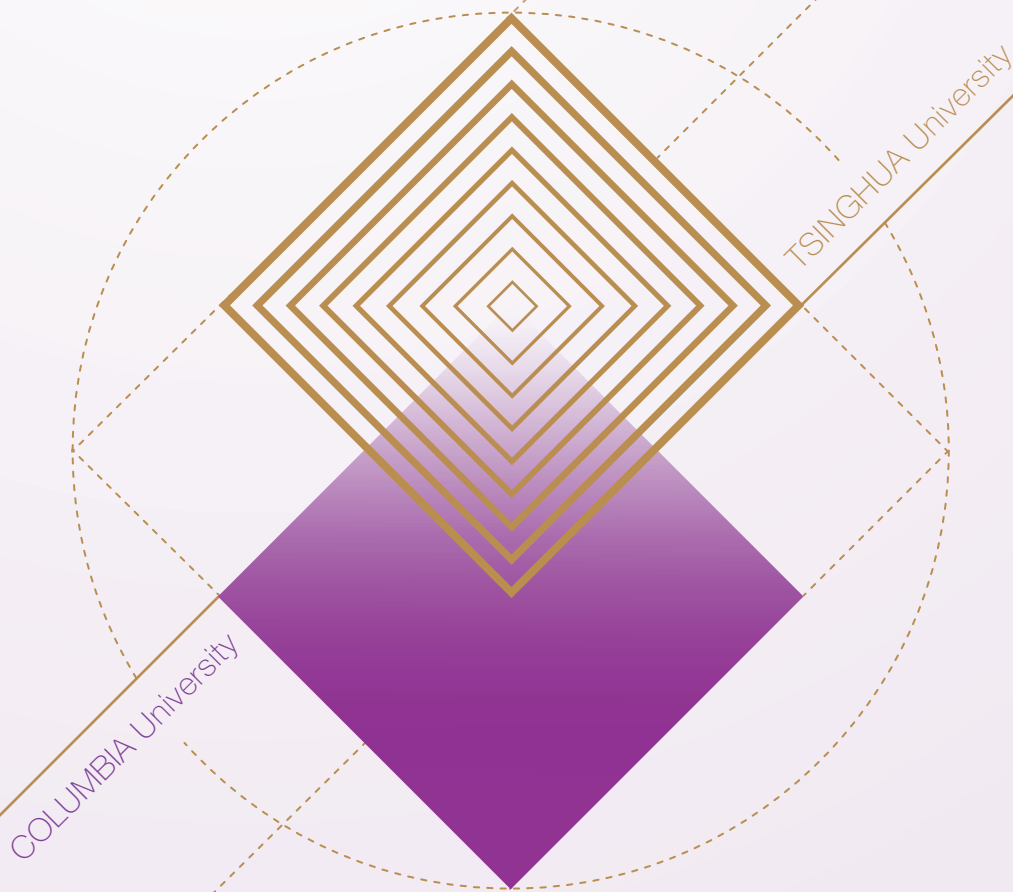


# TSINGHUA-COLUMBIA DUAL MASTER'S DEGREE PROGRAM IN BUSINESS ANALYTICS



<http://masters.sem.tsinghua.edu.cn>



SEM  
TSINGHUA UNIVERSITY  
清华经管学院

清华大学经济管理学院  
School of Economics and Management, Tsinghua University



TCMiBA



# WHY TSINGHUA

Tsinghua University was established in 1911. The campus of Tsinghua University is situated in the northwest Beijing on the site of the former imperial garden of the Qing Dynasty.

Among the top research universities in the world  
Tsinghua University ranks

16<sup>th</sup>

THE World University  
Rankings 2022

10<sup>th</sup>

THE World Reputation  
Rankings 2021

17<sup>th</sup>

QS World University  
Rankings 2022

6<sup>th</sup>

QS Graduate Employability  
Rankings 2022

1<sup>st</sup>

QS Graduate Employability  
Rankings 2022 in Asia

The World's Most Beautiful Campus  
—Forbes Magazine

\*ata as of September 30, 2020.

