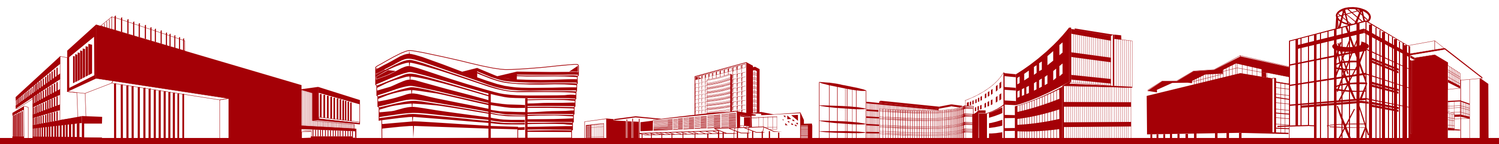
上海科技大学
ShanghaiTech University



Yueyang Campus: 319 Yueyang Road, Shanghai, 200031
Zhangjiang Campus: 393 Middle Huaxia Road, Pudong, Shanghai, 201210
www.shanghaitech.edu.cn/eng

上海科技大学
ShanghaiTech University

SHANGHAITECH

September 2018

OUR mission

Founded in 2013, ShanghaiTech is a young, resource-rich university with a modern campus in the heart of Shanghai Pudong's Zhangjiang Hi-Tech Park. With the backing and support of Shanghai Municipal Government and the Chinese Academy of Sciences, we are committed to tackling the challenges that China and the world are facing in the fields of energy, materials, environment, human health, biological medical engineering, data science, AI and electrical engineering.

OUR students

ShanghaiTech students are well-rounded, curious and self-motivated academics who excel in ShanghaiTech's rigorous learning environment.

Current

1,437 UNDERGRADUATE STUDENTS

1,801 GRADUATE STUDENTS

3:1 Male/ Female Students

TARGET

2,000 UNDERGRADUATE STUDENTS

4,000 GRADUATE STUDENTS

OUR academics

ShanghaiTech's application process considers more than just test scores. Prospective undergraduate students are invited to Campus Assessment Days to showcase their personal strengths as well as their academic excellence. ShanghaiTech's admissions team selects top students from around China who are well-rounded, independent thinkers.

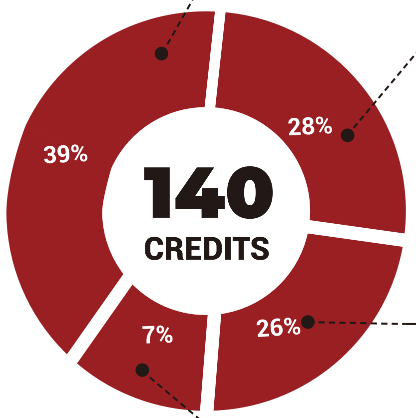
7 MAJORS

- Physics
- Chemistry
- Material Science & Engineering
- Biology
- Biological Medical Engineering
- Electrical Engineering
- Computer Science & Engineering

2 MINORS

- Finance
- Innovation & Entrepreneurship

UNDERGRADUATE COURSE CREDITS



Required Courses for Major:
~54 Credits
For a solid grounding in Science & Technology

Required Courses (Science):
~39 Credits
Mathematics, Physics, Chemistry, Biology and Information Science courses

General Courses (Liberal Arts):
~37 Credits
Humanities, Social Sciences, Entrepreneurship and Innovation Management, Social and Industry Engagement Programs, Physical Education

Optional Courses:
~10 Credits
The remaining courses are open to students' personal choice

* percentages are approximate

ShanghaiTech promotes a student-centered educational approach, encouraging cross-disciplinary research to nurture the next generation of China's leading scientists, inventors, and entrepreneurs.

