

6GN2022

5th EAI International Conference on 6G
for Future Wireless Networks

December 17-18, 2022
Harbin, People's Republic of China

FINAL PROGRAM



EAI



Welcome Message from the General Chairs

Welcome to the 5th EAI International Conference on 6G for Future Wireless Networks (6GN) held from December 17th to December 18th 2022 at Harbin, Heilongjiang Province of P.R.China. On behalf of the Organizing Committee of 6GN 2022, we would like to express our sincere and warm welcome to all participants! EAI 6GN 2022, conference is the fifth edition of the International Conference on key technology enablers for 5G/B5G/6G and other wireless networks.

With the pace of the conference, today we came to Harbin. Harbin is one of the largest cities in northeast China and a home to the arts known for its music, beer and ice culture. Located in Heilongjiang Province which is of high latitude, Harbin has four distinct seasons in a year. In the spring day, everything comes to life and lilacs bloom all over the city. On summer nights, songs and music, accompanied by the sound of cheers, ring out along the Songhua River. In the autumn fields, people enjoy the joy of harvest. Finally, in the winter snowflakes, Harbin transforms into an ice city, welcoming guests with lights among the ice sculptures and snow scenes.

The promotion and popularization of the fifth generation (5G) technology has become a symbol of The Times in the telecommunications industry. Enhanced mobile broadband (eMBB), Ultra-reliable & Low Latency Communication (uRLLC), and Massive Machine Type of Communication (mMTC) are no longer long-term goals in the eyes of scholars, but practical technologies in the hands of engineers. Taking this opportunity, this conference will further research and discuss the Internet of Things (IoT), edge computing, virtual reality, augmented reality, mobile social services, mobile search, mobile robots, unmanned systems and other aspects. We look forward to the full two-day program, which includes many productive discussions and demonstrations, can contribute to the future of 5G/B5G/6G communications and networks.

For the successful organization of an international conference of this size and diversity, we counted on the great support of many people and organizations. First, we would like to sincerely thank the EAI and 6GN Steering Committee, Organizing Committee for giving us the opportunity to organize the conference and for their support and guidance. We would like to express our appreciation to all invited speakers for offering wonderful speeches.

We thank all of you for participating in 6GN 2022. We sincerely hope 6GN 2022 can stimulate your innovation and future research and play as a platform for your professional activities.

General chair:



Prof. Deyun Chen

General Co-chairs:



Prof. Emad Alsusa



Prof. Gongliang Liu

Welcome Message from the TPC Chairs

The 5th EAI International Conference on 6G for Future Wireless Networks (6GN 2022) will be held from December 17th to December 18th 2022 at Harbin city, Heilongjiang Province, P.R. China. Firstly, we would like to express our great welcome and thank to all the participants. Welcome to Harbin, an ice city full of culture and enthusiasm.

As we all know, the promotion and popularization of the fifth generation (5G) technology has become a symbol of The Times in the telecommunications industry. But that's never the end, the following B5G/6G will drive another wave of new trends, not only to optimize the spectrum and spatial bandwidth, but also to create more new technologies and applications, such as the Internet of Things (IoT), edge computing, virtual reality, augmented reality, mobile social services, mobile search, mobile robots and unmanned systems. Moreover, the opportunities and challenges of 5G/B5G/6G are continuing to attract the attention of academics, industries, and governments. EAI 6GN 2022 provides high quality original research papers describing recent and expected challenges or discoveries along with potential intelligent solutions for 5G/B5G/6G.

Now, we'd like to announce that the keynote speakers of this year are: Prof. Xinwang Liu, (National University of Defense Technology, China) and Prof. Yong Wang, (Harbin Institute of Technology, China). We received 194 papers. After being reviewed by scholars organized by the Technical Committee, we selected 62 papers from universities and research institutions such as Harbin Institute of Technology, Harbin University of Science and Technology, and Heilongjiang University of Science and Technology. The acceptance rate was 32%, and the final registered paper was 58. Articles with a registration rate of 93.5%. The papers cover multiple technical fields such as 6G, wireless communication networks, edge computing, and artificial intelligence.

