2025 Asian Universities Alliance Postgraduate Academic Forum in Conjunction with Greater Bay Area Postgraduate Nanshan Academic Forum Call for Papers

I. Background of the Forum

In recent years, Tsinghua University has actively advanced its globalization strategy, with a strong commitment to cultivating international talent and enhancing global cooperation and exchange. In April 2017, Tsinghua University co-founded the Asian Universities Alliance (AUA) with 14 flagship universities in Asia, marking a new chapter in higher education collaboration.

Over the years, AUA has promoted deeper research collaboration, faculty and student exchanges, and joint curriculum development among its members, organizing multiple international academic events on cutting-edge topics such as artificial intelligence and sustainable development, thereby fostering a shared Asian higher education community.

Tsinghua University is proud to host this year's AUA Postgraduate Academic Forum, in collaboration with its Greater Bay Area Postgraduate Nanshan Academic Forum. Themed **"An Asian Vision for Sustainable Development: Innovation and Collaboration for the Future,"** the forum will bring together experts, scholars, and graduate students in the fields of artificial intelligence and environmental ecology to explore cutting-edge technologies and future challenges in sustainable development. The forum aims to foster interdisciplinary exchange and cooperation, promote the integration of scientific innovation and social responsibility, and offer diverse solutions to global development challenges.

Rooted in the United Nations Sustainable Development Goals (SDGs), the forum addresses key areas such as **poverty eradication, climate change mitigation, and environmental protection**. It aspires to contribute to the global agenda for sustainable development by 2030 through in-depth discussions on green innovation and technological transformation. By facilitating the synergy between science and society and encouraging the parallel development of environmental protection and economic growth, the forum seeks to make a meaningful contribution to the global sustainable development effort.

The forum will be held in mid-December at Tsinghua Shenzhen International Graduate School in Shenzhen, China. The tentative dates of the event are 19-21 December, 2025. A global call for papers is now open to participants from all sectors.

II. About the Forum

Forum Name: 2025 Asian Universities Alliance Postgraduate Academic Forum in Conjunction with Greater Bay Area Postgraduate Nanshan Academic Forum—An Asian Vision for Sustainable Development: Innovation and Collaboration for the Future

Hosted by: Tsinghua Shenzhen International Graduate School

Supported by: Secretariat of the Asian Universities Alliance; Institute of Data and Information, Institute of Environment and Ecology, and Office of Global Engagement of Tsinghua Shenzhen International Graduate School

Organized by: Graduate Student Union, Tsinghua Shenzhen International Graduate School

Partner: Envision Group

Date: December 2025

Venue: Shenzhen, Guangdong Province, China

Collaborative Journal: Frontiers of Environmental Science & Engineering (and more to be updated)

III. Call for Papers

Thematic Areas:

Sub-forum 1: AI Empowering Sustainable Development

1. Embodied Intelligence and Frontier Robotics

This theme addresses the autonomous design of robots operating in complex and realistic environments across sectors such as industry, aerospace, and marine applications. Research areas include high-precision spatial perception, real-time decision-making, and multimodal integrated intelligent control strategies. It also explores efficient techniques for embodied data generation, synthesis, and simulation to accelerate robotic applications in extreme environments, human-robot collaboration, and social services.

2. Artificial Intelligence and Data Empowerment

Focusing on large-scale, data-driven systems, this topic explores efficient distributed training and inference algorithms, as well as the development and optimization of large foundation models for domain-specific intelligence. It emphasizes the cross-disciplinary applications of AI in industrial manufacturing, environmental monitoring, and disaster early warning, aiming to drive the innovation and implementation of intelligent solutions.

3. Low-Altitude Economy and Three-Dimensional Mobility

This theme explores urban aerial transportation systems, intelligent autonomous flight of unmanned aerial vehicles (UAVs), efficient coordination and safety management of large UAV swarms, and high-bandwidth, high-reliability optical wireless communication technologies for low-altitude airspace control, promoting innovation and sustainable development in smart logistics and environmental sensing.

4. Intelligent Manufacturing and Advanced Equipment

Focusing on the intelligence and autonomy of high-end equipment, this area investigates precision manufacturing technologies, processes, and devices at micro- and nano-scales. It also covers automation, flexibility, and intelligence in industrial assembly, and the

integration of AI and advanced robotics to enhance production efficiency and resource utilization, supporting the intelligent and sustainable transformation of the manufacturing industry.

