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Tongji University Overview

Tongji University is a leading university directly under the State Ministry of Education in China, and is also included in the state-funded Project 211 and the 21st Century Education Rejuvenation Action Plan of China. The history of the university dates back to 1907 when Tongji German Medical School was founded by Erich Paulun, a German doctor in Shanghai. In 1923 it was officially established as a university and in 1927 it was renamed as National Tongji University. It then grew to be a comprehensive university offering programs in science, engineering, medicine, arts and law. In 1952, after the discipline reorganization, Tongji University became the largest and most complete university with strength in engineering, especially in Chinese civil engineering. In 1978, following the Reform and Opening-up Policy in China, Tongji has quickly developed to be a multi-disciplinary university with strength in engineering. Today, with a history of more than 100 years, Tongji has grown into a comprehensive research-oriented university which offers 11 major disciplines, namely sciences, engineering, medicine, literature, arts, law, economics, management, interdisciplinary, philosophy and pedagogy.



Tongji attaches importance to internationalization and has cooperated with Germany, France, UK, USA, Japan, Canada, Italy, Spain and Finland in fields of education, tech-

nology and economics. A number of international joint programs have been established between the university and its counterparts in other countries, such as Sino-German College for Graduate Study and Sino-German College of Applied Sciences, which are sponsored by the Chinese and German governments, Sino-Italian Campus which is sponsored by the Chinese and Italian governments, Sino-French Institute of Engineering and Management cooperated with Paris Tech in France, Tongji-UNEP Institute of Environment for Sustainable Development cooperated with UNEP (United Nations Environment Programme) and Tongji-Australian Institute of Technology.

Tongji makes great effort in developing international students' education. In 2019, registered international students amounted to 3826 in total, and among the long-term international students, about 50% students were to pursue their degrees in various disciplines. Recent years, international students amounted to around 5000.

Faculty:

Teaching and research staff: 2815; 18 academicians from Chinese Academy of Sciences, 28 academicians from Chinese Academy of Engineering; 1082 full professors.

Industrialized Discipline Chain:

In Tongji, there are 35 colleges/schools offering about 75 undergraduate majors. It can grant master degrees in 55 broad academic disciplines, together with 15 professional Master's programs and 26 engineering Master's programs. It also grants PhD degrees in 31 broad academic disciplines with 3 professional PhD programs and 25 post-doctoral mobile research stations. As one of the national key research centers, the university has 38 key laboratories and engineering research centers either at the state level or provincial level. The two industrialized discipline chains/groups are: Urban Construction & Disaster Prevention, covers disciplines of Architecture, Urban Planning, Civil Engineering, Bridge, Energy, Survey, Road, Geotechnical Engineering and Environment. These disciplines are mainly lectured in Siping Road Campus;

Modern Manufacturing, supported by the National Engineering Center, covers disciplines of Clean Energy Vehicle, synergizing Automobile, Rail Traffic, Traffic Engineering, Software Engineering, Management, Material Science, IT and Mechanical Engineering. These disciplines are mainly lectured in Jiading campus, which is close to Shanghai International Automobile City.



Educational Features and Goals: Social Service and Internationalization:

In recent years, Tongji University has kept exploring and has gradually formed a modern concept on education and school running with Tongji characteristics. Adhering to the education principle that the undergraduate education should be the foundation of the university and the graduate education should be the way to enhance the university, now the university has established the comprehensive quality-oriented education pattern and talent training model that emphasize the integration of “knowledge, ability and personality”. The university sticks to the harmonious development of the four functions of the university, i.e. “talents fostering, scientific research, social service and international communication”. It keeps strengthening its function of serving the society so as to realize the centralization of the university functions. In line with the national development strategy of science and technology and the major demand of the regional economy, Tongji has promoted traditional disciplines to a new level, strengthening the new disciplines, concentrating and simplifying the cross disciplines, and working closely with the industries, so as to form discipline chains and discipline groups that promote the interaction and progress both of the strong disciplines and the weak disciplines, and to build up the discipline system of a comprehensive university. We will constantly promote the education quality, contributing to the national economic and social development.

Overview of Sino-German School for Postgraduate Studies

The Sino-German School for Postgraduate Studies of Tongji University (CDHK) was established in 1998 as an educational institution for international cooperation through approval by the highest national leadership and an agreement on cultural exchange and cooperation between the Chinese and German governments. It brings together the elite resources of science, research and industry of both countries. Since its establishment 25 years ago, the CDHK had cultivated nearly 2000 outstanding graduates with international outlook and innovative, interdisciplinary competence, who are very popular with companies. Of these, more than 500 students, including nearly 100 international students, have successfully completed a Chinese-German double master degree. And over 1500 multinational students participated in exchange programs. 15 world-renowned transnational companies such as Porsche, Bayer, Schaeffler and Infineon are involved in promoting the construction and development of CDHK.



In 2019, the CDHK and the College of Mechanical Engineering, College of Automotive Studies, College of Electronic and Information Engineering and School of Economics & Management of Tongji University jointly established four Sino-German joint research institutions, namely the Sino-German Mechanical Engineering Center, the Sino-German Automotive Joint R&D Center, the Sino-German Intelligent Science and Technology Research Center, and the Sino-German Academy for Economics & Management, to jointly cultivate high-level talents with an international outlook. The four Centers will further expand the cooperation of various disciplines with Germany, and open up a new prospect for the educational exchanges and innovative scientific research.



In 2022, Tongji University integrated its internal resources related to Germany and established the first Sino-German doctoral school in China and the Sino-German Joint Research Center (Tongji University), which was approved by the Ministry of Education. While continuously uniting the relevant colleges, the German elite universities and the well-known enterprises for talent training on mutually beneficial basis, the CDHK was entrusted with the main construction task of both institutions and the mission of transform itself to a higher level Platform.

The CDHK is the only international university project in China that has been continuously funded by the DAAD for 25 consecutive years. The Talent training at CDHK is characterized by high internationalization, close cooperation with enterprises, closet combina-

tion of theory and practice, and cultivated a large number of excellent graduates, who have a high sense of international outlook, social responsibility and innovation. The success of the CDHK has been highly appreciated by Chinese and German leaders frequently.



In 2014, in the “Framework for Action of German-China Cooperation”, which was signed by the Prime Minister of the People's Republic of China, LI Keqiang, and the Federal Chancellor of the Federal Republic of Germany, Dr. Angela Merkel. It was stated that the CDHK should be regarded as "a successful example of the joint implementation of close sino-german cooperation in higher education".

In 2016, the CDHK was awarded the title "Second Shanghai Exemplary Sino-Foreign Cooperative Education Institution".

In 2018, on the 20th anniversary, WAN Gang, Vice President of the Political Consultative Conference of the Chinese People, and Heiko Maas, Federal Minister of the Federal Foreign Office, sent congratulatory letters in the CDHK anniversary book. In May 2018, the Embassy of the People's Republic of China in Berlin hosted an anniversary celebration for the CDHK. In October, a series of celebrations were held at Tongji University.

In 2020, in "Germany-Europe-Asia: Shaping the 21st Century Together", the German Federal Foreign Office pointed out that the Sino-German School for Postgraduate Studies is the lighthouse project of German foreign science and technology policy.

In 2021, the DAAD praised Tongji University's various cooperation and exchange platforms with Germany, including CDHK, as a “bridge between Germany and China”.

As an important exchange platform for education, research and business between Germany and China, the CDHK is characterized by the following features:

01. Introducing international high-quality educational resources

The CDHK introduces world-class educational resources, carries out the discipline construction, curriculum system construction, Engineering practice teaching and the reform on talents cultivation with advanced concept, and supports the relevant disciplines in assembling international professor teams and in offering high-level international courses. Several partner universities of the CDHK belong to the German Excellence Initiative or are members of TU9, such as the Technical University of Munich, the Karlsruhe Institute of Technology, the Technical University of Berlin, the Technical University of Braunschweig and others.



02. Training international students with China competence

The CDHK accepts about 150 international students from over 20 German and Austrian universities every year, making it one of the Tongji colleges with the highest proportion of international students.

Through refined management and services, the CDHK helps international students to gain a friendly impression of China. The CDHK offers Chinese regional studies in German, holds a series of traditional Chinese folk experience activities, and organizes visits to enterprises such as Huawei and CRRC Group to enhance international students' understanding of Chinese culture, economy and society.



03. Deepening cooperation between education and industry

The system of endowed chairs offers students an international environment for learning and practice. The CDHK has signed or extended endowed chair agreements for autonomous driving, intellectual property and new energy vehicles with companies such as Porsche, Bayer, Infineon and VW. The key research areas of the endowed chairs keep pace with the times and reflect the new trends in economic cooperation between China and Europe.



04. Introducing of High-level international faculty

Famous experts such as the Head of Institute for Machines, Equipment, and Process Automation at KIT, former president of TU-Braunschweig, and the Chairman of the Supervisory Board of Thyssen Krupp are invited to give lectures at the CDHK.



Sino-German Doctoral School of Tongji University

Background . Funding Opportunities . Application Modalities

I. Background

Tongji University has a long history and outstanding reputation as one of China's first class national universities of key importance. It was built in cooperation with the city of Shanghai and is directly administered by the Chinese Ministry of Education. During its long history, the University has developed into a comprehensive, international, research-oriented institution with distinctive features and international influence at home and abroad, ranking among the best universities in China. The history of Tongji University began in 1907 when the Tongji German Medical School was founded by Erich Paulun, a German doctor in Shanghai. The school soon expanded to include engineering programs, after which it was renamed Tongji Medical and Engineering School in 1912. In 1917 Chinese administrators assumed management of the school, renaming it the Tongji Medical and Engineering School, and then as the Private Tongji Medical and Engineering Specialist School. It was formally established as a university in 1923 and was renamed National Tongji University in 1927. Since then, Tongji University has developed into a comprehensive, research-oriented university with study programs in science, engineering, medicine, literature, law, economics, management, art, philosophy and education.

The University has a long history and profound background in Sino-German cooperation. As an important platform for scientific, technological and cultural exchange



between China and Germany, Tongji University signed the earliest cooperation agreement between Chinese and German universities in 1980. The Sino-German School for Postgraduate Studies (CDHK), established in 1998, is the first international, partnership-based institution of higher education approved by the top leadership of the country and established on the basis of an agreement on cultural exchange and cooperation between the Chinese and German governments. Subsequently, the University established a series of Sino-German cooperation-based institutions dedicated to such fields as language training, teaching research, talent training, vocational education research, national situation research, cultural exchange etc., and began cultivating extensive cooperative relations with stakeholders in the German education, science, technology and economic sectors.



The University has signed dual-degree agreements with a number of first-class universities and elite schools in Germany, involving 14 colleges or schools and covering a wide range of cutting-edge disciplines and programs. From 2016 to 2020, the University accepted 720 short-term exchange students and 189 dual-degree students from German universities. There are 77 students went to Germany to obtain joint doctoral training, 44 to pursue doctoral degrees and 88 to enroll in joint master's degree programs. The University also carried out 16 projects for postgraduate academic exchange at partner universities in Germany. In the fields of new energy vehicles, intelligent manufacturing, intelligent transportation, architecture and urban planning, medicine and life sciences, the University has set up 47 international scientific and technological, cooperation-based projects, established four MOE joint international research

laboratories and on-campus training bases, built four Sino-German cooperation platforms for high-level discipline integration and industry-education integration, and carried out two regional studies on cooperation with Germany. At the same time, the University has built a research center with leading German enterprises, such as Volkswagen, Siemens and Bayer.

On his official visit in 2016, German President Joachim Gauck described Tongji University as “the academic exchange hub between China and Germany.” As a model of Sino-German higher education cooperation, the University has been mentioned in many important policy papers in China and Germany, such as the “Sino-German Joint Action Plan: Shaping Innovation Together” and the “China Strategy 2015-2020”.

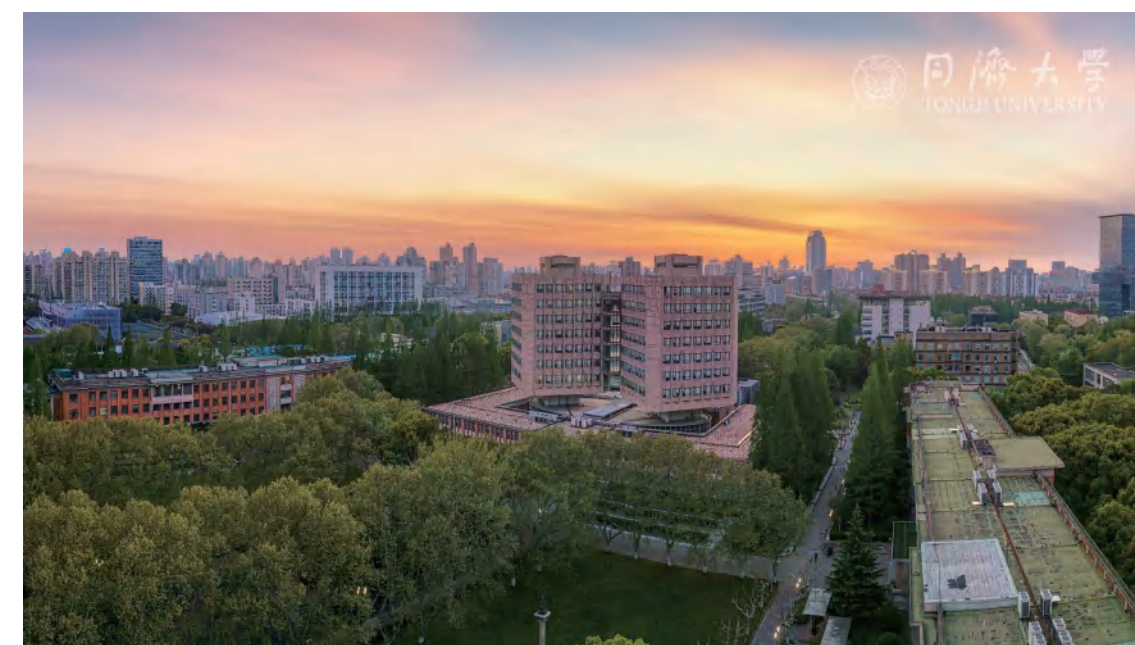
The University has launched the construction of Sino-German Doctoral School (in German: Chinesisch-Deutsches Doktorandenkolleg, CDDK) since 2021 so as to further deepen its cooperation with Germany and Europe, strengthen educational, cultural, scientific and technological exchange between China and Germany and other European partners, advance the international, high-level, talent-training system, and promote high-quality, cutting-edge research and in-depth research cooperation between the industrial and higher education sector.



The Sino-German Doctoral School (CDDK) aims to attract talented doctoral students from China, Germany and Europe to Tongji University who demonstrate academic excellence, a broad vision, a sense of responsibility and mission, and scientific research potential. By educating top-notch, innovative talents with global vision and intercultural communication skills, it aims to become a first-class talent-training base that serves the interests of society and advances innovation and development. The project seeks to

recruit excellent instructors from around the world, build top international research teams, undertake major scientific research projects which address global challenges, and produce first-class scientific achievements that contribute to human progress. It aims to promote the integration and interconnection of personnel training, research and international exchange in various disciplines at a higher level. In this way, it hopes to promote global development and contribute wisdom and strength to building the human community with a shared future.

We welcome candidates interested in innovative, challenging and cutting-edge research to apply to the Sino-German Doctoral School at Tongji University.



II. Scholarship programs for doctoral students

There are several channels and opportunities available for the European students who successfully enrolled by CDDK.

★ Note: Scholarship is tax free.

- 1) Tongji University & Bank of China Global Talent Scholarship
- 2) International Doctoral Scholarship Program of Tongji University
- 3) Chinese Government Scholarship – Doctoral Student Program
- 4) Foreign Student Scholarship Program of the Shanghai Municipal Government
- 5) Research Project Funding directly from the Doctoral Supervisor
- 6) CSC (Chinese Scholarship Council) Scholarship
- 7) Other Scholarship organizations, e.g., DAAD, Erasmus...

For those candidates who success from overall evaluation (incl. materials, interview) for scholarship, s/he will receive scholarship with global competitiveness. The doctoral positions provided regarding financial support are comparable to the level of TV-L E13 full (100%) position as in Germany or Europe. Some excellent ones will even get higher grade of scholarship. Usually, the scholarship will last four years and under annual evaluation. Importantly, the applicants first of all choose his interested research direction and contact the potential supervisor (professors are listed in this brochure).



III. Application requirements

To be eligible for admission to doctoral study, the applicants should have completed a subject-relevant Master degree study program, be able to complete doctoral-level learning tasks, and have the potential to engage in scientific research, teaching or management practice in the future. The applicant should also meet the following general requirements besides of the requirements from supervisors:

1. The applicant must hold a non-Chinese passport valid for at least four years and have resided outside China for more than two years.
2. The applicant must hold a master's degree (or equivalent level of degree) awarded by an authoritative body or relevant certification of equivalent academic qualifications.
3. The applicant should have a strong background in postgraduate study and good academic performance in relevant academic fields.

4. The applicant should be proficient in English or German. For more details on language requirements, please refer to the admission office for overseas students of Tongji University.

IV. Application deadline

In accordance with the regulations of Tongji University, please contact CDDK and your potential supervisor as soon as possible to get enough time for your application.

V. Application documents

1. Degree certificate

The applicant should hold a foreign degree equivalent to the Chinese master's degree, which should be awarded by an internationally recognized academic institution. Degree equivalency is determined by the assessor of the Graduate Admissions Office and the admission office for overseas students of Tongji University.

2. Transcript

The applicant should submit a transcript of his/her final stage of study. If the transcript does not confirm the conferral of the degree, the applicant should submit supplementary certification. The applicant should provide the original transcript together with a translated English transcript. In most cases, transcript in English translation are issued by the applicant's university or government agency. If the issuing agency uses English, an English translation of the transcript is not required. The original transcript should be provided by the original university and be accompanied by the university seal or imprint and the signature of the authorized institution. For more information, please contact the head of the department or the Graduate Admissions Office. the Graduate Admissions Office and the admission office for overseas students of Tongji University.

3. Letter of motivation

The letter of motivation is an opportunity for the applicant to present his/her scientific interests and research objectives and to state the reasons why he/she is seeking admission to the Sino-German Doctoral School (CDDK) of Tongji University rather than other institutions. At the same time, the applicant should provide some background information, including research experience, areas of expertise, distinctions received and extracurricular activities attended.

4. Letter of recommendation (Example of recommendation letter)

同济大学中德博士生院

国际博士生导师同意指导函

经与_____国家的国际学生_____（护照姓名）/_____（中文姓名）沟通，了解到该生学习努力、成绩良好，拟申请的专业、研究方向符合我的指导范围。

该生如入读同济大学中德博士生院攻读博士研究生，本人愿意担任其指导教师。

特此说明。

意向指导教师签名：

日期：

Supervisor Acceptance Letter

Sino-German Doctoral School of Tongji University

After communicating with the international student _____ (passport name)/_____ (Chinese name) from _____ (nationality), I consider the student is hardworking and has good academic performance. The major and research direction that the student intends to apply for is consistent with my research and guidance field.

If the student is accepted as doctoral candidate by the Sino-German Doctoral School (CDDK), I would like to be his/her supervisor.

Intended supervisor (signature):

Date:



The applicant is required to submit at least two letters of recommendation written by a professor (or instructor of equivalent qualification) and his/her master's supervisor. In the letter, the respective instructor should provide his/her personal evaluation of the applicant, including an assessment of the applicant's level of professional knowledge, research competence, working attitude, personality characteristics and the potential to win a scholarship.

VI. Admissions related websites

Graduate admissions:

<https://yz.tongji.edu.cn/zsxw/bszs.htm>

International Students Office:

<https://study.tongji.edu.cn/English/HOME.htm>

Sino-German School (CDHK):

<https://cdhk.tongji.edu.cn/cdhkDE/main.htm>

CDDK's particular web link is available with a fast link from CDHK's website.