The technical program team did an excellent job in soliciting submissions, coordinating the review process, and promoting the technical program. We would like to thank every one of them for taking leadership roles in organizing the various aspects of the technical program.

Also we would like to express our thanks to all members of the organizing committee and all the volunteer reviewers who have been working hard days and nights for this conference. We would like also to express our gratitude to the sponsorships from various sources. We are grateful to EAI for sponsoring this conference. Finally, the technical co-sponsorships of Harbin University of Science and Technology (HUST) and Harbin Institute of Technology (HIT) are deeply appreciated.

Technical Program Committee Chairs:



Prof. Ao LI



Prof. Liang XI



Dr. Yao SHI

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◆ **Program Schedule of 6GN2022 (December. 16-18, YouRong Hotel, Harbin)**

Day 0 (December. 16): Registration

12:00-20:00	Registration—— Hall, YouRong Hotel
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Day 1 (December. 17): Keynotes and Technical Sessions

09:00-09:40	Opening——Floor2, main conference room, YouRong Hotel		
09:40-10:10	Photo together for attendees		
10:10-10:25	Coffee Break		
10:25-11:10	Keynote I: Xinwang Liu (Floor2, main conference room)		
11:10-11:55	Keynote II: Yong Wang (Floor2, main conference room)		
12:00-13:00	Lunch——Floor2, West Restaurant		
Regular Sessions			
Rooms	Conference Room 104	Conference Room 105	Conference Room 107
14:00-15:40	<i>S1: Resource Allocation for 6G Networks</i>	<i>S2: Security and Privacy for 6G Networks</i>	<i>S3: Big data mining and pattern analysis techniques for 6G Networks</i>
15:40-16:00	Coffee Break——Outside Conference Rooms		
16:00-17:40	<i>S1: Resource Allocation for 6G Networks</i>	<i>S2: Security and Privacy for 6G Networks</i>	<i>S3: Big data mining and pattern analysis techniques for 6G Networks</i>
18:00-21:00	Banquet——Floor1, Banquet Hall		

Day 2 (December. 18): Technical Sessions

Regular Sessions			
Rooms	Conference Room 104	Conference Room 105	Conference Room 107
08:30-10:00	<i>S4: Artificial intelligent techniques for 6G Networks</i>	<i>S5: Mobile Edge Computing for 6G Networks</i>	<i>S6: Unmanned Aerial Vehicle Communication for 6G Networks</i>
10:00-10:20	Coffee Break——Outside Conference Rooms		
10:20-12:00	<i>S4: Artificial intelligent techniques for 6G Networks</i>	<i>S5: Mobile Edge Computing for 6G Networks</i>	<i>S6: Unmanned Aerial Vehicle Communication for 6G Networks</i>
12:00-13:00	Lunch——Floor2, West Restaurant		

◆ Keynote Speakers



Xinwang Liu received his PhD degree from National University of Defense Technology (NUDT), China, in 2013. He is now Professor at School of Computer, NUDT. His current research interests include kernel learning, multi-view clustering and unsupervised feature learning. Dr. Liu has published 100+ peer-reviewed papers, including those in highly regarded journals and conferences such as IEEE T-PAMI, IEEE T-KDE, IEEE T-IP, IEEE T-NNLS, IEEE T-MM, IEEE T-IFS, ICML, NeurIPS, CVPR, ICCV, AAAI, IJCAI, etc. He is an Associate Editor of IEEE T-NNLS and Information Fusion Journal. His title is SimpleMKKM: Simple Multiple Kernel k-means. In the Keynote Speak, he will propose a simple yet effective multiple kernel clustering algorithm, termed simple multiple kernel k-means. It extends the widely used supervised kernel alignment criterion to multi-kernel clustering. Criterion is given by an intractable minimization-maximization problem in the kernel coefficient and clustering partition matrix. To optimize it, he equivalently rewrites the minimization-maximization formulation as a minimization of an optimal value function, proves its differentiability, and designs a reduced gradient descent algorithm to decrease it. He theoretically analyzes the performance of SimpleMKKM in terms of its clustering generalization error.



