


CONFERENCE HANDBOOK ・ 大會手冊

# The 31st International Conference on Technologies and Applications of Artificial Intelligence

第 31 屆人工智慧技術與應用國際研討會

Agentic AI & Physical AI for Sustainable Innovation

代理式 AI 與實體 AI 的跨域永續創新

**November 20–21, 2026**

The Great Roots Forestry Spa Resort ・ Sanxia, New Taipei City, Taiwan

大板根森林溫泉酒店

https://taai2026.github.io/

Organized by the Taiwanese Association for Artificial Intelligence (TAAI) × National Taipei University (NTPU)
・ taai2026org@gmail.com

歡迎詞

# Welcome

## Where Agentic AI Meets Physical AI

Dear colleagues and friends, welcome to TAAI 2026! The 31st International Conference on Technologies and Applications of Artificial Intelligence takes place on November 20–21, 2026 at The Great Roots Forestry Spa Resort in Sanxia, New Taipei City, co-organized by the Taiwanese Association for Artificial Intelligence (TAAI) and National Taipei University (NTPU). I am especially grateful to the NTPU team and our Academia Sinica partners for their dedication, and to every author, reviewer, and volunteer.

TAAI is one of the longest-running AI conferences in Taiwan, with long-standing exchange with the Japanese Society for Artificial Intelligence (JSAI); International Track proceedings are published by Springer CCIS. As President of the association, my hope is that this is where Taiwan's AI community gathers every year: senior researchers, early-career scholars, industry, and students, under one roof.

This year's theme is Agentic AI and Physical AI for Sustainable Innovation. As AI moves from answering questions to planning, using tools, completing tasks on its own, and then into robots, sensors, and the physical world, we need more than more powerful models: we need collaboration across disciplines and a shared commitment to sustainable and trustworthy AI. This is the role the association hopes to play: connecting academic research, industry needs, and the next generation of talent.

We are honored to host four keynote speakers: Prof. Philip S. Yu (University of Illinois Chicago, USA), Prof. Yu Tsao (Academia Sinica, Taiwan), Prof. Ljiljana Trajkovic (Simon Fraser University, Canada), and Prof. Kazunori Komatani (The University of Osaka, Japan), who will share frontier perspectives from graph foundation models and speech to network security and dialogue systems.

Beyond international and domestic oral and poster sessions, the two days include industrial tracks, the Young Woman Star session, high-school sessions, the AI CUP and NAPAI Agentic AI Innovation Competition for Campus Applications, and the TAAI Master's and Doctoral Thesis Awards. Members are warmly invited to the General Assembly at noon on November 20.

Please make the most of these two days: step into sessions and ask questions, linger at the posters, and meet new friends over coffee and at the welcome banquet. May this forest be where good ideas meet. We wish you a rewarding conference!

## 當代理式 AI 遇見實體 AI

親愛的各位來賓、學者與朋友們：歡迎蒞臨 TAAI 2026！第 31 屆人工智慧技術與應用國際研討會，將於 2026 年 11 月 20–21 日在新北市三峽區的大板根森林溫泉酒店舉行，由學會與國立臺北大學共同主辦。我要特別感謝臺北大學團隊與中央研究院夥伴的投入，也謝謝每一位作者、審查委員與志工。

TAAI 是臺灣歷史最悠久的人工智慧學術會議之一，並長期與日本人工知能學會（JSAI）保持交流，國際論文組的論文集由 Springer CCIS 出版。身為學會理事長，我希望這裡是臺灣 AI 社群每年相聚的地方：資深學者、年輕研究者、產業夥伴與學生，在同一個場域交流。

本屆主題是「代理式 AI 與實體 AI 的跨域永續創新」。當 AI 從回答問題走向自主規劃、使用工具、完成任務，又進一步走進機器人、感測與真實世界，我們需要的不只是更大的模型，更是跨領域合作，以及對永續與可信賴 AI 的共同承諾。這也是學會希望在這個時代扮演的角色：把學界研究、產業需求與下一代人才串在一起。

為此，大會邀請四位傑出的主題演講講者：美國伊利諾大學芝加哥分校的 Philip S. Yu 教授、中央研究院的曹昱研究員、加拿大西門菲莎大學的 Ljiljana Trajkovic 教授，以及日本大阪大學的 Kazunori Komatani 教授，從圖基礎模型、語音、網路安全到對話系統，分享前沿觀點。

兩天的議程除了國際與國內論文的口頭及海報發表，還有產業軌道、青年女性之星、高中生場次、AI CUP 與 NAPAI Agentic AI 校園創新競賽，以及 TAAI 碩博士論文獎。11 月 20 日中午的會員大會，也請會員撥冗參加。

請善用這兩天：走進場次並勇於提問，在海報前多停留，在茶敘與歡迎晚宴結識新朋友。願這片森林成為好點子相遇的地方。祝福大會圓滿成功，各位滿載而歸！


**Richard Tzong-Han Tsai**
TAAI President and General Chair
National Central University

**Min-Yuh Day**
General Chair
National Taipei University

**Ling-Jyh Chen**
General Chair
Academia Sinica

TAAI 2026 籌備委員會

# TAAI 2026 Organizing Committee

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| **Yu-Shan Chen** | National Taipei University |
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| **Min-Yuh Day** | National Taipei University |
| **Ling-Jyh Chen** | Academia Sinica |

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| **Yi-Hsin Chen** | National Tsing Hua University |
| **Chuan-Kang Ting** | National Tsing Hua University |
| **Shou-De Lin** | National Taiwan University |
| **Hsuan-Tien Lin** | National Taiwan University |
| **Yu Tsao** | Academia Sinica |

## International Track Program Chairs

| | |
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| **Wei-Lun Chang** | National Taipei University |
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| **Chi-Chun Lee** | National Tsing Hua University |
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|---|---|
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| **Jun-Cheng Chen** | Academia Sinica |
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| | |
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| **Yun-Nung Chen** | National Taiwan University |
| **Chih-Hua Tai** | National Taipei University |

## AI Cross Domain Sustainable Innovation Chairs

| | |
|---|---|
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| **Chan-Yun Yang** | National Taipei University |
| **Chi-Jui Huang** | National Taipei University |
| **Sherry Chia-Ying Chan** | National Taipei University |
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| **Chien-Ping Chung** | National Taipei University of Technology |

## Nectar Program Chairs

| | |
|---|---|
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| **Li Su** | Academia Sinica |

## AI Education and Digital Learning Leadership Chairs

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|---|---|
| **Wan-Chi Chen** | National Taipei University |
| **Yun-Hsuan Lien** | Academia Sinica |
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## Special Session Chairs

| | |
|---|---|
| **Sheng-Yu Peng** | National Yang Ming Chiao Tung University |
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## AI Competition Chairs

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|---|---|
| **Yu-Te Wang** | Academia Sinica |
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## Game Tournament Chairs

| | |
|---|---|
| **Kuan-Yu Chen** | National Taiwan University of Science and Technology |
| **Shi-Jim Yen** | National Dong Hwa University |
| **Jr-Chang Chen** | National Taipei University |

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| | |
|---|---|
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## TAAI High School Session Chair

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| **Yi-Ning Tu** | Fu-Jen Catholic University |
| **Camille Hu** | Chung Yuan Christian University |

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| **Chia-Ru Chung** | National Central University |

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|---|---|
| **Ling-Yen Pan** | National Taipei University |

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|---|---|
| **Huai-Sheng Huang** | National Taipei University |

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| **Chia-Yu Lin** | National Central University |
| **Chia-Ru Chung** | National Central University |

Compiled from the website's committee page; one person may appear on more than one committee.

# Program at a Glance

All times are Asia/Taipei (UTC+8). Program edition: 2026-11-14.

## TAAI 2026 Day 1 • Friday, November 20, 2026

| Time | Plenary Hall<br>5F Lishan Hall | Room A<br>2F Lijing Hall A | Room B<br>2F Lijing Hall B | Room C<br>2F Liquan Hall C1 | Room D<br>7F Summit Hall | Poster Area<br>2F Liquan Hall exhibition area |
|---|---|---|---|---|---|---|
| **08:00-17:00** | Registration<br>[5F Lishan Hall open courtyard] | | | | | |
| **09:20-09:30** | **Opening Ceremony**<br>**Welcome remarks: Dalton Lin (President, National Taipei University); Richard Tzong-Han Tsai (President of TAAI and General Chair)** | | | | | |
| **09:30-10:20** | **Keynote Speech I**<br>Beyond Words: Riemannian Geometry for Next-Generation Graph Foundation Models<br>**Prof. Philip S. Yu • University of Illinois Chicago, USA**<br>**Chair: Chih-Hua Tai** | | | | | |
| **10:20-10:40** | Coffee Break<br>[5F Lishan Hall exhibition area] | | | | | |
| **10:40-12:00** | Industrial Track 1<br>Chair: Ming-Shun Tsai | International Oral Session 1<br>Chair: Chien-Chang Chen | Domestic Oral Session 1<br>Chair: Ying-Jia Lin | AI CUP<br>From AI Competitions to Cross-Domain Innovation and Talent Development<br>Chair: Shih-Hung Wu | NSTC ICD MCAEP<br>Oral Presentations<br>Chair: Chia-Hui Chang | Poster Session 1<br>(International)<br>Chairs: Yung-Chun Chang, Hung-Hsuan Chen |
| **12:00-13:00** | Lunch Break<br>[5F Lishan Hall exhibition area] | | | | TAAI General Assembly & Board Meeting<br>Assembly first, then Board Meeting | Lunch Break |
| **13:00-14:20** | Industrial Track 2<br>Chair: Chien-Ping Chung | International Oral Session 2<br>Chair: Yi-Zeng Hsieh | Domestic Oral Session 2<br>Chair: Meng-Luen Wu | Cross-Domain AI Sustainable Innovation<br>Session 1<br>Chair: Min-Yuh Day | NSTC ICD<br>Program Briefing & Planning Report<br>Chair: Chia-Hui Chang | Poster Session 2<br>(Domestic)<br>Chair: Jing-Tian Sung |
| **14:20-14:40** | Coffee Break<br>[5F Lishan Hall exhibition area] | | | | | |
| **14:40-16:00** | Agentic AI Tutorial 1<br>Agentic AI Deployment in the Enterprise: Code Runs the Workflow, LLMs Provide Judgment<br>Ethan Yin-Hao Tsui • HaoAI Future Technology | International Oral Session 3<br>Chair: Shih-Chieh Tang | Domestic Oral Session 3<br>Chair: Tz-Heng Hsu | Cross-Domain AI Sustainable Innovation<br>Session 2<br>Chair: Sherry Chia-Ying Chan | TAAI Thesis Award Presentations<br>Chair: Chia-Ru Chung | Poster Session 3<br>(International)<br>Chair: Ching-Ting Tu |
| **16:10-17:00** | **Keynote Speech II**<br>Neural Speech Enhancement and Assessment and Their Applications in Assistive Oral Communication Technologies<br>**Prof. Yu Tsao • Academia Sinica, Taiwan**<br>**Chair: Hsin-Min Wang** | | | | | |
| **17:00-17:50** | **International Panel Discussion**<br>Adaptive AI in the Real World: Challenges, Opportunities, and Future Directions<br>**Moderator: Ling-Jyh Chen** | | | | | |
| **18:00-20:00** | Welcome Banquet<br>Paper awards announced<br>[1F Lichi Hall (麗池廳)] | | | | | |