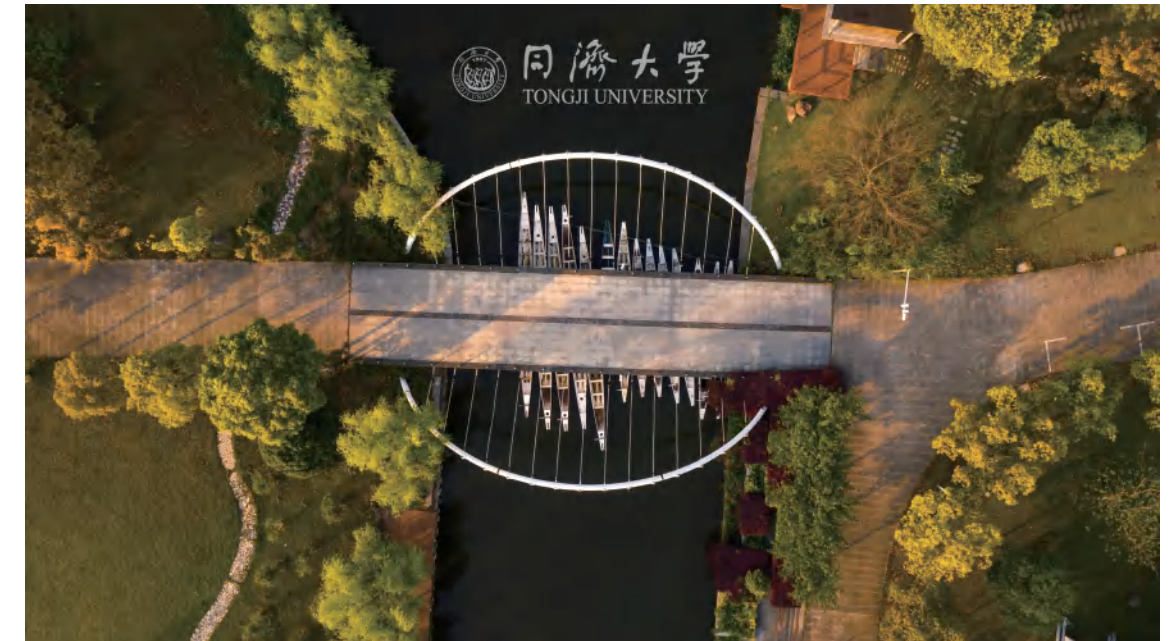
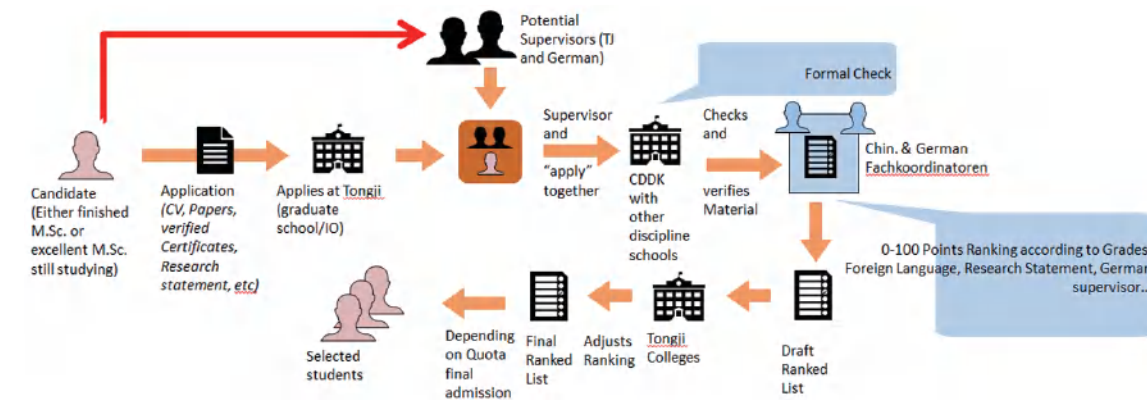
CDDK's consultation email address:

cddk@tongji.edu.cn

★ Note: for the doctoral study and research, it's always important first of all to get your strong motivation and contact the potential supervisor. You will get more academic information from the professors and also application information.

VII. Application steps

The flowchart below is showing the general application steps and processes. However, due to different disciplines (which belong to different major schools, centers), the application steps will have slight differences.





CHEN Shouming

 **Email**
schen@tongji.edu.cn

 **Research Fields**
Strategic management, Innovation,
Corporate Social Responsibility (CSR)

 **Professional Activities**
AOM Member

 **Personal Website**
<https://sem.tongji.edu.cn/semen/12051.html>

 **Doctoral thesis topic**

1. The Antecedents of Enterprises' Low-carbon Strategy
2. A Comparative Study of the Innovation Ecosystem between China and Europe.
3. The CSR Strategy of Chinese Enterprises in Europe/European Enterprises in China

 **Requirements**

1. Passionate about academic research in business and management
2. Fluent in English





LIU Huchen

 **Email**
huchenliu@tongji.edu.cn

 **Research Fields**
Quality engineering, Reliability management.

 **Professional Activities**

1. International Academy of Quality Associate Academician
2. IEEE Senior Member
3. China Association for Quality Member
4. IISE Transactions Senior Member
5. INFORMS Member, Quality Statistics and Reliability Section

 **Personal Website**
<http://sem.tongji.edu.cn/semen/20833.html>

 **Doctoral thesis topic**
Intelligent Quality Engineering, Human Reliability Analysis





MA Guofeng

 **Email**
guofengma@tongji.edu.cn

 **Research Fields**
Project Management and Real Estate

 **Professional Activities**

1. Director of the Department of Construction Management and Real Estate at Tongji University
2. Director of the Master of Engineering Management Center
3. Vice President of Shanghai fixed assets investment Association
4. Member of Building Internet and BIM Special Committee of Chinese Society of Urban Sciences
5. Member of the Special Committee of China Project Management Research Committee (PMRC))

 **Personal Website**
<https://sem.tongji.edu.cn/semch/15194.html>

 **Doctoral thesis topic**
Research field and research projects of doctoral students to be enrolled: Project Management and Real Estate





MA Weimin

 **Email**
mawm@tongji.edu.cn

 **Research Fields**
Operations Research and Operation Management, Uncertainty Decision Theory, Information Systems and Technology, Game Theory and real-time Economics, Service Science and Service Computing, optimization theory and method

 **Professional Activities**

1. IEEE Member
2. AIS Member and CNAIS Member
3. Production and Operations Management Society and POMS-China Chapter
5. International Consortium for Electronic Business and ICEB-CN

 **Personal Website**
<https://sem.tongji.edu.cn/semch/15159.html>

 **Doctoral thesis topic**
Operations Research and Operations Management, Decision Theory and Technology, Information Systems and Information Technology, real-time Economics, etc





SHI Qian

 **Email**
qianshi@tongji.edu.cn

 **Research Fields**
AI and Urban&Regional Governance

 **Professional Activities**
PMI-GAC Director

 **Personal Website**
<https://sem.tongji.edu.cn/semen/12139.html>

 **Doctoral thesis topic**
AI governance, Urban resilience





ZHOU Zhongyun

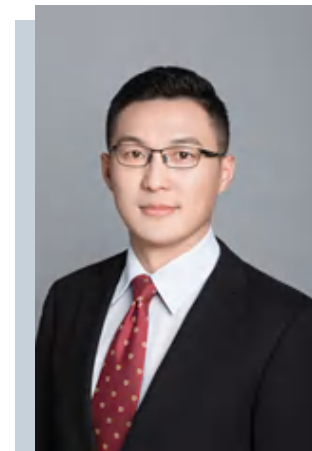
 **Email**
philzhou@tongji.edu.cn

 **Research Fields**
Business AI and Metaverse Applications, Health IT, FinTech

 **Professional Activities**
Senior Editor, Information Systems Journal
Senior Editor, Information Technology & People
Associate Editor, Electronic Commerce Research and Applications
Associate Editor, Industrial Management & Data Systems

 **Personal Website**
<https://sem.tongji.edu.cn/semch/15346.html>

 **Doctoral thesis topic**
Design and Use of Metaverse Applications
Healthcare and Business AI
Gamification
GenAI for Business





SU Qiang

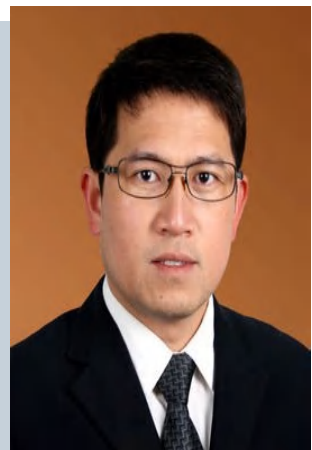
 **Email**
suq@tongji.edu.cn

 **Research Fields**
Management Science & Engineering

 **Professional Activities**
1.Senior Member of the Chinese Association for Quality (CAQ)
2.Senior Member of the IEEE
3.Senior Member of the American Society for Quality (ASQ)
4.Member of the Production and Operations Management Society (POMS)

 **Personal Website**
<https://sem.tongji.edu.cn/semen/12073.html>

 **Doctoral thesis topic**
1.Process Optimization and Intelligent Decision
2.Energy Oriented Production Management
3.Healthcare Service Management Engineering
4.Customer Experience Management



SU Yiyi

Email
suyiyi@tongji.edu.cn

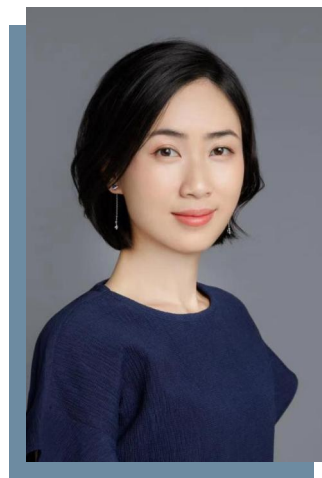
Research Fields
Innovation and Entrepreneurship

Professional Activities
Associate Editor, Chinese Management Studies (SSCI)

Editorial Review Board Member, Management Quarterly

Personal Website
<https://sem.tongji.edu.cn/semch/15360.html>

Doctoral thesis topic
Smart governance, Innovation and Entrepreneurship



WANG Xiaolei

Email
xiaolei.wang@tongji.edu.cn

Research Fields
Green Transportation Management, Operations Research of Shared Mobility

Professional Activities
Editorial Board Member of Transportation Research Part E

Personal Website
<https://sem.tongji.edu.cn/semen/19466.html>

Doctoral thesis topic
Operations Research of Shared Mobility
Related project: Natural Science Foundation of China #72431007: Green and Low-Carbon Oriented Operation and Management of Ride-Hailing Platforms



ZHANG Jianjun

Email
zhangjianjun@tongji.edu.cn

Research Fields
Logistics and Supply Chain Management, Digital Operation Management Innovation

Personal Website
<https://sem.tongji.edu.cn/semch/15134.html>

Professional Activities

1. National Natural Science Foundation of China (NSFC) Projects: 2
2. Ministerial & Provincial-Level Research Projects: 11
3. Management Consulting Projects (Commissioned by Enterprises and Governments)

Doctoral thesis topic
Logistics and Supply Chain Management, Digital Operation Management Innovation



ZHANG Jiantong

Email
zhangjiantong@tongji.edu.cn

Research Fields
Logistics and Supply Chain Management, Service Operation Management, Online Healthcare Management, Vehicle Routing and Dispatching

Professional Activities
Guest editor of Healthcare, Topic Editor for MDPI Topic "Data Science and Intelligent Management"

Personal Website
<https://sem.tongji.edu.cn/semen/12005.html>

Doctoral thesis topic
1)Online Healthcare Management
Related project: Natural Science Foundation of China #72371188: Pricing for Healthcare Platforms Considering Physician and Patient Participation Behaviors
2)Vehicle Routing and Logistics Planning



HUANG Xin


Email
 xhuang@tongji.edu.cn


Research Fields
 Micro-to-macro geomechanics

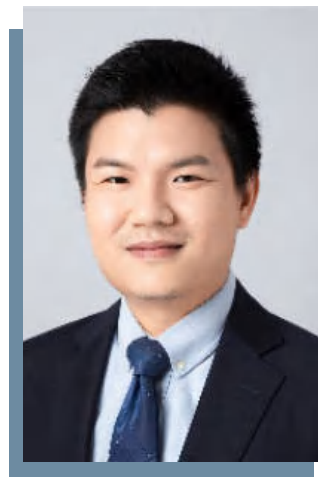
Tunnelling and Underground Engineering


Professional Activities
 Dr Huang is an editorial board member of several journals, including Chinese Journal of Rock Mechanics and Geotechnical Engineering, Chinese Journal of Basic Science and Engineering, Geotechnics, etc.


Personal Website
<https://faculty-civileng.tongji.edu.cn/huangxin/en/index.htm>


Doctoral thesis topic

The micro-to-macro mechanical behavior of desert sand and its failure mechanism under extreme environmental conditions



SU Taoyong


Email
 sutaoyong@tongji.edu.cn


Research Fields
 Corporate Strategy, Innovation, and Entrepreneurship


Personal Website
<https://sem.tongji.edu.cn/semen/12026.html>


Doctoral thesis topic

1. Environmental regulations and corporate ESG
2. ESG disclosure/performance and green finance
3. Performance feedback and digital transformation
4. Digital transformation and knowledge sharing
5. Digital capability and green transformation
6. Digital technological innovation and the firm's high-quality growth


Requirements

1. Applicants should be interested in scientific research.
2. Applicants should master the basic knowledge of management science.
3. Applicants should master some statistical knowledge and software (i.e. STATA/R).
4. Applicants should master some research methods.
5. Applicants should be able to work in a team.
6. Applicants should have experience in scientific research





CHEN Hong



Email
 chenhong2019@tongji.edu.cn


Research Fields
 Model Predictive Control, Automotive Control, Automated Driving


Professional Activities
 1.IEEE Fellow
 2.Fellow of SAE-China
 3.Fellow of CAA


Personal Website
<https://see.tongji.edu.cn/info/1376/10290.htm>


Doctoral thesis topic
 1.Model predictive control and optimal control
 2.Automotive control and automated driving, AI and applications



GUO Lulu



Email
 guoll21@tongji.edu.cn

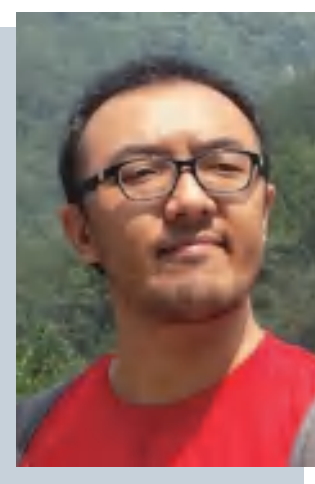

Research Fields
 Connected and automated vehicles, optimization control, energy management, vehicle cybersecurity


Personal Website
<https://scholar.google.com.tw/citations?hl=zh-CN&user=0sUbiwQAAAAJ>


Doctoral thesis topic
 1.Real-time solution of complicated and nonlinear optimal control problems
 2.Multi-vehicle cooperative optimization at intersections for improved traffics
 3.Knowledge-learning enhanced control for decision-making of automated vehicles


Requirements
 1.Perspective students should have a bachelor's or master's degree in engineering or related fields;
 2.Perspective students should have strong programming (e.g., C/C++, python, MATLAB/Simulink) and mathematical (e.g., optimization, machine learning, and control theory) skills with experience in developing research projects.



LIN Lin



Email
 fxlinlin@tongji.edu.cn


Research Fields
 Molecular, biological, and multi-scale communications

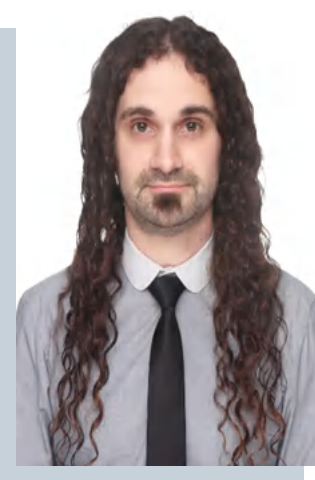

Professional Activities
 IEEE MBMC-TC Chair


Personal Website
<https://sites.google.com/site/fxlinlin/>


Doctoral thesis topic
 Molecular, biological, and multi-scale communications


Requirements
 1.Students are expected to have a bachelor or Master's degree in electrical engineering or a related discipline.
 2. The desirable minimum bachelor GPA is 3.5 (of a 5.0 maximum).



José Rodríguez-Piñeiro



Email
 j.rpineiro@tongji.edu.cn


Research Fields
 Electronics and Information Engineering, Communications, Electrical Engineering


Professional Activities
 General Secretary of IEEE VTS Propagation Committee
 Chair of Students Competition of the IEEE VTS Propagation Committee
 ITU-R Representative of Tongji University
 EU-COST Representative of Tongji University


Personal Website
<https://vtsociety.org/contact/jose-rodriguez-pineiro>


Doctoral thesis topic
 Self-Supervised Integrated Sensing and Communications

YU Haitao

Email
yuhaitao@tongji.edu.cn

Research Fields
Geotechnical earthquake engineering,
Seismic design and analysis of underground structures,
Rock fracture mechanics and fault movement,
Multi-field, multi-phase and multi-scale simulation

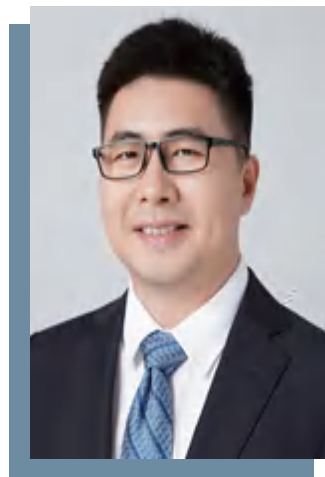
Personal Website
<https://geotec.tongji.edu.cn/yht/main.htm>

Professional Activities

Vice-Animateur of WG9 in ITA; Group Leader of Underground Storage and Utilization Technical Committee in ARMA

Doctoral thesis topic

1. Seismic performance evaluation and resilience design method for underground structures
2. Unified nonlocal mechanical model for rock failure simulation
3. Seismic mitigation method for long tunnels crossing active faults
4. Subsoil-structure interaction of shallow-buried underground structures in liquefiable soils during strong earthquakes
5. On the evolution of crack propagation and induced seismicity mechanism during the process of carbon dioxide geological storage
6. On the stability of lunar lava tubes used for habitat affected by lunar earthquakes



LIU Chengju

Email
liuchengju@tongji.edu.cn

Research Fields
Robotics and Artificial Intelligence

Personal Website
<https://rail.tongji.edu.cn/>



Doctoral thesis topic
Robots and Artificial Intelligence

Professional Activities
1.Vice Chairperson of the Intelligent Automation Professional Committee, Chinese Association of Automation (CAA).
2.Committee Member of the Intelligent Robotics Professional Committee, Chinese Association for Artificial Intelligence (CAAI)

DONG Yanchao

Email
dongyanchao@tongji.edu.cn

Research Fields
Computer Vision, SLAM, Embodied Intelligence,
Visual Language Navigation, Autonomous UAV.

Professional Activities

Led the drafting of an industry technical standard for using drone technology in power plant inventory management.

Contributed expertise as a co-author for a comprehensive encyclopedia on sustainability published by Springer.

Personal Website
<https://cse.tongji.edu.cn/6b/8d/c15581a158605/page.htm>

Doctoral thesis topic
1.Open-World Perception and 3D Semantic Mapping
2.Hierarchical 3D Scene Graphs for Situational Awareness
3.Dynamic Perception and Real-Time Obstacle Avoidance
4.Lightweight VLN System and Multi-Robot Collaboration




SHI Miaoqing

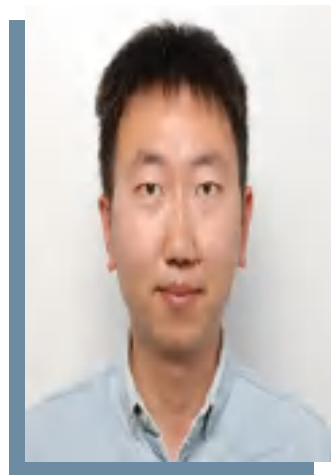

Email
 mshi@tongji.edu.cn


Research Fields
 Computer Vision and Machine Learning


Professional Activities
 IEEE Senior Member


Personal Website
<https://viscom.tongji.edu.cn/>


Doctoral thesis topic




YIN Huilin


Email
 yinhuilin@tongji.edu.cn


Research Fields
 Environment Perception of Autonomous Systems
 Reliability and Safety of Automated Driving


Personal Website
<https://ivcm.tongji.edu.cn/info/1100/1371.htm>


Doctoral thesis topic
 Research on perception and safety of intelligent systems


Requirements



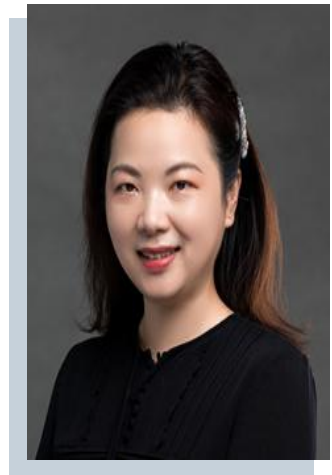

ZHANG Hao


Email
 zhang_hao@tongji.edu.cn


Research Fields
 Networked Control and Intelligent Control


Personal Website
<https://ivcm.tongji.edu.cn/info/1100/1273.htm>


Doctoral thesis topic
 Networked control, Intelligent control,
 Advanced control theory and application,
 Vehicle and robot control, Complex dynamic network/Complex system modeling,
 Control and optimization, Time-delay system, Random system, Fuzzy control system
 analysis and integration, Multi-agent system, Distributed control and filtering, Smart
 grid, etc




CANG Yu


Email
 yucang@tongji.edu.cn


Research Fields
 Solid Mechanics


Personal Website
<https://aero-mech.tongji.edu.cn/3b/34/c23511a211764/page.htm>


Doctoral thesis topic




Herbert Mang


Email
Herbert.Mang@tuwien.ac.at


Research Fields
Basic and applied research in mechanics of deformable solids, structural mechanics, computational mechanics, computational acoustics, multi-field analysis, multi-scale analysis


Personal Website
<https://geotec.tongji.edu.cn/Herbert%20Mang/main.psp>


Professional Activities
1992-1995: President of the Central European Association for Computational Mechanics (CEACM)
1998-2010: Vice President of the International Association for Computational Mechanics (IACM)
2005-2009: President of the European Community on Computational Methods in Applied Sciences (ECCOMAS)


Doctoral thesis topic
Computational mechanics
Engineering structures
Tunnel engineering




SONG Xiaobin


Email
xiaobins@tongji.edu.cn


Research Fields
Fire resistance and seismic analysis of structurals


Personal Website
<https://pecs.tongji.edu.cn/pecsEN/7a/35/c26044a227893/page.htm>


Professional Activities
1.Executive Deputy Director, Key Laboratory of Performance Evolution and Control for Engineering Structures of the Ministry of Education
2.Deputy Chair, Wood and Timber Structures Committee, Shanghai Society of Civil Engineering (SSCE)


Doctoral thesis topic
1.Multi-hazard analysis of concrete and timber structures
2.Progressive collage of concrete and timber structures under elevated temperature




DUAN Chunyan


Email
duanchunyan@tongji.edu.cn


Research Fields
Artificial Intelligence and Decision Optimization, Intelligent operation and maintenance, Intelligent Manufacturing and Risk Management, Mathematical Modeling and System Simulation


Personal Website
https://faculty.tongji.edu.cn/duanchunyan/zh_CN/index/94753/list/


Professional Activities
First Youth Working Committee Member of the Shanghai Operations Research Society, Vice Chairman and Deputy Secretary-general of the Postdoctoral International Exchange Program Association


Doctoral thesis topic
Artificial Intelligence and Decision Optimization, Intelligent operation and maintenance, Intelligent Manufacturing and Risk Management, Mathematical Modeling and System Simulation




FAN Rui


Email
rfan@tongji.edu.cn


Research Fields
Computer Vision, Robotics, and Deep Learning


Personal Website
www.ruirangerfan.com
<https://see.tongji.edu.cn/info/1376/10427.htm>


Professional Activities
IEEE/CCF Senior Member


Doctoral thesis topic
1.Extrinsic calibration of multimodal sensors
2.Perception and localization algorithms (spatial understanding, content understanding)
3.New concept robots (new structures, new sensors, new algorithms, etc.)



