早日获得创新性科研结果。

探月与航天工程中心

The Chang'e-5 probe selected the basaltic area in the northwest region of Oceanus Procellarum (also known as the Ocean of Storms) (longitude at 51.9°E, latitude at 43.1°N) as the sampling site, which is a whole new sampling area of lunar surface sampling by man following the US Apollo mission and the former Soviet Union's Luna mission. The lunar soil samples returned with Chang'e-5 are of great scientific value for a comprehensive understanding of the weathering, volcanism, regional geological background, and regional geological evolution on the lunar surface. In the lunar soil drilling and collection mission, the joint research team of the School of Civil Engineering and the Department of Mechanical Engineering of Tsinghua University researched the characteristics of deep-layer lunar soil and the development of simulated lunar soil for the key technology research and product development of the drilling subsystem, which supported the product design and experiment verification and made important contributions to the successful completion of the lunar soil drilling and collection mission of Chang'e-5.

The THU research team applied for lunar soil samples with the primary purpose of studying in-situ physical and mechanical behaviors of lunar soils and the properties of key structure materials for lunar surface construction based on lunar soils to provide scientific support for the lunar soil-structure interaction issues (such as the making of lunar soil bags, building foundation pits, and foundation stability) involved in future deep-level lunar exploration missions (such as lunar science work station, lunar base, and development and use of energy resources on the lunar surface).

The "new composite material-concrete composite framework structure" research achievement of the research group of Professor Feng Peng from the Department of Civil Engineering was successfully applied for the first time in Universal Beijing Resort

Universal Beijing Resort, the world's fifth, largest and most high-end Universal Studios theme park, started business operation in Beijing. The composite structure and advanced concrete structure research group led by Professor Feng Peng from the Department of Civil Engineering participated in constructing the dome structure, the topside part of the Universal Studios Grand Hotel in the park. The research group encountered great construction difficulties during the construction process: the hotel's highest point is 67.3m, and to achieve unique architectural effects and functions, only composite materials can be used.At the same time, the lightness of the structure must be ensured and the requirements for combustion property, fire resistance limit and structural safety must also be met. For modern civil engineering, most building structures use steel bolts, steel bars and other steel materials. The rigid requirement of an all-composite framework structure system made the dome part an "impossible" project.

Based on the requirement of a composite framework system, the research group proposed and developed an innovative FRP-concrete composite structure scheme and applied for a patent for it. **Fiber Reinforced Polymer** (FRP), a composite material, is a new material formed by continuous fiber-reinforced Vinylite or epoxy resin. It has the mechanical properties of lightweight and high strength. The composite material's specific strength (tensile strength/specific gravity) is 2 to 8 times that of the steel. Also, it can be used as a component in all non-metal structures and has the advantages of corrosion resistance, fatigue resistance, water resistance, flame retarding, and good electromagnetic wave permeability. The composite material-concrete composite structure system includes composite framework columns, framework composite beams, beam-column composite nodes, external protection system and concrete floor slab. No metallic materials are used in components.

After the scheme received strong support from the proprietor, the research team worked closely with Beijing Institute of Architectural Design, MCC Group Central Research Institute of Building and Construction, and Guangzhou Style Arts to design and construct the main structure of the dome.

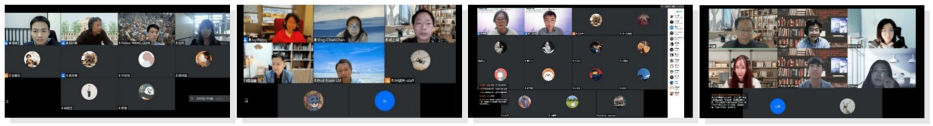
The 26th Session of the Chinese Research Institute of Construction Management (CRIOCM 2021) and the 7th Cross-Strait Forum on Sustainable Urban Development were successfully held