# TAAI 2026 Day 2 • Saturday, November 21, 2026

<table>
<tr><th>Time</th><th>Plenary Hall<br>5F Lishan Hall</th><th>Room A<br>2F Lijing Hall A</th><th>Room B<br>2F Lijing Hall B</th><th>Room C<br>2F Liquan Hall C1</th><th>Room D<br>7F Summit Hall</th><th>Poster Area<br>2F Liquan Hall exhibition area</th></tr>
<tr><td>08:00-17:00</td><td colspan="6">Registration<br>[5F Lishan Hall open courtyard]</td></tr>
<tr><td>09:00-09:50</td><td colspan="6">Keynote Speech III<br>AI-Driven Network Traffic Analysis for Anomaly Detection and Cybersecurity<br>Prof. Ljiljana Trajkovic • Simon Fraser University, Canada<br>Chair: Chan-Yun Yang</td></tr>
<tr><td>09:50-10:10</td><td colspan="6">Coffee Break<br>[5F Lishan Hall exhibition area]</td></tr>
<tr><td>10:10-11:00</td><td rowspan="2">Young Woman Star Session<br>10:10-12:00<br>Chair: Min-Chun Hu</td><td>International Oral Session 4<br>Chair: Jian-Xing Li</td><td>Domestic Oral Session 4<br>Chair: Rong-Ming Chen</td><td rowspan="2">Cross-Domain AI Sustainable Innovation<br>Session 3<br>10:10-12:00<br>Chair: Chih-Chien Wang</td><td>Agentic AI Session 1</td><td>Poster Session 4<br>(Domestic)<br>Chairs: Ling-Yen Pan, I-Hsien Ting<br>+<br>NSTC Intelligent Computing Discipline Session 1<br>[5F Lishan Hall exhibition area]</td></tr>
<tr><td>11:10-12:00</td><td>International Oral Session 5<br>Chair: Wen-Hung Liao</td><td>Domestic Oral Session 5<br>Chair: Minghsiang Su</td><td>Agentic AI Session 2</td><td>Poster Session 5<br>(International)<br>Chair: Te-Chuan Chiu<br>+<br>NSTC Intelligent Computing Discipline Session 2<br>[5F Lishan Hall exhibition area]</td></tr>
<tr><td>12:00-13:00</td><td colspan="6">Luncheon<br>[1F Lichi Hall (麗池廳)]</td></tr>
<tr><td>13:00-14:20</td><td>Agentic AI Tutorial 2<br>From Modern Poetry to Seamless AI Cinema: Storyboarding and Camera Movement Techniques<br>Prof. Hao-Chiang Koong Lin • National University of Tainan</td><td>International Oral Session 6<br>Chair: Kuo-Chan Huang</td><td>Domestic Oral Session 6<br>Chair: Shing-Tai Pan</td><td>High School Oral Session 1: Long Papers<br>Chair: Jen-Wei Huang</td><td>NAPAI Agentic AI Innovation Competition for Campus Applications<br>Session 1<br>Chair: Chia-Hui Chang</td><td>Poster Session 6<br>(Domestic)<br>Chairs: Huai-Sheng Huang, Chuei-Huei Kung</td></tr>
<tr><td>14:20-14:40</td><td colspan="6">Coffee Break<br>[5F Lishan Hall exhibition area]</td></tr>
<tr><td>14:40-15:30</td><td>Physical AI Tutorial<br>Imitation Learning with Diffusion Models for Intelligent Embodied Agents<br>Prof. Shao-Hua Sun • National Taiwan University</td><td>International Oral Session 7<br>Chair: Chuang-Chieh Lin</td><td>Domestic Oral Session 7<br>Chair: Mao-Hsiu Hsu</td><td>High School Oral Session 2: Short Papers<br>Chair: Jen-Wei Huang</td><td rowspan="2">NAPAI Agentic AI Innovation Competition for Campus Applications<br>Session 2<br>14:40-16:30<br>Chair: Chia-Hui Chang</td><td>Poster Session 7<br>(Domestic)<br>Chairs: Ya-Tang Yang, Min-Te Sun</td></tr>
<tr><td>15:40-16:30</td><td colspan="4">Keynote Speech IV<br>Getting to Know You: Long- and Short-Term Adaptation in Dialogue Systems<br>Prof. Kazunori Komatani • The University of Osaka, Japan<br>Chair: Yun-Nung Chen</td><td></td></tr>
<tr><td>16:30-17:00</td><td colspan="6">Closing Ceremony & Awards<br>Presentation awards</td></tr>
</table>

The Computer Game Tournament is held online. Rules and the latest information are on its official website.

Live program: taai2026.github.io/program.html

會場與交通

# Venue & Getting Here



## The Great Roots Forestry Spa Resort

大板根森林溫泉酒店

No. 79, Chajiao, Chajiao Village, Sanxia District, New Taipei City 237, Taiwan

237 新北市三峽區插角里插角 79 號

- Conference-grade Wi-Fi throughout the program; the network name and password will be posted on site and at the registration desk
- Registration: 08:00–17:00 on both days
- Lunch and coffee breaks: see Program at a Glance; locations are shown on on-site signage
- On-site emergency contact: please ask at the registration desk or any conference staff member
- Contact: taai2026org@gmail.com

## Meeting Room Guide

| | |
|---|---|
| **7F** | Summit Hall • Room D (General Assembly, Thesis Awards, Agentic AI and NAPAI competition, etc.) |
| **5F** | Lishan Hall • Plenary Hall (opening, keynotes, industrial tracks, closing, awards) |
| **2F** | Lijing Hall A • Room A \| Lijing Hall B • Room B \| Liquan Hall C1 • Room C \| Liquan Hall exhibition area • Poster Area |
| **Poster** | 2F Liquan Hall exhibition area; board numbers are listed on the Paper Sessions pages, exact locations per on-site signage |

Floors and hall names follow the website's room guide.

## Getting Here

| | |
|---|---|
| **Route A<br>Free shuttle** | HSR Banqiao Station → resort about 50 min; MRT NTPU Station (Sanying Line) → resort about 25 min. Online reservation required; timetable below. |
| **Route B<br>MRT + taxi** | From HSR Banqiao Station take the Bannan Line MRT to NTPU Station (Sanying Line), about 35 min, then a taxi or shared ride of about 25 min; about 60 min in total. |
| **Route C<br>By car** | Exit Freeway 3 at the Sanying Interchange and drive through Sanxia Old Street. Free parking for attendees. About 50 min from central Taipei without traffic. |

## Free Shuttle Timetable

| Shuttle | Route | Departs → Arrives |
|---|---|---|
| **Morning, Nov. 20 & 21, 2026 • To the resort** | | |
| **Bus 1** | Taipei University Station (Sanying Line) → The Great Roots Resort | 08:30 → 08:55 |
| **Bus 2** | Banqiao HSR Station → The Great Roots Resort | 08:40 → 09:30 |
| **Evening, Nov. 20, 2026 (Day 1) • Return** | | |
| **Bus 3** | The Great Roots Resort → Taipei University Station (Sanying Line) | 20:20 → 20:45 |
| **Bus 4** | The Great Roots Resort → Banqiao HSR Station | 20:20 → 21:10 |
| **Afternoon, Nov. 21, 2026 (Day 2) • Return** | | |
| **Bus 5** | The Great Roots Resort → Taipei University Station (Sanying Line) | 17:20 → 17:45 |
| **Bus 6** | The Great Roots Resort → Banqiao HSR Station | 17:20 → 18:10 |

Reserve at aicp.ntpu.ai/events/taai-2026/shuttle (email only; up to 4 seats per booking; waitlist when full). Timetable per the latest website announcement.

主題演講

# Keynote Speeches



**TAAI 2026 Keynote Speech I**

Day 1, Fri, Nov 20, 2026 • 09:30–10:20

## Beyond Words: Riemannian Geometry for Next-Generation Graph Foundation Models


### Prof. Philip S. Yu

UIC Distinguished Professor and Wexler Chair in Information Technology, Department of Computer Science, University of Illinois Chicago • ACM / IEEE / AAAS Fellow


**Session chair: Prof. Chih-Hua Tai (National Taipei University)**


**ABSTRACT**

Graph Foundation Models (GFMs) are poised to transform graph learning, yet substantial debate remains over how to construct a general-purpose GFM analogous to Large Language Models (LLMs). Traditional Graph Neural Networks (GNNs) struggle with memory retention, principled interpretability, and multi-domain adaptation, while graph serialization limits the direct application of LLMs, as linear tokens fail to capture the rich structural complexity of graphs. In contrast, Riemannian geometry provides a natural, mathematically principled framework for modeling graph structures, offering compatibility with semantic graph learning and LLM integration. In this talk, we argue that for graphs, geometry speaks louder than words. We introduce Riemannian Graph Foundations, which prioritize intrinsic graph geometry and endow models with endogenous capabilities for structural inference and generation, moving beyond simple representation-space transformations. Recent results on building a graph foundation model within Riemannian geometric space will be presented, highlighting how this approach lays the groundwork for next-generation graph intelligence.


**BIOGRAPHY**

Dr. Philip S. Yu is a Fellow of the ACM, IEEE, and AAAS. Dr. Yu received the ACM SIGKDD 2016 Innovation Award for his influential research and scientific contributions to mining, fusion, and anonymization of big data; the IEEE Computer Society 2013 Technical Achievement Award for "pioneering and fundamentally innovative contributions to the scalable indexing, querying, searching, mining, and anonymization of big data"; and the Research Contributions Award from ICDM in 2003 for his pioneering work in data mining. He has published over 2,000 refereed conference and journal papers, which have been cited more than 278,000 times, with an H-index of 223. He has also applied for more than 300 patents. Dr. Yu served as Editor-in-Chief of ACM TKDD (2011–2017) and IEEE TKDE (2001–2004).



**TAAI 2026 Keynote Speech II**

Day 1, Fri, Nov 20, 2026 • 16:10–17:00

## Neural Speech Enhancement and Assessment and Their Applications in Assistive Oral Communication Technologies


### Prof. Yu Tsao

Research Fellow, Academia Sinica, Taiwan


**Session chair: Prof. Hsin-Min Wang (Research Fellow, Academia Sinica)**


**ABSTRACT**

This presentation is divided into three parts. Firstly, we will discuss our recent advancements in neural speech enhancement (SE), a critical element in various speech-related applications. The primary objective of SE is to enhance speech signals by mitigating distortions caused by additive and convoluted noises, thereby improving human-human and human-machine communication efficacy. We'll delve into the system architecture and fundamental theories behind neural SE approaches, as well as explore important directions aimed at achieving better performance. Moving on to the second part, we will focus on our recent progress in neural speech assessment (SA), which aims to effectively evaluate the quality and intelligibility of spoken audio—a crucial aspect in numerous speech-related applications. Traditionally, the evaluation process often relies on listening tests involving human participants, which can be both resource-intensive and impractical due to the need for a large number of listeners. To address this challenge, neural SA metrics have garnered notable attention. We will discuss the fundamental systems of neural SA, highlight several factors influencing performance, and explore emerging trends in this domain. Finally, we will present some applications of neural SE and SA in assistive oral communication technologies. These applications include impaired speech transformation and noise reduction for assistive hearing and speaking devices. Through these discussions, our aim is to illustrate the potential impact of neural-based approaches in improving communication accessibility for individuals with oral communication disorders.