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Tsinghua University School of Economics and Management (hereinafter referred to as "Tsinghua SEM") was established in 1984. Over the past 39 years, pursuing the mission of advancing knowledge and cultivating leaders for China and the world and the core values of integrity, dedication and respect, Tsinghua SEM has maintained a leading position in terms of personnel training, scientific research, social influence and international exchanges in China and has been striving to be a world-class economic management school.

## WHY TSINGHUA SEM

## THE ADVISORY BOARD

The Advisory Board of Tsinghua University School of Economics and Management was founded in October 2000.





## Honorary Chairman

### ZHU Rongji

Founding Dean, School of Economics and Management, Tsinghua University (1984-2001)  
Premier, State Council, People's Republic of China (1998-2003)

## Honorary Members

### The Lord Browne of Madingley

Executive Chairman, L1 Energy  
Former Group Chief Executive, bp p.l.c.

### Henry M. Paulson, Jr.

Founder and Chairman, Paulson Institute  
Former U.S. Secretary of the Treasury  
Former Chairman and CEO, The Goldman Sachs Group, Inc.

### H. Lee Scott, Jr.

Former President and CEO, Wal-Mart Stores, Inc.

### WANG Qishan

Vice-President, People's Republic of China

## Chairman

### Tim Cook

CEO, Apple

## Vice Chairmen

### QIU Yong

President, Tsinghua University

### QIAN Yingyi

Professor of Economics and Distinguished Professor of Arts, Humanities and Social Sciences, Tsinghua University  
Dean (2006-2018), School of Economics and Management, Tsinghua University

## Members

### Mary T. Barra

Chair and Chief Executive Officer, General Motors Company

### Jim Breyer

Founder and CEO, Breyer Capital

### Roland Busch

Chairman of Managing Board, President and Chief Executive Officer, Siemens AG

### CHANG Zhenming

Vice Chairman, China Center for International Economic Exchanges  
Former Chairman, CITIC Group

### CHEN Jining

Mayor, Beijing Municipal Government  
Former Minister, Ministry of Environmental Protection, People's Republic of China  
Former President, Tsinghua University

### CHEN Yuan

Vice Chairperson, The 12th National Committee of the Chinese People's Political Consultative Conference (CPPCC)  
Former Chairman, China Development Bank

### Raymond T. Dalio

Founder, Co-CIO and Chairman, Bridgewater Associates, LP

### Srikant M. Datar

George F. Baker Professor of Administration Dean, Harvard Business School

### Michael Dell

Chairman of the Board and Chief Executive Officer, Dell Technologies

### Jamie Dimon

Chairman of the Board and Chief Executive Officer, JPMorgan Chase

### Michel Doukeris

Global Chief Executive Officer, AB InBev

### Denis Duverne

Chairman of the Board, AXA Group

### Laurence D. Fink

Chairman and Chief Executive Officer, BlackRock, Inc.

### William E. Ford

Chairman and Chief Executive Officer, General Atlantic

### Jane Fraser

Chief Executive Officer, Citigroup Inc.

### Victor K. Fung

Group Chairman, Fung Group

### Christopher B. Galvin

Co-Founder and Chairman, Gore Creek Asset Management LLC  
Former Chairman and CEO, Motorola Inc.

### Terry Gou

Founder, Foxconn Technology Group

### Mario Greco

CEO, Zurich Insurance Group

### Evan G. Greenberg

Chairman and Chief Executive Officer, Chubb Limited and Chubb Group

### Maurice R. Greenberg

Chairman and Chief Executive Officer, Starr Insurance Companies

### GU Binglin

Director, Institute for Advanced Study, Tsinghua University  
Former President, Tsinghua University

### GUO Shuqing

Secretary of Party Committee and Deputy Governor, People's Bank of China  
Chairman and Secretary of Party Committee, China Banking and Insurance Regulatory Commission

Former Chairman of the Board, China Construction Bank; Former Chairman of China Securities Regulatory Commission  
Former Governor, Shandong Province

