



同濟大學  
TONGJI UNIVERSITY

# DATA FOR POLICY 2025 (DFP'25) CONFERENCE -ASIA PACIFIC

ADVANCING AI:  
INNOVATIONS, GOVERNANCE, AND ETHICAL FRONTIERS

## CONFERENCE HANDBOOK

2025.10.23-10.24

中国·上海  
Shanghai, China



上海自主智能无人系统科学中心  
Shanghai Research Institute for Intelligent Autonomous Systems



上海市人工智能社会治理协同创新中心  
Shanghai Collaborative Innovation Center of AI Social Governance



Lightwheel



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## 1. WELCOME SPEECH

Dear distinguished guests and colleagues,

In this beautiful golden October, we are delighted to welcome you to the Data for Policy 2025 (DfP'25) Conference – Asia Pacific .

The conference will be grandly held from October 23<sup>rd</sup> to 24<sup>th</sup>, at Tongji University. It is jointly hosted by Tongji University and Data for Policy CIC, and co-organized by the Shanghai Research Institute for Intelligent Autonomous Systems of Tongji University, the State Key Laboratory of Autonomous Intelligent Unmanned Systems, the Frontiers Science Center for Intelligent Autonomous Systems, Ministry of Education and the Shanghai Collaborative Innovation Center of AI Social Governance.

The conference is chaired by Professor Jie Chen, Director of the State Key Laboratory of Autonomous Intelligent Unmanned Systems, with Professor Peiming Lyu as Executive Vice Chair, and Zeynep Engin, Jon Crockett, and Stefaan Verhulst serving as General Chairs.

This conference will bring together researchers, policymakers, practitioners, and industry experts to explore cutting-edge developments in artificial intelligence and the challenges they present, under the theme of “Advancing AI: Innovations, Governance, and Ethical Frontiers”, through the following core topics: Innovation and Challenges in Frontier Technologies of Artificial Intelligence; Current Status and Future of Artificial Intelligence Governance; Artificial Intelligence Ethics and Social Responsibility; Applications of Artificial Intelligence Across Industries; and Global Governance and Cooperation in Artificial Intelligence.

The conference seeks to advance reusable AI technologies and governance practices, foster collaboration across industry, academia, research, and government, and support the development of artificial intelligence that is trustworthy, reliable, and controllable.

We would like to express our sincere gratitude to all authors, reviewers, partners, and volunteers for their invaluable contributions. We wish the conference every success and hope that all participants enjoy a smooth, productive, and rewarding experience.

Conference Programme Committee  
October 2025

## 2. ORGANIZATION

### Hosts

Data for Policy CIC  
Tongji University

### Main Organizers

Shanghai Research Institute for Intelligent Autonomous Systems, Tongji University  
State Key Laboratory of Autonomous Intelligent Unmanned Systems  
Frontiers Science Center for Intelligent Autonomous Systems, Ministry of Education  
Shanghai Collaborative Innovation Center of Artificial Intelligent Social Governance

### Main Collaborating Institutions

Cambridge University Press  
AI Hub in Generative Models  
Light Wheel  
Shanghai Zentek Co., Ltd.

### DfP'25 Conference-Asia Pacific Leadership

#### Chair

**Jie Chen**, Director of the State Key Laboratory of Autonomous Intelligent Unmanned Systems  
Member of the Chinese Academy of Engineering, IEEE Fellow, IFAC Fellow

#### Executive Vice Chair

**Peiming Lyu**, Executive Vice President of Tongji University

#### General Chairs

**Zeynep Engin**, Founding Director & Chair, Data for Policy CIC

**Jon Crowcroft**, Marconi Professor of Communications Systems in the Computer Lab, at the University of Cambridge, and researcher-at-large at the Alan Turing Institute

**Stefaan Verhulst**, Co-Founder and Chief Research and Development Officer at the GovLab, New York University

### Conference Programme Committee (Sorted by Surname Alphabetically)

- David Barber  
Director of the Centre for Artificial Intelligence, University College London and Director of the AI Hub in Generative Models
- Anthony Graham Bellotti  
Professor in Computer Science, School of Computer Science, University of Nottingham Ningbo, China
- Ben M. Chen  
Department Chairman and Graduate Division Head of Mechanical and Automation Engineering, The Chinese University of Hong Kong
- Yanyong Du  
Professor, School of Humanities, Tongji University
- Shuzhi Sam Ge  
Director of Social Robotics Lab, National University of Singapore
- Bin He  
Professor, Shanghai Research Institute for Intelligent Autonomous Systems, Tongji University

## 2. ORGANIZATION

- Huiling Jiang  
Director of Shanghai Collaborative Innovation Center of Artificial Intelligent Social Governance and Dean of School of Law, Tongji University
- Suneel Jethani  
Senior Lecturer, University of Technology Sydney
- Jiang Liu  
Professor, Faculty of Science & Engineering, Global Center for Science and Engineering, Waseda University
- Canhui Liu  
Research Fellow in AI Policy, University College London
- Jacqueline C.K. Lam  
Associate Professor, Department of Electrical and Electronic Engineering, The University of Hong Kong
- Ruipeng Lei  
Professor, University of Electronic Science and Technology of China
- Tian Lan  
Professor of Geospatial Information Science, Wuhan University
- Lei Ma  
Associate Professor, University of Tokyo
- Nydia Remolina Leon  
Associate Professor, Singapore Management University
- Yang Shi  
Professor, University of Victoria
- Zhuping Wang  
Professor, Shanghai Research Institute for Intelligent Autonomous Systems, Tongji University
- Wilson Wong  
Director and Associate Professor, Data Science and Policy Studies Programme, The Chinese University of Hong Kong
- Carrie Wang  
Director of Data Science Systems, United Kingdom
- Masaru Yarime  
Associate Professor, Division of Public Policy, The Hong Kong University of Science and Technology