On November 20th and 21st, 2021, the 26th Session of the Chinese Research Institute of Construction Management (CRIOCM 2021) and the 7th Cross-Strait Forum on Sustainable Urban Development were successfully held via video link. The conference was co-hosted by Tsinghua University, Chinese Research Institute of Construction Management, and Hong Kong Polytechnic University, and co-organized by Tsinghua University School of Civil Engineering, Tsinghua University Research Institute of Future Cities, Towns and Infrastructure, and Hong Kong Polytechnic University Research Institute for Sustainable Urban Development (RISUD). More than 200 experts and scholars engaged in the fields of construction management and real estate from mainland China, Hong Kong SAR, Taiwan Province, Australia, the United States, the United Kingdom and other countries and regions had discussions on contemporary construction management, real estate innovation, sustainable urban development and other hot topics, attracting a total audience of over 1,200 online.

Opening Ceremony

The conference's opening ceremony was moderated by Associate Professor Guo Hongling from THU Department of Construction Management. Professor Fang Dongping, Dean of THU School of Civil Engineering, Professor Lu Weisheng of the University of Hong Kong, also the president of the Chinese Research Institute of Construction Management, and Professor Li Xiangdong, President of Hong Kong Polytechnic University RISUD, addressed the opening ceremony.

The two-day conference included the two sections of thematic presentation in the morning and seminar in the afternoon. The thematic presentation part was moderated by Fang Dongping, Lu Weisheng, and Professor Liu Guiwen and Professor Shen Liyin from Chongqing University, and saw the delivery of a number of presentations by Dr. Wang Tiehong, former Chief Engineer of the Ministry of Housing and Urban-Rural Development and President of China Construction Industry Association, Professor Roger Flanagan from the University of Reading, UK, Professor Geoffrey Shen from Hong Kong Polytechnic University, Professor Lucio Soibelman from the University of Southern California, USA, Professor Makarand Hastak from Purdue University, USA, Professor Miroslaw Skibniewski from the University of Maryland, USA, Zhuang Yong, Executive Director and Chairperson of the Board of China Overseas Grand Oceans Group Limited, Dr. Pierpaolo Franco, Vice President of International Market Development of Glodon Company Limited, Professor Kincho Law from Stanford University, USA, and Associate Professor Guo Hongling.



Some Parallel Sessions

The seminar part included a total of 11 parallel sessions, at which more than 150 experts and scholars from the University of Adelaide, Peking University, Chongqing University and other domestic and foreign universities. Scholars had discussions on topics including innovation in construction management theory and practice, construction management innovation technology, urban renewal and urban resilience, smart cities and smart construction, new infrastructure and social governance in the process of urbanization, land and space planning and innovation in land use, real estate management, and housing policies, etc.

The closing ceremony of the conference was moderated by Associate Professor Li Nan from THU Department of Construction Management. Geoffrey Shen, Secretary-General of the Chinese Research Institute of Construction Management, and Professor Peng Yi from Zhejiang University of Finance & Economics concluded. Liu Guiwen announced the list of excellent papers at this conference. In all the 175 pieces of papers submitted to the conference, 10 were given the excellent paper award, 6 the outstanding paper award, and 4 the best paper award after two rounds of two-way anonymous review by experts.

Lu Weisheng announced that the organizer of the 27th Session of the Chinese Research Institute of Construction Management (CRIOCM 2022) will be the Chinese University of Hong Kong, and Dr. Li Liang from this University delivered a welcome speech on behalf of the organizer. At this point, the 26th Session of the Chinese Research Institute of Construction Management (CRIOCM 2021) and the 7th Cross-Strait Forum on Sustainable Urban Development were successfully concluded.