### HO Ching

Chairman, Trailblazer Foundation  
Board Member, Temasek Trust

### Nobuyuki Idei

Founder, Representative Director and Chairman, Quantum Leaps Corporation  
Former Chairman and CEO, Sony Corporation

### Pablo Isla

Chairman, Inditex Group

### Erika James

Dean, The Wharton School of the University of Pennsylvania

### Christian Klein

Chief Executive Officer, SAP SE

### Henry R. Kravis

Co-Chairman and Co-Chief Executive Officer, KKR

### Ramon Laguarta

Chairman and Chief Executive Officer, PepsiCo

### Jonathan D. Levin

Philip H. Knight Professor and Dean, Stanford Graduate School of Business

### Richard C. Levin

Former CEO, Coursera  
President Emeritus, Yale University

### Richard Li

Founder and Chairman, Pacific Century Group

### Robin Li

Co-Founder, Chairman and Chief Executive Officer, Baidu, Inc.

### LIU He

Member, Political Bureau of CPC Central Committee  
Vice-Premier, State Council, People's Republic of China  
Head, General Office of the Central Commission for Financial and Economic Affairs

### LIU Mingkang

Former Chairman, China Banking Regulatory Commission

### Bernard Looney

Chief Executive Officer, bp Group

### LOU Jiwei

Standing Committee Member and Chairman of the Committee of Foreign Affairs, The 13th National Committee of the Chinese People's Political Consultative Conference (CPPCC)  
Former Chairman, National Council for Social Security Fund  
Former Minister, Ministry of Finance, People's Republic of China

### Andrónico Luksic

Chairman, Luksic Group

### Jack Ma

Founder, Jack Ma Foundation  
Partner, Alibaba Group

### MA Kai

Member, Political Bureau of the 18th CPC Central Committee  
Vice-Premier, State Council, People's Republic of China (2013-2018)  
**Pony Ma**  
Core Founder, Chairman of the Board and CEO, Tencent

### Eric S. Maskin

Adams University Professor and Professor of Economics and Mathematics, Harvard University  
2007 Nobel Laureate in Economics

### Doug McMillon

President and CEO, Walmart Inc.

### Elon Musk

Co-founder and CEO, Tesla, Inc.  
Co-founder and CEO, Space Exploration Technologies (Space X)

### Satya Nadella

Chairman and Chief Executive Officer, Microsoft

### James Quincey

Chairman and Chief Executive Officer, The Coca-Cola Company

### Brian L. Roberts

Chairman and Chief Executive Officer, Comcast Corporation

### David M. Rubenstein

Co-Founder and Co-Chairman, The Carlyle Group

### David C. Schmittlein

John C Head III Dean, MIT Sloan School of Management

### Stephen A. Schwarzman

Chairman, CEO and Co-Founder, Blackstone

### David M. Solomon

Chairman and Chief Executive Officer, The Goldman Sachs Group, Inc.

### Masayoshi Son

Representative Director, Corporate Officer, Chairman and CEO, SoftBank Group Corp.

### A. Michael Spence

Philip H. Knight Professor Emeritus of Management, Stanford University  
Senior Fellow, Hoover Institution at Stanford University  
2001 Nobel Laureate in Economics

### Bob Sternfels

Global Managing Partner, McKinsey & Company

### Ratan N. Tata

Chairman, Tata Trusts  
Chairman Emeritus of Tata Sons, Tata Industries, Tata Motors, Tata Steel and Tata Chemicals

### John L. Thornton

Executive Chairman, Barrick Gold Corporation  
Chairman, Pinebridge Investments  
Chair Emeritus, Brookings Institution

### Ben van Beurden

Chief Executive Officer, Royal Dutch Shell plc

### Jacob Wallenberg

Chairman of the Board, Investor AB

### WANG Dazhong

Former President, Tsinghua University

### Marjorie Yang

Chairman and CEO, Esquel Group

### YI Gang

Governor, People's Bank of China

### ZHAO Chunjun

Dean (2001-2005), School of Economics and Management, Tsinghua University

### ZHOU Xiaochuan

Vice Chairperson, The 12th National Committee of the Chinese People's Political Consultative Conference (CPPCC)  
Former Governor, People's Bank of China  
President, China Society for Finance and Banking

