



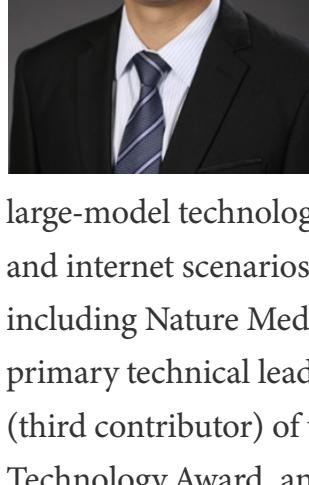
AIR

清华大学智能产业研究院

Institute for AI Industry Research, Tsinghua University

## 01 AIR Scientists & Talent Development

AIR assistant professor Weizhi Ma selected for the Beijing “Science & Technology Rising Star” program



AIR assistant professor Weizhi Ma was chosen for the 2025 Beijing Science & Technology Rising Star program *Innovation Rising Star*. This year a total of seven young faculty members from Tsinghua were recognized. Professor Ma's research focuses on intelligent information acquisition and smart healthcare, with an emphasis on evolvable, personalized large-model technologies and their research and applications in medical and internet scenarios. He has published over 100 papers in top venues including Nature Medicine and leading AI conferences, serves as the primary technical lead of the “Agent Hospital” project, was a co-recipient (third contributor) of the Qian Weichang First-Class Science and Technology Award, and was selected for the Chinese Association for Science and Technology's *Young Talent Support Program*.

On October 25, AIR assistant professor Jiangtao Gong received the

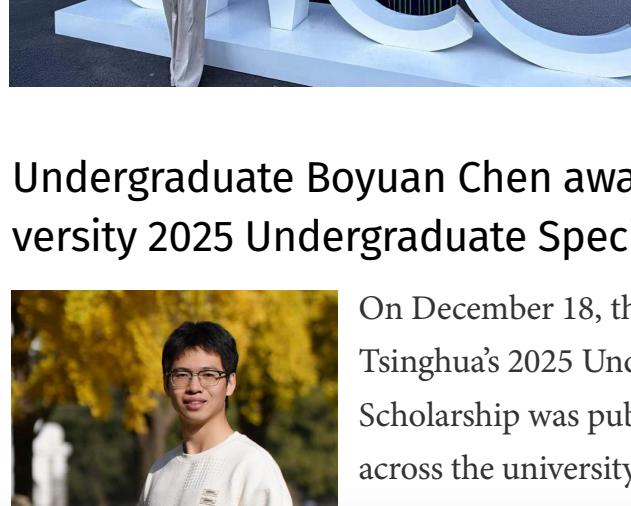
CNCC 2025 ACM China Rising Star Award. The award recognizes her

achievements in humanoid intelligence and human–AI collaboration. The

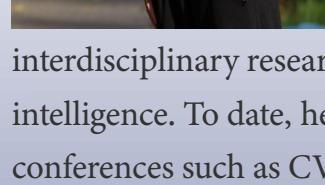
Rising Star Award is presented by the Association for Computing

Machinery (ACM) to early-career researchers who have achieved

outstanding accomplishments in their research careers.



Undergraduate Boyuan Chen awarded Tsinghua University 2025 Undergraduate Special Scholarship

