

Chief Scientists & PIs



Yunxin Liu
PI/ Professor



Zaiqing Nie
PI/Professor



Hang Li
Chief Scientist
Distinguished Visiting
Professor



Wei-ying Ma
Chief Scientist
Chair Professor



Ya-Qin Zhang
Founding Dean
Chair Professor



Yang Liu
Dean
Professor



Jingjing Liu
PI/ Professor



Yanyan Lan
PI/Professor

Core Research Team



Shuo Wang
Associate
Professor



Hao Zhao
Assistant
Professor



Kun Li
Assistant
Professor



Yan Wang
Assistant
Professor



Peng Li
Associate
Professor



Hao Zhou
Associate
Professor



Yilun Chen
Professor of
Engineering



Ting Cao
Professor



Guyue Zhou
Associate
Professor



Xianyuan Zhan
Associate
Researcher



Jianzhu Ma
Associate
Professor



Weizhi Ma
Associate
Professor



Yuanchun Li
Assistant
Professor

Distinguish Visiting Professors



Ye Ouyang
Distinguished Visiting
Professor
IEEE Fellow



Hongjiang Zhang
Distinguished Visiting
Professor
IEEE/ACM Fellow



Yong Rui
Distinguished Visiting
Professor
Foreign Member (AE) &
Foreign Fellow (CAE)
ACM/IEEE Fellow



Rahim Tafazolli
Distinguished Visiting
Professor



Jian Peng
Visiting Professor
Sloan Research Fellowship
Overton Prize

Top-Tier Research Team

Here we bring together a community of world-renowned scientists, distinguished leaders in the industrial revolution, pioneering young academics, and cross-disciplinary innovators.

35

w/ Various Honors
and Awards Received

78 %

w/ Front-line Industry
Research Experience

59 %

under the age
of 40 / with Overseas
Education Background

Join Us

We are seeking exceptional individuals who demonstrate innovative thinking, possess an international outlook, and have a deep understanding of cutting-edge technologies in academia. We are also interested in technical talents who have a passion for research and development, industry insight, and prior experience working for leading global technology companies. If you are committed to driving academic innovation in AI and share our vision of advancing industrial research and development, we welcome you to join AIR.

Benefits

We provide a first-class research environment, extensive academic growth prospects, substantial research funding, attractive remuneration packages, pioneering platforms for industry incubation, and a future filled with boundless opportunities.

AIR For Better

Proactively cultivating social resources to foster sustainable innovation empowered by AI.

Mission

Introduction of world-class talent, development of elite talent, nurturing of young talent.

Donation Schemes

Chair Professorship

Young Scholarship

Endowed Professorship

Students' Scholarships

Talent Funds

Research Funds

Mission

Supporting cutting-edge interdisciplinary research, encouraging academic application, and creating a

Donation Schemes

Foundational Research

Research Space & Labs

Cutting-edge Research Exploration



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Join Us: airhr@air.tsinghua.edu.cn



AIR

清华大学智能产业研究院

Institute for AI Industry Research, Tsinghua University

Introduction

Institute for AI Industry Research (AIR), Tsinghua University, focuses on research geared towards the internationalization, intelligentization, and industrialization of the fourth technological revolution. Our mission is to fuel the industrial upgrade and propel social advance with AI technologies. With university-enterprise as double engines for innovation, we aim to make breakthroughs in core AI technologies, develop future industry-leaders, and achieve leapfrog progress with the industry.

AIR was founded in 2020 by professor Zhang Ya-Qin, a world-renowned scientist and entrepreneur in the fields of multimedia and artificial intelligence.



Founding Dean

Ya-Qin Zhang

Dr. Zhang is one of the top scientists and technologists in digital video and AI, with over 500 papers, 60 granted US patents, and 11 books. He was the President of Baidu Inc. from 2014 to 2019. Prior to Baidu, Dr. Zhang was a Microsoft executive for 16 years with different key positions, including Managing Director of Microsoft Research

Chair Professor, Tsinghua University
Dean of Institute for AI Industry Research (AIR), Tsinghua University
Member of Chinese Academy of Engineering

Asia, Chairman of Microsoft China, and Corporate Vice President and Chairman of Microsoft Asia R&D.

Dr. Zhang was elected to the Chinese Academy of Engineering (CAE), the American Academy of Arts and Sciences (AAA&S), the Australian Academy of Technology and Engineering (ATSE), the National Academy of Inventors (NAI), and the Euro-Asia Academy of Sciences. He is a Fellow of IEEE and CAAI. He serves on the Board of Directors of four public companies. He is on the industry board of United Nation Development Program (UNDP), and AI global council of the Davos World Economic Forum. He is the Chairman of world's largest open autonomous driving platform "Apollo" alliance with over 200 global partners. He has been an active speaker in global forums including APEC, Davos, United Nations, and Bo'ao Asia Forum.