 ZHANG Xiaoqing

 **Email**
x.zhang@tongji.edu.cn

 **Research Fields**
Flexible piezoelectric materials and their applications

 **Professional Activities**

- 1.Co-editor of the European Journal of Electrical Engineering (EJEE)
- 2.Member of the academic committees of the IEEE International Symposium on Electrets, the International Conference on Vibration and Energy Harvesting Applications, and Chinese National Conference on Electrets
- 3.General chair of the 18th International Symposium on Electrets in 2021
- 4.Member-at-large of the IEEE Dielectrics and Electrical Insulation Society (DEIS) Administrative Committee (AdCom, 2024-2026)
- 5.Senior member of the IEEE
- 6.Member of the Electrostatic Professional Committee of the Chinese Physical Society

 **Personal Website**
electret.tongji.edu.cn

 **Doctoral thesis topic**

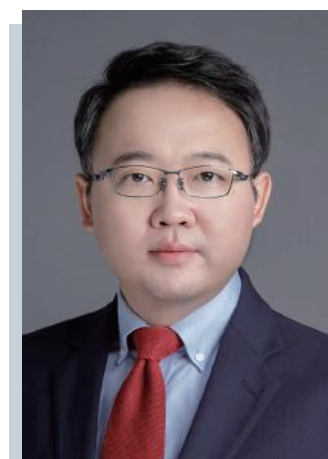
- 1.Design and preparation of Ferroelectret metamaterials
- 2.Flexible and wearable sensors and actuators based on ferroelectret films for health monitoring
- 3.Biodegradable piezoelectric films and devices



 CAO Nan

 **Email**
nan.cao@tongji.edu.cn

 **Research Fields**
Data Visualization, Visual Communication Design
Intelligent Design, Data Mining, Machine Learning



Professional Activities

Associate Editor of IEEE Transactions on Big Data Editorial
Board of Computer Science Review
Paper Co-Chair of IEEE PacificVis 2021, 2022
Program Committee Member of IEEE VIS, PacificVis, EuroVis
AI 2000 Most Influential Scholar (Honorable Mention)
IBM Outstanding Technical Achievement Award Winer
Microsoft Global Most Valuable Professional (MVP)

 **Personal Website**
<https://nancao.org>
<https://scholar.google.com/citations?user=5l0mFcsAAAAJ>
<https://dblp.org/pid/66/5146.html>

 **Doctoral thesis topic**

- 1.Intelligent Visual Communication Design and Data Visualization
- 2.Intelligent Design in Smart Manufacturing

 **Requirements**

1. Having the background of computer science, or big data, or artificial intelligent, or industry design.
2. Be interested in data visualization, computer graphics, visual communication design, computer aided design (CAD), or intelligent design
3. Having solid background in mathematics
4. Having high self-motivation
5. Interested in Chinese Culture



 CAI Liming

 **Email**
lcai@tongji.edu.cn

 **Research Fields**
Hydrogen, Fuel Cell, E-fuel, Combustion, Reaction Kinetics, Machine Learning Method, Artificial Intelligence

 **Professional Activities**
Member of German Section of Combustion Institute

 **Personal Website**
<https://auto.tongji.edu.cn/info/1162/7417.htm>

 **Doctoral thesis topic**

1. Numerical and experimental investigation on reaction kinetics of e-fuels
2. Numerical modeling of the fundamental chemical reaction processes in fuel cells
3. Development of advanced machine learning methods and frameworks for reaction kinetic modeling
4. Interdisciplinary research on reaction kinetic models for CFD simulations

 **Requirements**

- 1.M.Sc. degree (or equivalent) in Mechanical Engineering, Chemical Engineering, or a related subject with above-average grades
- 2.Fundamental knowledge of combustion theory
- 3.Interest in programming and numerical modeling
- 4.Excellent oral and written English communication skills, German language knowledge is a plus
- 5.An efficient and independent work style
- 6.Willingness to take on responsibility
- 7.Ability to work in an interdisciplinary team



 DAI Haifeng

 **Email**
tongjidai@tongji.edu.cn

 **Research Fields**
Control and management of electrochemical power sources for electrified vehicles

 **Personal Website**
<https://autoen.tongji.edu.cn/info/1121/1102.htm>



 Professional Activities

Prof. Dai is an IEEE Senior Member, and serves as the Standing Director of the Battery System Subcommittee in IEEE PES Electric Vehicle Satellite Committee-China. He is also the associate editor of the Journal of Energy Storage and an editorial board member of several international journals.

 Doctoral thesis topic

- 1.modeling and energy management of EV powertrain systems;
- 2.modeling, state estimation, life prediction, optimal charging, and safety of Li-ion batteries;
- 3.modeling and control of fuel cell systems.

 HE Yinzhi

 **Email**
heyinzhi@tongji.edu.cn

 **Research Fields**
Automobile aerodynamic noise, Vehicle NVH

 **Professional Activities**
Expert of China-SAE NVH
Expert of China-SAE Aerodynamics

 **Personal Website**
<https://auto.tongji.edu.cn/info/1154/6526.htm>

 Doctoral thesis topic

- 1.Testing techniques of vehicle aerodynamic noise at full-scale aeroacoustic wind tunnel.
- 2.Characteristics of vehicle non-stationary wind noise sources and their transmission study.





HU Zhiyuan

Email

huzhiyuan@tongji.edu.cn

Research Fields

Application of Low Carbon and Carbon Neutral Fuel for Automobile, Intelligent Hybrid Power and its Exhaust Aftertreatment Technology

Professional Activities

IEEE Fellow

Doctoral thesis topic

1.Application of Low Carbon and Carbon Neutral Fuel





LI Nan

Email

li_nan@tongji.edu.cn

Research Fields

Autonomous Systems, Intelligent & Connected Vehicles

Professional Activities

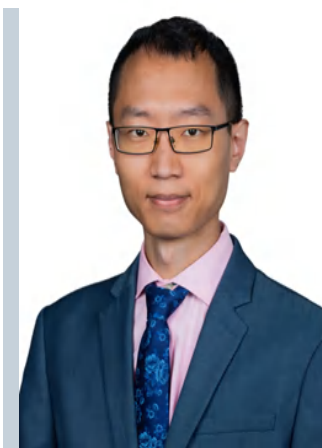
1.IEEE Member
 2.Associate Editor for MECC
 3.Session Chair for CCTA, CVC1
 4.Reviewer for Automatica, IEEE TAC, TCST, T-ITS, T-RO

Personal Website

<https://sites.google.com/site/nanliengineering>

Doctoral thesis topic

1.Autonomous Systems, Intelligent & Connected Vehicles, Planning, Decision-Making





LIN Rui

Email

ruilin@tongji.edu.cn

Research Fields

Key technology for green Hydrogen
 Key technology for Fuel Cells
 Carbon dioxide electro-reduction

Professional Activities

Professor

Personal Website

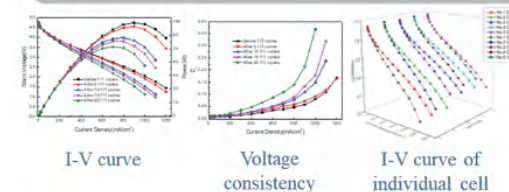
<https://auto.tongji.edu.cn/info/1169/6419.htm>

Doctoral thesis topic

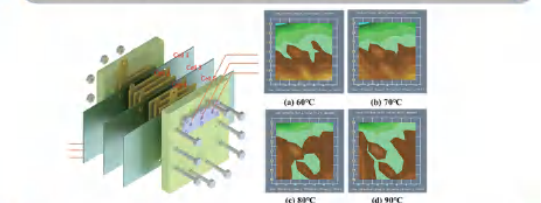
Three-phase interface and electrode structure evolution process and the relationship between performance and life under multi-physics coupling
 Online Diagnosis coordinated control method for internal state of fuel cell stack and electrolysis water for green hydrogen production
 Renewable energy coupled with water electrolysis for green hydrogen production
 Microenvironment regulation for carbon dioxide electroreduction
 Design and large-scale synthesis of novel catalysts for Fuel Cell and electrolyzed water catalysts
 The model for performance and lifetime evaluation method for fuel cell stack and electrolyzer



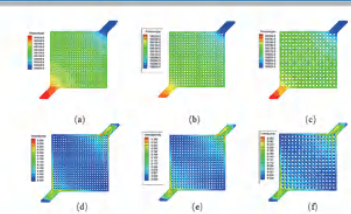
Three-phase interface and electrode structure evolution process and the relationship between performance and life under multi-physics coupling



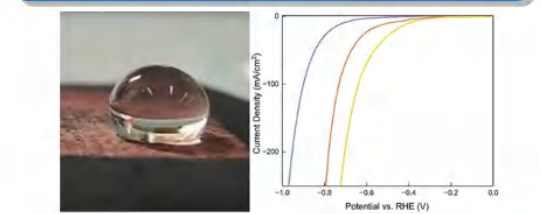
Online Diagnosis coordinated control method for internal state of fuel cell stack and electrolysis water for green hydrogen production



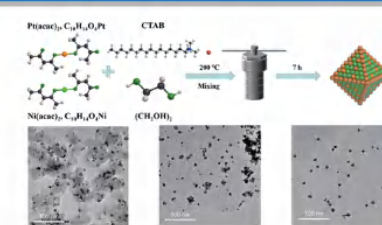
Renewable energy coupled with water electrolysis for green hydrogen production



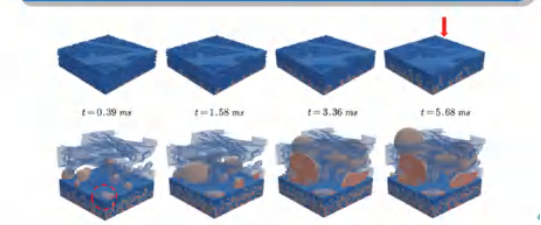
Microenvironment regulation for carbon dioxide electroreduction



Design and large-scale synthesis of novel catalysts for Fuel Cell and electrolyzed water catalysts



The model for performance and lifetime evaluation method for fuel cell stack and electrolyzer



Requirements

Good English reading and writing ability



**Ma Jun**

 **Email**
majun.tongji@foxmail.com

 **Research Fields**
Automotive human-computer interaction/intelligent cockpit

 **Personal Website**
<https://auto.tongji.edu.cn/info/1170/6421.htm>

 **Doctoral thesis topic**

- 1.Evaluation of human-machine interaction and human-vehicle relationship in automobiles
- 2.Design and Development of Automotive Intelligent Cockpit

-  **Requirements**
- 1.Automotive engineering, product management, or interaction design background.
 - 2.Prior research experience of usability research and academic paper writing.
 - 3.Strong motivation for academic research in automotive area.
 - 4.Proficient in English communication. Chinese language is a plus.



**PANG Jiabin**

 **Email**
pang@tongji.edu.cn

 **Research Fields**
Vehicle Aerodynamics, Wind Tunnel Technology

 **Professional Activities**
member of CARS / CASE

 **Doctoral thesis topic**

- 1.On-road wind characteristics and simulation techniques
 - 2.Transient aerodynamic effects on road vehicles
 - 3.Boundary layer control of automotive wind tunnel
 - 4.Mechanism and control of low-frequency pulsation in open-jet wind tunnel
 - 5.Enhanced thermal management of electric vehicles
 - 6.Simulation and optimization of automotive wind tunnel systems-theory and techniques
-  **Requirements**
- 1.Solid fundamentals in fluid mechanics and aerodynamics
 - 2.Familiar with vehicle engineering and wind tunnel testing
 - 3.Good at mathematic and CAD tool(s), academic reading and writing



**SONG Ke**

 **Email**
ke_song@tongji.edu.cn

 **Research Fields**
electric propulsion system for transportation, electrolyzer and fuel cell, engineering application of AI technology

 **Personal Website**
<https://auto.tongji.edu.cn/info/1175/6552.htm>

-  **Professional Activities**
Committee Member, Technical Committee on Vehicle Control and Intelligence, Chinese Association of Automation (CAA)
-  **Peer Review Expert**, National Natural Science Foundation of China (NSFC)
-  **Member**, China Society of Automotive Engineers (China SAE)
-  **Senior Member**, China Power Supply Society (CPSS)
-  **Vice Chairman**, Service Robot Expert Committee, Henan Computer Industry Association
-  **Expert Committee Member**, Henan Society of Automotive Engineers
-  **Member**, Institute of Electrical and Electronics Engineers (IEEE)
-  **Member**, SAE International
-  **Doctoral thesis topic**
- 1.Optimal Design and Control of Fuel Cell/Battery Hybrid Power System
 - 2.Design of Novel Fuel Cells and Electrolyzers
 - 3.Advanced Electric Drive Technologies
-  **Requirements**
- 1.Solid theoretical foundation, with a certain practical ability
 - 2.Have a strong sense of innovation, self-management ability

WANG Ning

Email
wangning@tongji.edu.cn

Research Fields
Intelligent Drive Path Planning Decision, Safety Testing and Evaluation Methods for Intelligent Driving Systems, Automotive Big Data Analytics, Automotive Industry and Technology Strategy, Automotive Industry Policy

Professional Activities

Professional Activities: Senior Member of the Society of China Automotive Engineering, Fellow of the Shared Mobility Committee of the Society of China Automotive Engineers, Technical expert of the SUV Branch of the Society of China Automotive Engineering

Personal Website
<https://auto.tongji.edu.cn/info/1177/6649.htm>

Doctoral thesis topic
1.Research on Decision-making Models and Optimization Algorithms for Intelligent Driving Path Planning, Shanghai Natural Science Foundation, National Key Research and Development Program
2.Research on Safety Testing and Evaluation Methods for Intelligent Driving Systems, Major Special Projects of Chongqing Science and Technology Commission
3.Research on the Management of Carbon Emissions and Optimization of Carbon Reduction Technology Pathways in the Automotive Industry, National Social Science Foundation



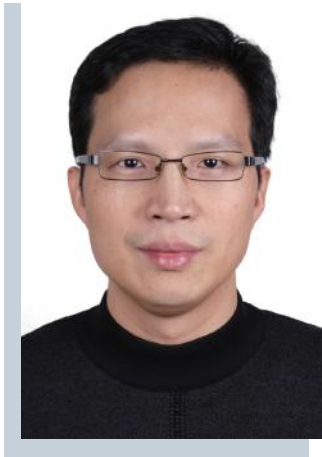
WEI Xuezhe

Email
weixzh@tongji.edu.cn

Research Fields
Electric vehicle engineering, Battery modeling and ESS design

Professional Activities
AOM Member

Personal Website
<https://auto.tongji.edu.cn/info/1177/6441.htm>



Doctoral thesis topic
Battery life and safety,Energy storage system design
Fuel cell life and fuel cell system design
Electric power source diagnosis and optimization

Requirements
1. Familiarity with lithium-ion batteries or fuel cells*
2. Familiar with electrochemical system modeling methods

WU Guangqiang

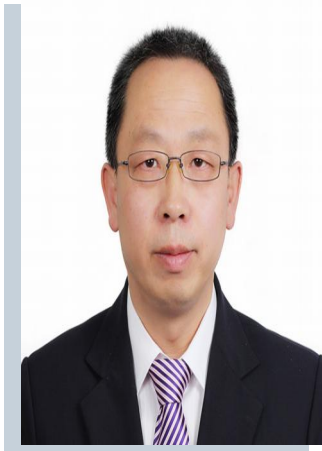
Email
wuguangqiang@tongji.edu.cn

Research Fields
1. Automotive Nonlinear Dynamics and Control
2. Intelligent Vehicle Driving
3. Theory and Technology of Automotive Automatic Transmissions

Professional Activities
SAE Fellow (U.S.), ASME Fellow (U.S.), Foreign Member of the Russian Academy of Engineering
Fellow of China Society of Automotive Engineers, Member of the Automotive Basic Software Branch
Member, SAE Materials, Modeling, and Testing Committee, SAE International (U.S.)
Member, The Vehicle Design Committee (VDC), ASME (U.S.)
Member, Committee on Autonomous Vehicles, IEEE (U.S.)
Responsible Editor, International Journal of Intelligent Transportation Systems Research
Editorial Board Member, International Journal of Vehicle Performance

Personal Website
<https://ias.tongji.edu.cn>

Doctoral thesis topic
1.Automotive Nonlinear Dynamics and Control
2.Intelligent & Connected Vehicle Systems (CAVG)
3.Automotive Transmission Systems: Covering various types (AT, AMT, DCT, CVT, DHT) and their Electrification



XIONG Lu

Email
xiong_lu@tongji.edu.cn

Research Fields
Vehicle dynamics control; state estimation; perception, decision, and planning

Professional Activities
Professor

- Requirements**
1. Studious and abide by academic norms.
 2. Strong interest in autonomous vehicles.
 3. Good practical ability and independent thinking ability.



ZHANG Lijun

Email
tjedu_zhanglijun@tongji.edu.cn

Research Fields
Automotive Noise and Vibration Control, Vehicle System Dynamics Analysis and Control, Electric Vehicle Powertrain Integration and Control, Intelligent Electric Vehicle Intelligent Driving and Smart Cockpit

Personal Website
<https://auto.tongji.edu.cn/info/1146/6326.htm>

Professional Activities
Council Member, Society of Automotive Engineers of China
Chair, Smart Transportation Technical Committee
SAE-China, Vice Chairman, China Automotive Talents Society
Automotive Innovation
Editorial Board Member, Automotive Innovation(Journal)

- Doctoral thesis topic**
1. Automotive Noise and Vibration Control, Vehicle System Dynamics Analysis and Control, Electric Vehicle Powertrain Integration and Control, Intelligent Electric Vehicle Intelligent Driving and Smart Cockpit
 2. Fuel Cell Simulation, Micro-Porous Flow Simulation, Cold Start Strategy



ZHAO Zhiguo

Email
zhiguozhao@tongji.edu.cn

Research Fields
Vehicle dynamics control; Environmental perception, positioning, decision-making and control for the intelligent electric vehicle; Powertrain system control and transmission control for the hybrid electric vehicle; Electric drive system design and optimization.

Professional Activities
Vice Chairman of Automotive Advanced Powertrain Systems Branch of the Chinese Society of Automotive Engineer; SAE-China Senior Member; Senior Member of Chinese Mechanical Engineering Society.

Personal Website
<https://auto.tongji.edu.cn/info/1180/6467.html>

- Doctoral thesis topic**
1. Environmental perception, positioning, decision-making and control for autonomous vehicle;
 2. Dedicated Hybrid Transmission design and optimization;
 3. NVH active control method for electric drive system;
 4. Thermal analysis and management for electric drive system.



ZHOU Quan

Email
q_zhou@tongji.edu.cn

Research Fields
Autonomous and Electrified Vehicles

Professional Activities
1. Committee Member of SAE Hybrid and Electrified Propulsion Committee
2. Associate Editor of Communications Engineering- Nature, IEEE Transactions on Transportation Electrification, IET Intelligent Transport System

Personal Website
<https://auto.tongji.edu.cn/info/1180/9914.htm>

- Doctoral thesis topic**
1. Neural-evolutionary Design and Control of Next-generation Chassis-by-Wire System for Heavy Duty Road Vehicles.
 2. Generative and Advisory Machine Learning for Functional-Critical Automotive Control Systems.
 3. High-efficiency Big Data Processing Method for the Development of Learning-based Automotive Control System
 4. Other topics related to AI-empowered (fuzzy inference, evolutionary computation, or machine learning) Design and Control of Automotive Chassis System or Powertrain System





PAN Yu



Email

yupan@tongji.edu.cn



Research Fields

Rail Vehicle System Energy Harvesting & Intelligent
Operation and Maintenance



Personal Website

<https://tjtt.tongji.edu.cn/info/3043/10950.htm>



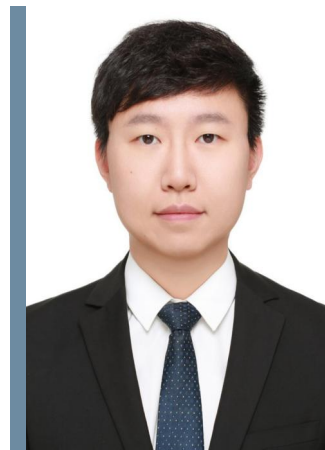
Professional Activities

- 1.International Scientific Committee & Organizing Committee for the 29th IAVSDInternational Symposium on Dynamics of Vehicles on Roads and Tracks (IAVSD 2025)
- 2.Co-Chair for Special Session on “Traction and Braking: Control, Safety and Energy Recovery”at the 6th International Conference on Railway Technology: Research, Development and Maintenance (Railway 2024)
- 3.Co-Chair for Track 2: Rolling Stock and Dynamics, Organizing Committee and Scientific Committee at ASME/IEEE Joint Rail Conference 2024 (JRC 2024)
- 4.International Scientific Committee for the 28th IAVSDInternational Symposium on Dynamics of Vehicles on Roads and Tracks (IAVSD 2023)
- 5.Organizing Committee and Scientific Committee for ASME/IEEE Joint Rail Conference 2023 (JRC 2023)
- 6.Symposium Secretary, Technical Committee, and Organizing Committee for U.S.Department of Transportation (DOT) 2nd Railroad Infrastructure Diagnosis and Prognosis (2022)
- 7.Reviewer for Vehicle System Dynamics, Journal of Sound and Vibration, Journal of Vibration and Acoustics, Journal of Vibration and Control, and Smart Materials and Structures, etc.