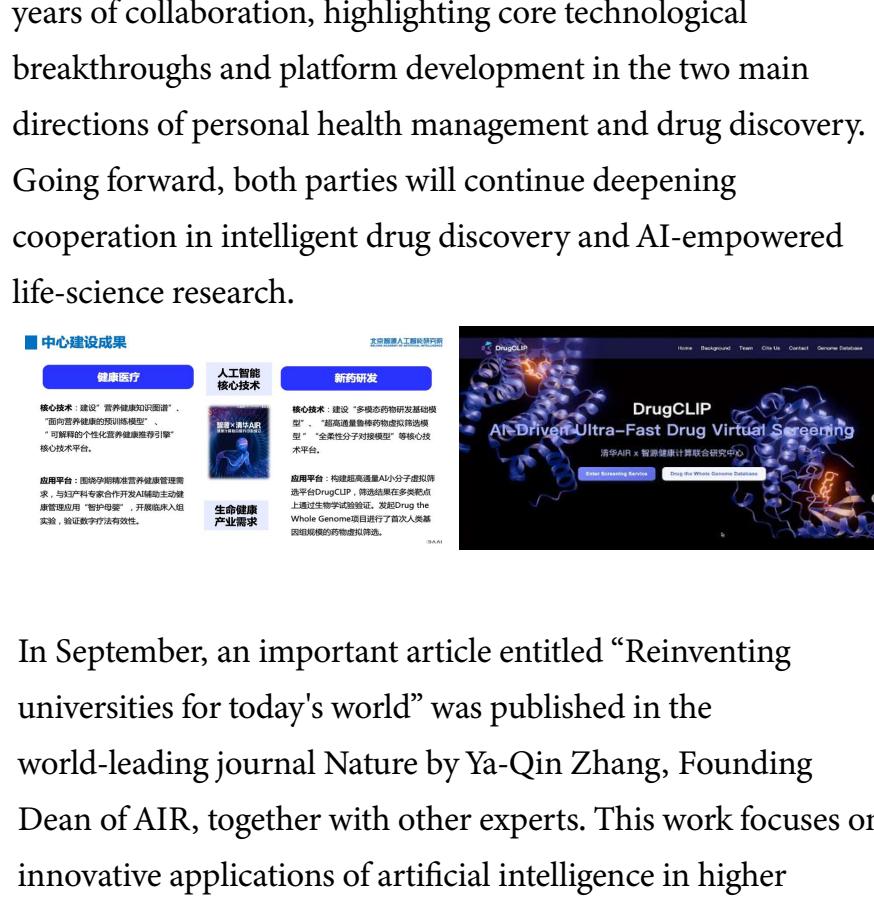


On December 18, the list of recipients for Tsinghua's 2025 Undergraduate Special Scholarship was published; ten students across the university were selected. Among them, Boyuan Chen — a fourth-year undergraduate at Xingjian College and a 2026 PhD student affiliated with AIR — stood out and received this honor. Chen has interned at AIR since his sophomore year, conducting interdisciplinary research at the intersection of mechanics and artificial intelligence. To date, he has five accepted papers (two as first author) at conferences such as CVPR and CoRL. He is currently a senior at Xingjian College and will continue to pursue a doctoral degree at AIR and the School of Artificial Intelligence under the supervision of Academician Ya-Qin Zhang.

## 02 Research and Industry Partnership

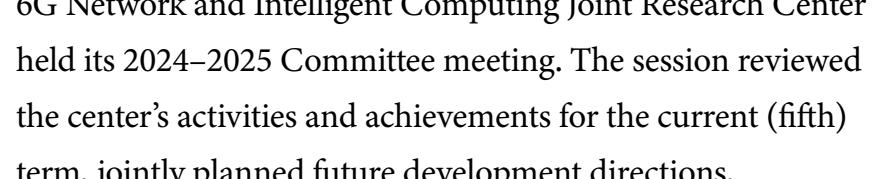
Jul.

On July 18th, the Shanghai Artificial Intelligence Laboratory convened a comprehensive performance-review meeting for its Rapid Project Approval Program. The project led by AIR Professor Yunxin Liu, “Construction and Industrial Application of an Intelligent Green Computing Platform for the Dual-Carbon Targets,” successfully passed the evaluation. Carried out under the rapid-approval mechanism, the project built and demonstrated a green intelligent computing platform aimed at China’s dual-carbon goals. Reviewers unanimously praised the project’s research depth and specifically commended its field validations in two application scenarios—5G base station optimization and data-center cooling optimization—observing that the energy-saving metrics “substantially exceeded expectations” and produced “significant energy-saving effects across different scenarios.”



Agu.

In August, the AIR – Beijing Academy of Artificial Intelligence (BAAI) Joint Research Center for Health Computing held its end-of-term summary meeting for the current operating period. Director Yanyan Lan reviewed the center’s original objectives and summarized the outcomes achieved during more than three years of collaboration, highlighting core technological breakthroughs and platform development in the two main directions of personal health management and drug discovery. Going forward, both parties will continue deepening cooperation in intelligent drug discovery and AI-empowered life-science research.