**BIOGRAPHY**

Yu Tsao (Senior Member, IEEE) received the B.S. and M.S. degrees in Electrical Engineering from National Taiwan University, Taipei, Taiwan, in 1999 and 2001, respectively, and the Ph.D. degree in Electrical and Computer Engineering from the Georgia Institute of Technology, Atlanta, GA, USA, in 2008. From 2009 to 2011, he was a Researcher at the National Institute of Information and Communications Technology (NICT), Tokyo, Japan, where he conducted research and product development in multilingual speech-to-speech translation systems, focusing on automatic speech recognition. He is currently a Research Fellow (Professor) and the Deputy Director at the Research Center for Information Technology Innovation, Academia Sinica, Taipei, Taiwan. He also holds a joint appointment as a Professor in the Department of Electrical Engineering at Chung Yuan Christian University, Taoyuan, Taiwan. His research interests include assistive oral communication technologies, audio coding, and bio-signal processing. He serves as an Associate Editor for IEEE Transactions on Consumer Electronics and IEEE Signal Processing Letters. He received the Outstanding Research Award from Taiwan’s National Science and Technology Council (NSTC), the 2025 IEEE Chester W. Sall Memorial Award, and served as the corresponding author of a paper that won the 2021 IEEE Signal Processing Society Young Author Best Paper Award.



**TAAI 2026 Keynote Speech III**

Day 2, Sat, Nov 21, 2026 • 09:00–09:50

## AI-Driven Network Traffic Analysis for Anomaly Detection and Cybersecurity

### Prof. Ljiljana Trajkovic

Professor, Simon Fraser University, Canada • IEEE Fellow

**Session chair: Prof. Chan-Yun Yang (Dean, College of Electrical Engineering and Computer Science, National Taipei University)**


**ABSTRACT**

Collection and analysis of data from deployed networks is essential for understanding communication networks. Hence, data mining and statistical analysis of network data have been employed to determine traffic loads, analyze patterns of users' behavior, predict future network traffic, and detect traffic anomalies. The Internet has historically been prone to failures and attacks that significantly degrade its performance, affect the Internet connectivity, and cause routing disconnections. Frequent cases of various cyber threats have been encountered over the years and, hence, detection of anomalous behavior is a topic of great interest in cybersecurity. In described case studies, traffic traces collected by various collection sites are used to classify network anomalies. Various anomaly and intrusion detection approaches based on machine learning have been employed to analyze collected data. Deep learning, broad learning, gradient boosted decision trees, and reservoir computing algorithms were used to develop models based on collected datasets that contain Internet worms, viruses, power outages, ransomware events, router misconfigurations, Internet Protocol hijacks, and infrastructure failures in times of conflict. The reported results indicate that while performance of machine learning models greatly depends on the used datasets, they are viable tools for detecting the Internet anomalies.


**BIOGRAPHY**

Ljiljana Trajkovic received the Dipl. Ing. degree from University of Pristina, Yugoslavia, the M.Sc. degrees in electrical engineering and computer engineering from Syracuse University, Syracuse, NY, and the Ph.D. degree in electrical engineering from University of California at Los Angeles. She is currently a professor in the School of Engineering Science, Simon Fraser University, Burnaby, British Columbia, Canada. Her research interests include communication networks and dynamical systems. Dr. Trajkovic served as IEEE Division X Delegate/Director, President of the IEEE Systems, Man, and Cybernetics Society, and President of the IEEE Circuits and Systems Society. She serves as Editor-in-Chief of the IEEE Transactions on Human-Machine Systems. She is a Distinguished Lecturer of the IEEE Systems, Man, and Cybernetics Society and was a Distinguished Lecturer of the IEEE Circuits and System Society. She is a Fellow of the IEEE.



**TAAI 2026 Keynote Speech IV**

Day 2, Sat, Nov 21, 2026 • 15:40–16:30

## Getting to Know You: Long- and Short-Term Adaptation in Dialogue Systems

### Prof. Kazunori Komatani

Professor, SANKEN, The University of Osaka, Japan

**Session chair: Prof. Yun-Nung Chen (National Taiwan University)**


**ABSTRACT**

Large language models have made dialogue systems capable of generating fluent responses. However, being good with words is not the same as understanding the person one is interacting with. A dialogue agent should adapt not just to any user, but to the particular person it is talking to, whose knowledge, experiences, and feelings differ from those of others. In this talk, I will discuss our research on user-adaptive spoken dialogue systems from two complementary perspectives. The first is acquiring knowledge through interaction, particularly learning unfamiliar words by deciding when, what, and how to ask users. The second is understanding users' current states through multimodal sentiment estimation, using information from speech, facial expressions, and physiological signals. I will also discuss how these research topics relate to recent developments in agentic AI, particularly from the perspectives of state representation and action selection.


**BIOGRAPHY**

Kazunori Komatani is a Professor at SANKEN, the University of Osaka, Japan. He received his Doctor of Informatics degree from Kyoto University in 2002. He was an Assistant Professor at Kyoto University from 2002 to 2010 and an Associate Professor at Nagoya University from 2010 to 2014. He was also a Visiting Scientist at Carnegie Mellon University from 2008 to 2009. He joined SANKEN as a Professor in 2014. His research interests include spoken dialogue systems, dialogue management, user adaptation, and multimodal sentiment analysis.

**TAAI 2026 International Panel**

Day 1, Fri, Nov 20, 2026 • 17:00–17:50 • Plenary Hall (5F Lishan Hall)

## Adaptive AI in the Real World: Challenges, Opportunities, and Future Directions

**Moderator**

Prof. Ling-Jyh Chen, Research Fellow, Institute of Information Science, Academia Sinica, Taiwan

**Panelists**

- Prof. Yu Tsao, Academia Sinica, Taiwan
- Prof. Ljiljana Trajkovic, Simon Fraser University, Canada
- Prof. Kazunori Komatani, The University of Osaka, Japan

**TAAI 2026 Agentic AI Tutorial 1**

Day 1, Fri, Nov 20, 2026 • 14:40–16:00 • Plenary Hall (5F Lishan Hall)

## Agentic AI Deployment in the Enterprise: Code Runs the Workflow, LLMs Provide Judgment

**Ethan Yin-Hao Tsui**

Founder, HaoAI Future Technology Co., Ltd., Taiwan

**TAAI 2026 Young Woman Star Session**

Day 2, Sat, Nov 21, 2026 • 10:10–12:00 • Plenary Hall (5F Lishan Hall)

## Young Woman Star Session

**Moderator**

Prof. Min-Chun Hu, Professor, Department of Computer Science, National Tsing Hua University, Taiwan

**Session convener**

Prof. Lun-Wei Ku, Research Fellow, Institute of Information Science, Academia Sinica, Taiwan

**Speakers**

- Dr. Yun-Hsuan Lien, Academia Sinica, Taiwan: Adaptive and Reliable Reinforcement Learning
- Prof. Meng-Fen Chiang, National Yang Ming Chiao Tung University, Taiwan: From Facts to Trust: Structured Knowledge for Reliable LLM Reasoning
- Prof. Woan-Shiuan Chien, National Yang Ming Chiao Tung University, Taiwan: Beyond Emotion Recognition: Toward Inclusive and Trustworthy Affective AI

**TAAI 2026 Young Woman Star Session**

Day 2, Sat, Nov 21, 2026 • 10:10–12:00 • Plenary Hall (5F Lishan Hall)

## Adaptive and Reliable Reinforcement Learning

**Dr. Yun-Hsuan Lien**

Assistant Research Fellow, Research Center for Information Technology Innovation (CITI), Academia Sinica, Taiwan

**ABSTRACT**

Reinforcement learning (RL) has achieved remarkable success in games, robotics, and foundation models, demonstrating the ability to learn increasingly complex behaviors through interaction. However, deploying RL in real-world environments remains a fundamental challenge. Intelligent systems must continuously adapt to changing tasks, users, and environments while operating under uncertainty, limited data, and stringent safety requirements. Future AI systems therefore need to be not only adaptive, but also reliable. This talk presents a unified perspective on Adaptive and Reliable Reinforcement Learning for building trustworthy embodied intelligence. Recent advances in offline reinforcement learning enable policy learning from previously collected data without requiring costly or unsafe online exploration. Adaptive policy optimization further improves robustness by dynamically balancing performance and conservativeness under uncertainty, while constrained reinforcement learning enables rapid adaptation to changing safety requirements without expensive retraining. Building upon these foundations, reliable perception, multimodal interaction, and human feedback provide the basis for reinforcement learning agents that can collaborate effectively with people in dynamic environments. These capabilities naturally extend to human-centered embodied intelligence, where robots continuously co-adapt with users, personalize their behavior through long-term interaction, and make reliable decisions that balance task performance, safety, and human values. By integrating adaptive optimization, trustworthy decision making, and human-centered learning within a unified framework, this talk outlines a roadmap toward the next generation of embodied AI systems capable of lifelong adaptation, reliable autonomy, and safe collaboration with humans.

**BIOGRAPHY**

Yun-Hsuan Lien is an Assistant Research Fellow at the Research Center for Information Technology Innovation (CITI), Academia Sinica, specializing in reinforcement learning. Her work focuses on developing theoretical RL algorithms and applying them to dynamic, real-world environments. She is committed to reducing the “reality gap” by improving the robustness of RL models when leveraging simulators or pre-collected data, thereby overcoming the limitations of direct environmental interaction.

**TAAI 2026 Young Woman Star Session**

Day 2, Sat, Nov 21, 2026 • 10:10–12:00 • Plenary Hall (5F Lishan Hall)

## From Facts to Trust: Structured Knowledge for Reliable LLM Reasoning

**Prof. Meng-Fen Chiang**

Assistant Professor, Department of Electronics and Electrical Engineering, National Yang Ming Chiao Tung University, Taiwan

**ABSTRACT**

Large language models produce fluent answers, but fluency is not reliability. In practice, real-world facts often involve multiple entities and conditions, knowledge changes over time, and sources can disagree. Systems that flatten or ignore this structure tend to hallucinate or silently pick one side. This talk presents three steps toward trustworthy LLM reasoning grounded in structured knowledge. First, HyperRAG represents n-ary facts as hypergraphs so that retrieval preserves the relationships among entities and qualifiers. Second, we show how disentangling reasoning logic helps models resolve explicit knowledge conflicts instead of guessing. Third, SiGHT uses graph structure to detect hallucinated claims in domain-specific settings without manual labels. I will close with open challenges in keeping retrieval, reasoning, and evidence aligned as knowledge evolves.