Doctoral thesis topic

- 1.Railway Vehicle and Track Energy Harvesting
- 2.Wheel-Rail Contact and Wear
- 3.Rail Nondestructive Detection
- 4.Railway Vehicle System Dynamics; Railway Vehicle Braking Safety



CHEN Huicui



Email

chenhuicui@tongji.edu.cn



Research Fields

- 1.Fuel Cell Engine System
- 2.Fuel Cell Stack
- 3.Fuel Cell (Single)



Personal Website

<https://auto.tongji.edu.cn/info/1162/6495.htm>



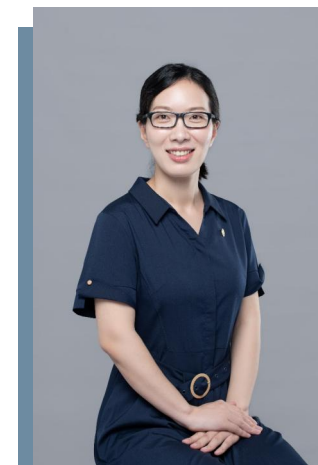
Professional Activities

2023: Awardee, Shanghai Sailing Program



Doctoral thesis topic

Hydrogen Energy , Fuel Cell Vehicle



ZUO Jianyong



Email

zuojoy@tongji.edu.cn



Research Fields

Railway Vehicle Safety and Braking



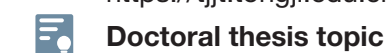
Professional Activities

- 1.Council Member, Railway Branch, China Association for Engineering Construction Standardization
- 2.Member, IEEE
- 3.Member, ASME
- 4.Co-Chair, Rail Transit Equipment Division, World Transport Convention



Personal Website

<https://tjtt.tongji.edu.cn/info/3043/11002.htm>



Doctoral thesis topic

Railway Vehicle Braking Related Research





NIU Gang

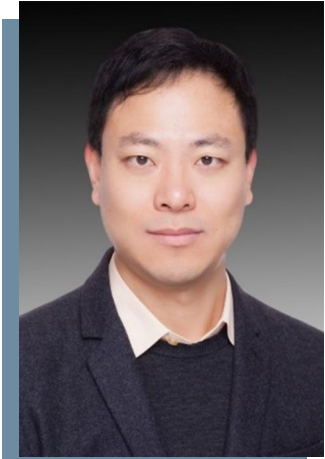
Email
gniu@tongji.edu.cn

Research Fields
Mechanical and Vehicle Health Management

Professional Activities
IEEE Senior Member

Personal Website
<https://faculty.tongji.edu.cn/niugang/>

- Doctoral thesis topic**
- 1.Advanced Sensing and Intelligent Diagnostics;
 - 2.Prognostics and Health Management (PHM);
 - 3.Self-Healing Control and Autonomous Systems



YUAN Quan

Email
quanyuan@tongji.edu.cn

Research Fields
Intelligent Freight Transportation and Logistics

Professional Activities
Associate Editor of npj Sustainable Mobility and Transport

Personal Website
<http://tongji.teacher.360eol.com/teacherBasic/preview?teacherType=&teacherId=13991>
<https://scholar.google.com/citations?user=BgLQwoYAAAAJ&hl=zh-CN>

- Doctoral thesis topic**
- 1.Freight transportation systems: planning, management and design
 - 2.Freight emissions and environmental impacts
 - 3.AI in Freight transportation systems



NI Fei

Email
fei.ni@tongji.edu.cn

Research Fields
1. Carbon-Neutral Maglev Transportation System
2. Intelligent Perception & Control for Maglev Trains

Personal Website
<https://railway.tongji.edu.cn/railwayen/c8/ca/c19776a248010/page.htm>

- Professional Activities**
- Currently serving as young editorial board member for leading journals including Transportation Systems and Technology and Electric Drive for Locomotives; Reviewer for prestigious IEEE transactions (IEEE Transactions on Transportation Electrification Q1, IEEE Transactions on Vehicular Technology Q1) and Journal of Sound and Vibration (Q2); and committee member of:
- 1.Maglev Technology Committee, World Transport Convention (WTC)
 - 2.Young Scholars Working Committee, China Power Supply Society
 - 3.Electromagnetic Compatibility Working Committee, China Power Supply Society
 - 4.Youth Working Committee on Maglev Tech & Vibration Control, Chinese Society of Vibration Engineering

- Doctoral thesis topic**
1. Carbon Footprint Assessment & Low-Carbon Operation for High-Speed Maglev Trains:
Lifecycle assessment models quantifying system carbon emissions
AI-driven operational strategies for minimizing carbon emissions
 2. Efficient Multiphysics Computing for Maglev Vehicle Dynamics:
Co-simulation of electromagnetic-thermal-mechanical coupling fields
Reduced-order modeling for control-oriented multiphysics systems
 3. Intelligent Control of Maglev Levitation Systems under Disturbances:
Robust adaptive control for coupled suspension-guidance dynamics
Reinforcement learning for distributed maglev train formations





GUO Rong

Email
guorong@tongji.edu.cn

Research Fields
Vehicle Thermal and Energy Optimization Control
Vehicle Dynamics Control
Vehicle NVH

Personal Website
<https://auto.tongji.edu.cn/info/1153/6516.htm>

Professional Activities
Member of Chassis Branch of Chinese Society of Automotive Engineering; Member of Academic Committee of Jiangxi Provincial Key Laboratory of Intelligent Networked Vehicles and Powertrain; Expert of National Natural Science Foundation of China; Expert of Ministry of Education of China; Expert of National Science and Technology Award.

Doctoral thesis topic

- 1.Vehicle Vibration and Noise Control
- 2.Hybrid Vehicle Technology
- 3.Autonomous Driving Technology





WU Zhijun

Email
zjwu@tongji.edu.cn

Research Fields
Low-carbon Fuel Combustion, Microscale flow and heat transfer

Personal Website
<https://faculty.tongji.edu.cn/wuzhijun/en/index.htm>

Professional Activities
Vice Chairman of the Alternative Fuel Vehicle Branch of the Chinese Society of Automotive Engineering; Member of the 8th Combustion Credit Professional Committee of the Chinese Society of Engineering Thermo-physics; Executive Director of the 9th Council of the Chinese Internal Combustion Engine Society and Vice Chairman of the Combustion, Energy Conservation, and Purification Branch; Leader of the expert working group at the Shanghai Synchrotron Radiation Facility Rapid X-ray Imaging Beamline.

Doctoral thesis topic

- 1.Efficient, low-carbon, and zero carbon power systems
- 2.Micro and nanoscale flows, heat transfer and phase transitions





FANG Liang

Email
fangliang@tongji.edu.cn

Research Fields
Thermal and Energy Management & Climate Wind Tunnel

Professional Activities

- 1.Assistant to the Dean, School of Automotive Studies, Tongji University
- 2.Deputy Director, Research Management Department, Shanghai Automotive Wind Tunnel Center
- 3.Deputy Secretary-General, Hybrid Power Technology Branch, Chinese Society for Internal Combustion Engines

Personal Website
https://faculty.tongji.edu.cn/fangliang/zh_CN/index.htm

Doctoral thesis topic

- 1.Energy Management of Vehicle-Level Thermo-Electric Coupling in New Energy Vehicles.
- 2.Experimental technologies of climate wind tunnel.





SHI Xiuyong

Email
shixy@tongji.edu.cn

Research Fields
Carbon-neutral Fuels for engines, Hybrid Electric Vehicle Power system

Personal Website
<https://auto.tongji.edu.cn/info/1175/6554.htm>

Professional Activities

- 1.Blind Peer Review Expert for Shanghai Academic Degree Theses
- 2.Vice Chairperson, Powertrain Division, Shanghai Society of Automotive Engineers
- 3.Member, Society of Automotive Engineers (SAE International)
- 4.Member, China Society of Automotive Engineers
- 5.Member, Chinese Society for Internal Combustion Engines

Doctoral thesis topic

- 1.Research on Plasma-Enhanced Ammonia Fuel Ignition and Mechanisms for Controlling NOx Generation
- 2.Research on Intelligent Energy Management Optimization for Hybrid Electric Vehicles Based on Reinforcement Learning



ZHENG Junsheng

Email
zhengjunsheng@126.com

Research Fields
Sealing of Fuel Cell

Professional Activities
2011: Shanghai Rising-Star Program Awardee (Shanghai Youth Science and Technology Talent Program)
2010: Outstanding Postdoctoral Fellow, Tongji University
2009: Shanghai Outstanding Doctoral Dissertation Award

Personal Website
<https://auto.tongji.edu.cn/info/1147/6351.htm>

Doctoral thesis topic

Research on the Failure Mechanism of Sealing Structure and Structural Optimization Strategies under the Operating Conditions of Proton Exchange Membrane Fuel Cells: this study is carried out based on the requirements of hydrogen permeability resistance and high air tightness for battery sealing structures. Through state observation and structural creep analysis under Force/Heat/Material excitation, the influence laws of temperature and humidity stress and chemical corrosion on the sealing interface structure between each layer of the proton exchange membrane/adhesive/frame/plate are revealed. The deformation and failure model of the sealing structure under the action of Force-Heat-Material in service conditions is constructed. The attenuation mechanism of the sealing structure under multiple physical fields is clarified. The design of the sealing structure is optimized to achieve stability of the sealing structure and stress-strain matching under service conditions, and the service life extension strategy for the new sealing structure is clarified.



ZHANG Yuanjian

Email
24093@tongji.edu.cn

Research Fields
Intelligent Electric Vehicles

Professional Activities
IEEE Senior Member



Personal Website
https://scholar.google.com/citations?hl=en&user=GQW8QFwAAAAJ&view_op=list_works&sortby=pubdate

Doctoral thesis topic
Artificial General Intelligence For Intelligent Electric Vehicles

JIN Wenrui

Email
wrjin@tongji.edu.cn

Research Fields
Robotics, Drones, New energy vehicles, Large aircraft, Artificial intelligence, and Emerging cross-cutting technologies in green and low-carbon fields.

Personal Website
<https://cdhaw.tongji.edu.cn/b4/4c/c17706a177228/page.htm>

Professional Activities
Special - invited expert of the Strategic Consulting Center of the Chinese Academy of Engineering, member of the Academic Committee of the Research Center for Sand and Dust of Large Aircraft, Executive Director of the Council of the China Creativity Association and Deputy Director of its Youth Working Committee, Member of the Artificial Intelligence Branch of the Society of Automotive Engineers of China and Expert of the Off-road Vehicle Technology Branch, Member of the System Reliability Professional Committee of the Systems Engineering Society of China, Member of the Professional Committee of Natural Computing and Digital Intelligent Cities of the Chinese Association for Artificial Intelligence, Deputy Director of the Professional Committee of Automotive Service Engineering of the China Machinery Industry Education Association, etc. Editorial Board Member, Young Review Expert, and Reviewer of internationally well-known journals and important academic conferences such as IEEE Transactions on Intelligent Transportation Systems (T-ITS), Neural Computing and Applications, Aerospace Science and Technology (AST), Engineering computations, Aerospace Systems, China Satellite Navigation Conference (CSNC), etc., and Correspondent Review Expert of the National Natural Science Foundation of China, etc.

Doctoral thesis topic
Autonomous intelligent robots, flying cars and low-altitude economic security, unstructured autonomous driving and deep reinforcement learning, advanced airborne systems for large aircraft and machine learning



TU Meiting

Email
meitingtu@tongji.edu.cn

Research Fields
Optimization and management of shared mobility systems
Applications of artificial intelligence algorithms in transportation problems
Modeling and analysis of traffic behavior
Low-carbon transportation and public policy

Professional Activities
Leading talents in Shanghai in 2022
Reviewer of Transportation Research Part A, D, E

Personal Website
<https://tjtt.tongji.edu.cn/info/2821/9078.htm>

Doctoral thesis topic
Real-time connection and information sharing between cars, people, roads, and the internet can help increase the number of passengers, reduce wasted space and distance, and choose better routes. This can improve how our roads work. Because of the "carbon neutrality" goal, the government should look at how carpooling and ride-sharing can help reduce emissions. This article wants to look at how low-carbon policies and shared travel affect how people travel. Autonomous cars can help make travel more on-demand and low-carbon. By making policies that encourage carpooling and ride-sharing, we can make sure that people have a good experience while also helping the environment. We will look at how shared travel affects our cities and measure how policies can help.

Requirements
1. Good at English
2. Passionate about scientific research



WANG Xuesong

Email
wangxs@tongji.edu.cn

Research Fields
Transportation Safety

Professional Activities
1.Transportation Research Record, Handing Editor
2.Accident Analysis & Prevention, Associate Editor
3.China Journal of Highway and Transport, Associate Editor



4.China Safety Science Journal, Associate Editor

Personal Website
<http://www.tjsafety.cn/MembersInformation.aspx?YNID=487&YNID2=334&ID=495>

Doctoral thesis topic
The research focuses on traffic safety, including 4 research directions: Driving Behavior Analysis and Improvement, Vehicle Active Safety and Autonomous Vehicle Safety Design, Safety Evaluation of Roadway Design, and Information-Based Traffic Safety Management.

YUE Lishengsa

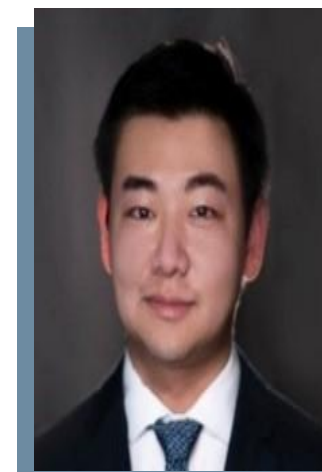
Email
2014yuelishengsa@tongji.edu.cn

Research Fields
1.Human-Vehicle Interaction and Collaboration for Intelligent and Connected Vehicles
2.Driving Behavior Modeling and Simulation
3.Transportation Safety

Professional Activities
Member of Technical Committee On Vehicle Control and Intelligence, Chinese Association of Automation
Member of Intelligent Vehicle Working Committee, Chinese Association of Automation
Member of Human Factors of Vehicles Committee, Transportation Research Board, United States
Handling Editor in Transportation Research Record: Journal of the Transportation Research Board

Personal Website
<https://tjtt.tongji.edu.cn/info/2901/9391.htm>

Doctoral thesis topic
Intelligent Human-Machine Interaction





ZHU Xinyi



Email

zhuxingyi66@tongji.edu.cn



Research Fields

- 1.Intelligent functional pavement
- 2.Risk assessment of anti-skid failure during aircraft landing
- 3.Integration of transportation and energy
- 4.Solid waste recycling
- 5.Research on multi-scale performance of pavement materials



Professional Activities

- 1.Associate Editor of ASCE Journal of Materials in Civil Engineering
- 2.Deputy Editor in Chief for the Founding of Cleaner Materials
- 3.Youth Editorial Board Member of China Journal of Highways
- 4.Youth Editorial Board Member of Journal of Traffic and Transportation Engineering (English Edition)
- 5.Youth Editorial Board Member of Journal of Building Materials
- 6.Advisor to the International Civil Aviation Organization Airport
- 7.Operations Working Group AOWG-FTF



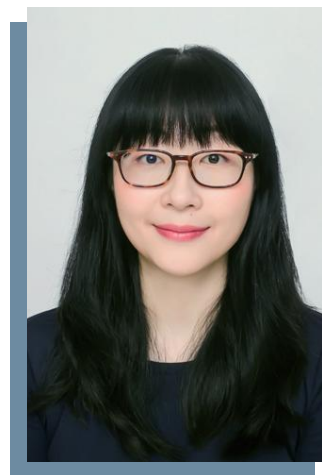
Personal Website

<https://tjtt.tongji.edu.cn/info/2004/8157.htm>



Doctoral thesis topic

- 1.Research field and research projects of doctoral students to be enrolled:
- 2.Energy self consistent technology for intelligent connected road transportation system
- 3.AI empowered integrated intelligent road of perception positioning guidance
- 4.Dynamic characteristics of large aircraft taxiing on waterlogged surfaces
- 5.Mechanical constitutive model of asphalt mixture
- 6.Nano friction power generation



ZHU Wenjun



Email

wjzhu@tongji.edu.cn



Research Fields

Resilience of rail transportation infrastructures



Professional Activities

RILEM active member



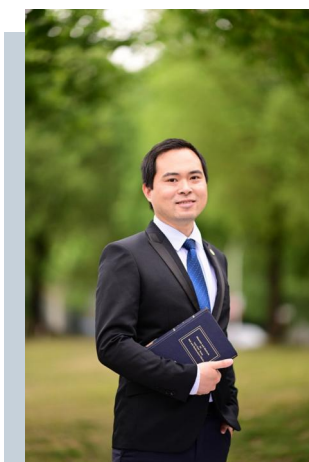
Personal Website

<https://tjtt.tongji.edu.cn/info/2863/10827.htm>



Doctoral thesis topic

- 1.Resilience of rail transportation infrastructures;
- 2.Intelligent maintenance of the High-speed railway infrastructures.



HUANG Wei



Email

wei_huang@tongji.edu.cn



Research Fields

GIScience, GeoAI, Human Mobility



Professional Activities

- 1.Chair of ISPRS WG IV/6 - Human Behaviour and Spatial Interactions
- 2.Associate Editor for ISPRS IJGI



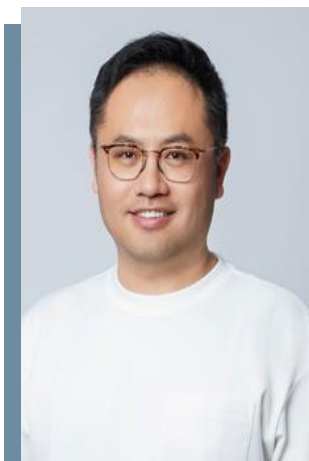
Personal Website

<https://huangweibuct.github.io/weihuang.github.io/>



Doctoral thesis topic

GIS, Human Mobility, GeoAI, HD maps





FU Yu



Email

fu_yu@tongji.edu.cn



Research Fields

1. Structural batteries
2. High performance composites
3. Multifunctional polymers



Professional Activities

SAMPE China Fellow



Personal Website

<https://aero-mech.tongji.edu.cn/ff/c4/c22274a262084/page.htm>



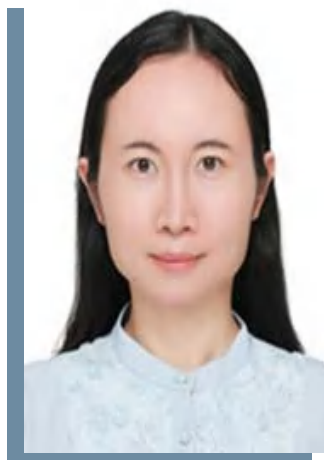
Doctoral thesis topic

1. To make structural battery composites and characterise their multifunctional performance
2. To manufacture tailor made carbon fiber cathode and anode for structural battery and characterize their microstructure and resulting electro-chemo-mechanical properties
3. To develop novel methods for solid electrolyte for structural batteries.



Requirements

We expect you to have a MSc in Materials Science, Physics, Chemistry and Chemical Engineering, Applied Mechanics, Mechanical Engineering or similar. We expect you to have interests in conduct interdisciplinary research in Mechanics, Materials science and Chemistry, Electrochemistry, etc. Since communication of knowledge results towards academic and industrial partners is a central part of the work, communicative skills in English (oral as well as in writing) are vital. Furthermore, it will also be expected that you can take on responsibilities within the project, have the ability to take own initiatives and, when needed, work independently. At the same time, being a successful researcher also involves working with others as well as disseminating the results within existing and new networks, both within academia but also to industry and society. Therefore, networking skills, team work skills and quality assurance are important. Knowledge of the Chinese language is not desirable. We students have good English communication skills.