Yong Wang received the B. S. degree and M. S. degree from Harbin Institute of Technology (HIT), Harbin, China, in 2002 and 2004, respectively, both in electronic engineering. He received the Ph. D. degree in information and communication engineering from HIT in 2008. He is currently a Professor with the institute of electronic engineering technology in HIT. His main research interests are in the fields of time frequency analysis of nonstationary signal, radar signal processing, and their application in synthetic aperture radar (SAR) imaging. He received the National Science Fund for Excellent Young Scholars in 2016, and the Program for New Century Excellent Talents in University of Ministry of Education of China in 2012, and the Excellent Doctor's Degree Nomination Award in China in 2010. Furthermore, he received the second prize of natural science in Heilongjiang Province. Prof. Yong Wang has published more than 160 papers, and more than 90 of them are indexed by SCI, and the total citation time is about 1500. As project leader, he undertakes more than 10 projects such as the National Natural Science Foundation of China. He has been selected as the senior member of IEEE, IET Fellow and the reviewer of 《Mathematical Review》. His title is Inverse synthetic aperture radar (ISAR) imaging of target with complex motion for the radar-communication integration. In the Keynote Speak, he will introduce inverse synthetic aperture radar (ISAR) imaging of target with complex motion, and three kinds of methods, including the parameters estimation, the time frequency representation and the signal decomposition technique for the treatment of multi-component PPS, and combined with the range instantaneous Doppler (RID) technique, the radar image quality can be improved significantly.

◆ Sessions
Index (The following Paper ID was created when the CAMERA READY was uploaded)

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325783	S1-6	325888	S3-5	325945	S5-4
325784	S2-4	325889	S4-8	325946	S1-5
325786	S2-5	325892	S4-9	325947	S3-3
325787	S1-7	325973	S5-10	325974	S5-5
325788	S2-3	325894	S6-7	325975	S4-5
325801	S6-8	325914	S6-5	325977	S5-9
325802	S4-10	325915	S6-6	325978	S5-8
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325806	S2-2	325919	S6-4	325980	S4-4
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325808	S1-1	325925	S4-2	325983	S5-7
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Details

S1

14:00-15:40, 16:00-17:40 (Sat. 17 December 2022)

Location: Conference Room 104

Title: Resource Allocation for 6G Networks
Chair: Dr. Wang Meng

- | | |
|------------------------------|---|
| No. 325808 | <u>OLSR Protocol Optimization Based on Node and Link Stability</u>
Wang Xi, Shi Shuo,
(Harbin Institute of Technology) |
| No. 325809 | <u>Dynamic Computation Offloading and Resource Allocation for Multi-access Edge Computing Networks</u>
Wang Meng, Shi Shuo, Wang Xi
(Harbin Institute of Technology) |
| No. 325805 | <u>Technical Design of an Ad-hoc Network Topology Simulation System</u>
Yin Zhongyu, Shi Shuo
(Harbin Institute of Technology) |
| No. 325817 | <u>Electromagnetic Propagation Path And Signal Attenuation Prediction Based On DEM Electronic Map</u>
Ziqi Sun, Shengliang Fang, Weichao Yang, Gongliang Liu, and Ruofei Ma
(Harbin Institute of Technology, Weihai) |
| No. 325946 | <u>Multi-Object Tracking Based on YOLOX and DeepSORT Algorithm</u>
Guangdong Zhang, Wenjing Kang, Ruofei Ma, Like Zhang
(Harbin Institute of Technology, Weihai) |
| No. 325783 | <u>Cross-Stage Fusion Network Based on Multi-Modal Hyperspectral Image Classification</u>
Yuegong sun,Zhening Wang,Ao Li,Hailong Jiang
(Harbin University of Science and Technology) |
| No. 325787 | <u>Higher accuracy yolov5 based safety helmet detection</u>
Wang Zizhen, Wang Zhening, Sun Yuegong, Li Ao
(Harbin University of Science and Technology) |
| No. 325928 | <u>Landslide Detection of 6G Satellite Images using multi-level Transformer Network</u>
Dong He, Liang Xi, Lu Liu
(Harbin University of Science and Technology, and Hainan Medical University) |
| No. 325994 | <u>Survey on Anti-jamming Technology of UAV Communication</u>
Tong Liu, Jiaqi Huang, Jianming Guo
(Norinco Group Air Ammunition Research Institute) |
| No. 326067
(video) | <u>Constructing an Emergency Supply Chain Decision Platform with Big Data Mining Technology</u>
Mai Ying
(Guangzhou City Polytechnics) |