The 7th National BIM Academic Conference was successfully held in Chongqing City

On December 25-26, 2021, the 7th National BIM Academic Conference kicked off in Chongqing City. This event was hosted by the BIM Special Committee ("Special Committee for short) of the China Graphics Society (CGS) and co-organized by TY Intelligent Science and Technology (Chongqing) Co., Ltd. and T.Y.Lin International (China). In order to comply with the requirements for epidemic prevention and control, this conference was held online and offline, with offline participants controlled within 100 people in each venue in accordance with the requirements. The total number of offline and online participants and viewers exceeded 10,000 people.

This conference included four sections: the main venue plenary meeting, the parallel presentations, the annual meeting of the BIM Special Committee, and the sharing and exchanges on outstanding projects. Professor Sun Linfu, Vice-Chairperson of the China Graphics Society and Chief Professor of Southwest Jiaotong University, delivered a speech on behalf of the society. Mr. Chang Bin, Secretary and Director of Party Leadership Group of Chongqing Housing and Urban-Rural Development Committee, Academician Zhou Xuhong, member of the Chinese Academy of Engineering and foreign member of the Engineering Academy of Japan, and Mr. Wang Yang, Chairperson of TY Intelligent Science and Technology (Chongqing) Co., Ltd., attended and addressed the conference at the main venue. Special guests Mr. Man-Chung Tang, member of the National Academy of Engineering, the United States, foreign member of the Chinese Academy of Engineering, and Chairperson of T.Y.Lin International (China), Professor Fang Dongping, Dean of THU School of Civil Engineering, Ms. Yu Jie, General Manager of CBIM, and Mr. Wang Yang, Chairperson of TY Intelligent Science and Technology (Chongqing) Co., Ltd. and expert with State Council Special Allowance, delivered presentations at the conference and had online real-time communication with the guests who were unable to arrive at the site. As a high-standard and high-quality national academic event on BIM, this conference provided a platform of communication and dialogue for technical experts in BIM and business representatives nationwide. It was reported and circulated by People's Daily, people.cn, cqnews.net, cqrb.cn and many other media outlets, generating a massive social influence.

This conference set up a special session for the BIM Joint Center of Tsinghua University (School of Civil Engineering)-Glodon Company Limited, at which oral presentations were made by postdoctoral fellow Zhang Yunyi, Ph.D. candidates Li Songyang, Zheng Zhe, and Zhou Junyu, master students Zhou Yucheng and Wu Langtao from THU Department of Civil Engineering, and Ph.D. candidates Qin Jinchun and Joseph Jonathan Magoua, master student Sun Yakang from THU Department of Construction Management. Professor Ma Zhiliang from THU Department of Civil Engineering organized and attended the conference as the Chairperson of the BIM Special Committee. Professor Zhang Jianping and Associate Professor Hu Zhenzhong also attended the event. Assistant Research Fellow Lin Jiarui moderated the plenary meeting and the parallel session.

Professor Ma Zhiliang from THU Department of Civil Engineering, Chairperson of the BIM Special Committee of China Graphics Society, Delivers a Speech

Professor Zhang Jianping from THU Department of Civil Engineering, Vice Supervisor of China Graphics Society, Delivers a Speech

Professor Fang Dongping, Dean of THU School of Civil Engineering, Delivers a Presentation upon Invitation via Video Link

Associate Professor Hu Zhenzhong from THU Shenzhen International Graduate School, Vice-Chairperson of the BIM Special Committee of China Graphics Society, Moderates the Parallel Session

Assistant Research Fellow Lin Jiarui from THU Department of Civil Engineering, Secretary-General of the BIM Special Committee of China Graphics Society, Moderates the Conference

Alumni

Serve the nation and the people, and live up to the call of the times-Li Ting, an alumnus from the Department of Civil Engineering of Tsinghua University, delivered a speech at the 110th anniversary of Tsinghua University as an alumni representative

Li Ting, admitted to the Department of Civil Engineering of Tsinghua University in 1980, obtained his bachelor's degree and master's degree in 1985 and 1988, respectively. After graduation, he worked in Central South Architectural Design Institute Co., Ltd. (CSADI) and engaged in structure design for nearly 30 years. He has directed or undertaken a number of large and medium-sized structure design projects. He was awarded the title of National Model Worker in 2015 and National Master of Engineering Survey and Design in 2016. Li currently serves as the Party Committee Secretary, Chairperson, and Chief Engineer of CSADI.