**BIOGRAPHY**

Meng-Fen Chiang is an Assistant Professor in the Department of Electronics and Electrical Engineering at National Yang Ming Chiao Tung University (NYCU), where she leads the Knowledge Computing Lab. Her research focuses on trustworthy multimodal intelligence, including reasoning over knowledge graphs, hallucination and knowledge conflicts in LLMs and MLLMs, and robust multimodal reasoning. Before joining NYCU, she was a Lecturer at The University of Auckland and a Research Scientist at the Living Analytics Research Centre, Singapore Management University, and earlier worked as a senior engineer at Yahoo Taiwan. She received her Ph.D. in Computer Science from National Chiao Tung University under the supervision of Professor Wen-Chih Peng. Her recent work appears in WWW, KDD, ACL, AISTATS, and ACM TIST.

**TAAI 2026 Young Woman Star Session**

Day 2, Sat, Nov 21, 2026 • 10:10–12:00 • Plenary Hall (5F Lishan Hall)

## Beyond Emotion Recognition: Toward Inclusive and Trustworthy Affective AI

**Prof. Woan-Shiuan Chien**

Assistant Professor, Department of Electronics and Electrical Engineering, National Yang Ming Chiao Tung University, Taiwan

**ABSTRACT**

As voice-based AI agents become increasingly integrated into everyday life, understanding human emotions is essential for more natural and meaningful human-AI interactions. While speech emotion recognition has made significant progress, recognizing emotions is only the beginning. Human emotions are inherently subjective and diverse, shaped by individual differences, social contexts, and varying perceptions. In this talk, I will explore the challenges of moving beyond emotion recognition toward inclusive and trustworthy affective AI. Using speech emotion recognition as a case study, I will highlight our research on speaker–rater fairness, group and individual fairness, and the importance of accounting for human variability in affective modeling. Finally, I will discuss future directions in multimodal and context-aware affective interaction, envisioning AI systems that not only recognize emotional signals but also respect individual differences and support more reliable, empathetic human-AI communication.

**BIOGRAPHY**

Woan-Shiuan Chien is an assistant professor in the Department of Electronics and Electrical Engineering at National Yang Ming Chiao Tung University (NYCU), Taiwan. She received her Ph.D. degree in Electrical Engineering from National Tsing Hua University (NTHU) in 2025, under the supervision of Prof. Chi-Chun Lee. Her research focuses on human-centered AI, affective computing, multimodal signal processing, and trustworthy AI, with particular interests in speech emotion recognition, algorithmic fairness, and human-AI interaction. She was selected for the 2025 Rising Stars Women in Engineering (Asia) program and named a 2025 Tsing Hua Postdoctoral Research Fellow. Her honors include the IEEE Taipei Section Best Doctoral Dissertation Award (2025), IICM Ph.D. Dissertation Merit Award (2025) and NSTC Outstanding Doctoral Students Fellowship (2022–2023).

**TAAI 2026 Agentic AI Tutorial 2**

Day 2, Sat, Nov 21, 2026 • 13:00–14:20 • Plenary Hall (5F Lishan Hall)

## From Modern Poetry to Seamless AI Cinema: Storyboarding and Camera Movement Techniques

**Prof. Hao-Chiang Koong Lin**

Professor, Department of Information and Learning Technology, National University of Tainan, Taiwan

**ABSTRACT**

How can the imagery of modern poetry become a continuous cinematic journey across diverse scenes? In this talk, Hao-Chiang Koong Lin demonstrates a creative workflow that begins with his own poetry. Poetic lines are transformed into visual prompts to generate key images in Midjourney. Through successive first- and last-frame transitions, these images are animated and connected to create AI films with the visual continuity and narrative rhythm of a single uninterrupted shot. The talk explores the relationships among poetic imagery, composition, scene transitions, and camera movement. Demonstrations include journeys through Tainan, architectural fly-throughs, behind-the-scenes film set visits, post-apocalyptic landscapes, and immersive passages through famous paintings. These examples illustrate how transitions can maintain visual coherence across changing spaces and artistic styles. Lin also introduces twelve-panel storyboards and point-of-view (POV) approaches, including a technique for subtly embedding camera movement instructions within twelve-panel storyboard images. By combining visual composition with textual direction, creators can guide camera trajectories and the pacing of generated footage. Through practical demonstrations and analysis of his work, participants will explore a complete workflow from poetic inspiration and image generation to storyboarding and continuous video assembly, opening up possibilities for artistic expression, place-based storytelling, and educational content creation.

**BIOGRAPHY**

Prof. Hao-Chiang Koong Lin holds a Ph.D. in Computer Science from National Tsing Hua University and is a Professor in the Department of Information and Learning Technology at National University of Tainan, where he directs the Digital Art and Interaction Design Laboratory (DDLab). His research spans artificial intelligence, affective computing, the metaverse and extended reality, digital art, and personalized adaptive learning. He is best known for affective tutoring systems that recognize learners' emotions and adjust teaching strategies in real time. Professor Lin has served as Department Chair and Dean of Student Affairs at National University of Tainan, Dean of the College of Innovation and Design at National Taipei University of Business, and Chief Information Officer of Tainan National University of the Arts. He was a Visiting Researcher at the NEC Research Institute in Princeton. He currently chairs the Taiwan Association of Technology Art Education, leads the Ministry of Education's Arts Adaptive Learning platform, and coordinates a regional Ministry of Education metaverse advisory team. He has guest-edited special issues for journals including Sustainability, Frontiers in Artificial Intelligence, and Educational Technology & Society. He has published more than 560 works, led over 170 research and industry projects, and received 29 Best Paper Awards. In 2026, he won the Silver Globee® Award and Best of Category for Artificial Intelligence Technology Education Achievement at the Globee® Awards for Artificial Intelligence, and was ranked among the top 1.3% of scholars worldwide by ScholarGPS. He has also received the NSTC Research Award for Outstanding Talent. He has mentored 27 students who now hold teaching positions, given more than 700 talks, and delivered 41 keynote speeches. Beyond academia, Professor Lin is a published poet and digital artist; one of his poetry collections topped the Books.com.tw bestseller list for contemporary Chinese poetry. He believes that however intelligent AI becomes, education must remain centered on people.

**TAAI 2026 Physical AI Tutorial**

Day 2, Sat, Nov 21, 2026 • 14:40–15:30 • Plenary Hall (5F Lishan Hall)

## Physical AI: Imitation Learning with Diffusion Models for Intelligent Embodied Agents

**Prof. Shao-Hua Sun**

Associate Professor, Department of Electrical Engineering, National Taiwan University, Taiwan

**ABSTRACT**

Imitation learning is a paradigm within reinforcement learning in which agents acquire skills by imitating expert demonstrations rather than optimizing explicit reward functions, and it plays a critical role in applications such as autonomous driving, robotics, and game AI. Despite its practical relevance, existing imitation learning methods often suffer from limited generalization, unstable training dynamics, and strong assumptions regarding the availability and quality of supervision. This talk presents a series of works published at NeurIPS, ICML, and ICLR that leverage diffusion models to address these challenges, improving robustness and generalization, stabilizing adversarial learning, enabling learning without action annotations, extending to video-based decision-making and replanning under partial observability, and supporting effective learning from noisy demonstrations.

**BIOGRAPHY**

Shao-Hua Sun is an Associate Professor in the Department of Electrical Engineering at National Taiwan University (NTU). He received his Ph.D. from the University of Southern California and his B.S. from NTU. His research spans robot learning, reinforcement learning, program synthesis, generative models, and foundation models. His work has been published in leading venues, including NeurIPS, ICML, CoRL, ICLR, etc. He has organized tutorials and workshops at NeurIPS, ICML, RLC, and CoRL. He has been awarded the MOE Yushan Young Fellow, the NSTC Ta-You Wu Memorial Award, and the IICM K. T. Li Young Researcher Award.

特邀場次

# Invited Sessions

The invited sessions include two NSTC Intelligent Computing Discipline sessions (project reports from the MCAEP program, and a program briefing and planning report, plus the Day 2 project poster exhibition), Industrial Track 1 and the AI CUP session on Day 1, and the Cross-Domain AI Sustainable Innovation sessions, which feature invited talks by experts and scholars in cross-domain AI sustainable innovation. Times are Asia/Taipei (UTC+8). NSTC talk titles are English translations; the original Chinese title follows each one.

## MCAEP NSTC Intelligent Computing Discipline • MCAEP Oral Presentations

Day 1, Fri, Nov 20, 2026 • 10:40–12:00 • Room D • 7F Summit Hall

Session chair: Prof. Chia-Hui Chang, Department of Computer Science and Information Engineering, National Central University; Convener, Intelligent Computing Discipline, NSTC • 3 research project reports, 25 minutes each

10:40 **Privacy-Preserving Retrieval-Augmented Generation System on Heterogeneous Platforms for Efficient Data Mining (Year 1 of 3)**
基於異構平台的隱私檢索增強生成系統用於高效資料探勘（1/3）
Prof. Ming-Syan Chen
Department of Electrical Engineering, National Taiwan University

11:05 **Early Anomaly Prediction and Alert System Based on Deep Multimodal Learning (Year 2 of 4)**
基於深度多模態學習之早期異常預測技術及警示系統（2/4）
Prof. Vincent S. Tseng
Department of Computer Science, National Yang Ming Chiao Tung University

11:30 **Forward-Looking Information Technology Research on Multimodal Language Reinforcement Models (Year 3 of 4)**
多模態語言強化模型之訊息科技前瞻技術研究（3/4）
Prof. Hung-Yu Kao
National Tsing Hua University

## IND 1 Industrial Track 1

Day 1, Fri, Nov 20, 2026 • 10:40–12:00 • Plenary Hall • 5F Lishan Hall

Session chair: Ming-Shun Tsai, Taiwan AI Academy

10:40 **Future Business Models: Innovation Barriers and Business Resilience in the AI-Driven Era**
Shih-Chieh Huang
Director, Membership Data Innovation and Research Department, FamilyMart Taiwan

11:10 **From Intelligent Assistants to Task Collaboration: AI Agents in Industry Applications and Business Transformation**
Shihyu Alex Chu
Industry Consultant and Section Director, Market Intelligence & Consulting Institute (MIC), Institute for Information Industry

## AI CUP AI CUP: From AI Competitions to Cross-Domain Innovation and Talent Development

Day 1, Fri, Nov 20, 2026 • 10:40–12:00 • Room C • 2F Liquan Hall C1

Session chair: Prof. Shih-Hung Wu, Chaoyang University of Technology

AI CUP, the Ministry of Education’ s national AI competition for universities and colleges, uses real-world problems, purpose-built datasets and AI technology competitions to develop AI talent and foster cross-disciplinary research and industry–academia collaboration. In this session, three professors share how their competitions were planned and run, the technical challenges they met and the research that grew out of them, from three angles: competition design and talent development, Agentic AI for ESG sustainability commitment verification, and turning competition results into research and international publications. Moving from competition design to cross-domain technology to academic research, the session looks at how AI competitions can drive innovation in teaching, research, cross-disciplinary collaboration and international academic exchange, and at their role in the next generation of AI technology and talent.