### Oliver Zipse

Chairman of the Board of Management, BMW AG

### Mark Zuckerberg

Founder and CEO, Facebook



# WHY TCMiBA PROGRAM

## Program Overview

Tsinghua-Columbia Dual Master's Degree Program in Business Analytics (TCMiBA) was co-established by the School of Economics and Management at Tsinghua University and the Fu Foundation School of Engineering and Applied Science at Columbia University in September 2014.

This program aims to develop interdisciplinary talent in the fields of management theory and cutting-edge information technology, with an emphasis on global vision and strong business analytical skills.

Students who have successfully completed the program will receive a Diploma and a Master's degree in management from Tsinghua University and a Master of Science degree from Columbia University.

TCMiBA is a full-time program that usually takes 2-3 years to complete. Students admitted to the dual degree program will study at Tsinghua University, Beijing, China, for the first year, and through an expedited application process, enroll and study at Columbia University, New York, USA, for the second year.

## Study Journey

### First Year

Tsinghua University  
Beijing, China

### Second Year

Columbia University  
New York, USA

## Program Features

### Collaboration between China and U.S Top Universities

The School of Economics and Management at Tsinghua University is one of the world's top business schools, especially in the field of management, and the Fu Foundation School of Engineering and Applied Science at Columbia University is a world-wide leader in the field of engineering and data science. The TCMiBA program combines the strengths of both universities. In addition, Columbia University and Tsinghua University have a long history of cooperation in a wide range of academic and professional fields.

### Interdisciplinary Approach to Management Theory and Data Science

TCMiBA is a pioneer in developing an interdisciplinary education system that integrates data science and management theory. The program focuses on big data application in management, improving knowledge base in data analytics and modeling and enhancing management skills. This unique and forward-looking interdisciplinary approach will help nurture the future leaders of this century.

### International Education Geared towards Industry Practice

Students enrolled in this program have diverse backgrounds. During their studies, students have access to many internships and job opportunities in Beijing, New York, and other major cities in the world, which helps them develop global vision and practical skills.



# FACULTY

Up to June 30th, 2022, Tsinghua SEM has 155 full-time faculty members and four dual-appointed faculty of Tsinghua Shenzhen International Graduate School (Innovation Management Area) and Tsinghua SEM (Shenzhen Campus). Among full-time and four dual-appointed faculty, 156 have Ph.D. degrees. Tsinghua SEM also invites Honorary Professors, Adjunct Professors, Visiting Professors, and Management Practice of Visiting Professors.



## CHEN Guoqing

- Department of Management Science and Engineering Tsinghua University Distinguished Professor of Arts, Humanities and Social Sciences Chair Professor
- Bachelor, 1992, Renmin University of China
- MBA, 1988, Catholic University of Leuven
- Ph.D., 1992, Catholic University of Leuven

### Research Areas

IT Strategy and Management, Business Intelligence and e-Business, Data Modeling and Fuzzy Logic



## CHEN Yubo

- Department of Marketing Professor, Coca-Cola Chair Professor
- Senior Associate Dean, School of Economics and Management
- Ph.D., 2004, University of Florida

### Research Areas

Big Data and Business Innovation in the Networked World, Market Transformation and Business Analytics in the Mobile Internet Era, Digital Transformation of Chinese Economy, Climate Change and Sustainability Strategy



## CHEN Jian

- Lenovo Chair Professor, Chair, Department of Management Science and Engineering
- Ph.D., 1989, Tsinghua University

### Research Areas

Supply Chain Management, e-Business, Business Intelligence and Decision Analysis, Optimization and Forecasting Techniques

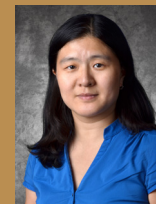


## XU Xin

- Department of Management Science and Engineering Starr Endowed Chair Professor
- Associate Dean, School of Economics and Management
- Ph.D., 2005, University of California, Irvine