SCHOOL OF PHYSICAL SCIENCE AND TECHNOLOGY

Energy
System Materials
Photon and Condensed State
Material Biology
Environmental Science and Engineering

SCHOOL OF LIFE SCIENCE AND TECHNOLOGY

Mechanism of Human Diseases
Stem Cell and Regenerative Medicine
Systems Biology and Bioinformatics
Biomedical Imaging
Immunology
Neurobiology

SCHOOL OF INFORMATION SCIENCE AND TECHNOLOGY

Computer Science/Big Data/AI
Cloud/Fog Computing
Post-Moore Device and IC Robotics
Information Theory
Communication Networks

SCHOOL OF ENTREPRENEURSHIP AND MANAGEMENT

Economics
Finance
Managerial Sciences
Behavioral Science

SCHOOL OF CREATIVE ARTS

Film Production
Life Drawing
Photography
VR and Game Coding
Illustration and Visualization
Performing Arts

SHANGHAI INSTITUTE OF ADVANCED IMMUNOCHEMICAL STUDIES (SIAIS)

Immunochemistry
Structural Biochemistry
Cell Biology
Computational Biology

iHUMAN INSTITUTE

Drug Development Targeting GPCR
Cell Biology and Biomedicine
Pharmacology
Chemical Biology
Computational Biology
Molecular Modeling

INSTITUTE OF MATHEMATICAL SCIENCES

Pure Mathematics
Theory of Computing
Applied Mathematics

EXPLORE SHANGHAITECH

ShanghaiTech offers opportunities for experiential learning to enhance students' academic experiences.

SOCIAL ENGAGEMENT PROGRAM

In the summer before their sophomore year, all undergraduates go on summer research trips to apply their knowledge in less-developed, ethnically diverse, or historically significant regions of China.

INDUSTRY ENGAGEMENT PROGRAM

In the summer before their junior year, all undergraduates visit companies and innoparks to better understand market needs and explore the relationship and gaps between research and application.

INTERNATIONAL EXCHANGES

ShanghaiTech students have the opportunity to take part in academic exchanges in the United States and Europe. Extracurricular activities bring students to international competitions to interact and exchange with students from all over the world.

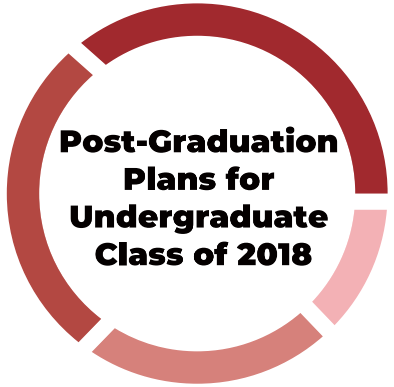
SMALL SCHOOL ADVANTAGE

ShanghaiTech's small size allows for quality interactions between undergraduates and professors and provides research opportunities for students that are rare at most Chinese universities.

1:10

Faculty/ Student Ratio

- Rotating faculty mentors live in student dorms one week a year.
- Professors lead informal weekly small-size seminars in dorms.
- Five lecture series cover arts and science.
- Health services and Wellness activities are available for all students.



38%	Further Study Abroad
34%	Further Study in China
20%	Employment
8%	Others

50%

of ShanghaiTech 2nd and 3rd year students participate in lab research

SHANGHAITECH

7 ACADEMIC DISCIPLINES

- PHYSICS
- CHEMISTRY
- MATERIALS SCIENCE & ENGINEERING
- BIOLOGY
- ELECTRONIC SCIENCE & TECHNOLOGY
- INFORMATION & COMMUNICATION ENGINEERING
- COMPUTER SCIENCE & TECHNOLOGY

GRADUATE PROGRAMS

ShanghaiTech offers combined master's-PhD programs, lab rotations, and has adopted a strict doctoral qualification examination. Subsidies are available for international conferences and academic exchanges.

MORE THAN 70%

OF SHANGHAITECH GRADUATE STUDENTS COME FROM THE TOP 38 UNIVERSITIES IN CHINA

MASTER'S DEGREE ENTERING CLASS OF 2014

27%	PURSUING THEIR PHD AT SHANGHAITECH
25%	PURSUING PHD AT CAS INSTITUTES OR OTHER UNIVERSITIES IN CHINA AND ABROAD
41%	WORKING FOR TOP DOMESTIC OR MULTI-NATIONAL COMPANIES
7%	STARTED OWN COMPANIES OR PURSUING CAREER

OUR faculty

ShanghaiTech's innovative university-wide tenure-track system attracts talented faculty with a wealth of experience from around the world. 19% are foreign nationals and almost 70% of the faculty earned their PhD abroad.