WANG Lihua



Email

lhwang@tongji.edu.cn



Research Fields

meshfree methods, machine learning, fluid-structure interactions, high-speed impact, inverse problems



Personal Website

https://lhw.tongji.edu.cn/English/Curriculum_Vitae.htm



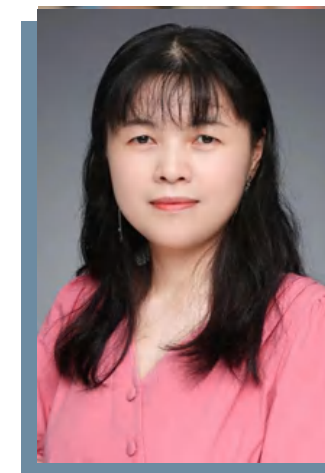
Professional Activities

1. General Council member, International Association for Computational Mechanics (IACM)
2. General Council member, International Chinese Association for Computational Mechanics (ICACM)
3. Committee member, Computational Mechanics Committee of Chinese Society of Theoretical and Applied Mechanics
4. Committee member, History and Methodology of Mechanics Committee of Chinese Society of Theoretical and Applied Mechanics
5. Vice-chairman committee member, South China Liaison Committee of Computational Mechanics
6. Committee member, Computational Mechanics Committee of Shanghai Society of Mechanics
7. Committee member, Youth Work Committee of Shanghai Society of Mechanics



Doctoral thesis topic

1. Developments and applications of meshfree methods and machine learning methods
2. Simulations of fluid-structure interactions; Simulations of high-speed impact problems
3. Simulations of inverse problems



JI Chenzhen

Email
czji@tongji.edu.cn

Research Fields
Gas turbine combustion, Hydrogen Combustion,
Combustion instability, Waste heat recovery,
Thermal management.

Professional Activities
1. Guest Editor of Two International Sci-index Journal
2. A Recipient of 3 Best Paper Awards

Doctoral thesis topic
1. Gas turbine hydrogen/ammonia blending combustion with low pollution emissions.
2. Thermoacoustic and its control of the gas turbine/aero-engine combustor.
3. EV battery thermal management for high-rate fast charging.



LI Zhijun

Email
zjli@ieee.org

Research Fields
Wearable robotics
autonomous systems

Professional Activities
IEEE Fellow, AAIA Fellow

Personal Website
<http://www.ieee-nrs.org/index.php/zhijun-li/>

Doctoral thesis topic
1. Wearable robotics, autonomous systems



XIA Haisheng

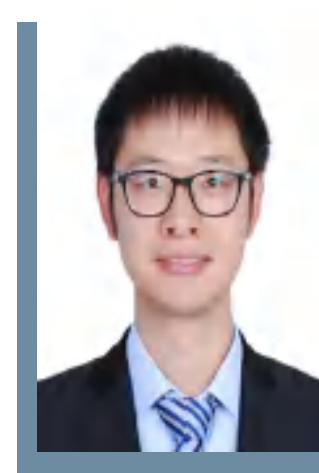
Email
hs_xia@tongji.edu.cn

Research Fields
Wearable robots, underwater robots

Professional Activities
Technical Committee Chair of IEEE SMC Flexible
Electronics Systems

Personal Website
<https://faculty.tongji.edu.cn/xiahaisheng/en/index/852698/list/index.htm>

Doctoral thesis topic
1. Wearable robots, underwater robots



LIU Guangjun

Email
gjliu@tongji.edu.cn

Research Fields
Intelligent construction robot;
unmanned construction machinery

Professional Activities
Deputy Director, Engineering Research Center of
Construction Technology and Equipment for Key
Engineering, Ministry of Education Committee Member,
Technical Committee of Shanghai Engineering Research Center of Underwater Salvage

Personal Website
<https://mefaculty.tongji.edu.cn/info/1296/3229.htm>

Doctoral thesis topic
1. Intelligent robotic technologies for on-site building construction
2. Autonomous operation technology for unmanned excavator

Requirements
Students with a Master's degree in Mechanical Engineering, Engineering Mechanics,
Electrical Engineering, or a related field, are all welcome to apply.





LI Yan



Email

liyan@tongji.edu.cn



Research Fields

1.Advanced Composites



Personal Website

<https://aero-mech.tongji.edu.cn/12/21/c26960a201249/page.htm>



Professional Activities

SAMPE Fellow

2016- present Deputy Director of Key laboratory of Advanced Civil Engineering Materials of ministry of education, Tongji University

2018- present Associate editor of the journal of Acta Materiae Compositae Sinica 2017- present The associate editor of Composites Science and Technology 2016- present The editorial board member of Composites Part A

2019- present The editorial board member of Composites Part B

2013- present Editor-in-chief of the special issue of Journal of Reinforced Plastics and Composites (special issue of natural fiber polymer composites)

2019- present Vice Chairman of SAMPE Shanghai Chapter

2017- present Executive Council Member of Chinese Society of Composite Materials



Doctoral thesis topic

- 1.Green Composite Materials and Structures
- 2.Integrated Design of Multifunctional Composite Structures
- 3.Additive Manufacturing of Composite Materials
- 4.Smart Technologies for Composite Materials



LIU Changhui



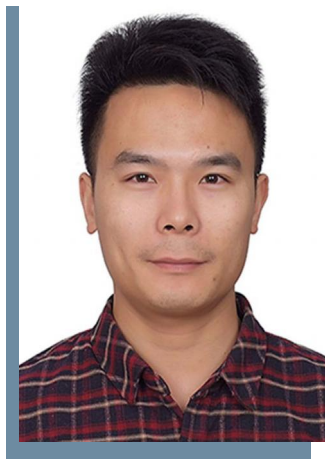
Email

liuchanghui@tongji.edu.cn



Research Fields

1.Data Mining and Analysis for Intelligent Manufacturing System: Quality Control, Prognostics and Health Management



1.Data Mining and Analysis for Intelligent Manufacturing System: Quality Control, Prognostics and Health Management

2.Intelligent Assembly: Assembly Deviation Modeling, Human-Machine Collaborative Assembly, Robotized Assembly

3.Precision Control of Complex Mechanical Products: Modeling for Multi-process Manufacturing Processes, Process Optimization and Control



Professional Activities

Director of the Quality Branch, Chinese Association for Applied Statistics

Member of the Industrial Big Data and Intelligent Systems Branch, Chinese Mechanical Engineering Society

Member of the Quality and Reliability Branch, Society of Management and Engineering of China

Member of the Intelligent Factory Committee of China Graphics Society

Member of Additive Manufacturing Technology Branch, Chinese Mechanical Engineering Society

Member of Youth Editorial Board, Additive Manufacturing Frontiers

Member of Editorial Board, Flight Control and Detection

Senior Member of IEEE, Senior Member of Chinese Mechanical Engineering Society, Senior Member of Chinese Association for Applied Statistics, Senior Member of China Graphics Society, Member of ASME.

Associate Editor, The IEEE International Conference on Advanced Robotics and Mechatronics (IEEE ICARM)

Special Chair, 2025 IEEE 21st International Conference on Automation Science and Engineering



Personal Website

https://www.researchgate.net/profile/Changhui_Liu5



Doctoral thesis topic

1.Data Mining and Analysis for Intelligent Manufacturing System: Quality Control, Prognostics and Health Management

2.Intelligent Assembly: Assembly Deviation Modeling, Human-Machine Collaborative Assembly, Robotized Assembly

3.Precision Control of Complex Mechanical Products: Modeling for Multi-process Manufacturing Processes, Process Optimization and Control

**MIN Junying**

 **Email**
junying.min@tongji.edu.cn

 **Research Fields**
New energy vehicle lightweight technologies;
Fuel cell technologies

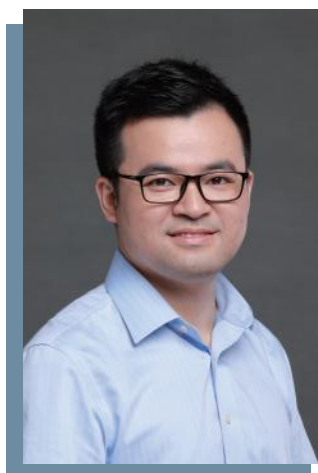
 **Professional Activities**
Alexander von Humboldt fellow; Member of expert committee of China Auto Lightweight Technology Innovation Strategy Alliance; Guest editor/editorial member of several international journals;
Organizing/scientific committee member of many international conferences

Personal Website
<https://al.tongji.edu.cn>

 **Doctoral thesis topic**

- 1.New forming processes of bipolar plates for full cells
- 2.Application of AI in characterization and modeling lightweight materials
- 3.Laser-assisted forming/manufacturing
- 4.Hybrid components and processes

 **Requirements**
With backgrounds of mechanical engineering, materials engineering, applied mechanics, etc.





**TANG Qirong**

 **Email**
qirong.tang@tongji.edu.cn

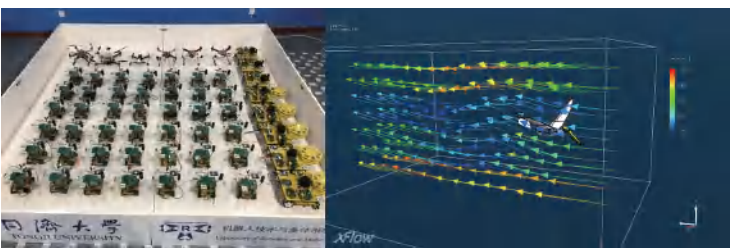
 **Research Fields**
Robotics and Artificial Intelligence,
Mechatronics

 **Professional Activities**
Distinguished Professor
IEEE Member, ASME Member,
Founding Director of Laboratory of Robotics and Multibody System of Tongji University, Leader Professor of the Association of Intelligent Unmanned Systems, Dean of Sino-German Doctoral School, Vice Dean of Sino-German School of Tongji University, Council Member of Tongji University, Holder of the National Science Fund for Distinguished Young Scholars, Holder of Shanghai Science and Technology Award, Convenor of "Swarm Intelligence and Swarm Robots" Committee of China Robotics Academic Annual Meeting, Member of "Robot Intelligence" Academic Committee of Automation Society of China.

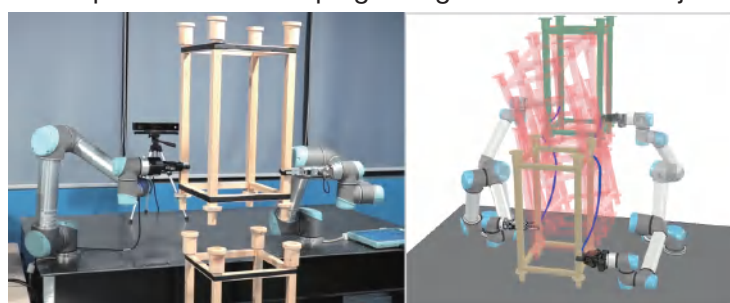
 **Personal Website**
<http://robotics-tongji.org/members/qtang>
<https://cdhk.tongji.edu.cn/xyld/list.htm>

 **Doctoral thesis topic**

- 1.Modeling of Swarm Robots and Its Control



- 2.Manipulation and Grasping of Rigid and Flexible Objects



 **Requirements**
Candidates should have strong motivation for doctoral study and academic work, and would like to communicate in a big group with about 60 members who have a strong passion and determination



TANG Yichao

Email

tangyichao@tongji.edu.cn

Research Fields

Small-scale robotics, Medical robotics

Professional Activities

2021–Now Professor, Mechanical Engineering,
Tongji University, China

2020–2021 Postdoctoral Researcher, Max Planck Institute
for Intelligent Systems, Germany(Advisor: Prof. Metin Sitti)

2019 Postdoctoral Associate, University of Illinois Urbana-Champaign, USA
(Advisor: Prof. Sameh Tawfik)

2018 Ph.D., Mechanical Engineering, Temple University, USA
(Advisor: Prof. Jie Yin, now at North Carolina State University)

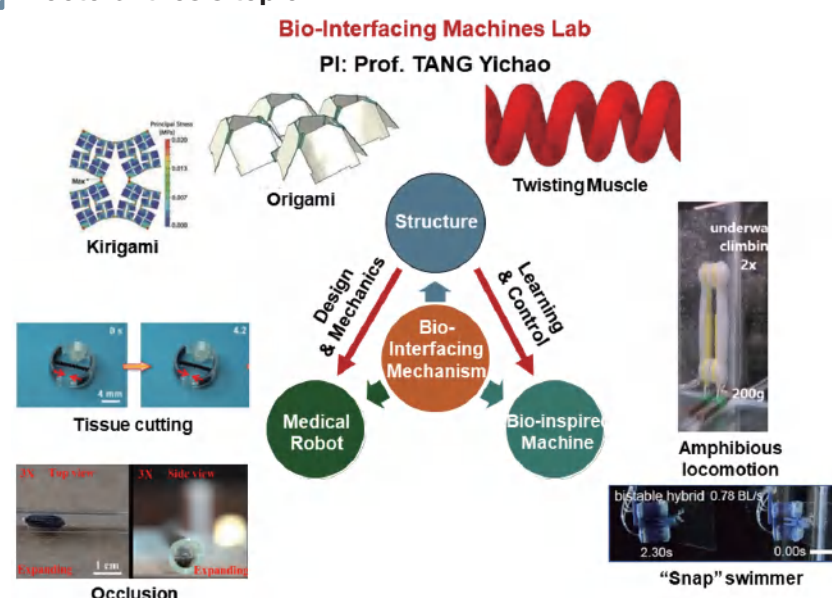
2014 M.S., Materials Science, Worcester Polytechnic Institute, Worcester, USA

2012 B.S., Materials Science, University of Science and Technology Beijing, China

Personal Website

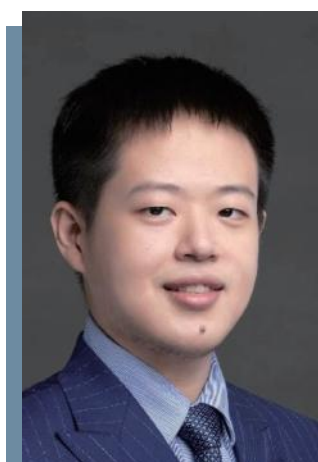
<http://yichaotang.weebly.com/>

Doctoral thesis topic



Requirements

We are always actively recruiting new Ph.D./ Master / Exchange students. The candidates need to have a strong passion and determination in investigating bio-interfacing robotic systems and their targeted biomedical applications. Candidates with past research and publication experiences are preferred. If you are interested, please send your •CV, Representative publications, a Personal statement, Transcript to tangyichao@tongji.edu.cn.



TU Qiansi

Email

tuqiansi@tongji.edu.cn

Research Fields

Carbon Emission

Professional Activities

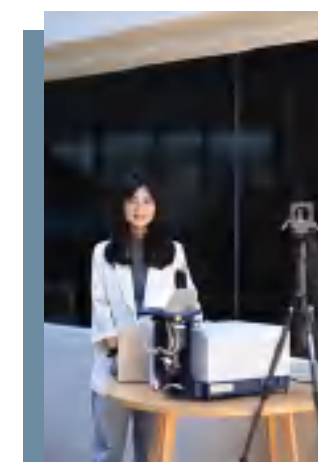
1.Thematic expert on greenhouse gas emissions,
International Society for Remote Sensing of Atmospheric
Environment

Personal Website

https://faculty.tongji.edu.cn/tuqiansi/zh_CN/index.htm

Doctoral thesis topic

- 1.Greenhouse gas observation based on remote sensing technology.
- 2.Carbon emission estimation based on machine learning algorithm



XIAO Yao

Email

xiaoy10@tongji.edu.cn

Research Fields

Smart materials and structures, biomedical robots

Professional Activities

Humboldt Research Fellowship, JSPS Research Fellowship

Personal Website

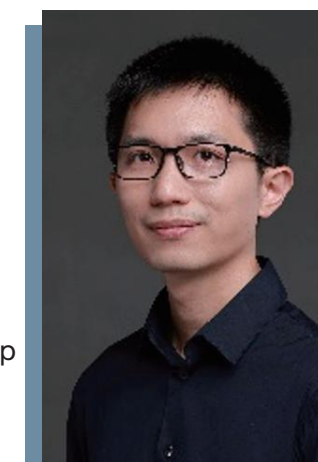
<https://al.tongji.edu.cn/info/1141/2402.htm>

Doctoral thesis topic

1. Mechanical behavior of nanostructured shape memory alloys
2. 3D printing of smart materials for aerospace, automotive and biomedical applications
3. Machine learning for materials design and intelligent manufacturing

Requirements

We are always ready to meet the most outstanding candidates from all fields and areas of expertise! People with diverse cultural and technical backgrounds are welcome to apply and may contribute to the further diversification of ideas.




LIN Rongfu


Email
 rongfulin@tongji.edu.cn


Research Fields
 Robotics, Mechatronics, Design and control of robotic mechanical systems


Professional Activities
 IEEE Member, ASME Member, Chinese Society of Mechanical Engineers Member, Shanghai Society of Machinists Engineering Member, Holder of Shanghai High-level Young Talents, Holder of National Science and Technology Academic Works Publishing Fund, One of the organizers of special session for the 17th International Conference on Intelligent Robotics and Applications (ICIRA), Associate editor of the IEEE International Conference on Advanced Robotics and Mechatronics (ICARM 2024), Technical committee member of the 7th International Conference on Intelligent Robotics and Control Engineering (IRCE), Expert in the evaluation of the classification catalogue of high-quality scientific and technological journals in the field of mechanical engineering.


Personal Website
https://faculty.tongji.edu.cn/linrongfu/zh_CN/index/849861/list/index.htm


Doctoral thesis topic

- 1.Kinematics of robots and mechanisms
- 2.Robotic mechanism theory and development
- 3.Multibody dynamics
- 4.Motion control and planning of robotic systems

Note: More topics on robotics could be organized under the interesting of the candidates


Requirements

1. Strong passion and determination in investigating robotic mechanical systems and its applications
2. Good practical ability and independent thinking ability
3. Cooperative awareness, would like to communicate in a big group with about 60 members
4. We are always actively recruiting new PhD/Master/Exchange students.




WANG Yuanxiang


Email
 yuanxiangwang@tongji.edu.cn


Research Fields
 Artificial Intelligence and Intelligent Robots


Professional Activities
 Member of IEEE, ASME, INFORMS, System Engineering Society of China, and Operations Research Society of China, holder of IEEE CASE 2021 Best Conference Paper Award, holder of INFORMS Bonder Foundation Award, associate editor of IEEE ICARM 2024, special session organizer of IEEE ICIRA 2024, online experience chair of IEEE CASE 2025.

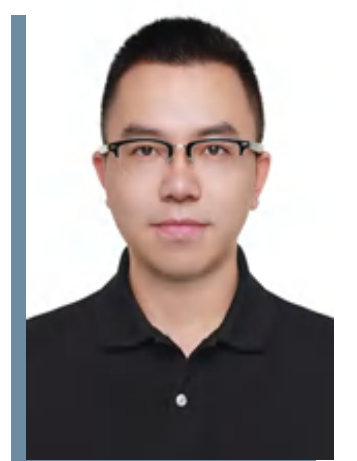

Personal Website
<http://robotics-tongji.org/members/yuanxiangwang>
<https://faculty.tongji.edu.cn/wangyuanxiang>


Doctoral thesis topic

1. Multi-modal sensory feedback for enhancing tactile and proprioceptive perception in prosthetic limbs
2. Multi-sensor fusion for intelligent perception and control of prosthetic hands
3. Hybrid intelligence in prosthetic hands for enhanced control and adaptability

Note: More topics could be organized based on the interests of the doctoral students.

Requirements
 Candidates should be highly motivated for academic work and would like to communicate and work with a large group with about 60 passionate and determined members.







Email
yew@tongji.edu.cn

Research Fields
unsupervised learning, graph machine learn

Personal Website
https://weiye.userweb.mwn.de/

Doctoral thesis topic
Graph neural networks (GNNs) have aroused a great deal of attention recently. The thesis will focus on the key research problem: improving the representational power of GNNs (Graph neural networks) effectively. To this end, we will investigate how to hierarchically embed, propagate, and aggregate the information in the three levels of the graph structures, i.e., node level, cluster level, and graph level, and extend the message passing mechanism in GNNs. The studies in this thesis will dramatically increase the representational power of GNNs, provide theoretical support for the further development of this field, and have important scientific significance.The thesis will focus on the key research problem: improving the representational power of GNNs effectively. To this end, we will investigate how to hierarchically embed, propagate, and aggregate the information in the three levels of the graph structures, i.e., node level, cluster level, and graph level, and extend the message passing mechanism in GNNs. The studies in this thesis will dramatically increase the representational power of GNNs, provide theoretical support for the further development of this field, and have important scientific significance.

- Requirements
1. Basic knowledge of machine learning and deep learning
 2. Coding experience in Tensorflow/Pytorch
 3. Related background in Computer Science, Electrical Engineering, Statistics, and Mathematics



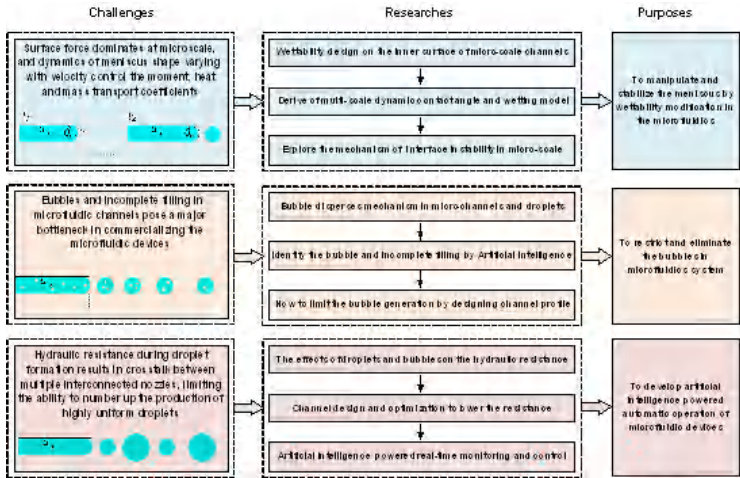
Email
zhicheng_yuan@tongji.edu.cn

Research Fields
Droplet Microfluidics, Multi-scale Dynamic Wetting, Multi-phase flow Simulation, Heat and mass transfer, etc.