S2

14:00-15:40, 16:00-17:40 (Sat. 17 December 2022)

Location: Conference Room 105

Title: Security and Privacy for 6G Networks

Chair: Dr. Liu Tong

No. 325807	<u>Design and Implementation of Ad Hoc Communication Demonstration System</u> Wang Jinpeng, Shi Shuo, E Rui (Harbin Institute of Technology)
No. 325806	<u>Design and Implementation of a Dual Channel Speech Signal Transceiver System Based on FPGA</u> Yang Tongbai, Shi Shuo (Harbin Institute of Technology)
No. 325788	<u>Network Coding Based Efficient Topology Construction and Flow Allocation</u> Ruisong Wang, Wenjing Kang, Shengliang Fang, Ruofei Ma (Harbin Institute of Technology, Weihai)
No. 325784	<u>Critical Separation Hashing for Cross-modal Retrieval</u> Zening Wang, Yuegong Sun, Liang Liu, AoLi (Harbin University of Science and Technology)
No. 325786	<u>Improved DBSCAN algorithm to analyze taxi pick-up hotspots</u> Wu Zheng, Yuan Cheng, Li Nan, Li Ao, Wang Zizhen (Harbin University of Science and Technology)
No. 325924	<u>Classification of deforestation factors in 6G satellite forest images</u> Yuhai Li, Yuxin Sun, Xianglong Meng, Liang Xi (Science and Technology on Electro-Optical Information Security Control Laboratory, and Harbin University of Science and Technology)
No. 325927	<u>6G Network Traffic Intrusion Detection using Multiresolution Auto-Encoder and Feature Matching Discriminator</u> Yuhai Li, Yuxin Sun, Dong He, Liang Xi (Science and Technology on Electro-Optical Information Security Control Laboratory, and Harbin University of Science and Technology)
No. 325810	<u>A Design of Information Extraction Method on CNC Machine Tools using C/S Structure</u> E Rui, Yang Shujie (Heilongjiang Polytechnic)
No. 325995	<u>Hierarchical system architecture design of UAV cluster based on mission requirements</u> Zhiqiang Su, Tong Liu, Lv Hao (Norinco Group Air Ammunition Research Institute)
No. 326137 (video)	<u>Reconstruction of smartphone camera effect parameter management system</u> Wanpeng Tang, Guomin Rao (Guangzhou City Polytechnic)

S3

14:00-15:40, 16:00-17:40 (Sat. 17 December 2022)

Location: Conference Room 107

Title: *Big data mining and patternanalysis techniques for 6G Networks*

Chair: Prof. Zhang Xiaofeng

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- No. 325869** **An Empirical Analysis of the Tax Inspection and Law Enforcement Risk of Changchun Taxation Bureau in the Era of Big Data**
 Zhang Xinyue
 (Changchun University Of Finance And Economics)
-
- No. 325870** **Research on the Challenges and Countermeasures of Tax Collection and Administration under the Digital Economy**
 Zhang Xinyue, Jing Shuang
 (Changchun University Of Finance And Economics)
-
- No. 325947** **Financial Pressure, Efficiency of Tax Collection and Administration and Regional Heterogeneity —Take the "2018 Consolidation of State and Local Taxes" as an Example**
 Jia Cunhui
 (Harbin University of Commerce)
-
- No. 325887** **Efficiency measurement of financial subsidies for agricultural insurance and analysis of provincial differences --A Study Based on Super-SBM Model and Malmquist Index**
 Wen Hongmei, Zhang Hanying
 (Harbin University of Commerce)
-
- No. 325888** **Research on the Impact of Digital Economy on Local Tax Revenue — PVAR Model Analysis Based on Chinese Provincial Panel Data**
 Wang Shuguang, Sun Yifan
 (Harbin University of Commerce)
-
- No. 325931** **Research on the influence of tax burden on the research and development level of logistics enterprises**
 Shao Shuai
 (Harbin University of Commerce)
-
- No. 325935** **Tax Policy, Technological Innovation and Industrial Structure Upgrading -- Based on Mediating Effect Model Test**
 Shao Shuai, Zhao Yuyang
 (Harbin University of Commerce)
-
- No. 325886** **Research on the Equalization Level of Public Services Under Urban-Rural Integration Development in Heilongjiang Province Based on Empirical Data Analysis**
 Zhang Xiaofeng, Sun Yifan
 (Harbin University of Commerce)
-
- No. 325867** **Application Research of Electronic Invoice System Based on Blockchain Technology ——Taking Shenzhen City as an Example**
 Zhang Xiaofeng, Lu Shiyu
 (Harbin University of Commerce)
-