Current

176 TENURED/TENURE-TRACK FACULTY

293 ADJUNCT PROFESSORS

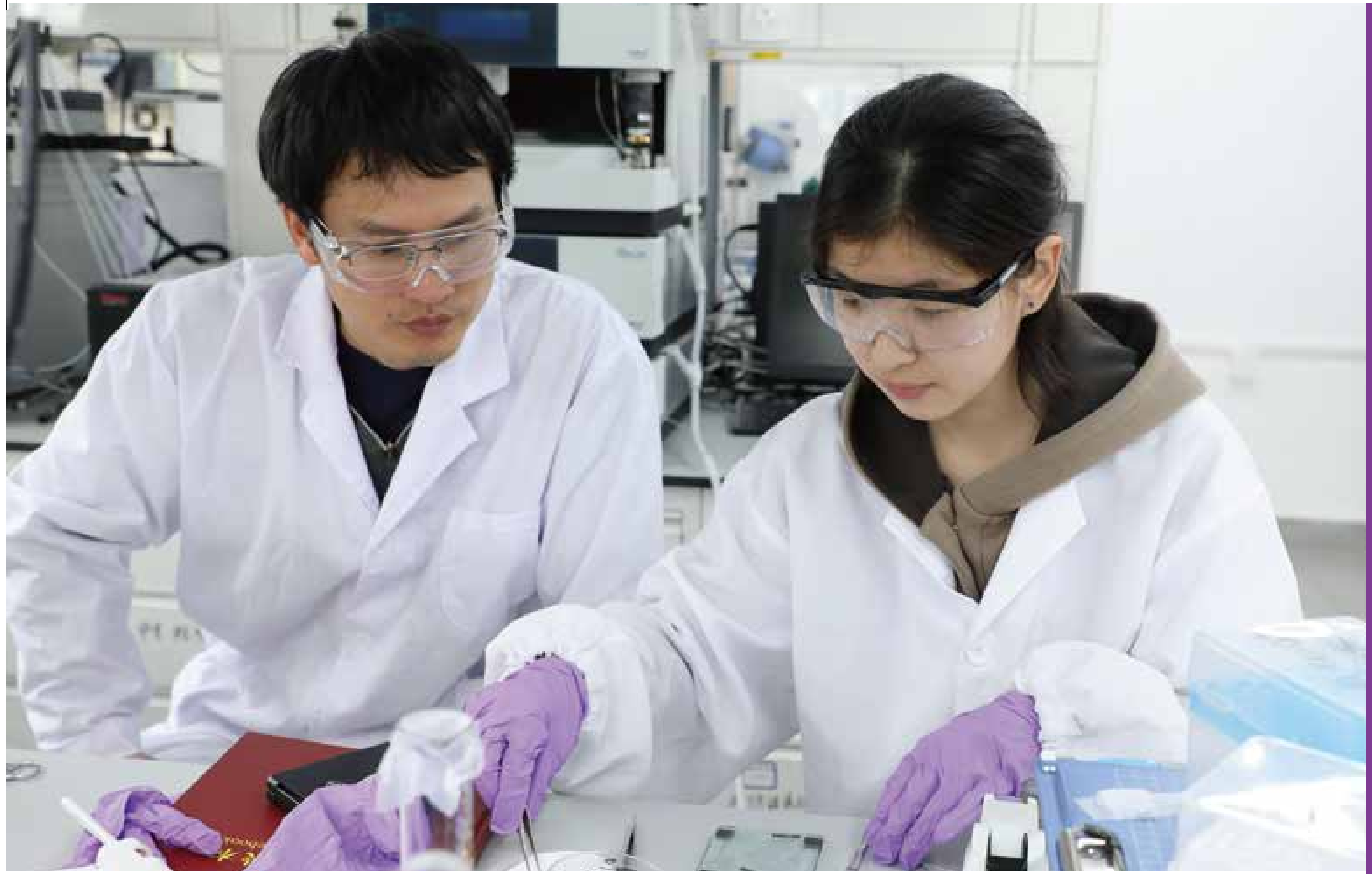
TARGET

500 TENURED/TENURE-TRACK FACULTY

500 ADJUNCT PROFESSORS

SHANGHAITECH FACULTY

NATIONAL ACADEMY OF SCIENCES (US)	10	MEMBERS
AMERICAN ACADEMY OF ARTS AND SCIENCES	5	MEMBERS
ROYAL SOCIETY (UK)	3	MEMBERS
CHINESE ACADEMY OF SCIENCES	34	MEMBERS
CHINESE ACADEMY OF ENGINEERING	3	MEMBERS



NOBEL LAUREATES ON FACULTY

James Rothman
2013 Nobel Laureate in Physiology or Medicine
Distinguished Adjunct Professor, SLST

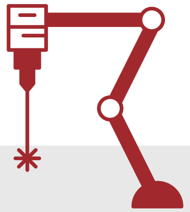
Roger Kornberg
2006 Nobel Laureate in Chemistry
Distinguished Adjunct Professor, SIAIS

Kurt Wüthrich
2002 Nobel Laureate in Chemistry
Distinguished Adjunct Professor, iHuman Institute

Michael Levitt
2013 Nobel Laureate in Chemistry
Distinguished Adjunct Professor, SIAIS

OUR

research



1655 PAPERS PUBLISHED BY SHANGHAITECH RESEARCHERS IN NATURE, CELL, SCIENCE AND OTHER TOP ACADEMIC JOURNALS

840 PAPERS LIST SHANGHAITECH AS FIRST ACADEMIC AFFILIATION OR CORRESPONDING ACADEMIC AFFILIATION

10.3PW

In 2017, the Shanghai Ultra-Intense and Ultrashort Pulse Laser Facility (SULF) successfully delivered peak power of 10.3 PW, making it one of the world's most powerful lasers.

IN PHYSICAL SCIENCE AND TECHNOLOGY

- Developed a photocatalytic methane conversion methodology which can directly transform methane, ethane and other gaseous alkanes into value-added liquid product (Science, 2018)
- Explored Lead Sulfide (PbS) as the active layer and developed highly efficient inverted structural quantum dot (QDs) solar cells (Advanced Materials, 2018)
- Performed synchrotron-based in situ grazing-incidence X-ray diffraction investigations, facilitated by other techniques, on the formation of the widely adopted MAPbI$_3$ (MA=methylammonium) perovskite films from their IA phases. Systematically investigated the influences of SVAs on MAPbI$_3$ films (Advanced Materials, 2018)