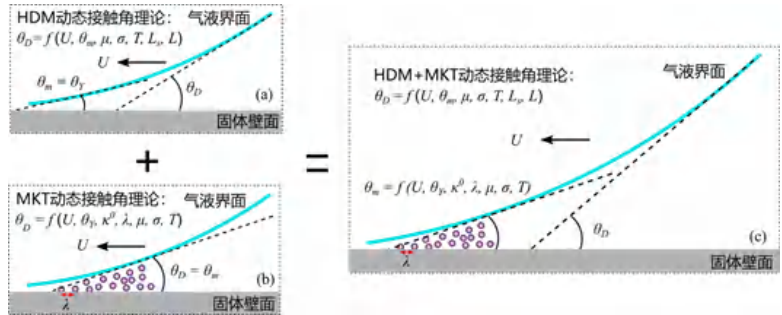
Personal Website
https://faculty.tongji.edu.cn/yuanzhicheng/en/index.htm

Professional Activities
Guest editor of the special issue (Research on Heat Transfer Analysis in Fluid Dynamics) on Applied Sciences

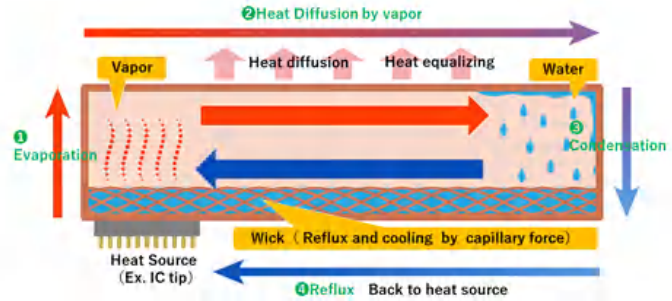
Doctoral thesis topic
1.Design and intelligentization of droplet microfluidics



2.Droplet, bubble, interface and multi-scale dynamic wetting



3.3D vapor chamber cooling for electronic device



SHAN Yao

Email

shanyao@tongji.edu.cn

Research Fields

Theoretical: Railway vehicle-track-subgrade interactions and multi-scale analysis

Technical: Risk control technologies for constructions near existing railway infrastructures

Personal Website

<https://tjtt.tongji.edu.cn/szdw1/jsml2/csgdytlgcx1/sy.htm>

<https://www.researchgate.net/profile/Yao-Shan-2>

Doctoral thesis topic

1. Cross-scale calculation algorithm: Mesoscopic soil property evolution-Macroscopic subgrade stability
2. Machine vision: Intelligent prevention and control system for the overturning risk of large-scale construction equipment adjacent to rail transit based on vision and AI technologies
3. Physics-Informed Neural Networks (PINNs): Railway involved inverse problems



YUAN Feng

Email

philipyuan007@tongji.edu.cn

Research Fields

Architectural Intelligent Design and Fabrication

Professional Activities

Editor-in-Chief of Architectural Intelligence journal
DigitalFUTURES Founder
Fellowship of America Institute of Architect
Council Member of UIA-PPC
IASS Committee Member



President of International Conference of Computational Design and Robotic Fabrication

Thomas Jefferson Professor at University of Virginia (2019)

Visiting Professor at Massachusetts Institute of Technology (2019), Royal Melbourne Institute of Technology (2021)



Personal Website

<https://caup.tongji.edu.cn/caupen/c1/a3/c11079a115107/page.htm>



Doctoral thesis topic

1. Artificial Intelligence in architectural design
2. Architectural 3D printing based on digital perception
3. Structural performance-based robotic fabrication

ZHANG Jiaolong

Email

Jiaolong_Zhang@tongji.edu.cn

Research Fields

1. Tunnel and Underground Engineering
2. Computational Mechanics
3. New Cementitious Materials
4. 3D Printing of Tunnel Linings



Professional Activities

1. Secretary of the Committee on Fault Geo-disaster and Induced Seismicity of the International Consortium on Geo-disaster Reduction (ICGdR)
2. Vice Chair of Technical Committee SD103 of the World Transport Convention (WTC)
3. Member of the EMI Experimental Analysis and Instrumentation Committee
4. Member of Early Career Editorial Board of "Engineering Structures"
5. Editorial member of "Periodica Polytechnica Civil Engineering"
6. Guest Editor of "Frontiers of Structural and Civil Engineering"



Personal Website

<https://faculty-civileng.tongji.edu.cn/zhangjiaolong/en/index/35341/list/index.htm>



Doctoral thesis topic

1. Tunnel and Underground Engineering
2. Computational Mechanics
3. New Cementitious Materials
4. 3D Printing of Tunnel Linings



 ZHU Xinyi

 **Email**
zhuxingyi66@tongji.edu.cn

-  **Research Fields**
- 1.Intelligent functional pavement
 - 2.Risk assessment of anti-skid failure during aircraft landing
 - 3.Integration of transportation and energy
 - 4.Solid waste recycling
 - 5.Research on multi-scale performance of pavement materials

-  **Professional Activities**
- 1.Associate Editor of ASCE Journal of Materials in Civil Engineering
 - 2.Deputy Editor in Chief for the Founding of Cleaner Materials
 - 3.Youth Editorial Board Member of China Journal of Highways
 - 4.Youth Editorial Board Member of Journal of Traffic and Transportation Engineering (English Edition)
 - 5.Youth Editorial Board Member of Journal of Building Materials
 - 6.Advisor to the International Civil Aviation Organization Airport
 - 7.Operations Working Group AOWG-FTF

 **Personal Website**
<https://tjtt.tongji.edu.cn/info/2004/8157.htm>

-  **Doctoral thesis topic**
- 1.Research field and research projects of doctoral students to be enrolled:
 - 2.Energy self consistent technology for intelligent connected road transportation system
 - 3.AI empowered integrated intelligent road of perception positioning guidance
 - 4.Dynamic characteristics of large aircraft taxiing on waterlogged surfaces
 - 5.Mechanical constitutive model of asphalt mixture
 - 6.Nano friction power generation

 NIU Gang

 **Email**
gniu@tongji.edu.cn

 **Research Fields**
Mechanical and Vehicle Health Management

 **Professional Activities**
IEEE Senior Member



 **Personal Website**
<https://faculty.tongji.edu.cn/niugang/>

 **Doctoral thesis topic**
Advanced Sensing and Intelligent Diagnostics;
Prognostics and Health Management (PHM);
Self-Healing Control and Autonomous Systems

 LIU Xian

 **Email**
Xian.liu@tongji.edu.cn

 **Research Fields**
Tunneling and subsurface engineering
Computational structural mechanics
Machine learning methods and uncertainty modeling

 **Personal Website**
<https://faculty-civileng.tongji.edu.cn/liuxian>

-  **Professional Activities**
- [1] Permanent Council Member and Deputy Secretary General of the Underwater Tunnel Engineering Technology Branch of the Chinese Society for Rock Mechanics and Engineering.
 - [2] Council Member of the Rail Transit Branch of the China Civil Engineering Society.
 - [3] Council Member of the Tunnel Engineering Branch of the China Highway and Transportation Society.
 - [4] Member of the Sustainable Civil Engineering Research Committee of the China Society for Urban Studies.
 - [5] Member of the Engineering Renovation and Maintenance Committee of the Shanghai Society of Civil Engineering.
 - [6] Member of the Underground Construction and Engineering Committee of the Architectural Society of Shanghai China.
 - [7] Member of the Rail Transit Committee of the Shenzhen Civil and Architectural Society.

 **Doctoral thesis topic**
Physics-informed machine learning in tunneling engineering
Digital Twins towards smart construction in tunnel engineering
Material efficient model-based design of robust and sustainable infrastructure



ZHANG Jie

Email

cezhangjie@tongji.edu.cn

Research Fields

1. Risk Analysis and Control of Geotechnical and Underground Engineering
2. Safety Assessment and Resilience Enhancement of Underground Structures
3. Geotechnical Earthquake Engineering and Environmental Vibrations
4. Data Science and Its Applications in Civil Engineering

Personal Website

<https://geotec.tongji.edu.cn/zj2/main.psp>

Professional Activities

1. Part-time Deputy Secretary-General, Chinese Society for Rock Mechanics and Engineering (CSRME)
2. Secretary-General, Division of Engineering Risk and Insurance Research, China Civil Engineering Society (CCES)
3. Secretary-General, Editorial Committee, Chinese Society for Rock Mechanics and Engineering (CSRME)
4. Chair, Technical Committee on Risk Analysis and Mitigation Technology (TC5), International Consortium on Geo-disaster Reduction (ICGdR)
5. Vice Chair, Technical Committee on Risk Assessment and Management (TC304), International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE)

Doctoral thesis topic

1. Intelligent Manufacturing and Construction
2. Risk Analysis and Control of Geotechnical and Underground Engineering
3. Safety Assessment and Resilience Enhancement of Underground Structures
4. Geotechnical Earthquake Engineering and Environmental Vibrations
5. Data Science and Its Applications in Civil Engineering



ZHOU Mingliang

Email

zhoum@tongji.edu.cn

Research Fields

Tunnel Engineering Safety and Disaster Prevention

Personal Website

<https://faculty-civileng.tongji.edu.cn/mz/en/index.htm>

Professional Activities



Dr. Zhou holds international roles, including Vice General Secretary of the International Joint Research Centre for Resilient Infrastructure (ICRI) and membership in ISSMGE Technical Committees TC309 and TC222.



Doctoral thesis topic

Research focuses on enhancing the resilience of underground infrastructure through advanced intelligent construction technologies, emphasizing safety management and disaster mitigation strategies for subsea tunnels



Günther Meschke



Email

zhoum@tongji.edu.cn



Research Fields

Computational Structural Mechanics
Numerical Modeling of Multi-Scale Models
Applications in Tunneling and Underground Engineering



Personal Website

<https://www.researchgate.net/profile/Guenther-Meschke>



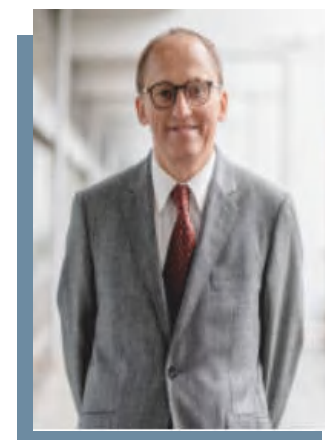
Professional Activities

1. Member, European Academy of Sciences (EURASC)
2. Member, North Rhine-Westphalia Academy of Sciences, Humanities and the Arts
3. Member, German National Academy of Science and Engineering (acatech)
4. Member, Austrian Academy of Sciences (ÖAW)
5. Member, Austrian Science Council



Doctoral thesis topic

1. Machine Learning Methods
2. Uncertainty Modeling in Underground Engineering



XIAO Yao

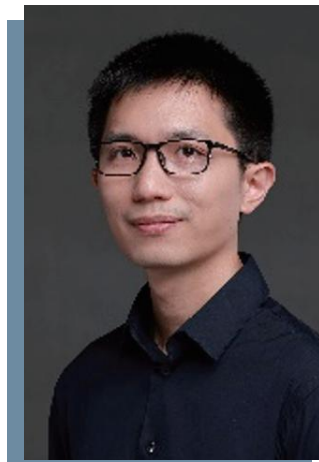
 **Email**
xiaoy10@tongji.edu.cn

 **Research Fields**
Smart materials and structures, Additive manufacturing

 **Professional Activities**
Alexander von Humboldt Fellowship

 **Personal Website**
https://faculty.tongji.edu.cn/xiaoyao/zh_CN/index/233481/list/index.htm

 **Doctoral thesis topic**
Smart materials and structures, Additive manufacturing



JIN Wenrui

 **Email**
wrjin@tongji.edu.cn

 **Research Fields**
Robotics, Drones, New energy vehicles, Large aircraft, Artificial intelligence, and Emerging cross-cutting technologies in green and low-carbon fields.

 **Personal Website**
<https://cdhaw.tongji.edu.cn/b4/4c/c17706a177228/page.htm>

 **Professional Activities**
Special - invited expert of the Strategic Consulting Center of the Chinese Academy of Engineering, member of the Academic Committee of the Research Center for Sand and Dust of Large Aircraft, Executive Director of the Council of the China Creativity Association and Deputy Director of its Youth Working Committee, Member of the Artificial Intelligence Branch of the Society of Automotive Engineers of China and Expert of the Off-road Vehicle Technology Branch, Member of the System Reliability Professional Committee of the Systems Engineering Society of China, Member of the Professional Committee of Natural Computing and Digital Intelligent Cities of the Chinese Association for Artificial Intelligence, Deputy Director of the Professional Committee of Automotive Service Engineering of the China Machinery Industry Education Association, etc. Editorial Board Member, Young Review Expert, and Reviewer of internationally well-known journals and important academic conferences such as IEEE Transactions on Intelligent Transportation Systems (T-ITS), Neural Computing and Applications, Aerospace Science and Technology (AST), Engineering computations, Aerospace Systems, China Satellite Navigation Conference (CSNC), etc., and Correspondent Review Expert of the National Natural Science Foundation of China, etc.

 **Doctoral thesis topic**
Autonomous intelligent robots, flying cars and low-altitude economic security, unstructured autonomous driving and deep reinforcement learning, advanced airborne systems for large aircraft and machine learning





Lu Yujie



Email

Lu6@tongji.edu.cn



Research Fields

Intelligent construction and AI, engineering intelligent management, and construction robotics



Professional Activities

- 1.Green Construction and Intelligent Building Branch in China Construction Industry Association, Deputy Secretary-General
- 2.Green Construction and Operation Branch in China Civil Engineering Society, Deputy Secretary-General
- 3.Infrastructure and Operation Management Committee in Chinese Urban Economics Association, Deputy Director
- 4.Green Building Research Center at Tongji University, Deputy Director
- 5.National Civil Engineering Structure Prefabrication and Assembly Engineering Technology Research Center, Head of Intelligent Construction and Smart Construction Team
- 6.Automation in Construction, Editorial Board Member
- 7.ASCE Journal of Management in Engineering, Editorial Board Member
- 8.Green Construction and Intelligent Building, Deputy Director of the Editorial Board



Personal Website

https://faculty-civileng.tongji.edu.cn/yujie_lu/zh_CN/index.htm



Doctoral thesis topic

- 1.Large Language Model for Construction Assessment
- 2.Construction robotics
- 3.Wearable devices
- 4.autonomous systems
- 5.Digital twin technology in Intelligent Construction
- 6.Urban renewal
- 7.Project Management



WANG Lihua



Email

lhwang@tongji.edu.cn

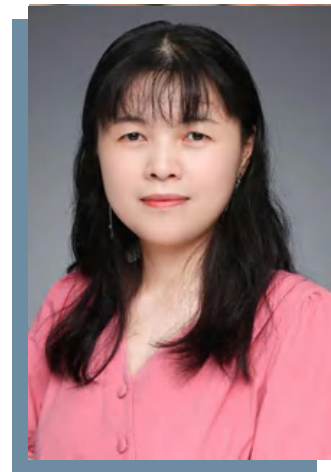


Research Fields

meshfree methods, machine learning, fluid-structure interactions, high-speed impact, inverse problems



Professional Activities



- 1.General Council member, International Association for Computational Mechanics (IACM)
- 2.General Council member, International Chinese Association for Computational Mechanics (ICACM)
- 3.Committee member, Computational Mechanics Committee of Chinese Society of Theoretical and Applied Mechanics
- 4.Committee member, History and Methodology of Mechanics Committee of Chinese Society of Theoretical and Applied Mechanics
- 5.Vice-chairman committee member, South China Liaison Committee of Computational Mechanics
- 6.Committee member, Computational Mechanics Committee of Shanghai Society of Mechanics
- 7.Committee member, Youth Work Committee of Shanghai Society of Mechanics



Personal Website

https://lhw.tongji.edu.cn/English/Curriculum_Vitae.htm



Doctoral thesis topic

Developments and applications of meshfree methods and machine learning methods; Simulations of fluid-structure interactions; Simulations of high-speed impact problems; Simulations of inverse problems



GUO Ru

Email

ruguo@tongji.edu.cn

Research Fields

Climate Change Mitigation and Adaptation,
Carbon Neutrality and Sustainability Assessment,
Ecological Planning and Management,
Green Low Carbon Smart Transition.

Professional Activities

- 1.Shanghai Society of Ecological Economics, Vice President
- 2.Carbon Peak and Carbon Neutral Committee, Chinese Society of Environmental Sciences (CSES), Member
- 3.Committee on Environmental Management, Chinese Society of Environmental Sciences, Member
- 4.National Natural Science Foundation of China, Review Expert

Personal Website

<https://unep-iesd.tongji.edu.cn/d0/c8/c13726a184520/page.htm>

Doctoral thesis topic

Carbon Neutrality and Sustainability



HE Pinjing

Email

xhpjk@tongji.edu.cn

Research Fields

- 1.Biological technologies for organic waste (including anaerobic digestion, composting, bio-drying, , etc.)
- 2.Integrated management and plan of municipal solid waste using life-cycle assessment.
- 3.Ecologically based landfill for municipal solid waste (bioreactor landfill)
- 4.Treatment and beneficial utilization of municipal and industrial sludge.



5.Characterization, treatment and beneficial utilization of MSW incineration residues.

6.Risk assessment of emerging contaminants in solid waste .

7.Biological and physicochemical removal technology for odorous pollutants and bioaerosols.

Professional Activities

- 1.Co-Editor-in-Chief, Waste Management (Elsevier)
- 2.Editor-in-Chief, Environmental Sanitation Engineering (in Chinese, Scopus indexed)
- 3.Editor, Sustainable Environment Research (BioMed Central)
- 4.Associate Editor, Journal of the Air & Waste Management Association (Taylor & Francis)
- 5.Associate Editor, Environmental Research and Technology (DergiPark AKADEMIK, Turkey)
- 6.Guest Editor, Bioresource Technology Special issue on “Bioconversion of food waste” (Elsevier)
- 7.Guest Editor, Waste Management Special issue on " Emerging Contaminants in Waste Management: Current Trends and Future Challenges in Fate, Pollution Control, Processes and Policy " (Elsevier)
- 8.Section Editor, Journal of Industrial Research & Technology, HATAM Publisher (Malaysia)
- 9.Member of Editorial Board, Journal of Material Cycles and Waste Management (Springer (dealing with manuscripts as associate editor), Journal of Environmental Sciences (Elsevier), Waste and Biomass Valorization (Springer), Waste Disposal & Sustainable Energy (WDSE), Journal of Chongqing University-English Edition, and several Chinese peer-reviewed journals.

Personal Website

https://sese.tongji.edu.cn/en/fac/fac/pro/H/Pinjing_He.htm

Doctoral thesis topic

- 1.Integrated management of municipal and rural solid waste
- 2.Landfilling, reclamation, site remediation and leachate treatment
- 3.Thermochemical treatment of solid waste and pollution control
- 4.Anaerobic digestion of biowaste and product valorization
- 5.Characterization of odour compounds, generating source tracing and treatment
- 6.Emerging pollutants of concern relating to solid waste, e.g. microplastics, antibiotics resistance genes and endocrine disrupting chemicals
- 7.Emerging pollutants of concern relating to solid waste, e.g. microplastics, antibiotics resistance genes and endocrine disrupting chemicals

LI Yongmei

Email
liyongmei@tongji.edu.cn

Research Fields
Environmental Engineering: Removal and recovery of nutrients from wastewater; Resource and energy recovery from biosolid; Modelling of wastewater treatment plant; Fate and attenuation of emerging organic contaminants in wastewater treatment processes.

Professional Activities
Associate editor, Chemosphere (2019-present); Member of the editorial board, Environmental Technology Reviews, Water; Member of the management committee of the IWA nutrient removal and recovery specialist group (2019-present)

Personal Website
https://sese.tongji.edu.cn/en/fac/fac/pro/L/Yongmei_Li.htm

Doctoral thesis topic
1. Low-carbon wastewater treatment technology 2. Anaerobic digestion of biosolids
3. Novel technologies for resource or energy recovery from wastewater

Requirements
1. The students should be enthusiastic in international communication and scientific research
2. Students should have academic backgrounds related to environmental engineering such as chemistry and biology



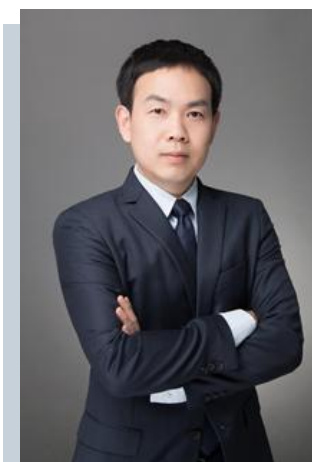
LIN Sijie

Email
lin.sijie@tongji.edu.cn

Research Fields
Environmental Chemistry, Environmental Nanotechnology, AI-enabled High Throughput Analysis

Personal Website
linlab.tongji.edu.cn

Doctoral thesis topic
Environmental Chemistry and Toxicology,
Environmental Nanotechnology, AI-enabled High Throughput Analysis



LING Lan

Email
linglan@tongji.edu.cn

Research Fields
1. Environmental Nanomaterial & Surface Chemistry for Pollution Control.
2. Environment and Energy Catalysis.
3. Surface Reaction and Nonclassical Performance and Theory.
4. Biosynthetic Nanoparticles and Visualization.
5. Application of Cs-S/TEM, Insitu S/TEM, Cryo Electron Microscope for Environmental Science.