### Research Areas

Business Value of IT, Social Media, IT Governance



## LIN Lihui

- Associate Professor, Department of Management Science and Engineering
- Ph.D., 2002, University of Texas at Austin

### Research Areas

Knowledge Management, Crowdsourcing, Crowd Funding, Open Source, E-Commerce, IT Investment, Real Options Analysis, Licensing of Intellectual Property



## LIU Hongyan

- Department of Management Science and Engineering Professor
- Ph.D., 2000, Tsinghua University

### Research Areas

Data/Text Mining, Business Intelligence, Recommender Systems, Social Network Analysis, Healthcare Data Mining and Analysis



## WANG Chun

- Department of Management Science and Engineering Associate Professor
- Academic Director
- Ph.D., 2014, Columbia University

### Research Areas

Dynamic Programming, Decision Models, Financial Engineering and Risk Management



## LIU Dengpan

- Professor, Department of Management Science and Engineering
- Ph.D., 2006, University of Texas at Dallas

### Research Areas

Information Systems and Information Management, E-Commerce, Internet Finance, Licensing of Intellectual Property

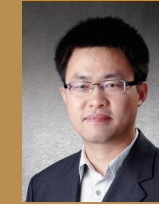


## PAN Wenqing

- Professor, Department of Economics
- Ph.D., 1999, Renmin University of China

### Research Areas

Input-Output Analysis, Quantitative Economics, Regional Economics, International Economics



## LI Bo

- Associate Professor, Department of Management Science and Engineering
- Ph.D., 2006, University of California, Berkeley

### Research Areas

Data Science, Applied Econometrics



# CURRICULUM

## Timeline

YEAR 1 Home University

- Opening Ceremony and Orientation
- Required and Elective Courses
- Thesis Proposal (Tsinghua)

YEAR 2 Host University

- Required and Elective Courses
- Thesis (Tsinghua)

Graduation

- Extended Learning and Student Activities
- Interns and Integrated Projects
- Career Development Services

Tsinghua University		Columbia University	
Core Courses	Concentration Core	Required Core	Required Technical Core
<ul style="list-style-type: none"><li>• Advanced Econometrics</li><li>• Optimization Models and Methods</li><li>• Machine Learning with Applications in Python</li></ul>	<ul style="list-style-type: none"><li>• Business Intelligence</li><li>• Management and Innovation in the Era of Big Data</li><li>• Data Analytics Strategy and Practice</li><li>• Integrated Business Analytics in Practice</li></ul>	<ul style="list-style-type: none"><li>• Optimization Models and Methods</li><li>• Introduction to Probability and Statistics</li><li>• Stochastic Models</li><li>• Simulation</li></ul>	<ul style="list-style-type: none"><li>• Tools for Analytics</li><li>• Data Analytics for Operations Research</li></ul>
<p><b>Integrated Business Analytics in Practice</b></p> <p>The course is designed to motivate students to think and learn creatively by involving them in real projects of modern enterprises. Students are expected to improve critical thinking capabilities and develop practical skills through tackling real business challenges.</p> <p><b>Upon completion of the course, students will</b></p> <ul style="list-style-type: none"><li>• Enhance the ability to tackle real BA problems systematically</li><li>• Improve proficiency in BA tools commonly used in modern enterprises</li><li>• Strengthen teamwork skills</li></ul>			



## Degree

Tsinghua Phase

Master in Management (Management Science and Engineering)

Columbia Phase

- MSOR**  
Master of Science in Operations Research, concentration in Business Analytics
- MSBA**  
Master of Science in Business Analytics
- MS&E**  
Master of Science in Management Science and Engineering
- MSIE**  
Master of Science in Industrial Engineering
- MSFE**  
Master of Science in Financial Engineering

\*During the study journey of TCMiBA, bridging degrees at Columbia University have been extended into five directions since 2019.