- Reported an engineered bacterium, which could direct dynamic assembly of inorganic nano-objects with spatiotemporal control (Advanced Materials, 2018)
- Discovered a new principle for efficient CO_2 mitigation (Joule, 2018)
- Gained mechanistic insights into staphylopine-mediated metal acquisition (PNAS, 2018)
- Made in situ X-ray scattering observation of two-dimensional interfacial colloidal crystallization (Nature Communications, 2018)
- Discovered candidate material for room-temperature quantum spin Hall Effect in partnership with Würzburg University (Science, 2017)
- Developed a high efficiency, low toxicity photocatalytic system based on colloidal quantum dots with broad absorbance in visible region (Advanced Materials, 2017)
- Prepared a high-performance lead-based perovskite semiconductor material (Advanced Materials, 2017)

IN LIFE SCIENCE AND TECHNOLOGY

- Determined high-resolution atomic structure of human serotonin receptor 2C (5-HT$_{2C}$), an important G-protein-coupled receptor (GPCR) drug targeting the treatment of schizophrenia and drug abuse (Cell, 2018)
- Performed base editing with a Cpf1-cytidine deaminase fusion (Nature Biotechnology, 2018)
- Demonstrated that the transcription of multiple genes in the brain can be simultaneously activated using CRISPR-dCas9-activator transgenic mice (Nature Neuroscience, 2018)
- Performed a genome-wide CRISPR screen to identify that regulate T cell activation upon anti-T cell receptor (TCR) stimulation (PNAS, 2018)
- Determined crystal structure of human glucagon-like peptide-1 receptor transmembrane domain (Nature, 2017)
- Revealed 3D structure of mature gametes and reprogramming dynamics during mammalian embryogenesis (Cell, 2017)
- Determined three-dimensional molecular structure of agonist-bond CB$_1$ (Nature, 2017)