Professional Activities
Social Activities:
1. 2022- Editorial Board Member of Journal of Hazardous Materials
2. 2019- Editorial Board Member of Environmental Chemistry
3. 2019- Member, Environmental Chemistry Sub-Committee, Society for Environmental Sciences, China
4. Reviewing manuscripts for Environ. Sci. Technol., Environ. Sci. Nano, Chem. Eng. J., Nanoscale, Engineering, J. Hazard. Mater., Environ. Pollut., Sci. Total Environ., Chemosphere, Chem. Geol., New J. Chem., Engineering, etc.

Award:
1. 2018, National Science Fund for Outstanding Young Scholars
2. 2023, Women Researchers at the Forefront of Crystal Engineering
3. 2024, Excellent Research Advisor at the ENVR Virtual Asia-Pacific Graduate Students Symposium, ACS Spring 2024
4. 2019, Excellent tutorial for undergraduates of Tongji University
5. 2006, Outstanding graduates of Tongji University

Personal Website
https://sese.tongji.edu.cn/en/fac/fac/pro/L/Lan_Ling/Research_Activity.htm

Doctoral thesis topic
1. Environmental Nanomaterial & Surface Chemistry for Pollution Control
2. Environment and Energy Catalysis
3. Surface Reaction and Nonclassical Performance and Theory
4. Biosynthetic Nanoparticles and Visualization
5. Application of Cs-S/TEM, Insitu S/TEM, Cryo Electron Microscope for Environmental Science



ZHANG Chaojie

Email
myrazh@tongji.edu.cn

Research Fields
Pollution Control of Perfluorinated
Compounds and Resource Utilization of CO₂

Professional Activities
IEEE Fellow

Personal Website
<https://sese.tongji.edu.cn/szdw/zyjs/js/Z/zcj.htm>

Doctoral thesis topic
Pollution Control of Perfluorinated Compounds and Resource
Utilization of CO₂



MENG Xiangzhou

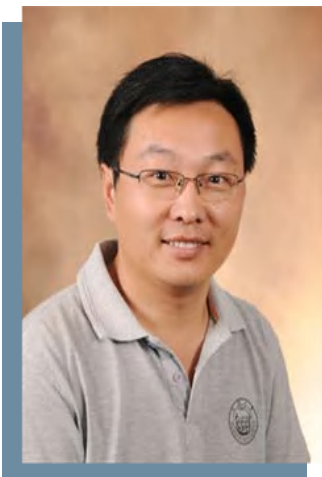
Email
xzmeng@tongji.edu.cn

Research Fields
The title of my research group is “Source Emission and
Environmental Kinetics of New Pollutants”, abbreviated as
NP-Seek. The main job is the examine the occurrence and
fate of emerging organic contaminants in the environment
and prioritization of unregulated chemicals for future
monitoring, assessment and research.

Professional Activities
Guest Editor, Environmental Pollution
Guest Editor, Environmental Science and Pollution Research
Editorial board, Chemosphere

Personal Website
https://sese.tongji.edu.cn/en/fac/fac/pro/M/Xiangzhou_Meng.htm

Doctoral thesis topic
Focus on new pollutants in the environment (also called as “emerging
contaminants), we are seeking the PhD students/visitors who have interest in their
nontarget analysis, release model, environmental behavior, and management
strategy.



WANG Rongchang

Email
wangrongchang@tongji.edu.cn

Research Fields
low-carbon bioprocesses
carbon capturing and utilization
biological wastewater treatment
biofilm reactors and processes

Professional Activities
Member of International Water Association (IWA),
Member of International Society of Microbial Ecology (ISME)
Management Board member of IWA Specialist Group on Biofilms
Management Board member of IWA Specialist Group on Water Reuse (SGWR)

Personal Website
https://sese.tongji.edu.cn/en/fac/fac/ass/W/Rongchang_Wang.htm

Doctoral thesis topic
Wastewater treatment and recovery, low-carbon bioprocesses, carbon
capturing and utilization, membrane biofilm reactors, algal technologies,
bioelectrochemical systems



ZHOU Xuefei

Email
zhouxuefei@tongji.edu.cn

Research Fields
Wastewater treatment and resource reuse

Professional Activities
IWA Fellow

Personal Website
<https://sese.tongji.edu.cn/szdw/zjjs/js/Z/zxf/yjfx.htm>

Doctoral thesis topic
1.Wastewater treatment and resource reuse
2.Environmental behavior of Pharmaceutical and Personal Care Products
(PPCPs) and their control
3.Environmental engineering simulation and intelligent control



TANG Yulin

Email
tangyulin@tongji.edu.cn

Research Fields

Drinking water, water saving and membrane technology

Professional Activities

1. Second Prize, Shanghai Teaching Achievement Award (2017, Rank 4/5)
2. Third Prize, Tongji University Teaching Achievement Award (2019, Rank 1/5)
3. Outstanding Master Thesis Advisor, Tongji University (2019)
4. First Prize, Young Faculty Teaching Competition, Tongji University (2011)
5. Kent-Yang Qin Education Award (Tongji University, 2018)

Personal Website
<https://sese.tongji.edu.cn/szdw/zjjs/js/T/tyl/jxky.htm>

Doctoral thesis topic

1. Theory and technology of drinking water advanced treatment;
2. Water-saving theory and technology;
3. Membrane treatment technology;



XU Bin

Email
binxu@tongji.edu.cn

Research Fields

1. Gas purification technology, principles, materials, and equipment;
2. Organic solid waste utilization technology;

Personal Website
https://sese.tongji.edu.cn/en/fac/fac/ass/X/Bin_Xu/Research_Activity.htm

Doctoral thesis topic

1. Organic solid waste utilization technology
2. Gas purification technology, principles, materials, and equipment;



WANG Ying

Email
yingwang@tongji.edu.cn

Research Fields

pollutant analysis, interfacial electrochemistry and nanocatalysis, design and fabrication of advanced environmental functional materials, and research on electrochemical catalytic conversion.

Professional Activities

Deputy Director, International Joint Research Center for Sustainable Urban Water Systems, Ministry of Science and Technology
Co-Chair, Global Environment Outlook-7 (GEO-7), United Nations Environment Programme (UNEP)
Associate Editor, Energy & Environmental Sustainability
Deputy Director, Young Scientists Committee, Chinese Society for Environmental Sciences
Standing Committee Member, Emerging Contaminants Control Committee, Chinese Society for Environmental Sciences
Academic Committee Member, Key Laboratory of Pollution Control and Waste Reduction in Textile Industry, China National Textile and Apparel Council
• Committee Member, National Technical Committee for Standardization of Waste Chemical Disposal
Committee Member, Industrial Water Treatment Committee, Chemical Industry and Engineering Society of China
UNEP Young Researcher & Lead Author, Global Environment Outlook-6 (GEO-6)
Editorial Board Member / Youth Editorial Board Member of: Environment & Health, Fundamental Research, Chinese Chemical Letters, Environmental Chemistry. Energy Environmental Protection

Personal Website
<https://sese.tongji.edu.cn/szdw/zjjs/js/W/wy1/yjfx.htm>

Doctoral thesis topic

1. Advanced Electrochemical Interfaces
2. Sustainable Resource Recovery Systems
3. Technology Translation and Industrial Applications



ZHANG Dong

Email

2015zhangdong@tongji.edu.cn

Research Fields

Environmental Pollution Control and Resource Utilization

Personal Website

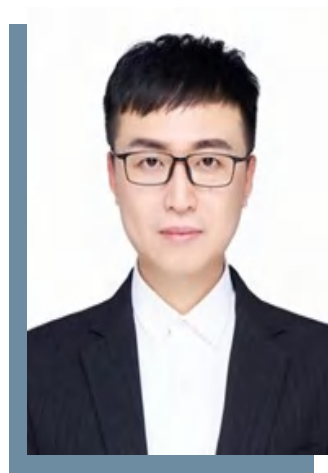
https://sese.tongji.edu.cn/szdw/zyjs/fjs_fjy_/Z/zd.htm

Professional Activities

As a peer reviewer for over 50 journals including Water Research, Chemical Engineering Journal, Journal of Hazardous Materials, ACS Sustainable Chemical & Engineering, Bioresource Technology, Applied Energy, and Waste Management. I am a member of the Youth Expert Committee of the China Biogas Society and the Youth Expert Committee of the China Anaerobic Biotechnology Society, a reviewer for the Ministry of Education's Science and Technology Evaluation and Review Information System, a reviewer for the Ministry of Education's Degree and Graduate Education Development Center, an expert in the Shanghai Science and Technology Expert Database, an expert contacted by the Taiyuan Municipal Committee of the Communist Party of China, and a young member of the editorial board of China Water & Wastewater.

Doctoral thesis topic

- (1) Water Pollution Control and Sludge Resource Utilization + AI
- (2) Organic Solid Waste Treatment and Disposal + AI
- (3) Biomass Energy and Carbon Emission Reduction and Carbon Neutrality
- (4) Environmental Control of Antibiotic Resistance Genes



CAI Chen

Email

caic@tongji.edu.cn

Research Fields

Theory and Technology of Carbon Neutrality

Professional Activities

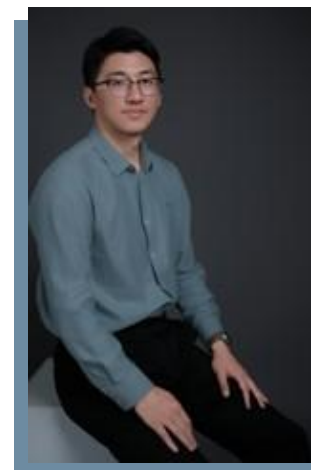
Assistant Professor

Personal Website

https://sese.tongji.edu.cn/szdw/zjjs/js_zljs_/C/cc/jygzjl.htm

Doctoral thesis topic

Focusing on the mechanisms and enhancement potential of global methane sinks, this program investigates microbial metabolic pathways in soils/oceans, environmental regulation patterns, and their coupling effects with the carbon cycle. It aims to develop high-precision monitoring technologies to provide theoretical support and technical solutions for methane mitigation.



DIAO Muhe

Email

mdiao@tongji.edu.cn

Research Fields

Environmental Microbiology

Professional Activities

Specially Appointed Research Professor

Personal Website

<https://scholar.google.ca/citations?user=v4-yB60AAAAJ&hl=en&oi=ao>

<https://www.researchgate.net/profile/Muhe-Diao>

Doctoral thesis topic

1. Microbial diversity and functions in aquatic environments, including wastewater, groundwater, lakes, wetlands
2. Biogeochemical cycling of methane, nitrogen and sulfur
3. Environmental remediation of polluted water and soil





LV Fan

Email

lvfan.rhodea@tongji.edu.cn

Research Fields

Anaerobic Digestion, Biological treatment,
Environmental microbiology, Waste Management

Professional Activities

Professor

Personal Website

<https://sese.tongji.edu.cn/szdw/zyjs/js/L/lf1.htm>

<https://www.webofscience.com/wos/author/rid/F-4812-2013>

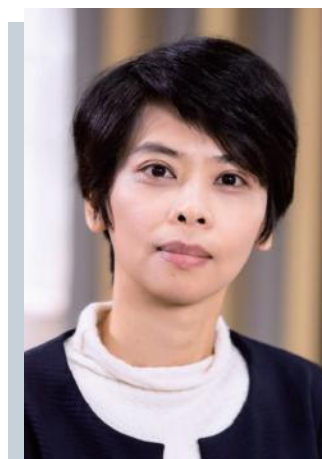
<https://scholar.google.com/citations?user=I4UHwFQAAAAJ&hl=en>

Doctoral thesis topic

1. Monitoring anaerobic digestion (AD) using the tool of mVOCs: to realize online monitoring and early warning of anaerobic digestion process for biowaste valorization, microbial Volatile Organic Compounds (mVOCs) are used as a biomarker and indicators. High-resolution mass spectrometry is used to achieve the whole profile of mVOCs. The characteristics of mVOCs are tried to be connected with metagenomics and meta-transcriptomics of microbiome under different AD scenarios.
2. Application of functional materials into AD process: This study is try to enhance the performance of anaerobic digestion under high organic loading rate, especially for thermophilic AD and high solid-content dry AD process. Functional materials that are tailoredly prepared, will be added to the reactor, and investigated for the changes of microorganisms and the reactor performance.
3. Life cycle assessment (LCA) in waste management: to explore a holistic approach to managing waste considering the entire life cycle from its creation to its disposal, analyzing the environmental impacts of a waste management system in the life cycle, and implementing environmentally-friendly strategies. Anaerobic digestion plants and other waste treatment plants in Shanghai and other cities in China will be assessed for each operational unit. The results can be compared with some plants in European countries.

Requirements

1. Language proficiency: Good in English or Chinese.
2. Academic qualifications: A master's degree related to Environmental Engineering.
3. Research proposal: Outlining the intended research topic, methodology, and objectives.
4. Recommendation Letter.



TENG Wei

Email

Wteng@tongji.edu.cn

Research Fields

Multifunctional nanostructured materials and
nanotechnology for environmental applications.

Personal Website

https://sese.tongji.edu.cn/szdw/zyjs/fjs_fyfy_/T/tw/jygzjl.ht

Doctoral thesis topic

1. Research on design and synthesis of environmental functional nanomaterials and the mechanism of pollutant transformation and removal.
2. Principle and technical application of electrochemical transformation and resource recycling of pollutants.
3. Development of functional materials and technologies for collaborative remediation of contaminated soil and groundwater.



WANG Hongtao

Email

hongtao@tongji.edu.cn

Research Fields

Water resources management; water-energy nexus in
urban water systems.

Professional Activities

1. Associate Editor of Journal of Hazardous Materials Advances
2. Editorial Board Member of Chemosphere, Water Environment Research, ACS ES&T Water

Personal Website

<https://sese.tongji.edu.cn/szdw/zyjs/js/W/wht/jxky.htm>

Doctoral thesis topic

1. Modeling the life cycle carbon footprint: A case study on wastewater treatment sector. Funded by the National Natural Science Foundation of China (NSFC). 2023-2025
2. Mechanisms of water-energy-carbon nexus and pathways towards synergetic control of environmental pollutants and carbon emissions in wastewater treatment plants based on machine learning. Funded by the National Natural Science Foundation of China (NSFC). 2023-2026



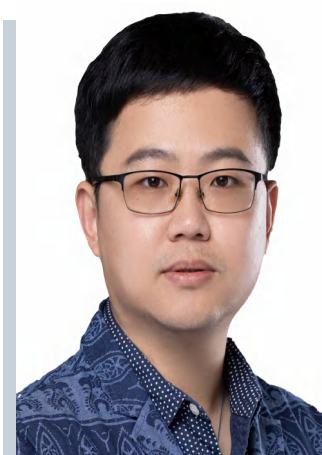
WU Yinan

Email
51n@tongji.edu.cn

Research Fields
Green Chemistry, Water Chemistry, Environmental Functional nano-Materials

Personal Website
<https://scholar.google.com/citations?user=YMAVINAAAAAJ&hl=en>

Doctoral thesis topic
Environmental Nanotechnology, Metal-organic Frameworks, Water Harvesting



XIE Li

Email
sally.xieli@tongji.edu.cn

Research Fields
1.Environmental biotechnology
2.CO2 bio-conversion process

Professional Activities
IWA member

Personal Website
<https://sese.tongji.edu.cn/szdw/zyjs/js/X/xl.htm>

Doctoral thesis topic
1. Nitrogen transformation in aerobic digestion
2. CO2 valorization



ZHANG Hua

Email
zhanghua_tj@tongji.edu.cn

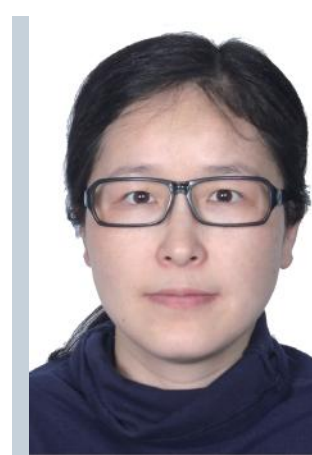
Research Fields
1)Intelligent identification of solid waste using computer vision and machine/deep learning; 2)Thermochemical treatment of solid waste and secondary pollution (residues, flue gas) control; 3)Valorization of thermoplastics to prepare hierarchical porous carbon

Professional Activities
Associate Editor, Journal of the Air & Waste Management Association
Member of Editorial Board, Environmental Sanitation Engineering (in Chinese)
Member of Scientific Advisory Panel, International Waste Working Group (IWWG)

Personal Website
<https://sese.tongji.edu.cn/szdw/zyjs/js/Z/zh1.htm>

Doctoral thesis topic
1.Intelligent classification and identification of physiochemical characteristics multi-source solid waste based on hyperspectral imaging
2.Co-incineration of multi-source solid waste: Blending strategies, influencing factors and pollution control
3.Autogenic pressure gasification and carbonization of thermoplastics for producing hierarchical porous carbon (HPC) and substitute natural gas (SNG)

Requirements
1. The working language is English, and advanced communication skills in English (oral and written) are expected
2. The ability for independent, ganized work is essential.
3. The int est in solid waste treatment and resource reuse.



WU Boran

Email

boranwu@tongji.edu.cn

Research Fields

1. Development of Environmentally Friendly Advanced Sludge Dewatering Technology and Mechanisms for Enhanced Dewatering Performance,
2. Hydrothermal Treatment for Harmless Disposal and Energy Utilization of Organic Pollutants,
3. In-Situ Ecological Remediation of Polluted Water Bodies Based on Microbial Activation Systems

Professional Activities

Assistant Professor

Personal Website

<https://scholar.google.com/citations?user=S417G84AAAAJ&hl=en>

https://sese.tongji.edu.cn/szdw/zjjs/js_zljs_/W/wbr/jxky.htm

Doctoral thesis topic

Solid Waste Treatment and Resource Recovery



GUO Yuntao

Email

yuntaoguo@tongji.edu.cn

Research Fields

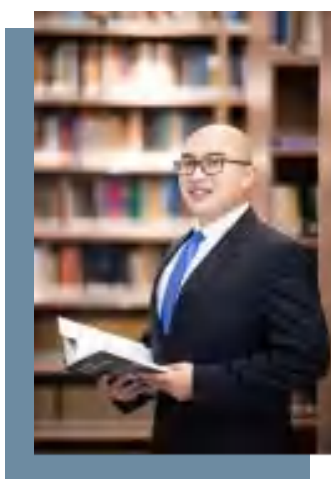
- Electric Vehicle Adoption
Infrastructure Planning

Personal Website

<https://tongji.teacher.360eol.com/teacherBasic/preview?teacherId=12498>

Doctoral thesis topic

1. Behavioral Evolution Mechanism
2. Charging Demand Prediction
3. Charging Infrastructure Layout Optimization
4. Policy and Scenario Analysis



SHI Xing

Email

20101@tongji.edu.cn

Research Fields

- Green Building Performance and Optimal Design

Urban Building Energy Modeling

Urban Microclimate

Professional Activities

Vice Dean, College of Architecture and Urban Planning,
Tongji University

Director, Key Laboratory of Ecology and Energy-Saving Study of Dense Habitat (Ministry of Education), Tongji University

Vice President, Building Physics Branch, Architectural Society of China

Personal Website

<https://tongji.teacher.360eol.com/teacherBasic/preview?teacherId=12498>

Doctoral thesis topic

Radiative Cooling Materials and Their Applications in Urban Buildings



LOU Yongqi

Email

louyongqi@tongji.edu.cn

Research Fields

Design driven Innovation,
Design for Social Innovation and Sustainability

Professional Activities

Fellow, Royal Swedish Academy of Engineering Sciences

Personal Website

<https://tjdi.tongji.edu.cn/TeacherDetail.do?id=1112&lang=en>

Doctoral thesis topic

1. Data-driven Design Approaches on Sustainable Community Building
2. Product Service Design for Wearable and Automotive Systems for Sustainability

Requirements

1. Proficient in English speaking and writing
2. Basic knowledge and skills on design, architecture, data science and technology



CHEN Jing

Email

ljingchen@tongji.edu.cn

Research Fields

Urban biodiversity and ecological design

Professional Activities

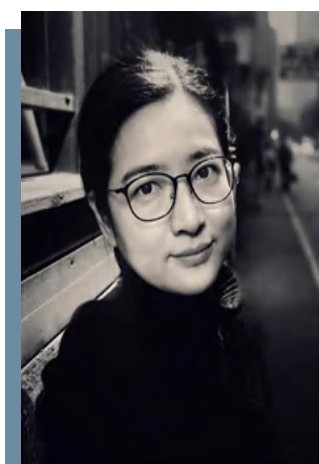
Member of the Landscape and Horticulture Professional Committee of the Shanghai Botanical Society

Personal Website

<https://landscape-caup.tongji.edu.cn/64/0d/c10588a91149/page.htm>

Doctoral thesis topic

1. Construction of resilient habitat networks in urban areas under future climate change conditions
2. Layout and optimization of urban green infrastructure
3. Ecosystem services of urban parks and community gardens



DONG Nannan

Email

dongnannan@tongji.edu.cn

Research Fields

- 1.Key technology research on the performance and construction of building greenery in high-density cities
2. Precise restoration technology for rural ecological space
- 3.Energy landscape integrated green technology based on the goal of double carbon development

Professional Activities

March 22, 2024, "Towards Sustainable Urban Regions: Sino-German Collaborative Transformation", Tongji University College of Architecture and Urban Planning, Zhongting Auditorium, Organized by: Tongji University College of Architecture and Urban Planning, German Federal Ministry of Education and Research (BMBF)
October 16, 2024, Sino-German Symposium on Sustainable Building and Urban Planning, Tongji Architectural Design (Group) Co., Ltd., First Floor Multi-function Hall, Organized by: Tongji University Sino-German Joint Research Center for Sustainable Urban Development, Tongji Architectural Design (Group) Co., Ltd. Institute of Future Architecture and Urbanism
October 21, 2024, "Indicator Tools and Practical Innovation under the Sustainable Development Goals" Workshop, Tongji University College of Architecture and Urban Planning, Building D, Room D201, Organized by: International Joint Laboratory of Eco-Urban Design (Ministry of Education), Tongji University Sino-German Joint Research Center for Sustainable Urban Development, Business Ecology Studio, University of Manchester, Manchester School of Architecture, Manchester Metropolitan University

Personal Website

<https://landscape-caup.tongji.edu.cn/64/09/c10588a91145/page.htm>

Doctoral thesis topic

- 1.Key technology research on the performance and construction of building greenery in high-density cities
- 2.Precise restoration technology for rural ecological space
- 3.Energy landscape integrated green technology based on the goal of double carbon development

Requirements

Urban and Rural Landscape Resilience Governance and Green Infrastructure Planning for Climate Change Adaptation





YE Yu

Email

yue@tongji.edu.cn

Research Fields

Digital Urban Design

Professional Activities

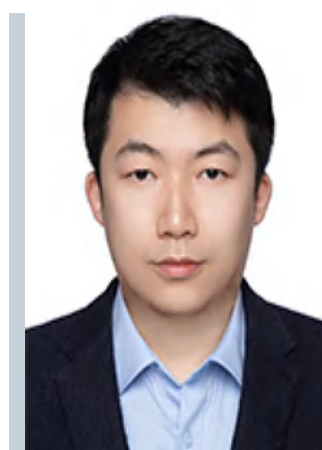
1. Member of Environmental Behavior Committee, Architectural Society of China
2. Member of the Computational Design Committee of Architectural Society of China
3. Youth member of Urban Design School Committee, Urban Planning Society of China
4. Member of the Special Committee on Urban Big Data, Chinese Society of Urban Sciences
5. Member of the Healthy Cities Committee, Chinese Society of Urban Sciences
6. Young Editorial Board member of Times Architecture
7. Young Editorial Board Member of Landscape Architecture
8. Executive editor of Landscape Architecture

Personal Website

<https://caupzs.tongji.edu.cn/e2/a2/c18995a189090/page.htm>

Doctoral thesis topic

(Transit-Oriented Development 2 – Public spaces, mobility hubs and climate neutrality toolbox) .2023.5-2026.4.