Sept.

In September, an important article entitled “Reinventing universities for today's world” was published in the world-leading journal Nature by Ya-Qin Zhang, Founding Dean of AIR, together with other experts. This work focuses on innovative applications of artificial intelligence in higher education, particularly on how AI technologies can accelerate talent development in medical education. It also presents “Agent Hospital,” an AI-simulated medical environment developed by the research team led by Professor Yang Liu, Dean of AIR. Driven by multimodal large models, this pioneering system powers virtual doctors and patients to fully simulate the entire clinical workflow, from initial disease onset triage, registration, and waiting, through medical examinations, diagnosis, and treatment recommendation, all the way to follow-up and return visits.



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In September, AIR- AsiaInfo Technologies (China) Co., Ltd. 6G Network and Intelligent Computing Joint Research Center held its 2024–2025 Committee meeting. The session reviewed the center’s activities and achievements for the current (fifth) term, jointly planned future development directions, considered major center matters, and set research objectives for emerging areas such as spatial intelligence. AsiaInfo Executive Director & CEO Nianshu Gao and AIR Founding Dean Ya-Qin Zhang attended and delivered opening remarks and the meeting summary on behalf of their organizations.



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In September, AIR entered into an industry-university-research collaboration agreement on embodied intelligence technologies with TARS. The partnership is designed to advance joint research in frontier areas of embodied intelligence, including world-model construction and multimodal perception, with the aim of accelerating technological breakthroughs and applications in intelligent robotics. Academician Ya-Qin Zhang, TARS Founder & CEO Yilun Chen, and Founder & Chairman Zhenyu Li attended the signing ceremony.

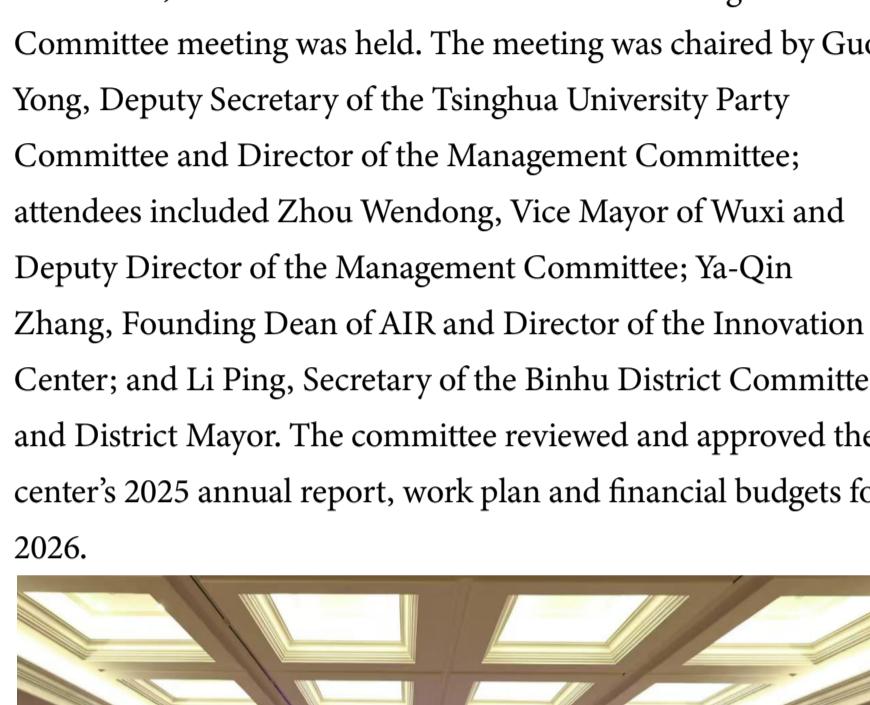


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In September, AstraZeneca’s Global R&D team and AIR co-hosted an “AI Science Day” themed “Eliminating Cancer as a Cause of Death.” Dr. Susan Galbraith, Executive Vice President of Global R&D at AstraZeneca, and Founding Dean of AIR, Ya-Qin Zhang delivered opening remarks. Research teams from both organizations exchanged and discussed key AI technologies across the full drug-discovery lifecycle. The two parties will pursue deeper collaboration on AI-enabled drug discovery going forward.