Dear leaders, guests, teachers, students, and schoolfellows:

Nice to see you here!

I am Li Ting. I was enrolled in the Department of Civil Engineering of Tsinghua University in 1980. I am very honored to attend this celebration of the 110th anniversary of this great University.

I started as an ordinary technician. After I graduated with a master's degree from Tsinghua University in 1988, I went to work for the Central South Architectural Design Institute in Wuhan. The CSADI is one of the first six comprehensive state-owned architectural design institutes established after founding the People's Republic of China. With the hard work at each step, I have grown into the company's Party Committee Secretary, Chairperson, and Chief Engineer. I was also given honorary titles such as the National Model Worker and the National Master of Engineering Survey and Design. Every step forward for me has been inseparable from the guidance of the Tsinghua spirit.

In the eight years at Tsinghua, I received rigorous professional training and ability training and exercised my body. Rain or shine, I kept running for five kilometers every day. I will become stronger because of this. Tsinghua has given me the confidence that I am the best, which is very important for taking on heavy responsibilities.

With only three years of working experience after graduation, I was sent to the Hainan branch. The situation at the branch was challenging, and there was no technical leader. I was allowed to lead the structure design for a critical project in Hainan Province. The uneven thickness and sometimes absent rock strata on the project site could cause uneven foundation settlement. This problem could not be solved even if the headquarters had held two consecutive meetings at the technical committee. I was under a lot of pressure. The training of scientific thinking at Tsinghua played a crucial role in my decision-making. I adopted reverse thinking and solved the most complex problem in the simplest way: blasting through and isolating rock strata and then using conventional pile foundations. Having survived lots of stress and difficulties, I have become the youngest chief engineer of CSADI at 39.

In 2015, the company encountered some significant risks and difficulties. My superior wanted me to lead the company's work and take on the mission to "turn crises into opportunities." I have been engaged in technical work after graduation. I have never done any job related to Party, government or business management. That was a great challenge for me. But, thanks to the comprehensive training and professional learning at Tsinghua University, I was able to have a deeper understanding of engineering digitalization and industry development trends and quickly pinpoint the principal contradiction. To address the severe involution in the

architectural design industry and the chronic problem of decentralized management under the contract responsibility system, I determined to steer the company to transform into a whole-process digitalized and high-tech enterprise in the construction industry. As a result, the company has found a new development path by taking a historic leap forward.

The most memorable thing is the fight against the COVID pandemic in 2020. Wuhan was trapped at the center of the pandemic. The situation was taut. Patients lined up for COVID next to the company all the way to the street at 9 p.m. As the leader of the company's pandemic prevention and control steering group, I directed the company in the whole process of fighting the pandemic. On New Year's Eve, we received the task of building an 80,000 m2 hospital, Leishenshan Hospital, within 12 days. I would be lying if I said it is not dangerous. Unfortunately, at the age of over 50, our former president passed away on the third day of the new year after contracting the virus. However, we did not back down in the face of the departure of our close fellow and the danger. Through our hard work day and night, the hospital was completed and used as scheduled. A total of 38 anti-pandemic construction projects were completed within one month, housing more than 30,000 beds. Impossible tasks were completed one by one. The Party Committee of our company was awarded the honorary titles of "National Advanced Primary Party Organization" and "National Advanced Group in Fighting the COVID-19."

As President Xi Jinping emphasized during an inspection tour at Tsinghua, we must keep "national priorities" in mind, grasp the general trend, dare to take responsibility, and be good at taking action. This is also a requirement for all of us at Tsinghua University. As a vital institution of the nation, Tsinghua provides us with an extraordinary platform. As members of this vital institution, we must take the initiative in engaging ourselves in the great rejuvenation of the Chinese nation. We must stand out and take on the heavy responsibilities in the face of difficulties. We must serve the country the people and live up to the call of the times.