10:40 **Learning and Research through Competition: Experiences in AI CUP and AI Talent Development**
Prof. Shih-Hung Wu
Department of Computer Science and Information Engineering, Chaoyang University of Technology; Co-Principal Investigator, AI CUP

11:05 **From AI CUP to Agentic AI: Designing and Implementing an ESG Sustainability Verification Challenge**
Prof. Min-Yuh Day
Graduate Institute of Information Management, National Taipei University; organizer of the AI CUP 2026 ESG Sustainability Commitment Verification Challenge

11:25 **From AI CUP to International Publications: Transforming Competition Outcomes into Research**
Prof. Hong-Jie Dai
Department of Electrical Engineering, National Kaohsiung University of Science and Technology; organizer of the AI CUP Medical Speech Sensitive Personal Information Recognition Challenge

11:45 **Panel Discussion: Challenges, Achievements and the Future of AI CUP**
Prof. Shih-Hung Wu, Prof. Min-Yuh Day, Prof. Hong-Jie Dai

## ICD NSTC Intelligent Computing Discipline • Program Briefing & Planning Report

Day 1, Fri, Nov 20, 2026 • 13:00–14:20 • Room D • 7F Summit Hall

Session chair: Prof. Chia-Hui Chang, Department of Computer Science and Information Engineering, National Central University; Convener, Intelligent Computing Discipline, NSTC • discipline briefing and subfield policy planning

13:00 **Discipline Program Briefing**
學門業務分享說明
李明霏 (Assistant Researcher)
National Science and Technology Council

13:30 **Policy Planning: Artificial Intelligence and Computational Intelligence Subfield**
人工智慧與計算智慧子領域 政策規劃分享

13:55 **Policy Planning: Data Science and Internet Subfield**
資料科學與網際網路子領域 政策規劃分享

## AISI 1 Cross-Domain AI Sustainable Innovation • Session 1

Day 1, Fri, Nov 20, 2026 • 13:00–14:20 • Room C • 2F Liquan Hall C1

Session chair: Prof. Min-Yuh Day, Graduate Institute of Information Management, National Taipei University

13:00 **AI-Driven Energy Governance and Sustainable Industrial Transformation**
Dr. Shr-Yi Chin
Senior Research Fellow, Center for Japan and Korea Studies, National Chung Hsing University, Taiwan

## AISI 2 Cross-Domain AI Sustainable Innovation • Session 2

Day 1, Fri, Nov 20, 2026 • 14:40–16:00 • Room C • 2F Liquan Hall C1

Session chair: Prof. Sherry Chia-Ying Chan, Dean, International College of Sustainability Innovations, National Taipei University • 3 invited talks + Q&A

14:40 **Combining LLM-Driven Test Generation and Combinatorial Interaction Testing for Financial RAG Chatbot Evaluation**
Prof. Chien-Ping Chung
Department of Information and Finance Management, National Taipei University of Technology

15:02 **Beyond Accuracy: Engineering Trustworthy and Sustainable AI for Real-World Deployment**
Prof. Haobijam Basanta
Department of Electrical Engineering, National Taipei University

15:24 **Governing Sustainable AI: Bringing Environmental Law into the AI Lifecycle**
Prof. Wei-Lun Chang
Department of Business Administration, National Taipei University

15:46 **Q&A with all speakers**

## AISI 3 Cross-Domain AI Sustainable Innovation • Session 3

Day 2, Sat, Nov 21, 2026 • 10:10–12:00 • Room C • 2F Liquan Hall C1

Session chair: Prof. Chih-Chien Wang, Graduate Institute of Information Management, National Taipei University

1 **Cross-Domain AI and the Challenge of the Digital Divide**
Prof. Chih-Chien Wang
Distinguished Professor, Graduate Institute of Information Management, National Taipei University

2 **From Illustrated Law to Animated Law: Sustainable Innovation in Legal Teaching Materials through Generative AI Collaboration**
Dr. Shih-Chieh Chien
Chief Executive Officer, Taiwan Law Foundation

## EXPO NSTC Intelligent Computing Discipline Exhibition, Sessions 1 & 2

Day 2, Sat, Nov 21, 2026 • 10:10–12:00 • 5F Lishan Hall exhibition area

Session 1: 10:10–11:00 (with Poster Session 4); Session 2: 11:10–12:00 (with Poster Session 5) • 13 NSTC project posters, on display in both sessions, listed by poster number. Titles are English translations except No. 15; the original Chinese title follows each one.

01 **A Metaverse-Based Drug-Craving Induction System Using Multisensory Stimuli and Situational Exposure, and an AI-Based Method for Assessing Addiction Severity**
研發基於元宇宙多感官刺激與情景式暴露的毒癮誘發系統以及基於人工智慧的成癮強度評估方法
Prof. Shih-Ching Yeh
Department of Computer Science and Information Engineering, National Central University

02 **Innovative Deep Learning for Gastrointestinal Disease Detection: Integrating an Endoscopy Foundation Model with Multiple-Instance Learning**
深度學習在腸胃疾病偵測中的創新應用：內視鏡基礎模型與多實例學習策略的整合
Prof. Ying-Feng Chang
Artificial Intelligence Research Center, Chang Gung University

03 **Advanced AI Techniques for Electromagnetic Imaging of Objects Buried beneath Non-Flat Surfaces**
先進人工智慧技術於非平坦表面下掩埋物體之電磁成像
Prof. Chien-Ching Chiu
Department of Electrical and Computer Engineering, Tamkang University

04 **Well-Being Interior Design: Bridging Cognitive Neuroscience and AI through Indoor Space Representation Learning with Encoder–Decoder Attention Networks**
安適室內設計：使用編解碼注意力網路進行室內空間表徵學習橋接認知神經科學與人工智慧
Prof. Po-Chih Kuo
Department of Computer Science, National Tsing Hua University

05 **Functional Identification of Membrane and Transport Proteins with a Multi-Window Scanning Deep Learning Model Combining Fast Multiple Sequence Alignment and Language-Model Encoding**
結合快速多重序列比對與語言模型編碼技術的多重視窗掃描深度學習模型來做膜蛋白與運輸蛋白的功能鑑別
Prof. Yu-Yen Ou
Graduate Program in Biomedical Informatics, Yuan Ze University

06 **Tumor Neoantigen Prediction with Deep Learning and Protein Language Models and Its Application to Personalized Immunotherapy**
基於深度學習和蛋白質語言模型的腫瘤新抗原預測及其在個人化免疫治療中的應用
Prof. Yu-Yen Ou
Graduate Program in Biomedical Informatics, Yuan Ze University

08 **Cross-Camera Multimodal Vehicle Tracking with Vision–Language Models**
整合視覺語言模型之跨相機多模態車輛追蹤
Prof. Chow-Sing Lin
Department of Computer Science and Information Engineering, National University of Tainan

09 **Evaluating the Quality of Embedding Features in Deep Learning Models: Developing Effective Metrics**
評估深度學習模型嵌入特徵品質：研發有效量度方法
Prof. Yi-Chieh Wu
Interdisciplinary Artificial Intelligence Center, National Chengchi University

10 **A Model-Building Platform Assisted by an LLM-Based Visual Intelligent Assistant**
基於大型語言模型之可視化智慧助理輔助模型建置平台
Prof. Jui-Hung Chang
Department of Computer Science and Information Engineering, National Cheng Kung University

11 **Exploring Immune-Related Drug Resistance Factors in Cancer through Machine Learning and Bioinformatics: Integrating scRNA-seq and Bulk RNA-seq Analyses**
透過機器學習和生物資訊學探索癌症中與免疫相關的抗藥性因素：scRNA-seq和Bulk RNA-seq分析的整合
Prof. Yen-Jung Chiu
Department of Biomedical Engineering, Chang Gung University

12 **Building a Multimodal Medical Foundation Model for Cancer with Contrastive and Federated Learning**
以對比和聯邦學習方法建立癌症多模態醫學基石模型
Prof. Che Lin
Department of Electrical Engineering, National Taiwan University

14 **A Machine-Learning-Based Gene Prioritization Database for Inborn Errors of Immunity**
以機器學習開發先天免疫缺損關連基因優先排序資料庫
Prof. Cho-Yi Chen
Institute of Biomedical Informatics, National Yang Ming Chiao Tung University

15 **A novel deep neural framework optimized by the Internet of Things (IoT) for spatial optimization and interpretable lung cancer analysis and smart healthcare systems**
Prof. Zeshan A. Khan
International Graduate School of Artificial Intelligence, National Yunlin University of Science and Technology

論文發表場次

# Paper Sessions

For oral sessions the first column is each talk's start time; for poster sessions it is the board number. 158 papers in total.

## Day 1 • Fri, Nov 20 Paper Sessions

### 10:40–12:00

#### I01 International Oral Session 1

Room A • 2F Lijing Hall A • 8 papers • Session chair: Prof. Chien-Chang Chen (Tamkang University)

| | | |
|---|---|---|
| 10:40 | #148 | **Score-Based Voting for Diverse Game-AI Teams: Bridging Optimistic and Plurality Voting**<br>Shogo Takeuchi<br>Kochi University of Technology, Japan |
| 10:50 | #194 | **Distributed Bandit Learning toward Social Optimum in Congestion Games: Nonlinear Costs and Convergence Analysis**<br>Shu-Ting Chang, Yi-Lin Chang, Kuan-Hsu Lo, Zih-Cheng Lyu<br>National Yang Ming Chiao Tung University, Taiwan |
| 11:00 | #26 | **EF1-Constrained Nash Social Welfare with Identical Additive Valuations: Complexity, Guarantees, and Experiments**<br>Zih-Sian Yang[1], Yi-Hao Chen[1], Yu-Te Kuan[1], Cheng-Jui Wu[1], Chuang-Chieh Lin[1], Po-An Chen[2]<br>[1]National Taiwan Ocean University, Taiwan [2]National Yang Ming Chiao Tung University, Taiwan |
| 11:10 | #87 | **DEPO: Dual-module Evaluator for Few-shot Prompt Optimization**<br>Chun-Pai Yang[1], Ying-Chun Lai[2], Shou-De Lin[1]<br>[1]National Taiwan University, Taiwan [2]Chung Shan Medical University, Taiwan |
| 11:20 | #207 | **Phase-wise Economic Policy Optimization for Auto-Battler Games using Evolutionary Algorithms**<br>Ching-Ting Chen, Yi-En Dong, Yi-Ruei Chen, Chuan-Kang Ting<br>National Tsing Hua University, Taiwan |
| 11:30 | #153 | **Contextual Biasing for Streaming ASR via CTC-based Word Spotting**<br>Kai-Chen Tsai[1], Tien-Hong Lo[1], Yun-Ting Sun[1], Hsueh-Wei Liao[2], Berlin Chen[1]<br>[1]National Taiwan Normal University, Taiwan [2]Realtek, Taiwan |
| 11:40 | #195 | **SpokenWait: A Benchmark for Real-Time Voice Agents Awaiting Tool Results**<br>Bo-Xuan Zheng, Yu-Kai Guo, Ho-Lam Chung, Hung-yi Lee<br>National Taiwan University, Taiwan |
| 11:50 | #106 | **Correspondence Between Repeated-Run LLM Variation and Human Disagreement in Sentence-Level News Annotation**<br>Mai Sugimoto, Mitsunori Matsushita<br>Kansai University, Japan |

#### D01 Domestic Oral Session 1

Room B • 2F Lijing Hall B • 7 papers • Session chair: Prof. Ying-Jia Lin (Chang Gung University)