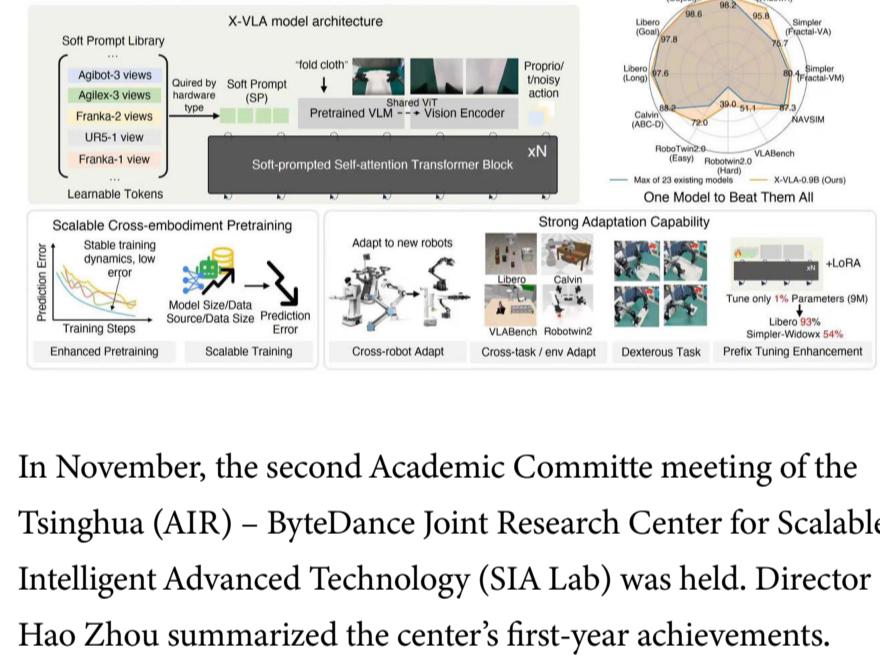


» In September, a closed-door conference for the autonomous driving industry, along with the 2025 Apollo Council Annual Meeting, was held in Haikou, Hainan. The event brought together more than 20 industry representatives, including professionals from vehicle manufacturers, chip companies, autonomous-driving solution providers, and smart-device firms, to discuss cutting-edge technical trends and development roadmaps. Key topics included how end-to-end approaches, VLA, world models, and related methodologies are reshaping autonomous driving, as well as which strategic pathways are pivotal to future industrial advancement. Participants also engaged in active discussions on emerging paradigms in the industry.