### 3.CONFERENCE OVERVIEW

Day 1: Thursday, October 23 <sup>rd</sup>	
Time	Programme
08:00	Arrival & Registration
09:00	<b>Opening Ceremony</b> (Lecture Hall A300)
09:30	<b>Keynote Session</b> (Lecture Hall A300)
10:20	Conference Group Photo
10:30	Coffee Break
10:45	<b>Keynote Session</b> (Lecture Hall A300)
11:35	Presentation: The Digital Statecraft Academy (DSA)(Lecture Hall A300)
12:05	Lunch Break (Lunch: at the canteen of Shanghai Research Institute for Intelligent Autonomous Systems)
13:30	<b>Keynote Session</b> (Lecture Hall A300)
14:25	Coffee Break
14:40	<b>Parallel Session 1</b> <b>Session 1A</b> (Lecture Hall A300); <b>Session 1B</b> (Lecture Hall B80)
15:40	Coffee Break
15:50	<b>Parallel Session 2</b> <b>Session 2A</b> (Lecture Hall A300); <b>Session 2B</b> (Lecture Hall B80)
16:50	Laboratory Visit
18:00	Dinner & Networking (Venue: Voco Shanghai Zhangjiang By IHG)
20:00	End of Day 1
Day 2: Friday, October 24 <sup>th</sup>	
Time	Programme
08:00	Arrival
09:00	<b>Keynote Session</b> (Lecture Hall A300)
10:40	Coffee Break
10:55	<b>Parallel Session 3</b> <b>Session 3A</b> (Lecture Hall A300); <b>Session 3B</b> (Lecture Hall B80)
11:55	Lunch Break (Lunch: at the canteen of Shanghai Research Institute for Intelligent Autonomous Systems)
14:00	<b>Parallel Session 4</b> <b>Session 4A</b> (Lecture Hall A300); <b>Session 4B</b> (Lecture Hall B80)
15:00	Coffee Break
15:15	<b>Keynote session</b> (Lecture Hall A300)
15:40	<b>Closing Ceremony</b> (Lecture Hall A300)
16:00	AI Company Visit - Fourier
17:30	End of Day 2

Conference Venue: 1st Floor of Wenzhi (NO. 1) Building, Shanghai Research Institute for Intelligent Autonomous Systems(short for "SRIIAS"),Tongji University  
Address: 300 meters south of the intersection of Sundong Road and Lanting Road in Pudong New Area, Shanghai

## 4. CONFERENCE PROGRAMME

### 23 October, 2025

Day 1: Thursday, October 23<sup>rd</sup>

Time	Programme	
08:00 - 09:00	<b>Arrival &amp; Registration</b>	
09:00 - 09:30	<b>Opening Ceremony (Lecture Hall A300)</b> <b>Chair:</b> Xianglin Gu, Tongji University	
	Welcoming speeches Joint Lab Inauguration	
09:30 - 11:35	<b>Keynote Sessions (Lecture Hall A300)</b> <b>Chair(s):</b> Bin He, Tongji University; Yiguang Hong, Tongji University	
09:30 - 09:55	Keynote Session 1: <b>“Taking Justice Seriously in the Age of Artificial Intelligence”</b> <b>Speaker:</b> Huiling Jiang, Director of Shanghai Collaborative Innovation Center of Artificial Intelligent Social Governance, Dean of School of Law, Tongji University	
09:55 - 10:20	Keynote Session 2: <b>“Embedded Intelligence for Adaptive Automation via Reconfigurable Robots”</b> <b>Speaker:</b> Jamie Paik, Founder and Director of the Reconfigurable Robotics Lab (RRL) of Swiss Federal Institute of Technology (EPFL) and a core member of Swiss NCCR robotics group	
10:20 - 10:30	Conference Group Photo	
10:30 - 10:45	Coffee Break	
10:45 - 11:10	Keynote Session 3: <b>“AI Empowered Perception and Navigation”</b> <b>Speaker:</b> Lihua Xie, Director of Centre for Advanced Robotics Technology Innovation of Nanyang Technological University	
11:10 - 11:35	Keynote Session 4: <b>“AI Ethics from the Perspective of AI Governance: China's Approach and Future Directions”</b> <b>Speaker:</b> Weiwen Duan, Executive Dean of the School of Philosophy, University of Chinese Academy of Social Sciences, Director of the Department of Philosophy of Science and Technology, Institute of Philosophy, Chinese Academy of Social Sciences	
11:35 - 12:05	<b>Presentation:</b> The Digital Statecraft Academy (DSA) (Lecture Hall A300) <b>Speaker:</b> Zeynep Engin, Founding Director of Data for Policy CIC; UCL	
12:05 - 13:30	Lunch Break	
13:30 - 14:25	<b>Keynote Sessions (Lecture Hall A300)</b> <b>Chair:</b> Qian Cheng, Tongji University	
13:30 - 13:55	Keynote Session 5: <b>“Towards AI-Driven Intelligent Sensing and Connectivity: Smart Devices for Next-Generation Healthcare Systems”</b> <b>Speaker:</b> Jiang Liu, Professor of Faculty of Science and Engineering, Global Center for Science and Engineering, Waseda University	
14:00 - 14:25	Keynote Session 6: <b>“The Challenge of Explainable AI” [Online]</b> <b>Speaker:</b> David Barber, Director of the Centre for Artificial Intelligence, University College London and Director of the AI Hub in Generative Models, UK	

## 4. CONFERENCE PROGRAMME

### Day 1: Thursday, October 23<sup>rd</sup>

Time	Programme
14:25 - 14:40	Coffee Break
14:40 - 15:40	<b>Parallel Session 1</b>

#### Session 1A (Lecture Hall A300)

##### Applications of Artificial Intelligence Across Industries

- “An Interpretable and Adaptive AI Governance Framework”; Ya **Wang** – Shanghai Jiao Tong University, China. (DAP-2025-0113)
- “Dialoguing with AI: Leveraging AI for Insight Discovery (Case Study of Hallyu Tracker)”; Natalia **Grincheva** – University of the Arts Singapore, Singapore. (Submission #114)

##### Artificial Intelligence Ethics and Social Responsibility

- “Structural and Institutional Factors Influencing Organizational Adoption of Artificial Intelligence (AI): Japan's Case (2021–2024) in the Context of the Global Partnership on AI (GPAI) Project”; Masayo **Fujimoto** – Doshisha University, Japan. (Submission #112)
- “Quantifying Bias and Variance in the Causal Inference of Large Language Models: Implications for Evidence-based Policy”; Fabian **Leal-Villaseca** – University of Technology Sydney, Australia, Hadi **Mohasel Afshar** – University of Technology Sydney, Australia, Roman **Marchant** – University of Technology Sydney, Australia. (Submission #134)

##### Current Status and Future of Artificial Intelligence Governance

- “Convergence of AI-powered, Human-decided Policies in Problem-centered Policy Analysis”; Ebinezer **Florano** – University of the Philippines, Philippines, Raphael Justin **Portuguez** – University of the Philippines, Philippines. (Submission #108)

**Chair(s):** Shuai **Feng**, Shanghai Association for Artificial Intelligence and Social Development; Kairui **Feng**, Tongji University

