# 2018 TSINGHUA INTERNATIONAL SUMMER SCHOOL

### - ENVIRONMENT

**TSINGHUA UNIVERSITY** 

### August 03 - August 16, 2018







#### Welcome to Tsinghua!

Join the 2018 Tsinghua International Summer School— Environment and have a great & memorable summer in China!

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# About Tsinghua University

Established in 1911, Tsinghua University has become one of the leading universities in China and is emerging as a world top university. The QS World University Ranking (2018) placed Tsinghua University as #1 in China, #3 in Asia, and #25 globally. At present, the university has 14 schools and 56 departments with faculties in science, engineering, humanities, law, medicine, history, philosophy, economics, management, education and art.

The educational philosophy of Tsinghua is to "train students with integrity". Among the 120,000 graduates from Tsinghua since its founding, there are many outstanding scholars, eminent entrepreneurs and great statesmen remembered and respected by their fellow Chinese citizens.



With the motto of "Self-Discipline and Social Commitment" and the spirit of "Actions Speak Louder than Words", Tsinghua University is dedicated to the well-being of Chinese society and to world development.

## About The School of Environment

The history of the School of Environment (SOE) at Tsinghua University dates back to 1926 when the Department of Municipal Engineering was established at Tsinghua University. With great contributions across several generations, the SOE has earned a reputation both domestically and internationally. SOE's Environmental Science and Engineering major is ranked #1 in China by the Ministry of Education. The QS World University Ranking system ranked the "Environmental Sciences" discipline at Tsinghua University as #1 in China, #2 in Asia, and #22 globally.

SOE conducts research across a wide arrange of fields, including water supply, wastewater treatment, air pollution control, and solid waste management. SOE has provided technical and theoretical support for China in solving big environmental problems and implementing sustainable development. After years of effort, SOE has established a scientific and comprehensive system of education. Each year hundreds of the most talented students matriculate, many of them becoming outstanding figures in the environmental field.



SOE has established exchanges and cooperation with many world leading universities, organizations and enterprises including mutual visits, collaborative scientific research and joint education programs.

## About The Program

Since its inaugural program in 2013, the aim of the international summer school has been to give students from all around the world the opportunity to acquire a deeper understanding of China's current environmental challenges. The rapid development of China's economy in recent years has been accompanied by an energy crisis and severe environmental degradation. It is more important than ever to use creativity and innovation to resolve the potential conflict between economic development and environmental conservation.





The 2018 international summer school equips students in their search for environmental solutions through lectures and discussions led by faculty and guest speakers, as well as site visits to leading environmental facilities and enterprises. Students will also have the opportunity to explore the ancient history and natural beauty of China.

## About This Summer School

The two-week summer school offers a unique opportunity to learn about environmental issues, develop innovative and creative thinking skills, and explore Chinese culture.

#### The summer school consists of three major components:

- **1 Environment**: Lectures and discussions led by renowned faculty and environmental actors; site visits to leading environmental enterprises and the SHOUGANG Circular Economy Industrial Park to learn about the state-of-the-art practices currently employed in environmental engineering.
- 2 Innovation Challenge: Creative environmental group projects proposed and led by student participants.
- **3 Culture**: Visits to cultural and environmentally significant landmarks.