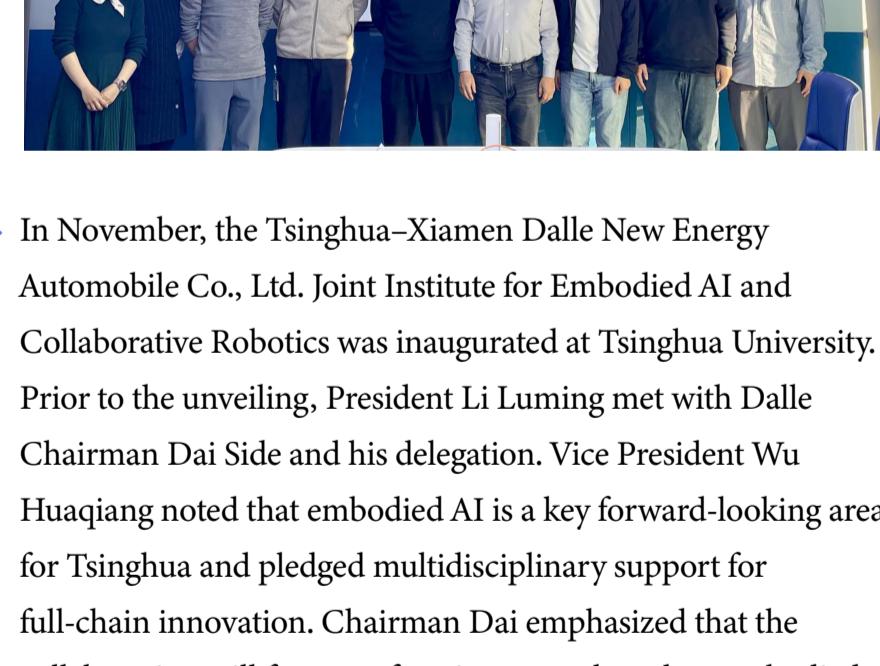


Otc.

In October, the Wuxi Innovation Center 2025 Management Committee meeting was held. The meeting was chaired by Guo Yong, Deputy Secretary of the Tsinghua University Party Committee and Director of the Management Committee; attendees included Zhou Wendong, Vice Mayor of Wuxi and Deputy Director of the Management Committee; Ya-Qin Zhang, Founding Dean of AIR and Director of the Innovation Center; and Li Ping, Secretary of the Binhu District Committee and District Mayor. The committee reviewed and approved the center's 2025 annual report, work plan and financial budgets for 2026.

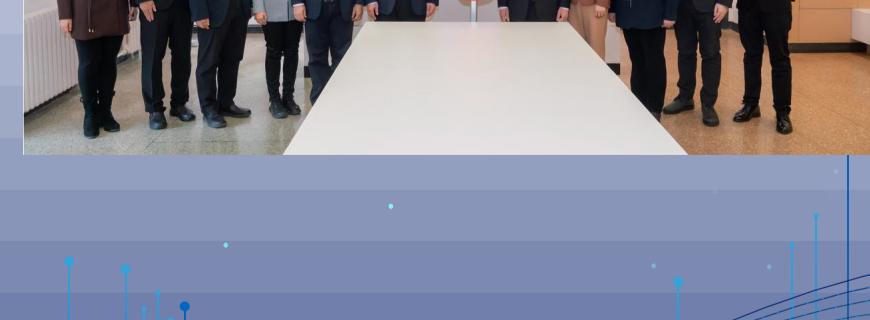


» On June 6th, AIR upgraded and released AIR ApolloFM, the world's first open-source end-to-end autonomous driving system that supports real-vehicle deployment, applying large model capabilities and end-to-end technology to autonomous driving systems. AIR ApolloFM has already been signed and promoted for application by more than ten companies.



Nov.

In November, the second Academic Committee meeting of the Tsinghua (AIR) – ByteDance Joint Research Center for Scalable Intelligent Advanced Technology (SIA Lab) was held. Director Hao Zhou summarized the center's first-year achievements. Within its inaugural year the center released several outcomes, including Decoupled Clip and Dynamic sAmpling Policy Optimization (DAPO), the diffusion-based large language model Seed Diffusion Preview, and the MemAgent agent for long-text tasks. The Committee commended the center's rapid progress and agreed that the next term will continue deep collaboration on core AI technologies.