Sub-forum 2: Sustainable Development: Economy Society Ecosystem

1. Climate Change Response and Carbon Cycle Regulation

This topic focuses on the impacts of human industrial and economic activities on carbon balance and climate systems. It includes research on carbon capture and utilization (CCU) technologies, biomass energy conversion, and low-carbon strategies for urban development, with the aim of supporting the design and evaluation of carbon neutrality pathways.

2. Ecosystem Conservation and Restoration Engineering

Emphasizing the identification and integrated restoration of degraded ecosystems, this theme covers the structural and functional recovery of watershed, coastal, and urban ecosystems. It also highlights the application of nature-based solutions in building ecological security patterns, aiming to enhance regional ecological resilience and sustainable development capacity.

3. Pollution Control and Resource Recycling

This area addresses the treatment of multi-media and compound pollution, along with the resource utilization of waste. Topics include pollutant identification, migration and transformation processes, development of green materials, and process intensification technologies. The goal is to establish integrated systems for pollution control and resource recovery, serving the dual needs of environmental quality improvement and circular economy advancement.

<u>Eligible Participants:</u>

Postdoctoral researchers, doctoral candidates, and master's students from member universities of the Asian Universities Alliance and institutions within the Guangdong-Hong Kong-Macao Greater Bay Area who are engaged in relevant research fields.

<u>Submission Requirements:</u>

Submissions should be original research papers, in either Chinese or English, aligned with the theme of this year's forum and reflecting interdisciplinary perspectives. The submitting author must be the primary contributor and the first author of the paper. The research must be an original outcome completed <u>within one year prior to the submission deadline</u>. **Prior publication is NOT a disqualifier**. All papers should adhere to international academic journal formatting standards. Chinese papers should be approximately 10,000 characters; English papers should be around 6,000 words.

Participants intending to join the forum must submit**: 1)** the registration form (with a 150–300-word abstract) and **2)** the full text of the paper via email to **auaforum2025_sigs@163.com** no later than **August 15, 2025**. If the paper has been published, please also send a scanned copy.

The email subject should follow the format: "2025AUA + University Name + Full Name + Paper Title."

Presentation Formats

In the registration form, participants should choose one of the following formats to present their research:

Format 1: Academic Poster Exhibition

Participants selecting the poster format must prepare one vertical scientific research poster (maximum one per person) with dimensions 120 × 90 cm and a resolution of 150 dpi.

Format 2: Academic Oral Presentations

Participants selecting the oral presentation format must prepare a 10-minute PowerPoint presentation to be delivered during the forum.

The forum organizing committee will notify selected participants via email in late September. Selected participants must submit the final electronic version of their poster or oral presentation PPT to auaforum2025_sigs@163.com by 17:30 (UTC+8), Friday, October 10, 2025.

IV. Forum Schedule (Tentative)

Day 1	All day	Arrival and Registration
Day 2	Morning	Opening Ceremony and Keynote Speeches
	Afternoon	Parallel Sessions
	Evening	Networking
Day 3	Morning	Parallel Sessions
		Closing Ceremony
	Afternoon	Culture/Industry Visits Departure

V. Timeline and Work Plan

	Academic Poster Exhibition	Academic Oral Presentations
Registration Deadline	August 15, 2025	
Poster or PPT Submission Deadline	October 10, 2025	
Date of Exhibition /Presentation	December 8, 2025 to the end of the forum (Mid-December 2025)	19-21 December 2025 (tentative)

Note: All submitted works must be original. Any instance of plagiarism will result in immediate disqualification from the forum.

V. Awards and Prizes

Award	Number of Recipients	Prize
First Prize for Outstanding Paper	2 (1 for each sub forum)	Certificate + ¥10,000 cash award
Second Prize for Outstanding Paper	4 (2 for each sub forum)	Certificate + ¥5,000 cash award
Third Prize for Outstanding Paper	6 (3 for each sub forum)	Certificate + ¥2,500 cash award
Best Oral Presentation Award	4 (2 for each sub forum)	Certificate + Tsinghua gift pack
Outstanding Poster Award	6	Certificate + Tsinghua gift pack

No registration fee is required for this forum.

Other benefits for AUA participants

Accommodation and meals during the forum will be provided for participants from AUA member universities. Airport drop-off will be arranged at the end of the forum.

Thank you for your support of the 2025 Asian Universities Alliance Postgraduate Academic Forum in Conjunction with Greater Bay Area Postgraduate Nanshan Academic Forum.

All young scholars and graduate students are warmly encouraged to submit their paper with the registration form by August 15, 2025.

Submission and Contact Email: auaforum2025_sigs@163.com