ZHANG Deshun

Email

zds@tongji.edu.cn

Research Fields

Landscape response to climate change;
Ecological planning and planting design in Landscape Architecture;
Landscape architecture planning and design.

Professional Activities

1. Selection mechanism of landscape plants in response to climate change: A case study of Shanghai, Supported by



the National Natural Science Foundation of China(Grant-No.31470701),2015.1—2018.12.

2.Study on the selection mechanism of landscape tree species in arid habitat of urban greenbelt, Supported by the National Natural Science Foundation of China(Grant No.31770747),2018.01—2021.12.

3.Selection mechanism of wind-resistant garden tree species in coastal areas of East China: A case study of Shanghai, Supported by the National Natural Science Foundation of China(Grant No.32071824),2021.1—2024.12.

Personal Website

<https://landscape-caup.tongji.edu.cn/63/f3/c10588a91123/page.htm>

Doctoral thesis topic

Conservation Status and Conservation Strategy of Picea neoveitchii

Requirements

1. International vision and team spirit
2. Interested in landscape architecture, ecology or botany



HUANG Hongwei

Email

huanghw@tongji.edu.cn

Research Fields

Risk assessment, risk warning, and risk control in geotechnical and tunnel engineering, as well as health monitoring and inspection of tunnels and underground structures

Professional Activities

1. November 2021 to present: Director of the International Joint Research Center for Resilient Infrastructure
2. June 2009 to August 2023: Chairman of the Engineering Risk and Insurance Research Branch of the China Civil Engineering Society
3. August 2023 to present: Honorary Chairman of the Engineering Risk and Insurance Research Branch of the China Civil Engineering Society
4. September 2018 to present: Associate Editor of the Journal of Tongji University (Natural Science Edition)
5. March 2017 to present: Editorial Board Member of Tunnelling & Underground Space Technology
6. September 2016 to present: Associate Editor of ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part A: Civil Engineering



7. January 2007 to January 2017: Core Member of the International Geotechnical Safety Network Organization
8. 2018 to present: Member of the Key Laboratory of Traffic Tunnel Engineering of the Ministry of Education, Southwest Jiaotong University
9. 2021 to present: Member of the Key Laboratory of Intelligent Structural Systems for Civil Engineering, Shenzhen
10. 2006 to present: Member of the ASCE Geotechnical Risk Management Committee, USA
11. 2006 to present: Editorial Board Member of Georisk An International Journal on Assessment and Management of Risk for Engineered Systems and Geohazards
12. 2005 to present: Member of the International Society for Soil Mechanics and Geotechnical Engineering TC28, TC304 Committees
13. 2018 to present: Executive Director of the China Civil Engineering Society
14. 2005 to present: Executive Director of the Tunnel and Underground Engineering Branch of the China Civil Engineering Society
15. 2004 to present: Chairman of the Risk Management Committee of the Tunnel and Underground Engineering Professional Committee of the China Civil Engineering Society
16. 1999 to 2015: Executive Director of the Chinese Society for Rock Mechanics and Engineering
17. 1999 to 2007: Chairman of the Youth Work Committee of the Chinese Society for Rock Mechanics and Engineering
18. 2008 to present: Editorial Board Member of Civil, Architectural and Environmental Engineering
19. 2004 to present: Editorial Board Member of Underground Space
20. 2003 to present: Editorial Board Member of Journal of Engineering Geology
21. 2003 to present: Editorial Board Member of Rock and Soil Mechanics
22. 1998 to present: Editorial Board Member of Journal of Rock Mechanics and Engineering
23. 2001 to 2008: Associate Editor of Geotechnical Engineering World
24. 2001 to 2005: Associate Editor of Geotechnical Engineer

Personal Website

https://faculty-civileng.tongji.edu.cn/huanghongwei/zh_cn/index.htm

Doctoral thesis topic

1. Safety Risk Management and Control of Geotechnical and Underground Engineering
2. Health Monitoring and Detection of Underground Infrastructure
3. Big Data Learning and Artificial Intelligence

LIU Xian

Email

Xian.liu@tongji.edu.cn

Research Fields

Tunneling and subsurface engineering
Computational structural mechanics
Machine learning methods and uncertainty modeling

Professional Activities

Full Professor, Tongji University, China

Personal Website

<https://faculty-civileng.tongji.edu.cn/liuxian>

Doctoral thesis topic

1. Physics-informed machine learning in tunneling engineering
2. Digital Twins towards smart construction in tunnel engineering
3. Material efficient model-based design of robust and sustainable infrastructure

Requirements

1. Masters qualification & good communication skills in English or Chinese
2. Similar research achievements or interests



SHEN Xianda

Email

xshen@tongji.edu.cn

Research Fields

H₂ geological storage, CO₂ sequestration

Professional Activities

1. ASCE rock mechanics technical committee member
2. ASCE CMMI game change committee panel
3. Chinese society for rock mechanics and engineering,
4. deputy secretary

Personal Website

<https://xiandashen.github.io/>

Doctoral thesis topic

The project is on the characterization of the Thermal-Hydro-Chemo-Mechanical coupling process in hydrogen geological storage system. Experimental work will be performed at the micro-scale to understand the hydrogen flow in the porous media. Numerical model will be developed to examine the efficiency of hydrogen storage, which will shed light on the design of hydrogen geological storage facilities.



XIAO Weifang

Email

weifangxiao@tongji.edu.cn

Research Fields

Sprengwirkungshemmende Konstruktion,
Intelligente Konstruktion



Professional Activities

IAPS member



Personal Website

<https://faculty-civileng.tongji.edu.cn/xiaoweifang/en/index.htm>



Doctoral thesis topic

1. Urbane Sicherheit gegen Explosionen

Der Schutz öffentlicher Räume vor terroristischen Bedrohungen und Explosionsunfällen stellt eine besondere Herausforderung für Städte und Gemeinden dar. Insbesondere mit Fahrzeugen wurden in den vergangenen Jahren verheerende Anschläge verübt. Der Anschlag auf den Weihnachtsmarkt am Berliner Breitscheidplatz am 19. Dezember 2016 ist das bekannteste Beispiel in Deutschland. Infolge zweier, innerhalb kurzer Zeit aufeinanderfolgender Explosionen in der chinesischen Hafenstadt Tianjin am 12. August 2015 starben 173 Menschen. 797 Personen wurden verletzt. Der Schutz vor solchen Anschlägen und Explosionsunfällen mit baulichen Maßnahmen steht im Mittelpunkt des vorgeschlagenen Projektes. Die Forschungsgruppe ist für die Entwicklung der sprengwirkungshemmenden Konstruktionen tätig. Es werden bauliche, möglichst multifunktionale, und intelligente Lösungen gesucht, die sich architektonisch ansprechend in die Stadtgestaltung einfügen und ihr Schutzpotential unauffällig entfalten, ohne dabei die Aufmerksamkeit auf die Gefahren zu lenken. Hierzu werden die Gefährdungs- und Risikoanalyse erarbeitet, und u.a. die Einsatzmöglichkeiten von Stadtmöblierung oder von wieder freigelegten Stadtbächen als Barrieren untersucht.



Requirements

Für die Bewerbung ist ein erfolgreicher Abschluss eines Erststudiums (z. B. Diplomprüfung, Master-Abschluss oder ein äquivalenter Abschluss) mit einer Gesamtnote von mindestens 2,5 oder mindestens dem Prädikat „gut“ notwendig.



YU Qianqian

Email

qianqian.yu@tongji.edu.cn



Research Fields

Structural Engineering



Professional Activities

1. ExCom Member, International Institute for FRP in Construction (IIFC)
2. ExCom Member, Smart Monitoring, Assessment and Rehabilitation of Civil Structures (SMAR)
3. Committee Member, ACI TC 440-0F
4. Committee Member, RILEM TC 270-CIM
5. Secretary, China Chapter of American Concrete Institute



Personal Website

<https://faculty-civileng.tongji.edu.cn/yuqianqian/en/index/31543/list/>



Doctoral thesis topic

Performance evolution and control of steel structures



ZHANG Fengshou

Email
fengshou.zhang@tongji.edu.cn

Research Fields

1. THMC coupling in fractured rocks
2. Unconventional hydraulic fracturing Granular mechanics and DEM simulation
3. Stability of faults and induced seismicity
4. Rock mechanics and geotechnical engineering
5. Rock mechanics and geotechnical engineering

Professional Activities

1. Vice President at large, International Society for Rock Mechanics and Rock Engineering (ISRM)
2. Director, Youth Elite Committee, China Society for Rock Mechanics and Engineering
3. Deputy secretary, China Society for Rock Mechanics and Engineering
4. Executive Editor-in-Chief, Rock Mechanics Bulletin

Personal Website

<https://scholar.google.com/citations?user=LqWUb3sAAAAJ&hl=en>

Doctoral thesis topic

I am looking for PhD candidates with interests in the coupled processes in subsurface, with applications to geothermal energy exploitation, CO2 sequestration, hydrogen geological storage, nuclear waste storage and so on.



GAO Naiping

Email
gaonaiping@tongji.edu.cn

Research Fields

Building ventilation and pollutant transport; Building simulation; Outdoor livable environment; Building thermal environment

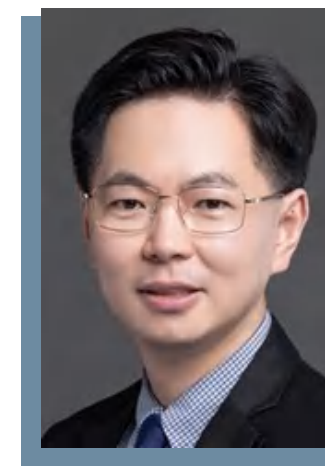
Personal Website
<https://mefaculty.tongji.edu.cn/info/1302/3307.htm>

Professional Activities

1. Reviewer for the National Science and Technology Awards, China
2. Reviewer for the National Key Projects for International Science and Technology Cooperation, China
3. Reviewer for the National Natural Science Foundation of China (NSFC)
4. Reviewer for the Hong Kong Research Grants Council (RGC)
5. Board Member, Indoor Environment and Health Branch, Chinese Society for Environmental Sciences
6. Committee Member, Ventilation Committee, Chinese Association of Heating, Ventilation and Air-Conditioning (CAHVAC)

Doctoral thesis topic

1. Advanced design and optimization methodologies for building ventilation systems
2. Fundamental mechanisms and control strategies of pollutant transport in indoor environments
3. CFD modeling of airflow, heat transfer, and pollutant dispersion in built environments
4. Coupled thermo-fluid simulation for integrated analysis of building environments and airflow
5. Theoretical analysis and numerical modeling of heat and mass transfer in porous media



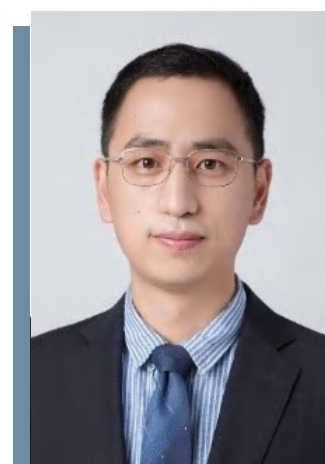
ZHANG Dongming

Email

09zhang@tongji.edu.cn

Research Fields

1. Safety control model of underground structure based on perception data
2. Design method of underground structure based on deformation performance
3. Underground structure simulation analysis technology based on geological uncertainty



Professional Activities

1. Committee Member and Secretary of International Society for Soil Mechanics and Geotechnical Engineering (ISSMGE) Technical Committee (TC309) Machine Learning.
2. Council Member of Risk and Insurance Research Branch of China Civil Engineering Society.
3. General Secretary of Young Member Committee of Risk and Insurance Research Branch of China Civil Engineering Society.
4. Deputy Director of Young Member Committee of Tunnel and Underground Works Branch of China Civil Engineering Society.
5. Corresponding Member of Young Member Committee of Chinese Institution of Soil Mechanics and Geotechnical Engineering of China Civil Engineering Society.
6. Member of ASCE and Member of ASCE Geotechnical Institute (GI)
7. Member of Shanghai Society of Civil Engineering.
8. Advisory Member for Shanghai High School Nursery Program of Science and Technology.
9. Chaired several conferences and workshops.
10. Reviewer for "ASCE Journal of Geotechnical and Geoenvironmental Engineering", "Canadian Geotechnical Journal", "Geotechnique", "Tunnelling and Underground Space Technology", "Engineering Geology", "Soils and Foundations", "Composite Structures", "Bulletin of Engineering Geology and the Environment", "Sensors", "European Journal of Environmental and Civil Engineering", "Geoscience Frontiers", "Applied Mathematical Modelling" and so on.

Personal Website

<https://faculty-civileng.tongji.edu.cn/zhangdongming>

Doctoral thesis topic

1. Safety control model of underground structure based on perception data
2. Design method of underground structure based on deformation performance
3. Underground structure simulation analysis technology based on geological uncertainty

ZHAO Zengfeng

Email

zengfengzhao@tongji.edu.cn

Research Fields

Recycled aggregate concrete, CO₂ utilisation in the construction materials, sustainable cementitious materials



Professional Activities

Member of FIB (International Federation for Structural Con-crete), TG4.7 - Structural Applications of Recycled Aggre-gate Concrete – Properties, Modeling, and Design, TG4.8 - Low-carbon concrete structures, YMG - Young Members

Group;

Senior member of RILEM (International Union of Laboratories and Experts in Construc-tion Materials, Systems and Structures), RILEM Technical Committees 273-RAC, 281-CCC, 282-CCL, 303-PFC, ADC, MPC, MMS;

Member of ACI (American Concrere Institute)

Personal Website

https://faculty-civileng.tongji.edu.cn/zhaozengfeng/zh_CN/index/33617/list/index.htm



Doctoral thesis topic

1. Use of carbonated recycled sand and recycled powder in the production of low-carbon green concrete
2. 3D printed concrete based on recycled materials from construction and demolition waste



ZHOU Shuwei

Email
shuwei_zhou@tongji.edu.cn

Research Fields
Underground engineering, computational rock mechanics, compressed air energy storage, compressed hydrogen energy storage

Professional Activities
Shanghai Eastern Scholar, Shanghai Leading Talent

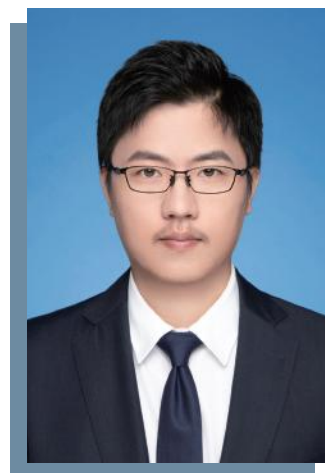
Personal Website
https://faculty-civileng.tongji.edu.cn/zhoushuwei/zh_CN/

Doctoral thesis topic

1. Multi-field phase field modeling of fracture initiation and propagation in heterogenous rock mass of a underground cavern for compressed hydrogen energy storage
2. Smart fracture modeling for lined rock caverns for compressed air energy storage
3. Fracture mechanism of transversely isotropic rock mass of lined rock caverns for compressed air energy storage
4. Sealing performance of lined rock caverns for compressed hydrogen energy storage

Requirements

1. Adequate English fluency in daily communication and scientific writing
2. Background related to rock mechanics or computational mechanics



Doctoral thesis topic
High-resolution satellite data processing, AI and intelligent spatial information, polar and global change remote sensing

LI Hui

Email
hli@tongji.edu.cn

Research Fields
Ecology and resilience of road infrastructure

Professional Activities

1. Member of the Technical Committee of the Transportation & Development Institute, American Society of Civil Engineers (ASCE);
2. Member of the International Association of Life Cycle Civil Engineering (IALCCE);
3. Member of the Committee on Seasonal Climatic Effects on Transportation; Infrastructure (AFP50), National Academy of Sciences Transportation Research Board;
4. Member of the Technical Committee on Pervious Concrete (ACI 522), American Concrete Institute (ACI);
5. Member of the Technical Committee on Sustainability of Concrete (ACI 130), American Concrete Institute (ACI).

Personal Website
<http://cst.tongji.edu.cn>

Doctoral thesis topic

1. Low-carbon and environmentally-friendly ecological pavement materials and structures
2. Sustainability and resilience of transportation infrastructure
3. Life cycle analysis and management of transportation infrastructure



LI Rongxing

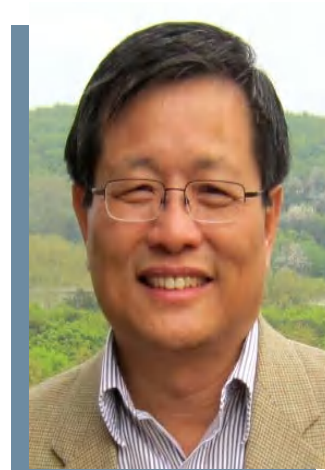
Email
rli@tongji.edu.cn

Research Fields
High-resolution satellite data processing, AI and intelligent spatial information, polar and global change remote sensing

Professional Activities

1. Fellow of the American Society for Photogrammetry and Remote Sensing
2. Fellow of the American Society for Civil Engineers
3. Editor-in-Chief of the Marine Geodesy journal (Taylor & Francis)

Personal Website
<https://celiang.tongji.edu.cn/info/1151/1018.htm>





LUO Xiao



Email

luo.xiao@tongji.edu.cn



Research Fields

Low-Carbon Transportation、 Carbon Emission Assessment、 Built Environment Evaluation



Professional Activities

Guest Editor of Technological Forecasting and Social Change and Transport Policy



Personal Website

Website: <https://tjtt.tongji.edu.cn/info/2901/9447.htm>



Doctoral thesis topic

Vehicle-to-Grid、 Zero-Carbon Transportation



YUAN Yong



Email

yuany@tongji.edu.cn



Research Fields

- 1.Dynamic Issues of Underground Structures
- 2.Performance-Based Design of Underground Structur
- 3.Theory and Methods for Underground Engineeri Maintenance



Professional Activities

- 1.Member, Performance and Safety Committe International Federation for Structural Concrete
- 2.Council Member, Protective Engineering Branch, Chi Civil Engineering Society
- 3.Editorial Board Member, Engineering Structures



Personal Website

<https://geotec.tongji.edu.cn/yy2/main.htm>



Doctoral thesis topic

Energy Storage Underground Structures



WEI Folan



Email

francesca@tongji.edu.cn



Research Fields

Urban ecology, ecological civilisation
sustainable urbanisation
urban-nature integration
bioregional innovation



Professional Activities

Underwater Forest, Power Station of Art, Shanghai Biennale (2021)
Laoximen.club, Personal Photography Exhibition (2019)
Tongji Design Week, Personal Photography Exhibition (2018)

Circular Economy and Food Network International Exhibition, with Ellen MacArthur Foundation (2019)

Design Harvests Project, Milano Design Week, Design Fair, Milano Triennale (2019)

Intelligence · Future, Liu Haisu Art Museum, Invited Project (2017)

Good Innovation International Design Exhibition 2017, Bao'an District, Shenzhen (2017)



Personal Website

<https://tjdi.tongji.edu.cn/TeacherDetail.do?id=3700>



Doctoral thesis topic

Green infrastructures, carbon and climate engineering, carbon ecologies, ecologies and governance