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|---|---|---|
| 10:40 | #83 | **Lightweight Dual-Stream Temporal Decoupling for Behavior Cloning in Minecraft's Hybrid Action Space**<br>張晉瑋, 黃意婷<br>國立臺灣科技大學電機工程系 |
| 10:50 | #189 | **一個整合深度強化學習與蒙地卡羅模擬之混合式台灣麻將丟牌策略架構**<br>劉柏毅, 黃國展<br>國立臺中教育大學資訊工程學系 |
| 11:00 | #199 | **CoRe-QCNN：基於跨解析度學習的樣本自適應量子影像分類**<br>李洳錚[1], 冷瀞珽[2], 王雅書[1]<br>[1]國立中興大學應用數學系 [2]國立中興大學資料科學與資訊計算研究所 |
| 11:10 | #168 | **基於隱式神經表示法與時空交叉注意力機制之高解析度 PM2.5 預報偏差修正**<br>高哲凱, 林上文, 冷靜珽<br>國立中興大學資料科學與資訊計算研究所 |
| 11:20 | #108 | **Enhanced API Recommendation using Community Question-Answering Information**<br>Tong-Hua Lin, Liang-Chen Lu, Min-Hui Hsu, Chia-Li Chang, Guan-Lin Chen, Cheng-Zen Yang<br>Yuan Ze University, Taiwan |
| 11:30 | #112 | **Revisiting Evaluation in Neural Weather Forecasting: Reporting Choices and Evidence Limits**<br>Shao-Kang Huang, Yu-Xiang Liu, Ting-Yuan Wang, Lu-Hung Chen<br>National Chung Hsing University, Taiwan |
| 11:40 | #117 | **Graph-CKA：結合化學知識圖譜上下文之大型語言模型安全測試方法**<br>陳廷鈞, 謝文川, 龔千芬<br>國立高雄科技大學智慧商務系 |

## PS1 International Poster Session 1

Poster Area • 2F Liquan Hall exhibition area • 8 papers • Session chairs: Prof. Yung-Chun Chang (Taipei Medical University); Prof. Hung-Hsuan Chen (National Central University)

Board IP-01 **#190** **A multiobjective evolutionary algorithm with adaptive mating and environmental selection for dynamic economic emission dispatch**
Mao-Ting Lee, Thammarsat Visutarrom, Tsung-Che Chiang
National Taiwan Normal University, Taiwan

Board IP-02 **#67** **Graph Neural Network-Driven Reinforcement Learning for Job-Shop Scheduling**
Yang-Rui Li, Yi-An Chen, Ming-Yi Ju
National University of Tainan, Taiwan

Board IP-03 **#98** **A Comparative Study of n-Step Returns for State-Augmented Double DQN under Action Delays**
Yi-Sheng Chen, Feng-Nan Hwang
National Central University, Taiwan

Board IP-04 **#36** **Development of a System for Estimating Mental-Physical States Based on Biological, Behavioral, and Environmental Data**
Daisuke Kitakoshi[1], Ayano Kubo[1], Arao Funase[2], Kentarou Suzuki[3], Masato Suzuki[1]
[1]National Institute of Technology, Tokyo College, Japan [2]National Rehabilitation Center for Persons with Disabilities, Japan
[3]Kyorin University, Japan

Board IP-05 **#59** **A Shikakeology-Based Graphically Illustrated Recommendation System**
Ying-Yu Chen[1], Hiroki Shibata[1], Lieu-Hen Chen[2], Yasufumi Takama[1]
[1]Tokyo Metropolitan University, Japan [2]National Chi Nan University, Taiwan

Board IP-06 **#53** **Playlist-Based Synthetic Dataset Generation for Context-Aware Music Recommendation**
Masato Imamura, Hiroki Shibata, Yasufumi Takama
Tokyo Metropolitan University, Japan

Board IP-07 **#111** **Performance-Based Evaluation of XAI Feature Rankings**
Kuo-Wei Chen, Chih-Wei Hsu, Ying-Jia Lin
Chang Gung University, Taiwan

Board IP-08 **#62** **Effects of On-Screen Feedback Display on Error Repair in an LLM-Based Japanese Speaking-Practice System**
Yangdi Ni, Junjie Shan, Megumi Yasuo, Yoko Nishihara
Ritsumeikan University, Japan

# 13:00–14:20

## IO2 International Oral Session 2

Room A • 2F Lijing Hall A • 8 papers • Session chair: Prof. Yi-Zeng Hsieh (National Taiwan University of Science and Technology)

13:00 **#137** **Analyzing Features of Natural Truncation and Branching Points in Shogi AI Principal Variations**
Taisei Kikkawa, Takeshi Ito
The University of Electro-Communications, Japan

13:10 **#174** **Analysis of AI Game Outcome Distributions and Placement Features for 1,440 Point-Symmetric Initial Positions in 66 Shogi**
Yoshimasa Yamaguchi, Takeshi Ito
The University of Electro-Communications, Japan

13:20 **#70** **Affective Representations for Conversation Derailment Forecasting**
Retnani Latifah, Yi-Shin Chen
National Tsing Hua University, Taiwan

13:30 **#135** **Disentangling Heterogeneous Traffic Dynamics for Multi-Step Traffic Forecasting via Adaptive Spectral Decomposition**
Zijun Huang[1], Chenrui Fu[1], Wenhao Wang[1], Xiaochuan Gou[2], Chih-Chieh Hung[3], Guanyao Li[1]
[1]Beijing Normal-Hong Kong Baptist University, China [2]Dalian Maritime University, China [3]National Chung Hsing University, Taiwan

13:40 **#204** **Historical Satellite Embedding Trajectories Provide Predictive Information About the Next Observed Embedding State**
Vinicius Buri
LuxVerso Research Initiative, Brazil

13:50 **#138** **Changes in Self-Perceptions of Detecting AI-Generated News Comments Across Discrimination and Generation Tasks: A Preliminary Study**
Nanase Mogi, Mitsunori Matsushita
Kansai University, Japan

14:00 **#129** **Evidential Deep Learning with conditional entropy for glaucoma detection**
Hai Siong Tan[1], Kuancheng Wang[2]
[1]Gryphon Center for Artificial Intelligence and Theoretical Sciences, Singapore [2]University of California, San Diego, USA

14:10 **#57** **Automatic Generation of Open-Vocabulary Descriptive Tags for Anime Cut Scenes Using Vision-Language Models and Syntactic Parsing**
Junjie Shan, Jianrui Yan, Yoko Nishihara, Yangdi Ni, Zhenzhong Duan
Ritsumeikan University, Japan

## D02 Domestic Oral Session 2

Room B • 2F Lijing Hall B • 7 papers • Session chair: Prof. Meng-Luen Wu (Tamkang University)

13:00 **#139** **Gauge or Process? Attributing Location Shifts at a Single Inspection Station Using Bridging Re-inspection Pairs**
Hubert Huang
National Taiwan University, Taiwan

13:10 **#133** **A Compact and Biologically Reproducible Transcriptomic Signature for Cross Cohort LUAD and LUSC Classification**
Muhammad Hussain[1], Najeeb Ullah[2], Hussain Abbas[3], Musawir Hussain[2], Hassan Abbas[2], Quang Thai Ho[1], Iqrar Hussain[4]
[1]Yuan Ze University, Taiwan [2]National Taipei University, Taiwan [3]National Taipei University of Nursing and Health Sciences, Taiwan
[4]National Sun Yat-sen University, Taiwan

13:20 **#25** **單一模型跨規格之可重構智慧面相位即時生成**
顏俊儀, 劉立頌, 林士程, 陳佑誠, 黃信睿
國立中正大學電機工程研究所

13:30 **#119** **基於跨模態知識蒸餾之輕量化腕戴式壓力辨識**
翁政雄, 于永庭, 林易叡, 陳盈智, 李文愷, 洪煜傑, 江承紘
國立彰化師範大學資訊管理系

13:40 **#101** **兼顧高敏感度辨識與病人內檢索之多模態皮膚病灶風險排序**
翁政雄[1], 楊惟麟[1], 施丞澤[2]
[1]國立彰化師範大學資訊管理系 [2]國立彰化師範大學資訊工程學系

13:50 **#121** **基於模型微調式醫療命名實體識別與句子編碼之自動化胃腸科護理問診系統**
林鈺耀[1], 陳履恒[1], 洪皓銘[1], 吳曉光[2]
[1]國立暨南國際大學資訊工程學系 [2]國立中央大學資訊工程學系

14:00 **#58** **隨拍、隨比、隨時學， AI 客語隨身教：結合電腦視覺與聲學評測之客語情境教學系統實作**
吳怡臻[1], 黃璿羽[1], 梁易軒[1], 張育倫[2], 林守毅[2], 李俊賢[3]
[1]國立中央大學客家語文暨社會科學學系 [2]國立中央大學企業管理學系 [3]國立中央大學資訊管理學系

## PS2 Domestic Poster Session 2

Poster Area • 2F Liquan Hall exhibition area • 12 papers • Session chair: Jing-Tian Sung (Institute for Information Industry)

Board DP-01 **#183** **Rank-Conditioned Multimodal Move Prediction in Go: Fine-Tuning on Ten Skill Levels**
Yu-Shan Yen[1], Shi-Jim Yen[2]
[1]National Taiwan Normal University, Taiwan [2]National Dong Hwa University, Taiwan

Board DP-02 **#144** **基於閘控路徑規劃網路之無人機路徑規劃方法**
黃彥皓, 陳冠佑, 陳柏儒
國立臺東大學綠能與資訊科技學系

Board DP-03 **#191** **A Modular Autonomous Driving Framework with DQN-Based High-Level Decision Making**
Yan-Han Chen[1], Wei-Chun Hsu[1], Ying-Jen Chen[2], Li Cho[1]
[1]Tatung University, Taiwan [2]Yuan Ze University, Taiwan

Board DP-04 **#84** **結合空間距離與建設生命週期特徵之房價溢價預測：基於CatBoost之實證研究**
吳常熙, 廖鈞義
龍華科技大學電子工程系

Board DP-05 **#147** **A Study on Prompt Design in Generative AI for Buddhist Short Videos**
Rou-Jen Lu, Meng-Chien Shih, Shi-Jim Yen
National Dong Hwa University, Taiwan

Board DP-06 **#55** **From Approval to Execution: A Verifiable Governance Continuity Model for Enterprise AI Agents**
Austin Hsieh
Independent Researcher, Taiwan

Board DP-07 **#163** **An Offline On-Device Method for Citrus Pest and Disease Recognition with Grounded Diagnosis**
Cheng-Yan Cai, Yuan-Chin Tu, You-Jia Huang, Chen-En Chien, Huan-Yu Chen
National Taichung University of Science and Technology, Taiwan

Board DP-08 **#118** **個人化雙耳節拍音樂誘導睡眠**
蘇敬堯, 陳思穎, 林和宇, 謝宗澔
東海大學資訊工程學系

Board DP-09 **#76** **Effects of Aggressive Front-End Downsampling on Prediction Concentration in CNN-Based Radiographic Grading of Mandibular Third Molar Surgical Difficulty**
Tsung-Yu Wu[1], Bo-Gang Chen[1], Chia-Yu Chiu[1], Tzer-En Nee[1], Jyh-Kwei Chen[2]
[1]Chang Gung University, Taiwan [2]Linkou Chang Gung Memorial Hospital, Taiwan