Academic Advisory Committee

Prof. Andrew Yao (Chairman)

- Dean of Institute for Interdisciplinary Information Sciences, Tsinghua University
- Turing Award Laureate
- Academician of Chinese Academy of Sciences
- American Academy of Arts and Sciences Fellow

Prof. John Hopcroft

- Professor at Cornell University
- Turing Award Laureate
- US National Academy of Sciences Member
- US National Academy of Engineering Member
- American Academy of Arts and Sciences Fellow

Prof. Diange Yang

- Founding Dean of School of Vehicle and Mobility, Tsinghua University
- Tsinghua University Leading Expert of National "Ten Thousands Talent Program"

Prof. Andrew Blake

- Fellow of UK Royal Academy of Engineering
- Professor Emeritus of Machine Intelligence, University of Cambridge
- Principal Scientist at Samsung AI Center, Cambridge

Prof. David Patterson

- Professor at University of California, Berkeley
- Turing Award Laureate
- US National Academy of Sciences Member
- US National Academy of Engineering Member

Prof. Jianping Wu

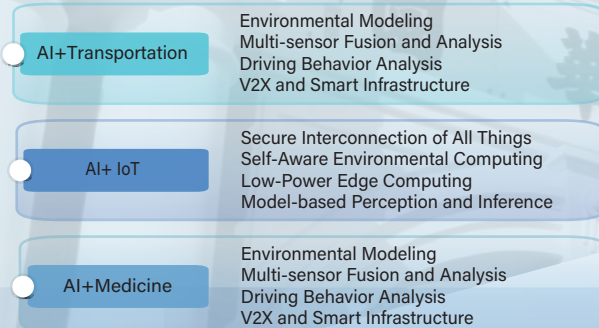
- Dean of Institute for Network Sciences and Cyberspace, Tsinghua University
- Chinese Academy of Engineering Member
- International Fellow of UK Royal Academy of Engineering

Prof. Ya-Qin Zhang

- Founding Dean of Institute for AI Industry Research (AIR), Tsinghua University
- Chinese Academy of Engineering Member
- American Academy of Arts and Sciences Fellow
- Australian Academy of Engineering Member

Research Areas

We have established five research teams, including AI+Transportation, AI+IoT, AI+Life Science, DISCOVER and DAIR Labs. We conduct cutting-edge research in areas that are at the forefront of technology, vital for the economy, important for the nation, and beneficial for people's life and health, while promoting the applications of the technologies.



DISCOVER Distributed Collaborative Perception Decision Platform

Distributed Heterogeneous Computing Collaborative Visual Perception Self-Replicating Robots

DAIR Multimodal Big Data Platform

Federated Learning, Closed-Loop Learning, Pre-trained Models, Contrastive Learning

AI+Transportation

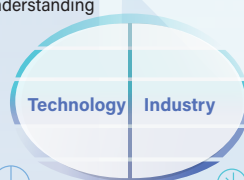
AIR PILOT

- AI Towards Self-Driving Cars
- End2end Autonomous Driving
- Mapless AI Navigation
- Multi-Modal Scene Understanding



Industry Impact

- Standard Development
- Innovation Incubation
- Intellectual Property
- White Paper



Platform

- DAIR-V2X Dataset
- RSU OS
- Apollo
- FLAIR

Applications

- L4 Autonomous Driving
- VICAD
- Unmanned Logistics
- Vertical Industry

AI+ IoT

Cloud

Multimodal knowledge acquisition and perception

- Speech/Visual/NLP Algorithms, -enhanced machine learning
- Neuron-morphic Computing, -improve single-modal perception accuracy with multimodal knowledge
- DBMS, Knowledge Graph, -enhance perception accuracy with knowledge
- Statistical Models, Data Analysis

Edge

Secure edge intelligence

- Low-power edge computing
- Edge analysis and intelligence
- Network security and system security
- Data security and privacy protection
- Obtain users' trust for edge intelligence with privacy protection and security guarantee
- Ensure the proper use of edge intelligence with improved authentication and access control

Device

Advanced Manufacturing with AIoT Devices

- Data acquisition and intelligent sensing
- Mobile/embedded devices
- Operation and execution units
- Automated decision-making and control
- Co-design hardware and software for AIoT manufacturing
- Improve the efficiency of design and manufacturing to promote industrial upgrading

AI+Medicine

AI-Driven Drug Discovery

- AIDD foundation model
- Drug discovery knowledge engine
- Digitalized biology laboratory
- Efficient Dry-wet computing interface



Active Health Management

- Large-scale nutrition knowledge graph
- Interpretable personalized recommendation engine
- Digital Therapeutics

AI for Life Science

- Protein Structure Prediction
- De Novo Protein Design