#### Session 1B (Lecture Hall B80)

##### Artificial Intelligence Ethics and Social Responsibility

- “A Multi-layer De-identification Framework for Psychiatric Audio Recordings: Balancing Clinical Utility and Privacy Protection”; Haojie **Fu** – Shanghai Research Institute for Intelligent Autonomous Systems, Tongji University, China, Ang **Chen** – Tongji University, China, Menxin **Chen** – Tongji University, China, Peiyu **Zhang** – Tongji University, China, – Tongji University, China, Bin **Wang** – Southwest University of Science and Technology, Xudong **Zhao** – Tongji University, China, Fazhan **Chen** – Tongji University School of Medicine, China. (DAP-2025-0131)

##### Applications of Artificial Intelligence Across Industries

- “Leveraging AI for Improved Health Outcomes: The Case of Abu Dhabi Health Information Exchange (ADHIE)”; Victor **Kabata** – Sorbonne University Abu Dhabi, United Arab Emirates. (Submission #119)

##### Global Governance and Cooperation in Artificial Intelligence

- “Shaping Higher Education in the AI Era: Institutional Perspectives on Generative AI Governance”; Wilson **Wong** – The Chinese University of Hong Kong, China, Angela **Aristidou** – University College London, United Kingdom. (Submission #130)

##### Other topics

- “Innovation at the Crossroads: How Export Controls Reshape Chinese Corporate Innovation Portfolios”; Siqi **Xie** – Hong Kong University of Science and Technology, China, Xuan **Zeng** – Hong Kong University of Science and Technology, China, Masaru **Yarime** – Hong Kong University of Science and Technology, China. (Submission #139)

**Chair(s):** Lei **Zhao**, Tongji University; Jiazuo **Hou**, Tongji University

## 4. CONFERENCE PROGRAMME

### Day 1: Thursday, October 23<sup>rd</sup>

Time	Programme
15:40 - 15:50	Coffee Break
15:50 - 16:50	<b>Parallel Session 2</b>

#### Session 2A: D&P Area Six Workshop Panel (Lecture Hall A300)

##### “Global Challenges and Dynamic Threats – Advancing Research Through an Asia-Pacific Lens”

**Speakers:** Wilson **Wong** - The Chinese University of Hong Kong, China / Zeynep **Engin** - Data for Policy; UCL, United Kingdom / Masaru **Yarime** - The Hong Kong University of Science and Technology, China / Canhui **Liu** - University College London, United Kingdom / Anthony **Bellotti** - University of Nottingham Ningbo China, China. (Submission #146)

**Chair:** Wilson Wong, The Chinese University of Hong Kong

#### Session 2B (Lecture Hall B80)

##### Current Status and Future of Artificial Intelligence Governance

- “Dynamics of Social and Cultural Institutions in AI Governing: a PMC Study Based on China's AI policy”; Xinyang **Zhao** – Tongji University, School of Humanities, China, Xuefang **Pie** – Tongji University, School of Humanities, China, Chen **Qu** - Shanghai Research Institute for Intelligent Autonomous Systems, Tongji University, China. (DAP-2025-0114)
- “Loyal Algorithms: Data Restriction Rights and Fiduciary Duties as Cornerstones of High-Risk AI Governance”; Hsuan Yu **Liu** – Washington University, United States. (Submission #123) **【Online】**

##### Applications of Artificial Intelligence Across Industries

- “Leveraging Large Language Models for Identifying Interpretable Linguistic Markers and Enhancing Alzheimer's Disease Diagnostics”; Tingyu **Mo** – The University of Hong Kong, China, Jacqueline Ck **Lam** – The University of Hong Kong, China, Victor Ok **Li** – The University of Hong Kong, China, Lawrence YI **Cheung** – The Chinese University of Hong Kong, China. (Submission #116)

##### Artificial Intelligence Ethics and Social Responsibility

- “When Robots Take the Wheel: How Chinese Taxi Drivers Navigate a Changing Employment Landscape”; Shidi **Wang** – Peking University, China, Gabriel **Wagner** – Peking University, China. (Submission #121)

**Chair(s):** Lei **Zhao**, Tongji University; Shuo **Jiang**, Tongji University

16:50 - 17:50	<b>Laboratory Visit</b> (Accompanied by Shuo Jiang and Jiazuo Hou)
18:00 - 20:00	<b>Dinner &amp; Networking</b> <b>Host:</b> Yu <b>Cheng</b> <b>Venue:</b> Voco Shanghai Zhangjiang By IHG

#### End of Day 1 Programme

## 4. CONFERENCE PROGRAMME

### 24 October, 2025

Day 2: Friday, October 24<sup>th</sup>

Time	Programme	
08:00 - 09:00	<b>Arrival</b>	
09:00 - 10:55	<b>Keynote Sessions (Lecture Hall A300)</b> <b>Chair:</b> Zhuping <b>Wang</b> , Tongji University; Yu <b>Cheng</b> , Tongji University	
	09:00 - 09:25	Keynote Session 7: <b>“The Ontological and Moral Status of Biomedical Data”</b> Ruipeng <b>Lei</b> , Professor of University of Electronic Science and Technology of China
	09:25 - 09:50	Keynote Session 8: <b>“Trustworthiness Assurance of Intelligent Systems in the Age of AI Agents”</b> Lei <b>Ma</b> , Associate Professor of the University of Tokyo
	09:50 - 10:15	Keynote Session 9: <b>“The European GDPR and AI Act: implications for behavioral research”</b> Lucas <b>Noldus</b> , Professor of the Radboud University, Fellow of the Dutch Academy of Engineering and Founder of Noldus
	10:15 - 10:40	Keynote Session 10: <b>“A Vision for an Emergent Ethics of Responsibility Framework”</b> Sumei <b>Cheng</b> , Deputy Director and Research Fellow at the Institute of Philosophy, Shanghai Academy of Social Sciences
	10:40 - 10:55	Coffee Break
10:55 - 11:55	<b>Parallel Session 3</b>	
<b>Session 3A (Lecture Hall A300)</b>		

#### Artificial Intelligence Ethics and Social Responsibility

- “Public vs. Private Provisioning of AI Tools in High-stakes Contexts: Experimental Evidence from Technology and Law Students in India”; Nandana **Sengupta** – Indian Institute of Technology Delhi, India, Nevin **George** – Indian Institute of Technology Delhi, India, Vidya **Subramanian** – National Law School of India University, India, Arul **Scaria** – National Law School of India University, India. (DAP-2025-0115)

#### Applications of Artificial Intelligence Across Industries

- “NLP-Driven Early Detection of Alzheimer’s Disease to Support Policy and Health System Decision-Making”; Jason **Gan** – The University of Hong Kong, China, Jacqueline Ck **Lam** – The University of Hong Kong, China, Victor Ok **Li** – The University of Hong Kong, China. (Submission #126)
- “Problems and Dilemmas of Introducing AI Translation in the Translation Industry”; Wenjing **Guo** – Doshisha University, Japan. (Submission #111)