IN INFORMATION SCIENCE AND TECHNOLOGY

- Proposed new coding schemes to improve noisy network coding (NNC) and distributed decode-forward (DDF) by exploiting the transmitter's observation and applying hybrid relaying strategies. (IEEE Transactions on Information Theory, 2018)
- Honored for papers on light field imagery, fundamental geometry and artificial intelligence problems such as object and anomaly detection and visual question answering (International Conference on Computer Vision, 2017)
- Observed 1D chiral Majorana fermions modes (Science, 2017)
- Honored with the 2018 ACM Sigmobile Test-of-Time Paper Award for seminal work on network coding (IEEE Transactions on Information Theory, 2000)
- Collaborating with Shanghai Museum, Alibaba, Shanghai Pudong TV and other industry partners to put a groundbreaking light field acquisition system into place

2095 RESEARCH PAPERS PUBLISHED IN NATURE, CELL, SCIENCE AND OTHER ACADEMIC JOURNALS AND CONFERENCES

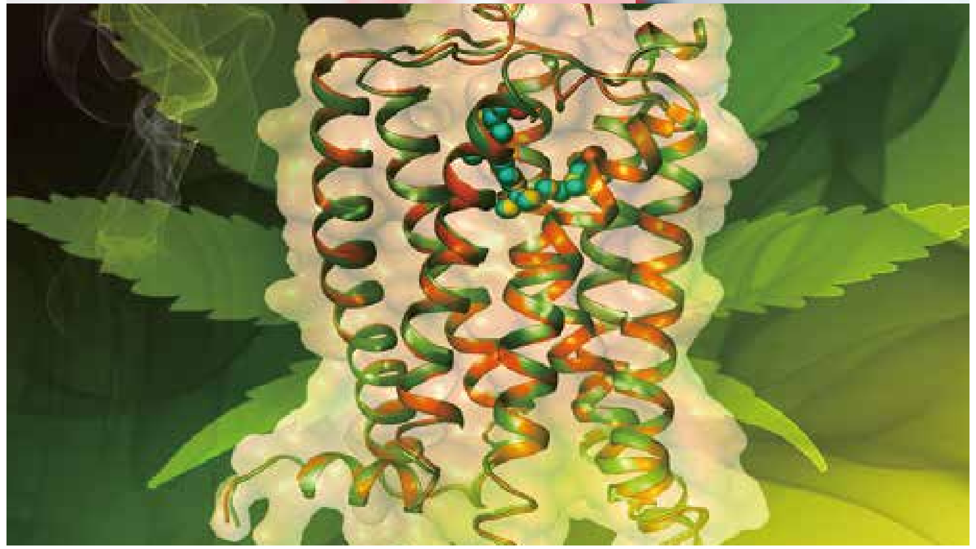
179 RESEARCH GROUPS

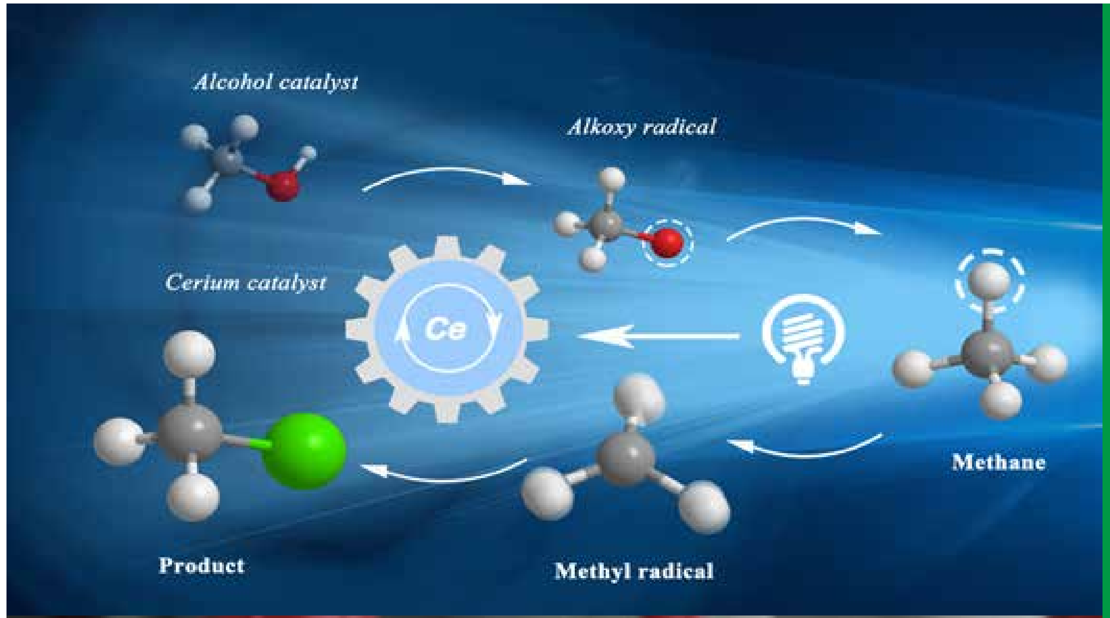
235 ON-GOING RESEARCH PROJECTS FROM CHINESE NATIONAL SCIENCE FOUNDATION, MINISTRY OF SCIENCE AND TECHNOLOGY, SHANGHAI GOVERNMENT AND OUTSIDE RESOURCES

INNOVATION & TECHNOLOGY TRANSFER

82 Domestic Patents
25 International Patents