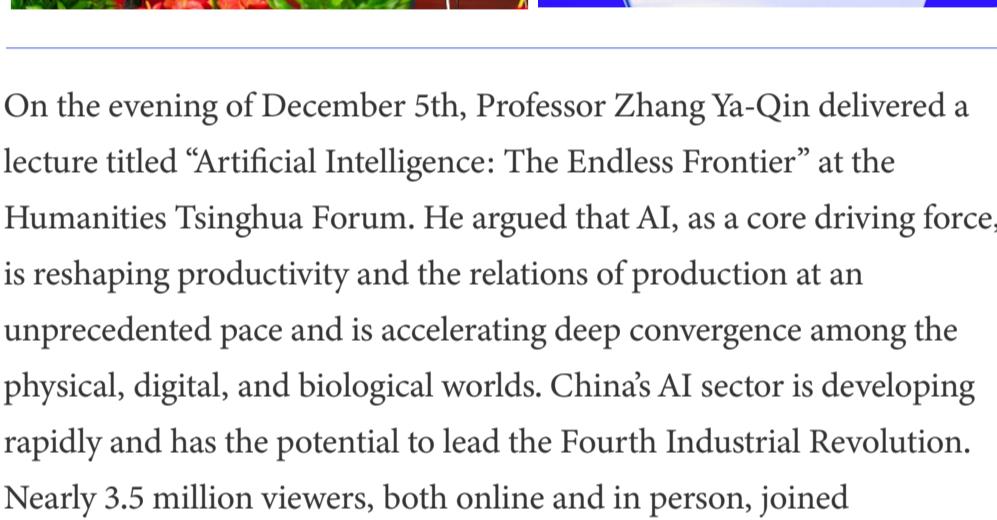


» In November, the Tsinghua-Xiamen Dalle New Energy Automobile Co., Ltd. Joint Institute for Embodied AI and Collaborative Robotics was inaugurated at Tsinghua University. Prior to the unveiling, President Li Luming met with Dalle Chairman Dai Side and his delegation. Vice President Wu Huaqiang noted that embodied AI is a key forward-looking area for Tsinghua and pledged multidisciplinary support for full-chain innovation. Chairman Dai emphasized that the collaboration will focus on frontier research such as embodied AI world models and multimodal foundational models, and on training high-level talent. The Management Committee's first meeting approved the institute's charter and annual plan. The joint institute will build a national-level research and industrial innovation platform around embodied AI and collaborative robotics.

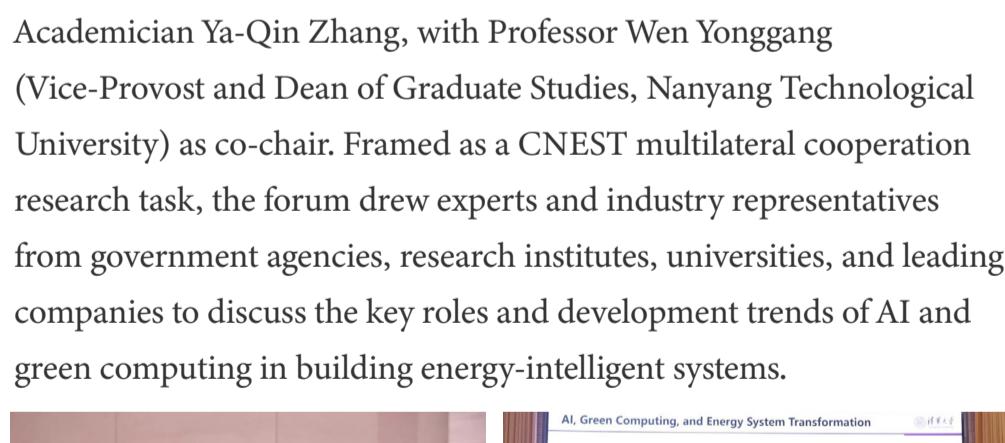


## 03 Academic Services

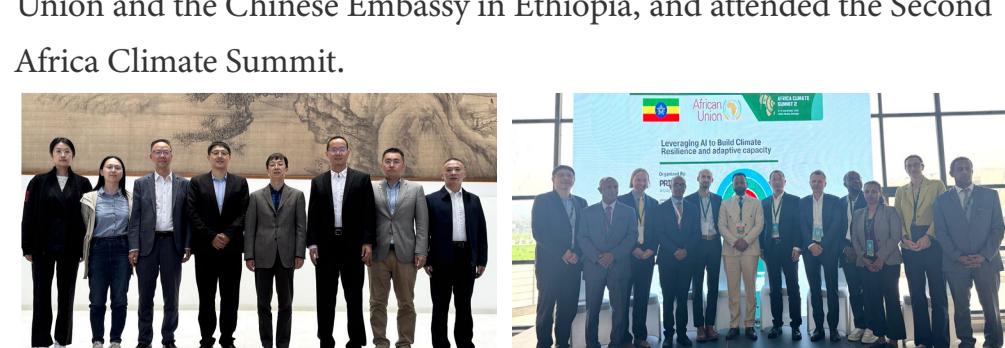
In 2025 AIR faculty were actively participated in major domestic and international events: in July, Foreign Academician of the Chinese Academy of Engineering and AIR Founding Dean Ya-Qin Zhang attended the UN-ITU co-organized AI for Good Global Summit plenary “From Principles to Practice: Governing Advanced AI in Action” to discuss AI governance, and (participating remotely) joined a WAIC 2025 roundtable on “Scientific Consensus and Uncertainty of Superintelligent AI,” delivering a viewpoint keynote; in September he held an in-depth dialogue with Dr. Zhu Min, former IMF Deputy Managing Director and former Deputy Governor of the People’s Bank of China, on AGI development and Sino-US innovation competition, and on the afternoon of September 28th spoke at the World New Energy Vehicle Congress main forum “Frontier Technologies and Integrative Innovation,” taking part in the “AI × Cloud × Chip × Systems: A New Roundtable on Intelligent Mobility” and delivering a thematic guiding address; from October 14–15 he participated in the 23rd Forbes Global CEO Conference to present forward-looking perspectives on AI, and later in October gave a keynote titled “AI + Trends” at the 2025 World Internet of Things Exposition.