May Tsinghua prosper as always and create a new chapter of excellence!

Zhao Yumin, an alumnus from the Department of Civil Engineering, was commended for poverty alleviation

At a National Poverty Alleviation Conclusion and Commendation Conference, several alumni from Tsinghua won the honorary title of "National Advanced Individual in Poverty Alleviation," including Zhao Yumin, a graduate from the Department of Civil Engineering.

Graduated from the Department of Civil Engineering in 2017, Zhao Yumin was appointed as Deputy Director of the Transport Bureau of Rangtang County, Sichuan Province, Deputy Secretary of the Party Committee of Wuyi Township, and Deputy Secretary of the Party Branch of Wuyi Village in September 2018. **By September 2020, Zhao returned to Beijing. The villagers saw him off despite the wind and the rain at the mountain foot.**

Rangtang, also known as "Rangbalatang," is located in the Tibetan Plateau at the junction of Sichuan, Gansu, and Qinghai provinces. It has an average elevation of more than 4,000 meters. It belongs to the most impoverished Three Regions and Three Prefectures (Three Regions: Tibet, the Tibetan ethnic areas of Sichuan, Yunnan, Gansu and Qinghai provinces, and the four prefectures in southern Xinjiang-Hotan, Aksu, Kashi, and the Kizilsu Kirgiz Autonomous Prefecture; Three Prefectures: Liangshan in Sichuan, Nujiang in Yunnan, and Linxia in Gansu). Rangtang is the most remote and poorest State-level impoverished county in Ngawa Tibetan and Qiang Autonomous Prefecture.

In the two years, Zhao Yumin was always putting the interest of the Rangtang people first and working for the benefit of the people. After coming to the village, the first thing he did was facilitate the Party branch of the village in implementing grid-based management. He and Party members took the lead in solving problems for the people, such as repairing roads and electricity, coordinating the delivery of medicines to the door, building a new village, and controlling the number of school dropouts. The Party branch became more united, and the masses were more motivated to get rid of poverty. In response to the floods, landslides, mudslides and other disasters that frequently occur in Rangtang County, Zhao worked at the front line and participated in emergency highway maintenance over 20 times in the two years. To solve the transportation problem from the source, he actively promoted building and maintaining good roads in rural areas in Rangtang. Shangnan Road, built on a plateau with an altitude of 4,000 meters, demonstrates the "good rural roads" in Rangtang County. It helped promote the development of industries with local features. It was also reported by People' Daily as "Shangnan Heaven Road." Under the leadership of Zhao Yumin, Wuyi Village, which had a poverty incidence of 26%, successfully got rid of poverty.

Zhao also gave himself a Tibetan name, "Gadeng," which means "good life." The Rangtang spirit of "keeping the mind open despite the remote location and making the highest achievements at work despite the tough environment" inspired this young man from Beijing. Zhao said that it is a great fortune for him to become one of the more than 3 million cadres stationed in villages and to devote himself to the great cause of poverty alleviation. He hopes that he can lead the whole village to live a good life through hard work.

Tsinghua University Alumni Association Civil Engineering & Construction Management Branch convened its 2021 Board Meeting