#### Themes of the 2018 summer school

Energy and global changes, Community based environmental solutions

| Thursday        | 6-Aug | Cultural Trip<br>Sichuan<br>Province<br>Sichuan<br>Big data<br>Center   | Giant Panda<br>Sanctuary  |                           |
|-----------------|-------|---|---|---------------------------|
| Wednesday       | 8-Aug | Academic Lecture 5<br>Corrado CLINI<br>Academic Lecture 6<br>Dale JORGENSON<br>(Harvard University)   | Academic Lecture 7<br>Prof. Huang Xia<br>Academic Lecture 8<br>Prof. Liu Yi   |                           |
| Tuesday         | 7-Aug | Innovation lecture 1<br>GU Xueyong<br>Innovation lecture 2<br>Robert Guild (Asian<br>Development Bank)<br>Panel Discussion<br>(WU Ye)                     | Project Hours   |                           |
| Monday          | 6-Aug | Field Trip<br>Beijing<br>Gaobeidian Sewage<br>Plant   | Field Trip<br>Beijing<br>China Meteorological<br>Administration   |                           |
| Sunday          | 5-Aug | Academic Lecture 1<br>Cedo MAKSIMOVIC_<br>(Imperial College)<br>Academic Lecture 2<br>Steven WOFSY<br>(Harvard University)<br>Panel Discussion<br>(LU XI) | Academic Lecture 3<br>Peter Kitanidis<br>(Stanford University)<br>Academic Lecture 4<br>Hu Min (Energy<br>Foundation) |                           |
| <u>Saturday</u> | 4-Aug | Opening Ceremony<br>Keynote Lectures:<br><u>HE Kebin &amp; Michael</u><br><u>McElroy</u>  | Lab Visit & Campus<br>Orientation<br>Supervising Teacher<br>Meeting   | Welcome Party &<br>Dinner |
| Friday          | 3-Aug | Registration  |   | Group<br>Meeting          |
| Time            | Date  | 9:00-12:0<br>0  | 14:00-16:<br>30   | 19:00-21:<br>00           |

Culture

Innovation

Environment

Tentative Schedule

Agenda – Week 1

05

Agenda – Week 2

| ••        | •••    | Summer Sc  | hool - En  | viron                               |  |  |
|-----------|--------|--|--|-------------------------------------|--|--|
| Thursday  | 16-Aug | Departure  |  |                                     |  |  |
| Wednesday | 15-Aug | Final Project<br>Presentation  | Closing<br>Ceremony                                      |                                     |  |  |
| Tuesday   | 14-Aug | Cultural Lecture 1<br>Tsinghua. <u>SONG Lili</u><br>Cultural Lecture 2<br>Tsinghua.<br>the Academy of Arts<br>& Design | Cultural experience<br>Tsinghua University<br>Art Museum | Project Hours with<br>group members |  |  |
| Monday    | 13-Aug | Innovation Camp<br>(training)<br>Tsinghua, the Academy of<br>Arts & Design, X-lab                                      | Project Hours  | Salon                               |  |  |
| Sunday    | 12-Aug | Field Trip<br>Shougang<br>Circular<br>Economy<br>Industrial Park   |  |                                     |  |  |
| Saturday  | 11-Aug | Visit Innovation X-lab   |  |                                     |  |  |
| Friday    | 10-Aug | Cultural Trip<br>Beijing<br>The Great Wall at<br>Badaling  |  |                                     |  |  |
| Time      | Date   | 9:00-11:30   | 14:00-16:30  | 19:00-21:00                         |  |  |

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#### 2018 Tsinghua International

ment

Culture

Innovation

Environment

# Notable Speakers ( to be confirmed)



#### **Corrado CLINI**

Former Minister of the Italian Ministry for the Environment, Land and Sea

Former Chair of the G7 Task Force on Energy

Member of China Council for International Cooperation on Environment and Development

#### Michael B. MCELROY



Gilbert Butler Professor of Environmental Studies

Former Director of Harvard University Center for the Environment

Fellow of the American Academy of Arts and Sciences

Fellow of the American Association for the Advancement of Science

Fellow of the International Academy of Astronautics

Recipient of James B. Macelwane Award



#### **Cedo MAKSIMOVIC**

Professor in Department of Environmental Engineering, Imperial College London

Head of ICL Urban Water Research Group

Special Advisor to UNESCO on Urban Water

Coordinator of EU projects: Blue Green Dream and RainGain



#### **Steven WOFSY**

Abbott Lawrence Rotch Professor of Atmospheric and Environmental Science, Harvard University