#### Current Status and Future of Artificial Intelligence Governance

- “Diet Code - The Hidden Cost of Code Bloat: AI Development, Internet Strain, and the Erosion of Net Neutrality”; Ryan **Payne** – University of Canberra, Australia. (Submission #147)

#### Other topics

- “Soft Ethics vs. Hard Regulation: A Comparative Study of AI Governance Tools and Trust-Building in China and the Nordic Region”; Xizi **Liu** – The Hong Kong University of Science and Technology, China, Guanrui **Hong** – Lund University, Sweden. (Submission #143)

**Chair(s):** Ming **Xu**, Tongji University; Yue **Song**, Tongji University

## 4. CONFERENCE PROGRAMME

### Day 2: Friday, October 24<sup>th</sup>

Time	Programme
<b>Session 3B (Lecture Hall B80)</b>	

#### Artificial Intelligence Ethics and Social Responsibility

- “Local Wisdom, Global Templates: Crafting a Culture-responsive AI Law for Indonesia”; Firman **Darajat** – Ministry of Finance of Republic of Indonesia, Tax Audit, Indonesia, Arief **Noegraha** – Ministry of Finance of Republic of Indonesia, Vishnu **Baroto** – Institute of Science Tokyo, Social and Human Science, Japan; Ministry of Finance of Republic of Indonesia, Tax Audit. (DAP-2025-0116)

#### Applications of Artificial Intelligence Across Industries

- “Breaking Down Barriers Assistant: Leveraging AI to Conduct Policy Analysis with Complex Data”; Ujjwal **Kc** – The University of Melbourne, Australia, Rajeev **Samarage** –The University of Melbourne, Australia, Jan **Kabatek** –The University of Melbourne, Australia. (Submission #141)

#### Current Status and Future of Artificial Intelligence Governance

- “Guiding AI’s Trajectory Toward Legitimate Autonomy”; Zeynep **Engin** – Data for Policy CIC & University College London, United Kingdom. (Submission #145)

#### Global Governance and Cooperation in Artificial Intelligence

- “Building Trustworthy AI in Digital Forensics: Tools, Ethics & Framework”; Wishnu Agung **Baroto** – Institute of Science Tokyo, Japan/Ministry of Finance of Republic of Indonesia, Indonesia. (Submission #122)

#### Innovation and Challenges in Frontier Technologies of Artificial Intelligence

- “Cross-Modal Speech Imputation and Marker Discovery for Alzheimer’s Detection Using Multi-Modal Large Language Models”; Yang **Han** – The University of Hong Kong, China, Jacqueline Ck **Lam** – The University of Hong Kong, China, Victor Ok **Li** – The University of Hong Kong, China, Lawrence YI **Cheung** – The Chinese University of Hong Kong, China. (Submission #124)

**Chair(s):** Ying **Sun**, Tongji University; Dongliang **Zheng**, Tongji University

11:55 - 14:00	Lunch Break
14:00 - 15:00	<b>Parallel Session 4</b>
<b>Session 4A (Lecture Hall A300)</b>	

#### Innovation and Challenges in Frontier Technologies of Artificial Intelligence

- “A Pilot Study of Jurimetrics and AI for Indonesian Tax Court Decisions: Towards an Integrated Decision Support System”; Wishnu **Erlangga** – University of Glasgow, United Kingdom, Bagas **Wibowo** – Directorate General of Taxes; University of Glasgow, United Kingdom, Wishnu **Baroto** – Tokyo Institute of Technology, Social and Human Science, Japan; Directorate General of Taxes, Tax Audit, Indonesia, Poento **Hariyadi** – Directorate General of Taxes, Indonesia. (DAP-2025-0117)

#### Applications of AI Across Industries

- “AIMS-QA: A Framework for Scaling Beyond Compliance the Assessment of Corporate Modern Slavery Statements with AI-powered Question Answering”; Adriana Eufrosina **Bora** – Queensland University of Technology, Australia, Duoyi **Zhang** – Queensland University of Technology, Australia, Hannah **Thinyane** – Diginex Ltd, Md Abul **Bashar** – Queensland University of Technology, Australia, Richi **Nayak** – Queensland University of Technology, Australia, Kerrie **Mengersen** – Queensland University of Technology, School of Mathematical Sciences, Australia. (DAP-2025-0121)

**【Online】**

#### Artificial Intelligence Ethics and Social Responsibility

- “Dynamic Vulnerability: AI’s Influence on Consent and Decision-Making in Consumer and Political Domains”; David Uriel **Socol de la Osa** – Hitotsubashi University, Japan. (Submission #118)

## 4. CONFERENCE PROGRAMME

### Day 2: Friday, October 24<sup>th</sup>

Time	Programme
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#### Session 4A (Lecture Hall A300)

- “A Confucian Political Philosophy for Responding to the Impact of Artificial Intelligence”; Liulin **Li** – Northwest University, China, Yuanshuai **Qi** – Shandong University, China. (Submission #135)

#### Current Status and Future of Artificial Intelligence Governance

- “Enhancing Public Comment Analysis with Large Language Models: A Modular NLP Framework for Policy Feedback Interpretation”; Qian **Xu** – The Hong Kong University of Science and Technology, China, Masaru **Yarime** – The Hong Kong University of Science and Technology, China. (Submission #117)

**Chair(s):** Taolue **Zhang**, Tongji University; Masaru **Yarime**, Hong Kong University of Science and Technology

#### Session 4B: Panel (Lecture Hall B80)

#### “AI Ethics from Principles to Practice: Assessing Trust, Justice, and Performance”

#### Speakers:

Tuba **Bircan** - Vrije Universiteit Brussel, Belgium / Alkim Almila Akdag **Salah** - Utrecht University, Netherlands / Haodong **Qi** - Malmö University, Sweden / Albert Ali **Salah** - Utrecht University, Netherlands. (Submission #131)

**Chair:** Canhui **Liu**, University College of London

15:00 - 15:15	Coffee Break
15:15 - 15:40	Keynote session 11 (Lecture Hall A300): “ <b>The Challenges of Governance in Federated Learning</b> ” <b>【Online】</b> <b>Speaker:</b> Jon <b>Crowcroft</b> , Marconi Professor of Communications Systems in the Computer Lab, at the University of Cambridge, and researcher-at-large at the Alan Turing Insititute <b>Chair:</b> Bin <b>He</b> , Tongji University
15:40 - 16:00	<b>Closing Ceremony</b> <b>Chair:</b> Bin <b>He</b> , Tongji University
16:00 - 17:30	<b>AI Company Visit - Fourier</b> (Accompanied by Shuo <b>Jiang</b> and Dongliang <b>Zheng</b> )  <b>Fourier</b> is an industry-leading general purposerobotics company, aiming to build the most reliable robots for rehabilitation and humanoid robots.

