



# Department of Computer Science and Technology

## Tsinghua University

### **I**NTRODUCTION

With a comprehensive range of disciplines and pioneering research, Tsinghua's Department of Computer Science and Technology (DCST) has always been at the forefront of the latest trends. Ranked 15th in the 2023 QS computer science rankings, DCST places a strong emphasis on applying knowledge in innovative ways through its diverse range of courses and projects. Our dedicated faculty team brings a wealth of expertise and enthusiasm to the classroom, while our exceptional and diverse student body creates a dynamic learning environment. The campus offers a peaceful setting for study and reflection, while our lectures strike a perfect balance between theoretical depth and practical relevance. With a distinguished alumni network, studying at DCST puts you one step closer to a bright and successful future.

# DCST

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### CONTACT INFORMATION

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## HISTORY OF DCST

- 1956** • The computer science major was established
- 1958** • Department of Automatic Control was set up with computer science as one of its majors
- 1979** • Renamed to Department of Computer Engineering and Science
- 1984** • Renamed to Department of Computer Science and Technology
- 1994** • Institute for Information Network Engineering was established
- 2001** • School of Software was established
- 2007** • Institute for Theoretical Computer Science was established

## INSTITUTES & RESEARCH AREAS

**Institute of High Performance Computing:** High-performance Computer System, Parallel and Distributed Computing, and Advanced Storage System.

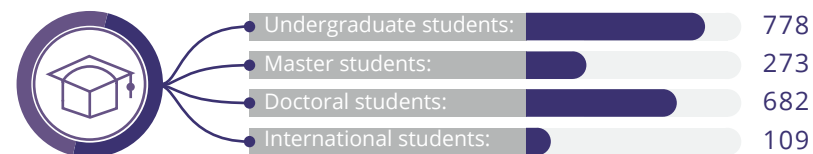
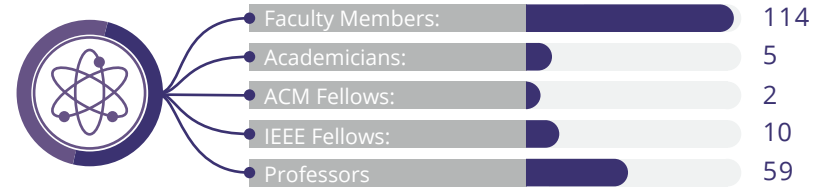
**Institute of Computer Networks:** Next Generation Internet Architecture, Internet Routing and Switching, Network Performance Evaluation and QoS Control, Cyberspace Security, and Network Applications.

**Institute of Computer Software:** Data Engineering, Knowledge Engineering, Software Engineering and System Engineering, Electronic Design Automation, and Data Visualization.

**State Key Laboratory of Intelligent Technology & Systems:** Theory and Methodology of Artificial Intelligence, Intelligent Information Processing, Intelligent Control, and Robotics.

**Institute of Human-Computer Interaction & Media Integration:** Computer Graphics and Computer Vision, Digital Media Computing, Harmonious Human Computer Interaction, and Pervasive Computing.