The THU Alumni Association Civil Engineering & Construction Management Branch ("THU CE & CM Branch" for short) convened its Board Meeting online and offline on January 17th, 2021. On-site meeting attendees include Nie Jianguo (postdoctoral fellow enrolled in THU in 1992), Honorary Director of THU CE & CM Branch, Shi Yongjiu (enrolled in THU in 1979), President of THU CE & CM Branch, Liu Hongyu (enrolled in THU in 1980), Fang Dongping (postdoctoral fellow enrolled in THU in 1993), Vice President of THU CE & CM Branch, Liu Ning (enrolled in THU in 1978), Wang Cuikun (enrolled in THU in 1981) , Ji Rujin (master student enrolled in THU in 1984), Liu Yansheng (enrolled in THU in 1984), Chen Senlin (enrolled in THU in 1985), Xiao Congzhen (enrolled in THU in 1986), Yang Jun (enrolled in THU in 1991), Pan Peng (enrolled in THU in 1994), Li Xiaodong (enrolled in THU in 1993), Li Meng (enrolled in THU in 1997), and Wang Qiang (enrolled in THU in 2002). Online meeting attendees include Mei Xiaopeng (enrolled in THU in 1980), Zhang Qing (enrolled in THU in 1977), Vice President of THU CE & CM Branch, Cang Huiqin (enrolled in THU in 1979), Yue Qingrui (enrolled in THU in 1980), He Zhen (enrolled in THU in 1983), Wang Yinhai (enrolled in THU in 1984), Zhu Rongbin (enrolled in THU in 1988), and some standing directors and class representatives. Feng Peng, Head of THU Department of Civil Engineering and Secretary-General of the CE & CM Branch, moderated the meeting.

Honorary Director and Academician Nie Jianguo mentioned that the development of the CE & CM Departments requires strong support from the alumni so that "the flames can go higher if everyone adds fuel to it." Nie also thanked the alumni for their help in the two departments' talents training and discipline development. He said that to honor Mr. Chen Zhaoyuan and implement his teachings with concrete actions, the "Tsinghua University Chen Zhaoyuan Education Fund" was launched to reward and motivate teachers and students, organize high-standard commemorative academic lectures, and support the development of the CE & CM Departments at Tsinghua University. He called upon the alumni to support this cause in memory of Mr. Chen.

Professor Fang Dongping, Dean of the School of Civil Engineering, reported on the work of the two departments in the past year on behalf of the school and department leadership. He elaborated on the recent developments in the two departments from ten aspects, covering the fight against the COVID-19, change of leadership, education and teaching, team building, discipline building, scientific research, platform construction, student work, and alumni support, etc. Fang accurately summarized the development of the two departments in 2020 with the three pieces of comments, "eventful year, endeavoring year, and harvesting year."

Professor Shi Yongjiu, President of THU CE & CM Branch, reported on the recent work carried out by the branch, including organizing alumni reunion at Tsinghua campus at a ten-year time node, organizing alumni forums, offering job opportunities at alumni companies, as well as the donations made in the past three years. He thanked the alumni for their support and help in the two departments' teaching, scientific research, and student work. He hoped that the alumni would continue to support the development of the CE & CM Departments.

On-site Meeting Attendees

Tsinghua University Fujian Alumni Association, Civil Engineering & Construction Management Branch, was established

On May 15th, the inaugural meeting of the Civil Engineering & Construction Management Branch of the Fujian Alumni Association of Tsinghua University was held in Fujian Province online and offline. Attendees include Professor Shi Yongjiu, Director of the Academic Committee of THU Department of Civil Engineering & Department of Construction Management, and President of THU Alumni Association Civil Engineering & Construction Management Branch, Yang Jun, Research Fellow at THU Department of Civil Engineering and Vice President of THU Alumni Association Civil Engineering & Construction Management Branch, Lin Chao, President of THU Fujian Alumni Association, and more than 40 alumni and guests. The meeting officially announced the establishment of the Civil Engineering & Construction Management Branch of the Tsinghua University Fujian Alumni Association.

Professor Shi Yongjiu Delivers a Speech

Professor Shi Yongjiu represented the School and the Departments in congratulating them on the establishment of the branch. He reviewed the developments of the CE & CM Departments, shared the current efforts of the School and the Departments in alumni work and student training, and introduced the future development plan for the School and the Departments. He thanked the alumni for their hard work and dedication and expressed his hope that they may grow and develop together with the School and the Departments.