S4	8:20-10:00, 10:20-12:00 (Sun. 18 December 2022)
	Location: Conference Room 104
	<i>Title: Artificial intelligent techniques for 6G Networks</i>
	Chair: Prof. Qiuduo Zhao
No. 325918	<u>Dual-point side-fed circularly polarized microstrip antenna design</u> Shiyuan Lv, Yao Shi (Harbin Institute of Technology(ShenZhen))
No. 325925	<u>A semi-supervised classification method for 6G remote sensing images based on Pseudo-label and false representation recognition</u> Xianglong Meng, Liang Xi , Lu Liu (Harbin University of Science and Technology, and Hainan Medical University)
No. 325979	<u>Establishment of Soil Quantitative Detection Model Based on Sparrow Search Algorithm</u> Qiuduo Zhao, Ke Liu, Chen Xiong, and Fengyong Yang (Heilongjiang University of Science and Technology)
No. 325980	<u>Soil Temperature and Humidity Detection System Based on Machine Learning and Computer Vision</u> Qiuduo Zhao, Liu Zhao, Ke Liu and Xudong Zhang (Heilongjiang University of Science and Technology)
No. 325975	<u>Extraction of soybean pod features based on computer vision</u> Ning Shan, Zhao Qiuduo and Zhang Xudong (Heilongjiang University of Science and Technology)
No. 325984	<u>Artificial Intelligence Cross-Domain Fusion Pattern Recognition Based on Intelligent Robot Algorithm</u> Yu Qiu, and Zheqing Tang (Heilongjiang Vocational College)
No. 325985	<u>Cross-Border Technology Integration in the Field of Artificial Intelligence Based on Neural Network Algorithm</u> Yu Qiu, Zheqing Tang, and Yang Luo (Heilongjiang Vocational College)
No. 325889	<u>Research on ad hoc network routing protocol for UAV application</u> Xu, Zhenyu(Huizhou Engineering Vocational College); Li, Xinlu; Wang, Xinyun
No. 325892	<u>Research on Emergency Communication Technology of UAV Based on D2D</u> Xu, Zhenyu; Li, Jinfang; Xu, Xun (Huizhou Engineering Vocational College)
No. 325802 (video)	<u>China Mobile network architecture for 6G</u> Baorong Zhan, Xichang Yu, Zhaojiang Zeng, Shuai Shao, Xiao Han, Qingxin Lu (Guangdong Innovative Technical College)

S5
8:20-10:00, 10:20-12:00 (Sun. 18 December 2022)