Research Associate Professor Hua Tian's research determining the 3-dimensional molecular structure of the agonist-bound human cannabinoid receptor CB_1 was published in Nature (2017).

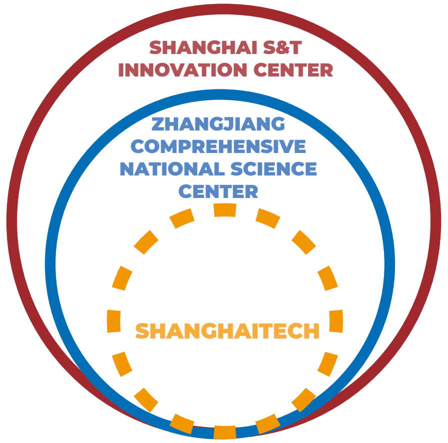




Assistant Professor Zuo Zhiwei's research developing a selective functionalization of methane by cerium photocatalysis for natural-gas upgrading was published in Science (2018).

OUR
facilities

Located in Shanghai's Zhangjiang Hi-Tech Park, ShanghaiTech plays an important role in the development of the Zhangjiang Comprehensive National Science Center, in partnership with CAS institutes. The proximity of neighboring facilities offers numerous opportunities for collaboration.



1. SHANGHAI SYNCHROTRON RADIATION FACILITY
2. SOFT X-RAY FREE ELECTRON LASER FACILITY
3. LIVE CELL IMAGING FACILITY
4. SHANGHAI ENGINEERING CENTER FOR MICROSATELLITES
5. SHANGHAI ADVANCED RESEARCH INSTITUTE, CAS
6. NANO FABRICATION, SHANGHAITECH
7. ULTRA-INTENSE AND ULTRASHORT PULSE LASER FACILITY
8. NATIONAL CENTER FOR PROTEIN SCIENCE - SHANGHAI
9. NEW DRUG RESEARCH PLATFORM OF SHANGHAI INSTITUTE OF MATERIA MEDICA
10. NMR, MS CENTER, SHANGHAITECH
11. ELECTRON MICROSCOPE CENTER, SHANGHAITECH
12. HARD X-RAY FREE ELECTRON LASER FACILITY

OUR campus life

Both inside and outside of the classroom and lab, ShanghaiTech encourages curiosity and exploration. Frequent activities and visiting lecturers enhance the intense academic environment.