On the evening of December 5th, Professor Zhang Ya-Qin delivered a lecture titled “Artificial Intelligence: The Endless Frontier” at the Humanities Tsinghua Forum. He argued that AI, as a core driving force, is reshaping productivity and the relations of production at an unprecedented pace and is accelerating deep convergence among the physical, digital, and biological worlds. China’s AI sector is developing rapidly and has the potential to lead the Fourth Industrial Revolution. Nearly 3.5 million viewers, both online and in person, joined Academician Zhang Ya-Qin in reflecting on technological trends in the AI era, the next generation of intelligent agents, and future directions.



On the afternoon of June 28th, Associate Dean of AIR, Professor Yunxin Liu (AIR) attended the 2025 International “Carbon Neutrality and Energy Intelligence” (CNEST) forum and chaired the AIR-led special session titled “Intelligent Connectivity Technologies for Energy-Intelligent Systems.” The session was presided over by Academician Ya-Qin Zhang, with Professor Wen Yonggang (Vice-Provost and Dean of Graduate Studies, Nanyang Technological University) as co-chair. Framed as a CNEST multilateral cooperation research task, the forum drew experts and industry representatives from government agencies, research institutes, universities, and leading companies to discuss the key roles and development trends of AI and green computing in building energy-intelligent systems.

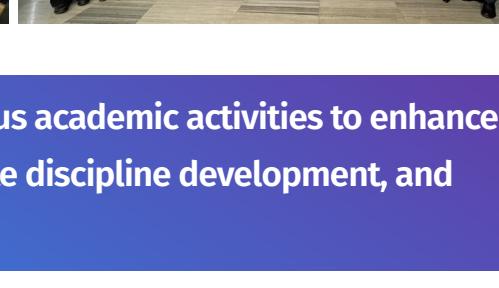
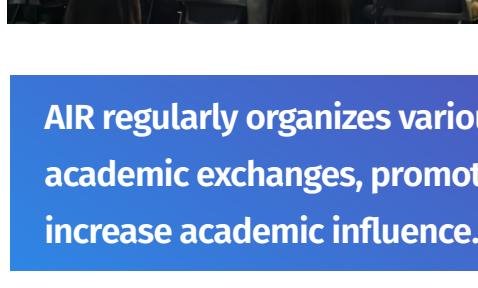


From September 9–11, Associate Dean of AIR, Professor Yunxin Liu led a delegation to Addis Ababa, Ethiopia, for exchange visits focused on energy transition, climate adaptation, and AI-enabled solutions. During the trip the delegation met with the Chinese Mission to the African Union and the Chinese Embassy in Ethiopia, and attended the Second Africa Climate Summit.



On November 11, Lord Patrick Vallance, UK Minister for Science, Research and Innovation, led a delegation to Tsinghua University and engaged in in-depth exchanges with AIR faculty and students. The visit was hosted by Director Ya-Qin Zhang, who highlighted AIR's latest research achievements including the "Agent Hospital." AIR associate professor Xianyuan Zhan presented the institute's work on AI-enabled green computing, decarbonization, and environmental monitoring, adaptation, and policy support.