#### End of Day 2 Programme

## 5.KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### **Huiling Jiang**

#### **Brief Biography**

Professor Huiling Jiang, the Dean of the Law School at Tongji University and chairs the Shanghai Collaborative Innovation Center of AI Social Governance, is a pioneering scholar in digital justice. He previously held the position of Senior Judge at the Supreme People's Court of the People's Republic of China for 22 years, where he was responsible for overseeing national judicial reform programs, including internet courts, online dispute resolution, and judicial transparency, among others.

#### **Title of Speech**

Taking Justice Seriously in the Age of Artificial Intelligence

#### **Abstract**

The AI Safety Governance Framework 2.0 emphasizes "protecting life, health, and human dignity," which is the essence of the justice principle. Although justice has various interpretations, it remains the touchstone in AI development. This talk provides a Chinese perspective on social and judicial justice in the AI era.

## 5.KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Jamie Paik

#### Brief Biography

Jamie Paik, Founder and Director of the Reconfigurable Robotics Laboratory and Vice-Dean of the School of Engineering at EPFL, is a world-leading expert in soft and self-morphing robotics. Her “robogami” technology has applications in automotive, medical, space, and wearable systems. Her work has been published in top journals including Nature, Science, IEEE Transactions on Robotics, and Soft Robotics Journal, combining pioneering academic research with successful commercial translation.

#### Title of Speech

Embedded Intelligence for Adaptive Automation via Reconfigurable Robots

#### Abstract

As intelligent systems move into physical environments—hospitals, homes, factories—a critical challenge emerges: how do we create machines that safely navigate the dynamic complexity of the real world?

Current approaches prioritize computational sophistication through massive datasets and learning algorithms. Yet physical interaction remains the bottleneck. Rigid automation struggles with contextual adaptation; conventional robots require safety barriers that limit human-centered applications.

Recent breakthroughs in reconfigurable robotics offer a different paradigm. Self-reconfigurable modular systems autonomously change their morphology; soft-bodied robots adapt their compliance based on context. These platforms embed intelligence in physical structure—achieving safety through material properties, versatility through morphological adaptation, and resilience through distributed control.

This talk demonstrates how physical reconfigurability addresses deployment challenges computational approaches alone cannot solve, offering policymakers practical insights for governing autonomous systems: platforms whose physical design provides inherent safety, graceful failure, and human compatibility.

## 5.KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### **Lihua Xie**

#### **Brief Biography**

Lihua Xie is a Professor and President's Chair in Control Engineering and Director of the Center for Advanced Robotics Technology Innovation (CARTIN) at Nanyang Technological University, Singapore. He is a Fellow of IEEE, IFAC, and the Academy of Engineering Singapore. He serves as Editor-in-Chief for Unmanned Systems and Vice-President of the IEEE Control Systems Society. His research focuses on system theory and control, smart sensing, and unmanned systems.

#### **Title of Speech**

AI Empowered Perception and Navigation

#### **Abstract**

Embodied AI empowers autonomous robots with the ability to perceive, reason, and act based on natural language instructions and complex sensory input. This talk will present recent work on robust perception and navigation leveraging deep learning and human-readable textual cues. It will also discuss navigation powered by large language models, focusing on zero-shot object navigation using open-ended natural language, without requiring predefined categories or prior environmental knowledge.

## 5. KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Weiwen Duan

#### Brief Biography

Weiwen Duan, Professor at Research and Promotion Centre for Artificial Intelligence, Chinese Academy of Social Sciences. He specializes in philosophy of science and technology, and the social and ethical aspects of ICTs and AI. He is an Invited Expert at the AI Safety and Governance Program of the World Internet Conference (WIC) Specialized Committee on AI. He is also on the editorial board of the Journal of Responsible Innovation. His publications include *The Ethical Foundations of the Information Civilization* (2020), *Acceptable Science: Reflections on the Foundations of Contemporary Science* (2014), *The Ethical Foundation of Cyberspace* (2002), etc.

#### Title of Speech

AI Ethics from the Perspective of AI Governance: China's Approach and Future Directions

#### Abstract

With the rapid development of digital technology and AI, AI governance has become a key initiative for countries to strike a balance between mitigating risks and promoting innovation. Faced with AI, an increasingly complex and evolving hyper-object of governance, China has established AI ethics as the value foundation for AI security and governance, enriching its meaning through relevant laws, regulations, standards, and guidelines. Thus, AI ethics is no longer merely an academic inquiry for ethicists, but a boundary-object jointly constructed by diverse stakeholders. Furthermore, China has designated AI ethics as a key area within the national science and technology ethics governance system, positioned as a management and service mechanism guided by national industrial sectors. In building the future intelligent society, the key challenge for AI ethics lies in navigating the disruptive cognitive impact of this cognitive technology on humanity, thereby establishing appropriate boundaries for its deep integration across society.

## 5.KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Jiang Liu

#### Brief Biography

Jiang Liu is a Professor in the Department of Communications and Computer Engineering at Waseda University. She also serves as Vice Director of the Global Information and Telecommunication Institute and Chair of the Computer Science and Communications Engineering Major. In addition, she has been a committee member of the Institute of Image Electronics Engineers of Japan (IIEEJ) and the Institute of Electronics, Information and Communication Engineers (IEICE), and currently serves as Secretary of the Japan Division of the Institution of Engineering and Technology (IET). Her research focuses on wireless communications, wireless network systems, AI systems, and their industrial applications.

#### Title of Speech

Towards AI-Driven Intelligent Sensing and Connectivity: Smart Devices for Next-Generation Healthcare Systems

#### Abstract

AI and Near Field Communication (NFC) technologies have attracted significant attention for developing sensing systems in healthcare monitoring and secure short-range data exchange. We design and develop contactless smart devices that leverage AI and NFC to acquire vital data such as pulse rate, SpO<sub>2</sub>, blood pressure, and blood glucose, while also recognizing human language and interpreting emotions without relying on traditional input interfaces. This talk provides an overview of non-contact data sensing technologies and smart devices, highlighting the latest research outcomes.

## 5.KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### David Barber

#### Brief Biography

Professor David Barber is the Director of the UCL Centre for Artificial Intelligence and a Fellow of the Alan Turing Institute. A leading scholar in Machine Learning and AI, he co-led the Opensource Imaging Consortium, an international initiative using Machine Learning to improve CT-based lung disease diagnosis. His main research focuses on Bayesian methods, with over 100 publications. He contributed to introducing Gaussian Processes for Classification and advancing variational methods for large-scale approximate inference, which are now central to modern deep-learning approaches in AI. His representative work includes Bayesian Reasoning and Machine Learning.