The meeting adopted the Tsinghua University Fujian Alumni Association Civil Engineering & Construction Management Branch Charter and voted on the president, vice president, secretary general, and deputy secretary general list. Lin Dong was elected President of the Branch, and Wen Tao, He Min, Zheng Wei, and Lin Zaitian were Vice Presidents. He Min was elected Secretary-General of the Branch and Zou Di Deputy Secretary-General. Lin Dong, President of the Branch, reviewed the long-term education and training provided by THU and the support and help from the alumni. Lin expressed gratitude to the alumni for their joint efforts to carry forward the merit of the Tsinghua people. Lin said that the branch would facilitate the liaison, unity, and organization of the alumni under the guidance of the THU Alumni Association. Vice Presidents Wen Tao, He Min, Zheng Wei, and Lin Zaitian also delivered speeches.。

President and Vice Presidents Deliver Election Speeches

Alumni Deliver Speeches at the Meeting

Lin Chao, President of Fujian Alumni Association, Delivers a Speech, Congratulating on the Establishment of the Branch

The Fujian Alumni Association, Civil Engineering & Construction Management Branch, will build a platform for information exchange, resource sharing, and bonding among the CE & CM alumni in Fujian Province. It will play an active role in consolidating the cornerstone of the civil engineering and construction management industry and promoting the healthy development of the industry, contributing to the joint development of civil engineering and construction management in Fujian and at Tsinghua University!

The 2021 Annual Meeting of THU Central China Area Alumni Association of Architectural, Civil Engineering, Hydraulic Engineering, and Environmental Majors was successfully held

On the morning of April 17th, 2021, the **2021 Annual Meeting of THU Central China Area Alumni Association of Architectural, Civil Engineering, Hydraulic Engineering and Environmental Majors & Special Session of THU Hubei Alumni Association of Architectural, Civil Engineering, Hydraulic Engineering, and Environmental Majors** kicked off in Conference Hall 110 of the School of Architecture and Urban Planning of Huazhong University of Science and Technology. Meeting attendees include Academician Li Dequn, President of THU Hubei Alumni Association, Wang Mingtao, Secretary-General of THU Hubei Alumni Association, Professor Li Baofeng, an alumnus from THU School of Architecture, Professor Liu Huabei, an alumnus from THU School of Civil Engineering, and more than 50 alumni from Central China Area.

Under the organization of the host, the alumni introduced themselves in turn. Academician Li Dequn, President of Tsinghua Hubei Alumni Association, and Wang Mingtao, Secretary-General of Tsinghua Hubei Alumni Association, expressed their congratulations on the convening of this annual meeting and their welcome to all the alumni present. They also congratulated on the 110th anniversary of Tsinghua and expressed their nostalgia for the years at this University.

Under the theme of "Practicing Tsinghua Spirit and Telling the Story of Your Growth," several alumni representatives who joined Tsinghua at different periods walked onto the stage and shared their personal experiences and insights about work and life.

As shown in the meeting's theme, "Recalling Campus Life at Tsinghua and Creating the Future Together," we hope for an even brighter future for Tsinghua. May the Central China Area alumni keep in mind their original aspirations and the university's motto and create a unique career for themselves together.

New Civil Engineering Building

In response to the needs of education, teaching, scientific research, and serving society, the Department of Civil Engineering will have an advanced department building in 2022, the New Civil Engineering Building. This is a building that combines culture, aesthetics, functions and innovation. The building will house nine new laboratories, including the Structural Dynamics Laboratory, the CM Department General Laboratory, and the Building Materials Research Laboratory. These laboratories will provide full support for teaching and scientific research. The large, medium and small multifunctional halls and conference rooms can provide a platform for communication; the leisure area and the graphic information room provide space for inspiration and creativity.

3D Rendering of the Building

自強不息
厚德載物

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