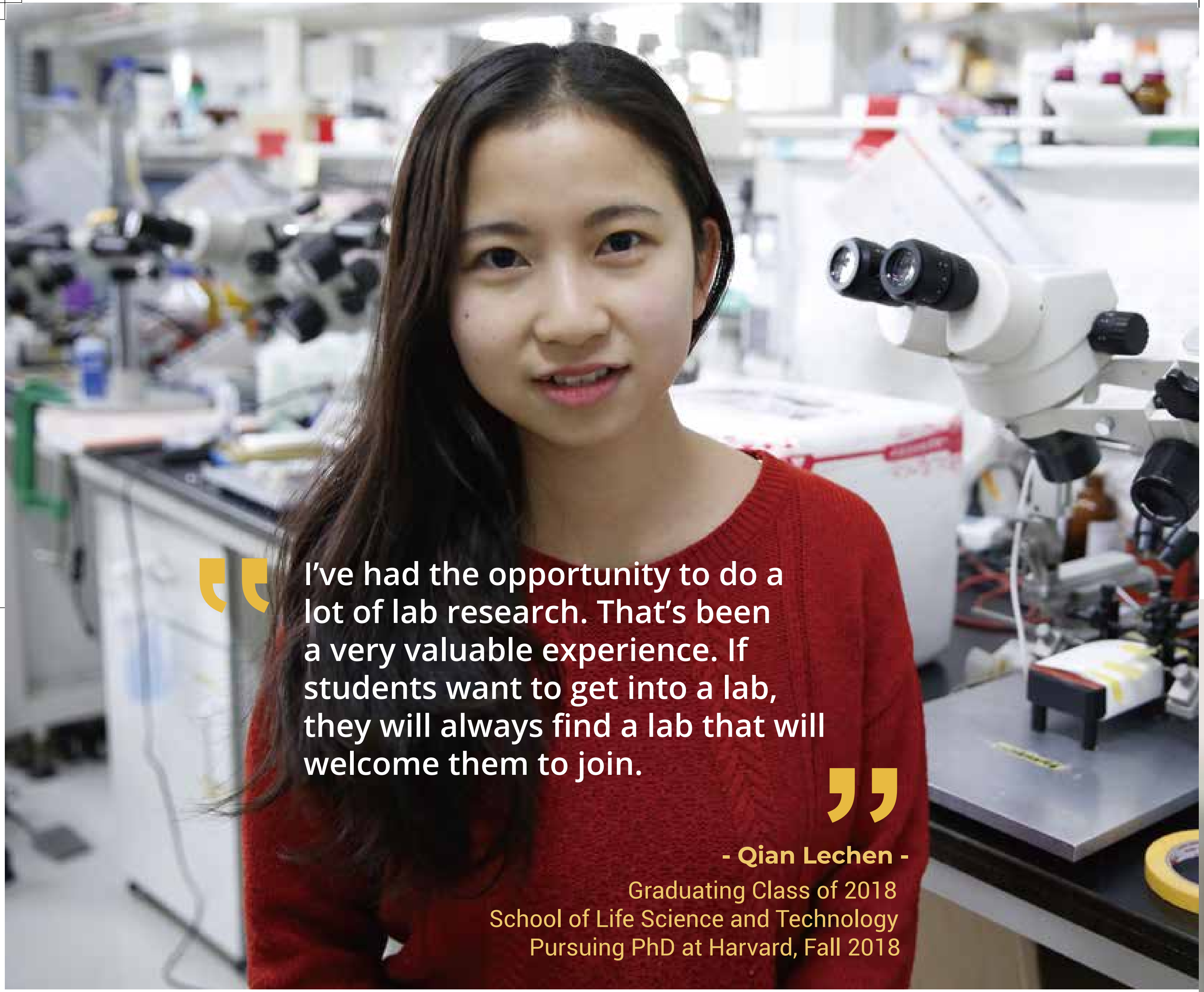
OVER 60 STUDENT SOCIETIES AND CLUBS

AWARDS

Award-winning teams:
Odyssey of the Mind
Segment Fault Hackathon
iGEM

In 2018, ShanghaiTech student association -Geek Pie, a first-time ASC finalist, won silver medal and the e Prize.

In 2017, ShanghaiTech's iGEM team won a gold medal in international competition for the second year in a row.