#### Title of Speech

The Challenge of Explainable AI

#### Abstract

Understanding how complex models based on deep learning is both challenging and important. This is particularly the case in applications in which we are looking for explanations behind predictions. For example, in medical imaging, it is important to understand why a prognosis is made — both for the patient and also for potential discovery of underlying disease mechanisms. More generally the public will trust AI systems that can provide interpretable explanations for their decisions. I'll discuss the challenges around explainable AI particularly from an image-perspective and some possible ways forward.

## 5. KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Ruipeng Lei

#### Brief Biography

Ruipeng Lei is Professor of Bioethics, Director of Center for Ethics and Governance of Science and Technology, and Vice Dean of Advanced Institute of the Humanities and Social Sciences, University of Electronic Sciences and Technology of China. She established Research Center for Bioethics at Central China University of Science and Technology in Wuhan in 2002 as Co-founder and Executive Director till 2022. Her research interest focuses on ethical and governance issues relevant to emerging technologies. She has published over 100 research, review and commentary articles and 10 books written and edited in English and Chinese. She published a comment article “Reboot ethics governance in China” as first author in *Nature* in 2019 which has a positive impact on a series of regulations and legislation in China. Currently she leads national key projects and has contributed to policy formulation for WHO, UNESCO, and China’s Biosecurity Law and genetic resources regulation.

#### Title of Speech

The Ontological and Moral Status of Biomedical Data

#### Abstract

This study examines disputes over the ownership of biomedical data. Reviewing the HeLa cells case, Iceland’s deCODE genomic database, and the NHS–DeepMind collaboration, it highlights tensions between ownership and control, group and family privacy, and platform governance and data sovereignty. Ontologically, it defines the conceptual boundary of biomedical data, identifies its 4V/3H features, and uses the metaphors of oil, light, gift, and trust to show both resource-like and personhood-related attributes. Regarding moral status, it proposes a composite path starting from an infosphere community, expanding moral protection to informational entities while maintaining the normative centrality of human beings in the information ecology. Finally, it argues that the custodianship model, supported by fiduciary duties and co-governance, provides a more feasible balance between individual protection and public good.

## 5. KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Lei Ma

#### Brief Biography

Lei Ma is an Associate Professor at the University of Tokyo and the University of Alberta. He holds the Canada CIFAR AI Chair and is a Fellow of the Alberta Machine Intelligence Institute (Amii). His research centers on the interdisciplinary fields of human-centered trustworthy artificial intelligence (AI), software engineering (SE), and cyber-physical systems (CPS), with particular emphasis on quality, reliability, safety, and security assurance, as well as the interpretation and human interactivity of AI systems. Many of his works have been published in top-tier venues in AI, software engineering, and security.

#### Title of Speech

Trustworthiness Assurance of Intelligent Systems in the Age of AI Agents

#### Abstract

Recent advances in AI-enabled systems have driven a surge of intelligent applications across diverse domains. This growth has been further accelerated by the emergence of large foundation models, which now form the backbone of many modern AI agentic systems. However, the increasing complexity and centralization of these models introduce new challenges for ensuring their trustworthiness. This talk provides a high-level overview of our ongoing research on trustworthiness assurance and systematic engineering of AI-enabled systems in the era of AI agents.

## 5. KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Lucas Noldus

#### Brief Biography

Lucas Noldus is the founder and Chief Scientist of Noldus Information Technology, a developer of software tools and integrated measurement systems for the study of human behavior and human-system interaction, headquartered in Wageningen, The Netherlands. Noldus' systems have found their way into thousands of academic and industrial research labs around the world. Furthermore, Lucas Noldus is Professor of Behavior, Information Technology and Innovation at Radboud University, Nijmegen, The Netherlands. He has (co-)authored more than 140 papers and conference presentations about methods and techniques in behavioral research. In 2023, Lucas Noldus was elected Fellow of the Netherlands Academy of Engineering.

#### Title of Speech

The European GDPR and AI Act: Implications for Behavioral Research

#### Abstract

The European Union's General Data Protection Regulation (GDPR) and Artificial Intelligence Act (AI Act) are key instruments for ensuring a safe and trustworthy digital society in Europe. The GDPR, effective since May 2018, enhances individuals' control over personal data and unifies data protection across the EU. The GDPR enforces the clear disclosure of data collection and use in software interfaces and the obtaining of user consent. The AI Act has broader implications, explicitly regulating emotion recognition based on biometric data, classifying it as "high risk," and prohibiting its use in workplaces and education. While protecting users, these rules may limit innovations that enhance comfort, wellbeing, and health. Hence, achieving an appropriate balance between innovation and regulation is crucial to ensure that Europe can fully realize the benefits of emerging technologies while effectively managing associated risks.

## 5. KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Sumei Cheng

#### Brief Biography

Sumei Cheng is a Professor at the Philosophy Institute of the Shanghai Academy of Social Sciences and the Editor-in-Chief of The Journal Philosophical Analysis. Her research interests include the philosophy of science, the philosophy of quantum mechanics, the philosophy and ethics of AI, and the philosophy of leisure. Her recent publications include Philosophical Explorations in the Age of Intelligence and Philosophical Reflections on the Future of Science and Innovation.

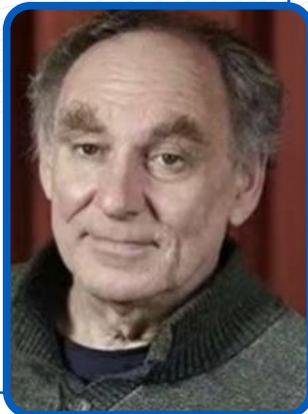
#### Title of Speech

A Vision for an Emergent Ethics of Responsibility Framework

#### Abstract

The Emergent Ethics of Responsibility is a novel conceptual framework that integrates the notion of emergence from complexity science with the ethics of responsibility in moral philosophy. It emphasizes the non-traceability, hierarchical structure, and emergent nature of responsibility, while recognizing the uncertainty and unpredictability inherent in intelligent complex systems. This framework provides a lens for analyzing and addressing new ethical challenges arising from complex technological systems, in which responsibility cannot be ascribed to any single individual. This presentation will further elaborate on the theoretical foundation and construction of this framework.

## 5. KEYNOTE SPEAKERS AND KEYNOTE SPEECHES



### Jon Crowcroft

#### Brief Biography

Jon Crowcroft, Marconi Professor of Communications Systems in the Computer Lab at the University of Cambridge, and researcher-at-large at the Alan Turing Institute, focuses on computer networks, distributed systems, and quality of service, with expertise in theoretical network science and network switching. He has authored books adopted internationally and published numerous papers in networking and distributed systems. He served as General Chair of ACM SIGCOMM and received the SIGCOMM Award and other international honors.