## FAST FACTS



## INTERNATIONAL STUDENTS

- NORTH AMERICA **13%**
- EUROPE **39%**
- ASIA **35%**
- AFRICA **7%**
- OCEANIA & SOUTH AMERICA **6%**

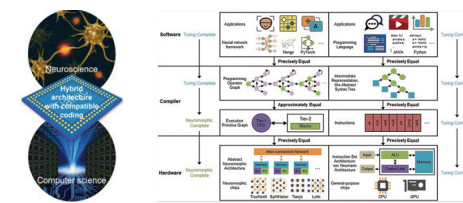


## BEST PAPER AWARDS

YEAR	2022	2022	2022	2021	2021	2020
CONFERENCE	APNet 2022	WSDM 2022	ICLR2022	CLUSTER	ICS 2021	ACM SIGKDD 2020
ARTICLE TITLE	Locality Matters! Traffic Demand Modeling in Datacenter Networks	Learning Discrete Representations via Constrained Clustering for Effective and Efficient Dense Retrieval	Analytic-DPM: an Analytic Estimate of the Optimal Reverse Variance in Diffusion Probabilistic Models	Accelerating GPU Message Communication for Autonomous Navigation Systems	HyQuas: Hybrid Partitioner Based Quantum Circuit Simulation System on GPU	ArnetMiner: Extraction and Mining of Academic Social Networks
AUTHOR	Zhiwen Liu, Mowei Wang, Yong Cui	Jingtao Zhan, Jiaxin Mao, Yiqun Liu, Jiafeng Guo, Min Zhang and Shaoping Ma.	Fan Bao, Chongxuan Li, Jun Zhu, Bo Zhang	Hao Wu, Jiangming Jin, Jidong Zhai, Yifan Gong, Wei Liu	Chen Zhang, Zeyu Song, Haojie Wang, Rongkai Yuan, Jidong Zhai	Jie Tang, Jing Zhang, Limin Yao, Juanzi Li, Li Zhang, Zhong Su
AWARD	Best Student Paper Award	Best Paper Award	Outstanding Paper Award	Best Paper Award	Best Student paper	Test of Time Award for Applied Science

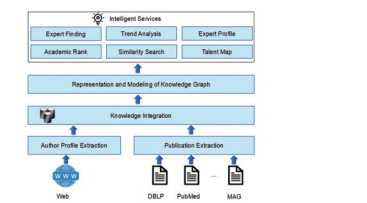
## NOTABLE SCIENTIFIC PROJECTS

### Neuromorphic Completeness



1. Participation in the design of brain-inspired computing chip. The chip achievement was published as the cover article of Nature (2019) and was rated as one of the top ten scientific advances in China in 2019.
2. The proposal of neuromorphic completeness and the system hierarchy of brain-inspired computing (published by Nature, 2020).

### AMiner: AI-Powered Academic Network Mining



AMiner, a scholar-centric academic search and mining system, has attracted more than 20,000,000 independent IP accesses from over 220 countries/regions (per Google Analytics). The original paper about the AMiner system published on SIGKDD 2008 received the inaugural Test-of-Time Award for Applied Science in recognition of the study of mining academic social networks.

## NURTURED TALENTS

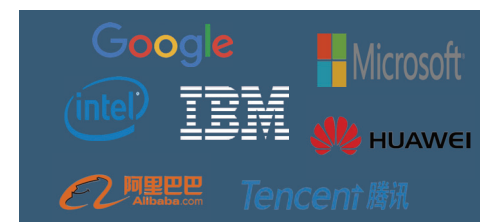
### Academia

**Yike Guo:** Tenure Professor at Imperial College London, Principal Vice President of Hong Kong University of Science and Technology  
**Yi Pan:** Tenure Professor at Georgia State University, Academician of American Academy of Medical and Biological Engineering  
**Xiangyang Li:** Executive Dean of School of Computer Science and Technology, University of Science and Technology of China

### Industry

**Xiaochuan Wang:** Co-founder of Baichuan AI  
**Qi Yin:** Co-founder and CEO of Megvii (Face++)  
**Xuedong Huang:** Chief Technology Officer of Microsoft Global Artificial Intelligence

## INDUSTRIAL COOPERATION



# campus life

Tsinghua University is located in the Haidian district of Beijing, which is internationally renowned as the 'Silicon Valley' of China. Tsinghua is listed as one of the world's most beautiful college campuses by Forbes. 7 libraries + history museum + art museum + sports centers + indoor & outdoor swimming pools + 13 cafeterias + gymnasiums

## ONLINE EDUCATION

DCST provides more than 20 courses on XuetangX and edX with over half a million enrolled students worldwide. These high-quality courses have been adopted by many institutions to carry out mixed teaching.

## SCHOLARSHIP & FUNDING

Chinese Government Scholarship covers tuition fees, living allowance, on-campus accommodation and comprehensive medical insurance. Tuition Scholarship covers full or partial tuition fees.

## APPLICATION & ADMISSION

Application Term: November 1st ~ March 1st (Only the fall semester is open for application)  
 Further details: <https://yzbm.tsinghua.edu.cn/intlLogin>

- o Master Program: <http://ac.cs.tsinghua.edu.cn/>
- o Doctoral Program: <http://ac.cs.tsinghua.edu.cn/>
- o Exchange Program: [https://www.tsinghua.edu.cn/en/Admissions/Non\\_Degree\\_Programs1/Overview.htm](https://www.tsinghua.edu.cn/en/Admissions/Non_Degree_Programs1/Overview.htm)
- o Summer School: <http://ss.cs.tsinghua.edu.cn/>



Graduate program



Summer School