Location: Conference Room 105

Title: Mobile Edge Computing for 6G Networks
Chair: Prof. Wenjing Kang

- | | |
|-----------------------|---|
| No. 325818 | <u>3D Battlefield Radiation Source Location Tracking Algorithm</u>
Ziqi Sun, Weichao Yang, Yifan Ping, Ruofei Ma, Gongliang Liu
(Harbin Institute of Technology, Weihai) |
| No. 325936 | <u>Server Selection and Resource Allocation for Energy Minimization in Satellite Edge Computing</u>
Weichen Zhu, Weichao Yang, Gongliang Liu
(Harbin Institute of Technology, Weihai) |
| No. 325940 | <u>Comprehensive Interference Analysis for ZC-NOMA</u>
Mingyi Wang, Yifan Ping, Gongliang Liu
(Harbin Institute of Technology, Weihai) |
| No. 325945 | <u>Embedding with Bounding Box Contracting for Multi-Object Tracking</u>
Like Zhang, Wenjing Kang, Guangdong Zhang
(Harbin Institute of Technology, Weihai) |
| No. 325974 | <u>Soybean pods and stems segmentation based on an improved Watershed</u>
Ning Shan, Zhao Qiuduo and Liu Ke
(Heilongjiang University of Science and Technology) |
| No. 325982 | <u>Design and implementation of garbage classification system based on convolutional neural network</u>
Qiuduo Zhao, Chen Xiong, and Ke Liu
(Heilongjiang University of Science and Technology) |
| No. 325983 | <u>Study on the effect of total Se content of Chinese cabbage fermentation broth on its quality evaluation based on wireless environmental monitorin</u>
Liming Wang, and Qiuduo Zhao ²
(Heilongjiang University of Science and Technology) |
| No. 325978 | <u>Development Road Map and Planning Mode of Artificial Intelligence Technology Under the Background of Internet Information</u>
Zheqing Tang, Xiqiang Sun, Yang Luo
(Heilongjiang Vocational College) |
| No. 325977 | <u>Artificial Intelligence Technology in Computer Vision and Network Field</u>
Zheqing Tang, Xiqiang Sun
(Heilongjiang Vocational College) |
| No. 325973
(video) | <u>Research on precise ideological and political education in colleges and universities based on the analysis of student group portraits</u>
Min Lin, Haiying Wu, Hongwei Li
(Guangdong Polytechnic of Industry & Commerce) |

S6

8:20-10:00, 10:20-12:00 (Sun. 18 December 2022)

Location: Conference Room 107

Title: *Unmanned Aerial Vehicle Communication for 6G Networks*

Chair: Prof. Xu Zhenyu

No. 325939	<u>Research on Anycast Scheduling Algorithm in Edge Computing Networks</u>
	Lin Wu, Xiao Lin, Yao Shi (Harbin Institute of Technology(ShenZhen))
No. 325934	<u>Synchronization technology for underwater acoustic mobile communication</u>
	Xinyang Li, Wei Li, Yao Shi (Harbin Institute of Technology(ShenZhen))
No. 325933	<u>UAV path planning based on APF-Q-learning</u>
	Wenji Yuan, Yao Shi (Harbin Institute of Technology(ShenZhen))
No. 325919	<u>Simulation analysis of Inter-digital electrodes sensor based on HFSS</u>
	Hanxiao Yuan, Yao Shi (Harbin Institute of Technology(ShenZhen))
No. 325914	<u>6G Network Security Technology Based on Artificial Intelligence</u>
	Xinlu Li, Canquan Ling, Zhenyu Xu (Huizhou Engineering Vocational College)
No. 325915	<u>Research on UAV Communication Technology Based on 6G network</u>
	Xinlu Li, Zhenyu Xu, Canquan Ling (Huizhou Engineering Vocational College)
No. 325894	<u>Research on Key Technologies of agricultural and forestry plant protection UAV</u>
	Lin, XiuLian ; Xu, Zhenyu; Wu, YeTong (Huizhou Engineering Vocational College)
No. 325801 (video)	<u>The Development Demand and Application Prospect of Intellectualization in the Logistics Industry for 6G Technology</u>
	Zhu Liudan, Li Zhiguo, Deng Kaipeng, Huang Yinteng, Liang Naifeng (City College of Huizhou)
No. 325774 (video)	<u>Challenges and Reflections on Vocational Education in 6G Era</u>
	Huang Yinteng, Zhao Yanjie, Zhu Liudan, Han Bingshuang, Li Zhiguo (City College of Huizhou)

◆ **Organization**

Steering Committee

Imrich Chlamtac	University of Trento
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Organizing Committee

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	Shuo Shi	Harbin Institute of Technology
Conference Manager:	Ivana Bujdakova	EAI(European Alliance for Innovation)

◆ Sponsorship & Acknowledgement

➤ Harbin University of Science and Technology

In 1995, three higher institutes, Harbin University of Science and Technology, Harbin Institute of Electrical Engineering and Harbin Higher Industrial Vocational College, combined into the present Harbin University of Science and Technology (HUST). Founded in the 1950s, the three all once belonged to the former Ministry of Machinery. In 1998, HUST was transferred to the administration of Heilongjiang Province and implemented a management system jointly built by the central government and the local government.