#### Title of Speech

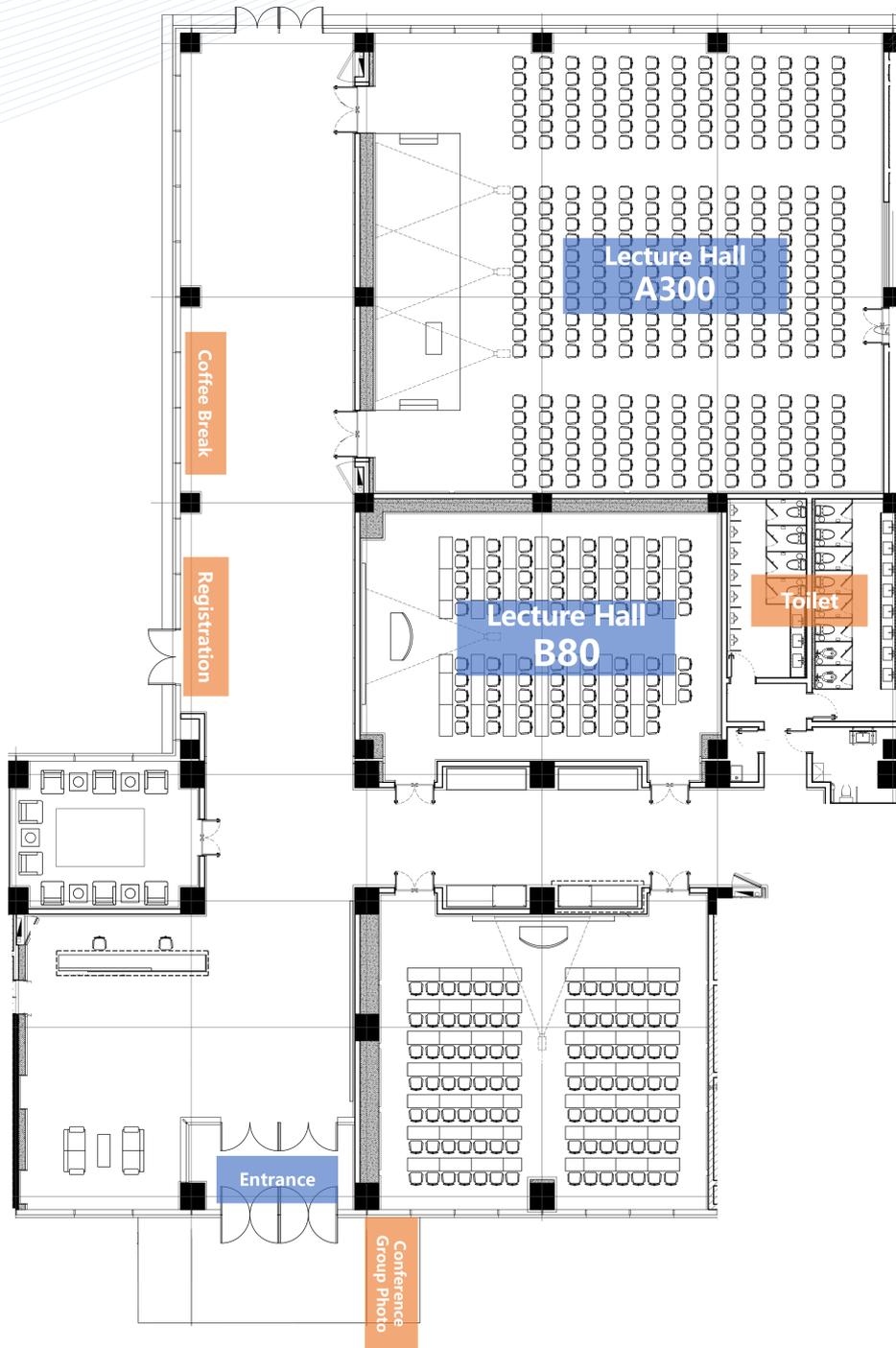
The Challenges of Governance in Federated Learning

#### Abstract

The Internet provides nearly 50 years of lessons in federated systems, from E-Mail in the 1970s, the Domain system in the 1980s, inter-domain routing in the 1990s, to the "Fediverse" in the 2020s. Each system has evolved over time: for example, E-Mail adopted DMARC and DKIM to reduce spam from unaccountable sources, DNS added certificates and CA Transparency, and BGP speakers check a (somewhat) centralized database to verify IP ownership. The Fediverse, epitomized by BlueSky and Mastodon, has decentralized rules for content moderation. Federated learning faces potentially harder challenges. Despite being inherently cooperative, it is vulnerable to threats such as model drift, membership inference, model inversion attacks, denial and theft of service, and pollution/poisoning attacks. As a general-purpose technology, it is not amenable to static one-shot solutions, and research is needed to explore governance and future stability without simply re-centralizing.



## 6. MAP OF SRIIAS AND VENUE FLOOR PLAN



Venue Floor Plan

## 7.HOTEL AND SHUTTLE BUS

### Hotel Information

Shanghai Zhangjiang Voco Hotel

Address: No. 811 Huaxia East Road, Pudong New Area, Shanghai

Telephone: (021)3880 9999

### Shuttle bus information

#### Timetable

##### Day 1: 23<sup>rd</sup> October

Direction	No.	Departure Time
From Voco Hotel to SRIIAS Tongji(Conference Venue)	1	08:10
	2	08:30
	3	13:00
From SRIIAS (Conference Venue)Tongji to Voco Hotel	1	12:30
	2	15:50
	3	17:50

##### Day 2: 24<sup>th</sup> October

Direction	No.	Departure Time
From Voco Hotel to SRIIAS Tongji(Conference Venue)	1	08:10
	2	08:30
	3	13:30
From SRIIAS (Conference Venue)Tongji to Voco Hotel	1	12:00
	2	16:10

## 8.INTRODUCTION TO THE MAIN ORGANIZERS

### **Shanghai Research Institute for Intelligent Autonomous Systems, Tongji University**

On December 17, 2018, the Shanghai Research Institute for Intelligent Autonomous Systems was inaugurated, established with the support of Tongji University.

Guided by the principles of scientific development and a holistic, systematic approach, the Shanghai Research Institute for Intelligent Autonomous Systems addresses the scientific advancement and critical demands of intelligent autonomous systems. With its primary tasks centered on scientific discovery, knowledge creation, and technological innovation in the field of artificial intelligence, the institute brings together top-tier talent from around the world, builds infrastructure for fundamental scientific research, and establishes key research and development platforms.