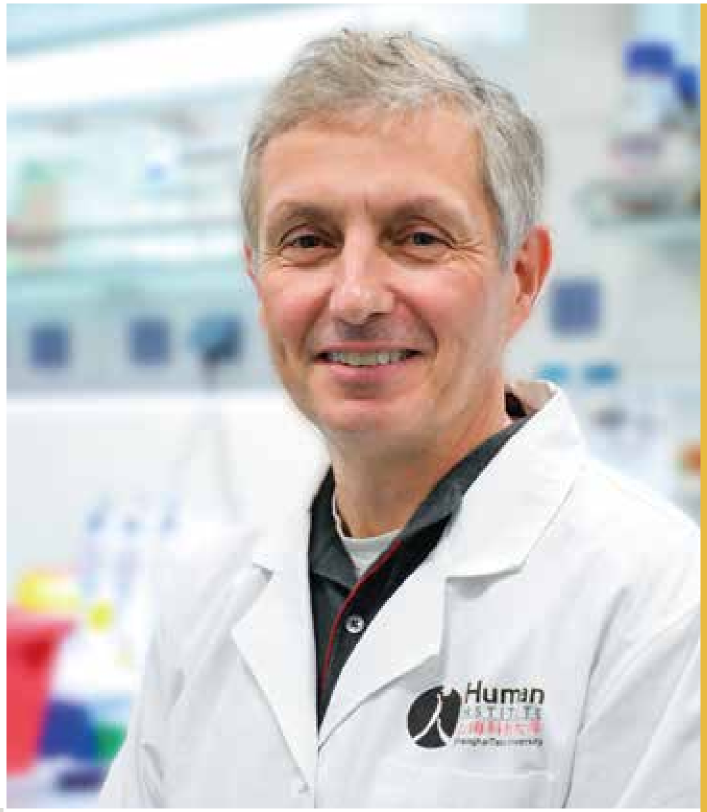
“I’ve had the opportunity to do a lot of lab research. That’s been a very valuable experience. If students want to get into a lab, they will always find a lab that will welcome them to join.”

- Qian Lechen -
Graduating Class of 2018
School of Life Science and Technology
Pursuing PhD at Harvard, Fall 2018

OUR people

“I’ve been a professor for 30 years, but being here, just the energy of the students here, there is this attitude that if you can dream it, you can do it.”

- Ray Stevens -
Founding Director, iHuman Institute
Provost Professor, USC



“We give everyone freedom and resources so we can open our minds to any new ideas, to do anything. This is how innovation should work.”

- Yu Jingyi -
Vice Dean, School of Information Science and Technology

International Cooperation

50% of ShanghaiTech students will study abroad before graduation, in either summer sessions or semester/ yearlong programs.

Our most accomplished undergraduates participate in ShanghaiTech's 3+1 Study Abroad Program (three-year study in ShanghaiTech and up to one academic year at foreign universities), enrolling as visiting students at a number of excellent universities including MIT, UC Berkeley, Drexel University and Harvard.

Every summer, ShanghaiTech hosts international students from top universities such as University of Chicago, Yale University and Cornell University for its Summer Research Program.

ShanghaiTech frequently welcomes entrepreneurs and experts to lecture on campus.

ShanghaiTech is committed to the integration of science, education and entrepreneurship by working with domestic and international hi-tech companies and collaborating with the GPCR Consortium, Micro-Electronics Consortium, and OpenFog Consortium.

OpenFog

IBM

lenovo

NOVARTIS

①-⑧ School of Physical Science and Technology

School of Life Science and Technology

SIAIS/iHuman

①-④ School of Information Science and Technology

School of Entrepreneurship and Management

① Institute of Mathematical Sciences

② School of Creative Arts

③ General Education Center

① Library ② Athletic Center

③ Stadium ④ Swimming Facileties

① Administration Center

② Teaching Center ③ Auditorium

④ Student Innovation Center

⑤ Campus Service Center

⑥ Student Center

⑦ Conference Center

①-③ Dining Halls

①-⑥ Faculty Village

①-⑩ Student Apartments

Energy Station