# CAREER DEVELOPMENT

**CDC Service**

The Tsinghua SEM Career Development Center (CDC) is dedicated not only to assisting Tsinghua SEM students to discover their career prospects, identify their career goals, refine their occupational qualities and skills, but also to bridging the gap between the students and the potential employers for more job offers and internship opportunities. The services provided are as follows:

## Personalized Guidance

## Job Opportunities

## Activities and Lecture Series on Career Development

## Organizing Career Trips

## Initiating Career Development Courses

## Voice of the Employers

“The graduates from Tsinghua SEM we hired are very driven with solid structure thinking and crisp communication skills. They are passionate about Internet industry and are outstanding talents with high potentials.”

**CHENG Zhengyu**

Tencent

“ Since years Siemens Management Consulting is recruiting from Tsinghua University year by year we are impressed by the excellence and value foundation of the top talent from this top university in China. With their fast learning capability and structured approach to problem solving, they can directly contribute their own ideas to the projects and create impact for our customers.

We welcome all Tsinghua graduates to join SMC to realize their career goal in consulting and set the foundation for a management career at Siemens.

## Maximilian Duerre

Siemens Management Consulting

## Top Employers







# ALUMNI NETWORK

## Tsinghua SEM Alumni

98,132+

Alumni from Non-degree Programs



# OVERSEAS TSINGHUA ALUMNI MENTORS PLAN

## Overseas Tsinghua Alumni Mentors' Profile

Average age

40+ years old

Living and working in the USA

10-20+ years



Industries

Banking  
Financial Services  
Investment  
High-tech, etc.

15 Tsinghua alumni in the  
USA are appointed as TCMiBA  
overseas alumni mentors

Exclusively for TCMiBA students

The first overseas mentorship  
program in Tsinghua SEM

Guiding students' personal  
development, providing  
employment and internship  
opportunities and counselling  
life development during their  
TCMiBA study journey.



## STUDENT ACTIVITIES

Student life at Tsinghua extends far beyond academic courses. Athletics, performing arts, colorful clubs and societies, and diverse social activities not only complement a student's studies at Tsinghua but also offer wonderful opportunities for friendship and learning.

### Performing Arts

The Tsinghua Singing Competition, held annually in December, has become a tradition widely popular among the students. The New Year Gala Night, jointly prepared and performed by Chinese and international students, is a unique way for the international community at Tsinghua to celebrate the New Year.

### Sports

The motto "Without sports, there is no Tsinghua" reflects the exceptional athletic tradition at Tsinghua. The Ma Yuehan Cup, the memorial event for the late Tsinghua Professor of Physical Education Ma Yuehan, is the highlight of the annual Tsinghua sports calendar. It is comprised of 40 sports, with more than 10,000 students and faculty participating.

### Clubs and Societies

There are about 250 clubs and associations, covering six areas of sports, culture, arts, innovation, personal development, and social welfare.

### Social Engagement and Service

At Tsinghua, students have the opportunity to participate in transforming local communities and addressing global social issues. In 2017, social engagement programs for Tsinghua students took them to 34 provinces, autonomous regions, municipalities and special administrative regions in China, as well as 24 countries and regions on five continents including the United States, Russia, and Kazakhstan.



# HOW TO APPLY

## International Applicants

### Qualification of Applicants

- 1 Applicants must be non-Chinese citizens with valid passports.
- 2 Applicants should hold a degree that is equivalent to a Bachelor's Degree (or above) from China.

### Application Schedule

Registration	Mid October to Early March
Interview	March to April
Admission	Late June

### Registration

For more information:

<http://gradadmission.tsinghua.edu.cn>

### Application Documents

- ♦ Application Form
  - ♦ Resume
  - ♦ Personal Statement
  - ♦ Degree
  - ♦ Academic Transcripts
  - ♦ Three Recommendation Letters
  - ♦ GRE
  - ♦ Valid Passport
  - ♦ Valid TOEFL or IELTS
    - IELTS at least 7 and above
- \*For applicants whose undergraduate or graduate degree was awarded in a country in which English is not the official language.
- ♦ Valid HSK | at least level 5, score 180



## Tuition Fees and Scholarships

### Tuition Fees

#### Tsinghua Phase

- Tuition for international students: RMB 30,000 per year

#### Columbia Phase

- Please refer to the official website of IEOR, The Fu Foundation School of Engineering and Applied Science at Columbia University for the updated standard of tuition fees. Students admitted in TCMiBA will pay tuition and fees to Columbia University directly before starting the Columbia phase.