Focusing on three core scientific challenges—"Autonomy and Perception", "Intelligence and Emergence", and "Collaboration and Swarm Intelligence"—the Shanghai Research Institute for Intelligent Autonomous Systems conducts research across multiple directions, including metamaterial-based sensing, multi-scale integration, nature-inspired computing, human-machine-electromechanical integration, autonomy and interaction, and multi-agent systems and collaboration. The institute is committed to constructing major national scientific research infrastructures, establishing research centers for next-generation devices and algorithms, and advancing integrated research platforms for land, sea, air, and space autonomous intelligent agents and multi-agent systems. It also focuses on developing applied technology platforms for unmanned systems, making breakthroughs in core technologies such as smart sensors, intelligent control, unmanned devices, and networked cooperative control systems. Through these efforts, the institute aims to achieve a series of internationally leading, original innovations in the field of intelligent autonomous unmanned systems, driving industrial transformation in areas such as smart cities, intelligent transportation, intelligent construction, smart manufacturing, and intelligent healthcare.



## 8.INTRODUCTION TO THE MAIN ORGANIZERS

### **Tongji University Shanghai Collaborative Innovation Center for AI and Social Governance**

The Tongji University Shanghai Collaborative Innovation Center for AI and Social Governance was established in 2021. Leveraging Tongji University's interdisciplinary strength, it integrates multidisciplinary expertise spanning law, economics and management, humanities, information science, transportation, and autonomous systems, collaborating with Alibaba, Fudan University, Shanghai Jiao Tong University, and the Chinese Academy of Social Sciences to conduct joint innovation.

The Center aims to address major issues in AI social governance, tackling critical practical and industry-wide challenges in AI development. It gathers AI governance experts, innovates talent training system, supports interdisciplinary research, and provides public services through open-access knowledge platforms to promote AI ethics and governance awareness, enhance digital literacy, and advance urban digital transformation. Its research focuses on AI risk prediction and assessment, social perception and ethical norms, safety supervision and legal governance, as well as experimental scenarios and institutional norms for AI social governance. In recent years, the Center has contributed to drafting the "Shanghai Regulations on Promoting the Development of the Artificial Intelligence Industry," the "Model AI Law (Expert Proposal Draft)," and national AI legislative proposal; released key guidelines such as the "Operational Guidance for Ethical Norms in Large AI Models," "Generative AI Risk Assessment Framework (1.0);" participated in compiling Shanghai local standards; published book series and translations; built the Global AI Governance Database and the Autonomous Driving Data Compliance Assessment Platform; and hosted the World AI Conference Intelligent Society Forum, conducting public lectures with broad societal impact.



## 9. INTRODUCTION TO THE SPONSORS

### Lightwheel Limited

Lightwheel, founded in 2023, is dedicated to enabling the deployment of AI in the physical world through advanced simulation and synthetic data technologies. The company's mission is to bridge the gap between simulation and reality to accelerate the development of embodied intelligence. By integrating physics-based simulation, generative AI, and large-scale data pipelines, Lightwheel builds the digital foundation that allows robots and intelligent systems to see, think, and act with real-world precision.



## Lightwheel

At the core of Lightwheel's offering is the End-to-End Embodied AI Data Factory — an integrated framework that connects data collection, simulation, generation, and policy evaluation across both virtual and real environments. By combining high-quality simulation, synthetic data generation, and AI-driven augmentation, Lightwheel provides visually and physically realistic datasets that power large-scale embodied AI training and real-world deployment.

As of early 2025, Lightwheel has partnered with global leading Companies, as well as top research institutions including Stanford University and MIT. Focused on the embodied intelligence domain, Lightwheel has become a global leader in synthetic data and simulation-based training solutions for robotics and AI.

Lightwheel's technologies are deployed across a wide range of industries — from autonomous driving and industrial automation to humanoid robotics and research. By delivering scalable, reproducible, and physics-accurate simulation pipelines, Lightwheel enables enterprises to shorten development cycles, expand data diversity, and accelerate model generalization.

Through deep collaboration with ecosystem partners and the Newton physics engine, Lightwheel continues to advance the frontier of simulation and data infrastructure for embodied AI. Its solutions are designed not only to train intelligent systems efficiently, but also to validate, evaluate, and continuously improve them before real-world deployment — significantly reducing cost, risk, and iteration time.

Looking ahead, Lightwheel is building a global network of research and industrial partners to shape the next generation of simulation standards and data ecosystems, driving the adoption of AI in the physical world.

## 9. INTRODUCTION TO THE SPONSORS

### Shanghai Zentek Intelligent Technology Co., Ltd.

Shanghai Zentek is specializing in GPU-accelerated data center solutions. The company provides GPU-based hardware and software systems for clients in robotics, education and research, intelligent computing centers, healthcare, energy, finance, manufacturing, and media. Our services include consulting and planning, solution testing and deployment, and ongoing operation and maintenance for AI infrastructure. Zentek's wholly owned subsidiary, Shanghai LiChan Technology Co., Ltd. LiChan focuses on intelligent computing cloud platforms and AI training acceleration, operating its in-house ChanCloud platform that delivers end-to-end accelerated computing from infrastructure to application.



### 1. Business Overview

#### Comprehensive GPU-Accelerated Cloud Services

- Provides end-to-end GPU cloud solutions, including GPU, networking, and software stacks such as NVAIE, NIMs, and Omniverse (OVE).
- Offers elastic scalability to support diverse workloads, including training and inference for large language models and industry-specific AI applications.
- Operates a self-developed cloud platform that supports various use cases such as artificial intelligence, robotics training, and high-performance computing (HPC), meeting customers' diverse computing needs.

#### Modular Private Cloud Construction Services

- Bare-metal infrastructure · Computing resource management platform · AI acceleration toolkit platform · AI application marketplace · Data collection platform

### 2. We Continuously Deliver Value Across Four Key Areas

#### Artificial Intelligence, Big Data & High-Performance Computing Platforms

- Leveraging NVIDIA's core technologies, we provide clients with AI and big data solutions and professional services, including system design, infrastructure development, and operations management.

#### Industry Solutions

- We deliver accelerated computing solutions for clients in intelligent computing centers, education and research, energy, finance, manufacturing, healthcare, design, and media industries.

#### AI Talent Development

- NVIDIA DLI Certification
- Training on NVIDIA GPU and networking technologies
- Workshops on NVIDIA software platforms such as Omniverse (OVE) and NVAIE

#### Platform Development

- GPU resource management platform
- AI training and inference platform
- Embodied / robotics training platform
- Simulation platform