In 2015, the university became a university jointly established by the People's Government of Heilongjiang Province and the State Administration of Science, Technology and Industry for National Defense. In 2018, it was selected as a "double first-class" university in Heilongjiang Province, and its engineering discipline entered the Top 1% discipline list of ESI for the first time. In 2020, it was selected as one of the first demonstration universities in Heilongjiang Province for curriculum Ideological and political construction, and the discipline of "Materials Science" has entered ESI Top 1% discipline list. In 2021, the discipline of "Chemistry" entered the ESI Top 1% of global disciplines list.

➤ Harbin Institute of Technology

Harbin Institute of Technology (HIT) was founded in 1920. From its beginning, HIT has received preferential support from the central government. In 1954, the Ministry of Higher Education designated, for the first time, six national key universities. In 1984, HIT again found its way onto the list of 15 national key universities to receive special support. In 1996, HIT was among the first group of universities to be included in Project 211. In 1999, HIT was listed as one of the top nine key universities in China. This distinction provided HIT



with the opportunity to develop into a highly-competitive first-rate university with the assistance of the Ministry of Education and the Heilongjiang Provincial Government.

So far, we have signed academic cooperation agreements with 126 institutions of higher education in 24 countries such as the United States, the United Kingdom, France, Germany, Japan and Russia. Cooperation and exchanges are carried out between HIT and these universities through exchanging students, faculty and research staff, holding academic conference and cooperating in scientific research.

Welcome to Shanghai 2023!

Shanghai Dianji University (SDJU), whose history dates back to 1953, is a public institution of higher learning, with its orientation towards advanced manufacturing and modern service industries, taking engineering as its dominant and coordinately developing other disciplines of economics, management, literature, art and science. SDJU has two campuses, Lingang and Minhang, with the total area of nearly 200 acres, and more than 13,000 full-time post-graduate, undergraduate and junior college students.



SDJU now has 5 graduate programs, namely, energy power, international business, electronic information, machinery, materials and chemical industry, 43 undergraduate programs and 7 junior college programs. SDJU is among the first nation-wide CDIO pilot universities and the first model universities in Shanghai to further the educational reform for innovation and entrepreneurship. The school has gathered a group of high-level scholars and experts, including national-level professors, nationally outstanding young scholars, experts enjoying special State Council allowances, and leading local talents. There are more than 1,100 faculty members, including 855 full-time teachers. During the past five years, its students have won more than 1,170 awards and honors in nation-wide sci-tech innovation and entrepreneurship competitions and vocational skill competitions, including the Title of Xiaoping Technology Innovation Team, and the awards of Website Design and Development in the World Skills Contest, of National College Student Entrepreneurship Planning, of the China Youth Sci-tech Innovation, of the "Challenge Cup" National College Students Extracurricular Academic Sci-tech Works Competition and so on. In recent years, its graduate employment status has remained above 96%, which has won it a good social reputation for its high quality of talent training.

Under its development strategy of internationalization branding, SDJU has built cooperative relations with 75 colleges and universities in 20 countries and regions, among which mutual recognition of credits with more than 40 colleges and universities has been implemented. Meanwhile, more than 1,300 students have been sent to overseas for exchange in recent years.



Shanghai has the reputation of "Paris of the East". It is one of the four municipalities directly under the Central Government and the largest city in China. It is the economic, financial, trade and shipping center of mainland China. Shanghai has created and broken a number of world and China World Record Association's most. Located at the mouth of the Yangtze River in the middle of China's mainland coastline, Shanghai has China's largest foreign trade port and largest industrial base. Shanghai is also an emerging tourist destination, with profound modern urban culture and numerous historical sites.