Board DP-10 **#78** **基於全同態加密並結合 HMAC 完整性驗證與密文域可逆資訊隱藏之隱私保護心臟病風險預測系統**
沈奕昕, 葉采瑩, 戴婕伊, 李哲瑋
國立高雄師範大學軟體工程與管理學系

Board DP-11 **#151** **WGAN資料增強對常見機器學習與深度學習模型 於EEG神經退化性疾病分類效能之影響評估**
鐘培嘉, 曾金宏, 蘇奕安, 陳榮銘
國立臺南大學資訊工程學系

Board DP-12 **#201** **ERP 交易限制下 LLM Agent 失敗恢復與驗證**
吳書逸, 謝文川, 林欣瑾
國立高雄科技大學智慧商務系

## 14:40–16:00

### IO3 International Oral Session 3

Room A • 2F Lijing Hall A • 8 papers • Session chair: Prof. Shih-Chieh Tang (National Cheng Kung University)

14:40 **#213** **Quantum Computational Intelligence and Generative AI for Taiwanese-English-Japanese Language Co-Learning with STEM Education Applications**
Chang-Shing Lee[1], Mei-Hui Wang[1], Hsin-Wei Chen[1], Chun-Chieh Tseng[1], Pin-Yen Shen[1], Naoyuki Kubota[2], Chu-Kiong Loo[3]
[1]National University of Tainan, Taiwan [2]Tokyo Metropolitan University, Japan [3]University of Malaya, Malaysia

14:50 **#215** **Hierarchy-Guided Question Generation and Adaptive Testing for Agent Preference Shifts**
Jing-Tian Sung, Tsan-Yu Tsai, Daniel Liu
Institute for Information Industry, Taiwan

15:00 **#154** **What INT8 Post-Training Quantization Buys on a CPU: A Speedup, and a Code Path the Runtime Can Reprice**
Yuan-Zhen Yang, Yi-Hsiang Chao

15:10 **#172** **Evidence-Grounded Dental Vision-Language Framework for Implant Detection and Marginal Bone Loss Assessment in Panoramic Radiographs**
Wen-Ze Chen, Min-Yuh Day
National Taipei University, Taiwan

15:20 **#126** **Video-Only Badminton Highlight Generation with Conservative Subtitle Control**
Tsan-Tsung Yang, Kuang-Da Wang, Wen-Chih Peng
National Yang Ming Chiao Tung University, Taiwan

15:30 **#149** **Evaluating Cluster-Based Noise Exclusion in Disaster Social Media Imagery under Recall Constraints**
Yutaka Morino
Aoyama Gakuin University, Japan

15:40 **#37** **Training-free Conditional Object Composition for Multi-object Image Generation with Diffusion Models**
Hsuan-Fu Wang, Hsuan-Tien Lin
National Taiwan University, Taiwan

15:50 **#82** **A Study on Synthetic Data Refinement through Agent Feedback**
Takumi Miyazawa, Hiroki Shibata, Yasufumi Takama
Tokyo Metropolitan University, Japan

### DO3 Domestic Oral Session 3

Room B • 2F Lijing Hall B • 7 papers • Session chair: Prof. Tz-Heng Hsu (Southern Taiwan University of Science and Technology)

14:40 **#89** **小規模資料下模型效能評估變異性之探討：以腦電圖失智症分類訓練資料取樣策略為例**
蔡尹瑜, 陳榮銘
國立臺南大學資訊工程學系

14:50 **#130** **整合全域與局部基因模組之多視角遮罩自編碼器於單細胞 RNA 定序聚類之大規模跨資料驗證**
彭姿穎[1], 張乃文[2], 陳榮銘[1]
[1]國立臺南大學資訊工程學系 [2]國立臺灣大學醫學院附設醫院醫學研究部

15:00 **#178** **SMART PHOTOGRAPHER**
Guan-Chang Li[1], Hung-Wei Wang[1], Yu-Hui Huang[2]
[1]Yuan Ze University, Taiwan [2]National Central University, Taiwan

15:10 **#30** **A Comparative Study of Deep Learning Models for 3D Cardiac Muscle Segmentation: Accuracy–Efficiency Trade-offs from CNNs to Transformers**
An-Yun Liu, Chien-Chang Chen
National Central University, Taiwan

15:20 **#43** **LIPAML: A CROSS-BACKBONE LANGEVIN-INSPIRED PREPROCESSING FRAMEWORK FOR GRAPH-BASED ANTI-MONEY LAUNDERING**
Hao-Yang Li, Berlin Chen
National Taiwan Normal University, Taiwan

15:30 **#187** **Multi-View Grasp Pose Generation Using the Diffusion Model**
Tien-Yu Wu, En-Ti Lin, Hsin-Chung Yin, Jenn-Jier James Lien
National Cheng Kung University, Taiwan

15:40 **#150** **Power- and Severity-Aware LLM Scheduling in Battery-Powered Navigation Aids for the Visually Impaired**
Quan-Quan Yang, Yu-Fu Huang, Yoke-Hou Tan
Chung Yuan Christian University, Taiwan

### PS3 International Poster Session 3

Poster Area • 2F Liquan Hall exhibition area • 9 papers • Session chair: Prof. Ching-Ting Tu (National Chung Hsing University)

Board IP-11 **#96** **Robust Obstacle Avoidance of Autonomous Nano-UAVs with Liquid neural Networks with Monocular Depth Estimation based on Optical Flow**
Jheng-Lin Lin, Zong-Ying Shen, Chung-Chuan Lo, Ya-Tang Yang
National Tsing Hua University, Taiwan

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| Board IP-12 | #94 | **Efficient Machine Unlearning for Vision Transformers via Weight Resetting Strategies**<br>Zhe-Yu Lin, Wen-Hung Liao<br>National Chengchi University, Taiwan |
| Board IP-13 | #45 | **A Foul Classification Model for Basketball Layup Shots Based on Multi-View Image Fusion**<br>Kenya Oba, Masayoshi Kanoh<br>Chukyo University, Japan |
| Board IP-14 | #23 | **Video-Camera-Based Multi-Person Gaze Estimation System Using Facial Features**<br>Zhenzhong Duan, Junjie Shan, Megumi Yasuo, Yoko Nishihara<br>Ritsumeikan University, Japan |
| Board IP-15 | #44 | **Topological Analysis of Handwritten Japanese Characters Using Persistent Properties**<br>Masato Suzuki, Daisuke Kitakoshi<br>National Institute of Technology, Tokyo College, Japan |
| Board IP-16 | #102 | **Script-Derived Index Expansion for Natural-Language Retrieval of Anime Production Assets**<br>Hinata Kirayama, Ryosuke Yamanishi<br>Kansai University, Japan |
| Board IP-17 | #103 | **Parameter-Efficient Knowledge Distillation with DoRA for Instruction-Following Language Models**<br>Yi-Sin Chen[1], Min-Te Sun[1], Wei-Shinn Ku[2], Po-Wei Harn[1]<br>[1]National Central University, Taiwan [2]Auburn University, USA |
| Board IP-18 | #66 | **GuardianNet: An LLM-Assisted Multi-Agent Framework for Detecting Stealthy SDN Anomalies**<br>Yu-Yang Huang, Chirag Jindal, Mochamad Fakhri Andian, Po-Yu Chen, Kippei Ando, Le Anh Kiet, Po-Wei Harn<br>National Central University, Taiwan |
| Board IP-19 | #113 | **What a Decoder-Side Network Recovers from CRA5: Near-Surface versus Upper-Air Error over CONUS**<br>Tong-Jen Wang, Chieh-An Chou, Lu-Hung Chen<br>National Chung Hsing University, Taiwan |

# Day 2 • Sat, Nov 21 Paper Sessions

## 10:10–11:00

### I04 International Oral Session 4

Room A • 2F Lijing Hall A • 5 papers • Session chair: Prof. Jian-Xing Li (National University of Tainan)

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| 10:10 | #211 | **A Closer Look at Road Damage Detection on Imbalanced Multi-Country Data**<br>Mirkamol Mirkamilov, Lematte Ahmed, Saydobid Khusanov, Yuan Zhou<br>Nanjing University of Information Science and Technology, China |
| 10:20 | #56 | **Environment Curriculum Generation via Vision-Language Models**<br>Yu-Hsin Chou, Kuei-Chung Chen, Hsuan-Tien Lin<br>National Taiwan University, Taiwan |
| 10:30 | #127 | **Multimodal Representation and Reformulation of Creative Intention in AI Video Generation**<br>Chuei-Huei Kung<br>Fu Jen Catholic University, Taiwan |
| 10:40 | #179 | **Attack-Resilient Hierarchical Federated Intrusion Detection for Communication-Constrained Low-Altitude UAV Networks**<br>Mao-Hsiu Hsu, Po-Chia Chuang<br>National Formosa University, Taiwan |
| 10:50 | #73 | **A Comparative Analysis of Humor in Japanese Ogiri Responses Generated by an LLM and Humans**<br>Bifu Ohishi, Megumi Yasuo, Junjie Shan, Yoko Nishihara<br>Ritsumeikan University, Japan |

### D04 Domestic Oral Session 4

Room B • 2F Lijing Hall B • 4 papers • Session chair: Prof. Rong-Ming Chen (National University of Tainan)

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| 10:10 | #208 | **Mapping Intent: Agentic UAV Route Planning with Semantic Cost Maps**<br>Jeng Wen Joshua Lean[1], Ting-Yu Yen[1], Kang-Chiao Lin[2], Xu-Peng He[2], Shih-Hsuan Hung[1], Hung-Kuo Chu[1]<br>[1]National Tsing Hua University, Taiwan [2]Industrial Technology Research Institute, Taiwan |
| 10:20 | #216 | **基於姿態估計之個人化網球教練系統：揮拍特徵組合歸納與修正建議驗證架構**<br>陳孝宗, 溫演福, 謝立文<br>國立臺北大學資訊管理研究所 |
| 10:30 | #79 | **資料集特性分析於少樣本類別增量學習中的影響**<br>賴瑋宥, 劉立頌, 劉育銨<br>國立中正大學電機工程研究所 |
| 10:40 | #176 | **基於 StressID 資料集之多模態與集成學習壓力辨識方法**<br>李佳芸, 黃芷婕, 蘇明祥<br>東吳大學資料科學系 |

## PS4 Domestic Poster Session 4

Poster Area • 2F Liquan Hall exhibition area • 12 papers • Session chairs: Prof. Ling-Yen Pan (National Taipei University); Prof. I-Hsien Ting (National University of Kaohsiung)

Board DP-13 **#122** **Point-Supervised Weed Stem Candidate Localization Using U-Net Heatmaps for RealSense-Assisted Laser Weeding**
Pradeep Marimuthu, Yu-Sung Liu
National Formosa University, Taiwan

Board DP-14 **#161** **FRESHKG MISSION SUPERVISION WITH TRACKING AND ATTITUDE EVALUATION**
Chun Shih Cheng, Yu Jie Tsai, Cheng You Lin, Zih Sian Yang
Chaoyang University of Technology, Taiwan