On November 24, Italy's Minister of Health, Professor Orazio Schillaci, led a delegation to AIR for a focused review of the "Agent Hospital" project. Dean of AIR Yang Liu received the delegation, gave a systematic presentation of the project's technical architecture and core functions, and demonstrated recent results in simulating real clinical environments and supporting clinical decision-making. The two sides held substantive discussions on how AI can empower the healthcare industry and improve service efficiency.



**AIR regularly organizes various academic activities to enhance academic exchanges, promote discipline development, and increase academic influence.**

### AIR Academic Seminars

In the second half of the year, we organized 8 academic lectures. We were honored to host keynote and invited talks from a distinguished group of researchers, including Professor Rajesh Krishna Balan (School of Computing and Information Systems, Singapore Management University), Dr. Kai Chen (Young Lead Scientist, Shanghai Artificial Intelligence Laboratory), Pei Peng (Pretraining Lead, Foundation Models Team, Meituan Computing & Intelligence Platform), Zhang Jiaqi (Researcher in Large-Text Model Architectures and Pretraining Strategies, Meituan), Dr. Lei Bai (Young Scientist, Shanghai Artificial Intelligence Laboratory), Dr. Yong Rui (Technology Advisor, Berkeley Frontier Fund), Professor Yang Liu (Dean of AIR, GDS Chair Professor, Tsinghua University), and Professor Fan-Gang Zeng (Foreign Member, U.S. National Academy of Engineering). Their presentations covered a wide range of cutting-edge AI research and provided our community with rich, up-to-date insights.



### AIR Young Scientists Forum

For the AIR Young Scientists Forum in the second half of the year, we were pleased to invite Dr. Jun Gao (Assistant Professor, University of Michigan) and Dr. Li Jiang (Assistant Professor, The Chinese University of Hong Kong, Shenzhen) to share their research and perspectives with AIR faculty and students.



### Spatial Intelligence

Representation & World Modeling 世界表示与建模

- 构建任务可泛化、时空可预测的三维世界空间表征
- 利用大规模数据以无监督方式学习高质量空间表征
- 显式世界模型用于仿真与长尾数据生成

Perception & Reasoning & Action 感知 & 推理 & 决策与执行

- 基于空间关系与因果关系的可解释的推理
- 基于空间理解的安全、可靠的决策与行动

## 04 AIR For Better

### GDS Holdings Limited continued support for the Named Professorships and Young Scholars Program (Phase II).

Established in 2021, the GDS Named Professorships and Young Scholars Program has supported AIR for five consecutive years by attracting internationally influential scholars, encouraging faculty excellence, and recruiting promising early-career researchers to accelerate breakthroughs in AI research. In November 2025, GDS and the Tsinghua University Education Foundation signed a Phase II endowment agreement to continue supporting AIR's talent development over the next five years, with expanded funding relative to Phase I.

### Swire Group support for international academic exchange.

Through its Cathay Pacific subsidiary, Swire has provided airfare support enabling AIR faculty and students to participate in international academic exchange—presenting invited talks and first-author papers—at top conferences such as ICML, MobiCom, and NeurIPS beginning in August 2025. Promoting international exchange through education projects is a key component of Swire's CSR activities in Mainland China.

### Tsing Zhi Capital established a scholarship.

In November 2025 Tsing Zhi Capital endowed the “Friends of Tsinghua — AIR Tsing Zhi Scholarship” to support full-time doctoral students who demonstrate initiative and excellence in embodied intelligence and AIGC research, encouraging scholarly diligence, innovation, and well-rounded development.

## 05 AIR Five Years Old

On December 1, AIR's fifth-anniversary celebration concluded successfully at the Turing Lecture Hall. The event reviewed the rich achievements AIR has made over the past five years in research, technological innovation, and talent development, and looked ahead to future directions. A program of captivating cultural performances and engaging interactive games kept the atmosphere lively and filled with laughter. This memorable occasion not only paid tribute to the past but also marked the starting point for the next five years.



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