Fellow of the American Association for the Advancement of Science

Recipient of James B. Macelwane Award

#### Dale JORGENSON

Professor of Department of Economics and John F. Kennedy School of Government, Harvard University

Member of the American Philosophical Society

Member of the U.S. National Academy of Sciences

Member of the American Academy of Arts and Sciences

Recipient of John Bates Clark Medal

#### Peter K. KITANIDIS

Professor of Department of Civil and Environmental Engineering

Stanford University

Chief Editor of the Journal of Hydrology

Recipient of the W. L. Huber Civil Engineering Research Prize and the 2011 Hydrologic Sciences Award

#### Daniel S. ALESSI

Director for Transport and Communications

Asian Development Bank

Advisor for governments, private sector, and multilateral institutions in over two dozen countries in Asia, the Pacific, and Latin America.

#### HE Kebin

Academician at Chinese Academy of Engineering

Dean, Professor of School of Environment, Tsinghua University

Senior member of The Chinese Society of Environmental Sciences

Awardee of over 10 Prize of National Sci. & Tech. Progress Award

#### HU Min

Executive Directorof Innovative Green Growth Program

Advising on iGDP operation, partners relationship and research

The first Program Officer of the Environmental Management Program

The Program Director for Low Carbon Economic Growth Program of Energy Foundation China.











## Review of the Summer School 2017

#### **People**: Teachers & Students & Teaching Assistants

Michael B. MCELROY (a professor at Harvard University and a fellow at the American Academy of Arts and Sciences), Cedo MAKSIMOVIC (a professor at Imperial College London and Head of ICL Urban Water Research Group), Corrado CLINI (former minister of environment, territory and maritime affairs of Italy) and many other international experts and senior officials were invited to give lectures.





110 students from more than 20 countries and more than 50 universities gathered in Tsinghua University, including China, the United States, Britain, Germany, Canada, Australia and Egypt; universities includes Harvard University, Imperial College, University of Chicago, RWTH Aachen University, etc.



#### Activities: Lectures & Practices & Cultural journey



Authoritative scholars and senior officials from many well-known universities presented lectures on "big data". Students visited sewplants, age treatment power plants, and the Bureau of Meteorology, which combined theory with practice. In addition, there were multi-dimensional and multi-faceted cultural experiences, such as the Great Wall, the hometown of Confucius. the Tsinghua Museum of Art, X-Lab, and others.

#### Achievements: Friends & Teams

Experiencing culture is not only about traveling, but also about integration among the students. Students learnt how to work together, how to communicate with others and how to accomplish their common goals efficiently.



In the 14 days, we focused on the hot spots of environmental research, felt the attraction of Chinese ancient culture, sought cooperation and innovation, and made friends from different countries.

# Highlights

#### Environment

Lectures and discussions led by faculty from Tsinghua University, Harvard University, Stanford University, and University of Michigan. Site visits to SHOUGANG Circular Economy Industrial Park, China Meteorological Administration, and other leading environmental facilities and enterprises.

#### **Innovation Challenge**

Training in creative and innovation thinking. Group projects proposed and led by student teams that utilize innovation training to find solutions to environmental development issues in China.

#### Culture

Field trips to the Great Wall of China and the Forbidden City in Beijing, and the Giant Panda Sanctuaries in Sichuan province.







# More Information

#### **Important Dates**

Application /CV submission deadline: **April 13, 2018** or until all spots are filled.

#### Application

Please apply via the following website: http://goglobal.tsinghua.edu.cn/program/envsummer2018

#### **Expenses and Fees**

Tuition fees is CNY 18,000. Qualified applicants will be offered a scholarship which covers the full tuition and accommodation. Other related learning costs will also be covered by Tsinghua University.

Round-trip international airfares, travel insurance and other personal expenses, including transportation and meals, are to be borne by the participants.





# 2018 Tsinghua International

#### Summer School – Environment



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