### Scholarships

#### Tuition Scholarships

Cover full or partial tuition fee support with a duration of one academic year. Applicants may apply for Tuition Scholarships annually (competitive).

#### Assistantship

Teaching Assistantship, Research Assistantship, and Management during stay at Tsinghua.

#### TCMiBA Excellence Scholarship

TCMiBA Excellence Scholarship is initiated from 2019 and established exclusively for TCMiBA students for rewarding those outstanding talents to reduce financial pressure, encourage to focus on study and research and also support the development of the program.

#### Scholarship policy for enrolled class 2021:

- The First Award: RMB100,000
- The Second Award: RMB60,000

### Scholarships







# WHAT THEY SAY ABOUT TCMiBA PROGRAM

“ The great attractive advantage of the program is that it provides students with the opportunity to live in New York and Beijing, two global metropolitans in the world. At Tsinghua the courses prepared me for my study abroad; at Columbia I made best of the time to improve myself and seized every opportunity. While studying at Columbia, I had internships and worked with colleagues from around the world. Thanks to the TCMiBA program, I not only realized the dream of watching the game, but also participated in the NBA data analysis competition and landed the offer of basketball operations internship from Thunder. The program is such a bless to me in terms of the countless possibilities it has offered. As long as you seize the opportunity, you will realize your dream.

## ZHOU Guantong

Alumnus, Graduated Class of 2019

“ I'm Amelie, a French-American student, currently enrolled in Tsinghua-Columbia Dual Master's Degree Program in Business Analytics.

I chose this master's program because I am really interested in Business Analytics as data is exploding nowadays and we need people trained to be able to analyze this data. But more than a simple master's degree in Business Analytics, what's special about this program is the fact that you get to discover two cultures in two years at the best universities in each country.

What I love about Tsinghua University is the passion and the drive I can feel in all of the students I meet here. This makes you want to push yourself to always learn more. More than studying the course materials, the University also offers a wide range of activities, ranging from conferences from top speakers, career guidance, but also opportunities to learn more about China.

## CUNIN Amélie

Student, Enrolled Class of 2018

“ I am very pleased to join this program which brings me "more possibilities". The thoughtful design of the project curriculum integrates with the excellent overseas teaching mode and provide better resources for students. It focuses on how to apply insights to real-world scenarios derived from data. And we will obtain various hard skills through coding projects (Python, R). In this program, we are encouraged to ask questions, challenge existing methods and consider new ones. By studying business analytics, I can improve my strategic data management and fact-based decision-making skills.

The program will continue to push me out of my comfort zone, get in touch with the frontiers of management and information technology, and feel the collision of Eastern and Western culture. TCMiBA provides valuable resources, such as the world's top academic resources, alumni resources and career development resources. We can communicate and learn from the most creative minds, meet mentors, and constantly explore the boundaries of life.

## LIU Yang

Student, Enrolled Class of 2020



## School of Economics and Management Tsinghua University

### Mission

To Advance Knowledge and Cultivate Leaders for China and the World.

### Aspiration

To Be a World-Class School of Economics and Management.

### Core Values

Integrity Dedication Respect

### Master's Programs Office

Add: Room B101, Lihua Building,  
School of Economics and Management,  
Tsinghua University

Tel: 86-10-62789822

Email: [mim\\_ba@sem.tsinghua.edu.cn](mailto:mim_ba@sem.tsinghua.edu.cn)

Web: <http://masters.sem.tsinghua.edu.cn/>



For more information,  
scan the code and  
visit our official WeChat.