Board DP-15 **#171** **Hierarchical Specialist Networks and Few-Shot Language Reconstruction for Skeleton-Based Taiwanese Sign Language Recognition**
Jhih-Shan Tsai, Pei-Hao Chen, Tou-Tou Wu, You-Yin Lin, Huan-Yu Chen
National Taichung University of Science and Technology, Taiwan

Board DP-16 **#182** **Ego-Motion Compensated Adaptive Spatio-Temporal Difference Gating for UAV Edge Dynamic Object Detection**
Ming Chien Ho, Yan Je Wang, Ting Ying Chien
Yuan Ze University, Taiwan

Board DP-17 **#17** **結合PatchCore與視覺語言模型之可解釋工業異常檢測 (Explainable Industrial Anomaly Detection by Combining PatchCore and Vision Language Models)**
廖偉煊[1], 饒建奇[2]
[1]淡江大學電機工程學系人工智慧物聯網組 [2]淡江大學電機工程學系

Board DP-18 **#165** **基於 MCP 的使用者行為資料最小化與異常分析**
金石開, 袁佳慶
嶺東科技大學資訊科技系

Board DP-19 **#90** **探討不同多模態架構於黑色素瘤預測效能之比較**
蔣典宸, 王翊宇, 吳芷瑩, 陳映瑄, 鄭秋艷, 李彩儀, 翁政雄
國立彰化師範大學資訊管理學系

Board DP-20 **#100** **應用影像監控系統於海鱷性徵成熟度判定**
謝易錚, 蒙諺勳
國立臺灣科技大學電機工程系

Board DP-21 **#186** **組合料號電子零件內容之自動擷取**
洪宗貝[1], 林義勳[1], 卓恩綺[2], 黃士峰[3], 施宣妤[4], 陳怡婷[4]
[1]國立高雄大學資訊工程研究所 [2]國立高雄大學應用數學研究所 [3]國立中央大學統計研究所 [4]富比庫股份有限公司

Board DP-22 **#64** **Melody–Accompaniment Separation in Synthesized Solo Piano Audio Using Spectral U-Nets and a Composite Loss**
Hao Chun Kao, Chao Zong Wang, Yu Han Huang
National Dong Hwa University, Taiwan

Board DP-23 **#97** **Patient-Level Weak Supervision as a Stress Test of Vision Foundation Model Transfer and Domain Adaptation in Gastroscopy**
Chien-Liang Liu[1], Bo-Jyun Wang[1], Shayan Kordi[1], Shu-Wei Huang[2], Yu-Chung Wang[1], Kwei-Jay Lin[1], Ying-Feng Chang[1]
[1]Chang Gung University, Taiwan [2]New Taipei Municipal Tucheng Hospital, Taiwan

Board DP-24 **#109** **基於 nnU-Net 之心臟電腦斷層影像多類別自動分割可行性研究**
許倖誠[1], 季祖明[1], 邱禹瑞[1], 劉彥瑋[1], 楊珮菁[1,2]
[1]長榮大學資訊工程學系 [2]長榮大學人工智慧研究中心

# 11:10–12:00

## IO5 International Oral Session 5

Room A • 2F Lijing Hall A • 4 papers • Session chair: Prof. Wen-Hung Liao (National Chengchi University)

11:10 **#21** **Matching Digits or Quantities? A Controlled Diagnostic Benchmark for Cross-Source Verification of Traditional Chinese ESG Disclosures**
Chenxuan Zhou, Jian Song, Christy Jie Liang
University of Technology Sydney, Australia

11:20 **#68** **FUSE: A Fused Unified Synthetic-image Ensemble for AI-Generated Image Detection**
Ping-Chen Chung, Nguyen Huynh Phuoc Thien, Pei-Hua Tsai, Hsuan-Cheng Chu, Po-Wei Harn
National Central University, Taiwan

11:30 **#210** **Direction Echo: Redirecting Attention Flow to Mitigate Length-Induced Representation Collapse in Repetition-Based Language Model Embeddings**
Mu-Feng Tsai, Hung-Yu Kao
National Tsing Hua University, Taiwan

11:40 **#104** **Reviewed Aspects in Video Games Released from the 1980s to the 2020s**
Jotaro Tasaki, Kazushi Ikemachi, Ryosuke Yamanishi
Kansai University, Japan

## D05 Domestic Oral Session 5

Room B • 2F Lijing Hall B • 5 papers • Session chair: Prof. Minghsiang Su (Soochow University)

11:10 **#29** **Deepfake 偵測模型於多強度影像退化下之穩健性與方向性誤判分析**
張祐齊, 吳孟倫
淡江大學資訊工程學系

11:20 **#145** **A Hybrid LLM–RL Framework for Army Tactical Decision Support: Evaluation in a Real-Time Strategy Simulation**
Yu Rui Shi[1], Zong Xin Lin[1], Yi Syuan Lu[1], Cheng Shun Lee[1,2]
[1]R.O.C. Military Academy, Taiwan [2]National Cheng Kung University, Taiwan

11:30 **#52** **An Effective Spoken Language Understanding Approach Leveraging Query-Adaptive Intent Detection**
Bing-Long Kuo[1], Yu-Hsuan Fang[1], Tien-Hong Lo[1], Hsueh-Wei Liao[2], Berlin Chen[1]
[1]National Taiwan Normal University, Taiwan [2]Realtek, Taiwan

11:40 **#27** **PlainSCOTUS: A Sentence-Aligned Corpus for Legal Text Simplification**
Yun-Mao Lo, Meng-Luen Wu
Tamkang University, Taiwan

11:50 **#4** **應用變換式架構模型於華語轉換客家語**
洪士程, 王俊詠
朝陽科技大學資訊工程系

## PS5 International Poster Session 5

Poster Area • 2F Liquan Hall exhibition area • 10 papers • Session chair: Prof. Te-Chuan Chiu (National Tsing Hua University)

Board IP-21 **#50** **Measuring and Repairing NLI Sensitivity to Emoji and Informal Markers**
Avinash Goutham Aluguvelly
University of Texas at Austin, USA

Board IP-22 **#131** **Humans and LLMs: Role Inference under Varying Information Availability in the Werewolf Game**
Taiki Takiuchi, Takeshi Ito
The University of Electro-Communications, Japan

Board IP-23 **#38** **Agentic Workflow Automation for n8n: Prompt Engineering, Domain Fine-Tuning, and a Comparative Case Study**
Zhi-Ying Wang, Hsuan-Yu Liu, Chun-Yao Lin, Wen-Hsien Huang, Chia-Hui Chang
National Central University, Taiwan

Board IP-24 **#114** **Price Movement Prediction for High-frequency Trading by Leveraging Fine-tuned Large Language Model as Short-term Trend Indicator**
Fan-Yu Pu, Shiou-Chi Li, Jen-Wei Huang
National Cheng Kung University, Taiwan

Board IP-25 **#155** **Structural Fidelity of Automated Multidimensional AI Judges for Earnings Call Argument Quality Assessment**
Wei-Hsi Sun, Yi-Ting Liao, Yi-En Liu, Min-Yuh Day
National Taipei University, Taiwan

Board IP-26 **#75** **Turning Books into SNS: Effects of Familiar Social Media-Style Reading Interfaces on Cognitive Load and Reading Performance**
Konosuke Tada, Junjie Shan, Megumi Yasuo, Yoko Nishihara
Ritsumeikan University, Japan

Board IP-27 **#173** **The Steepest Derivative: AI Neuro-Persuasion as a Compounding Cognitive-Security Risk**
Aayush Gandhi
DatumND, USA

Board IP-28 **#110** **ShardedGold: Mitigating Gradient Mimicry Attack on Blockchain-Based Federated Learning**
Patcharawit Wilaikaew[1], Wei-Zhe Xu[1], Min-Te Sun[1], Kazuya Sakai[2], Wei-Shinn Ku[3]
[1]National Central University, Taiwan [2]Tokyo Metropolitan University, Japan [3]Auburn University, USA

Board IP-29 **#3** **Comments Are Load-Bearing: Semantic-Preserving Obfuscation Evades Cheap LLM Smart-Contract Auditors**
Ruiyang Zhang
Ryonix Labs, Canada

Board IP-30 **#185** **When Extra Reliability Signals Hurt: Selective Activity Recognition under Unseen Fault Families**
Nuwantha Senadhi Ranaweera, Savindu Dilshan Wickramasinghe, Thusith Wijewardena, H.W.P. Sandeepa
University of Moratuwa, Sri Lanka

# 13:00–14:20

## I06 International Oral Session 6

Room A • 2F Lijing Hall A • 6 papers • Session chair: Prof. Kuo-Chan Huang (National Taichung University of Education)

13:00 **#85** **Resolving Knowledge Conflicts in Versioned Documents via Agentic Evidence Synthesis and Hierarchical Dual-Store Retrieval**
Chao-Chun Chuang[1], Chih-Min Yao[1], Tsui-Mei Lee[1], Yi-Ni Liu[2]
[1]National Institutes of Applied Research, Taiwan [2]Chung Shan Medical University, Taiwan

13:10 **#203** **When Case-Disjoint Evaluation Is Not Subject-Disjoint in EEG Seizure Forecasting**
Swastik Nanda[1], Rohan Sharma[2], Kevin Zhu[2]
[1]Stanford University, USA [2]Algoverse AI Research, USA

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|---|---|---|---|
| 13:20 | #214 | **Towards Reliable Chinese Spelling Correction: Consensus-Based Correction under Linguistic Variation**<br>Cen-Chieh Chen[1], Yu-Chen Hsu[2], Berlin Chen[1], Tao-Hsing Chang[2], Yao-Ting Sung[1]<br>[1]National Taiwan Normal University, Taiwan [2]National Kaohsiung University of Science and Technology, Taiwan |
| 13:30 | #180 | **LAWRENCE: A Benchmark for Adversarial Lawyering in Taiwanese Criminal Law**<br>Yu-Kai Guo, Wei-Cheng Lai, Chen-Wei Hsu, Hung-yi Lee<br>National Taiwan University, Taiwan |
| 13:40 | #181 | **FIVE: Fixed-Prefix Failure Prediction for Tool-Using LLM Agents from Visible Trajectory Evidence**<br>Tomorn Soontornnapar[1], Marius Herzog[2], Tuchsanai Ploysuwan[1], Kay Rottmann[2]<br>[1]King Mongkut's Institute of Technology Ladkrabang, Thailand [2]Hochschule der Medien, Germany |
| 13:50 | #209 | **Calibrated Hierarchical Structured Decisions for SASB Compliance Evidence in Sustainability Reports**<br>Wei-Chen Huang, Min-Yuh Day<br>National Taipei University, Taiwan |

## D06 Domestic Oral Session 6

Room B • 2F Lijing Hall B • 7 papers • Session chair: Prof. Shing-Tai Pan (National University of Kaohsiung)

| | | | |
|---|---|---|---|
| 13:00 | #42 | **When Does a Two-Phase WEF1T Allocation Satisfy WEF1? Structured Experiments and Local Repair**<br>Chi-Hsuan Wu, Chuang-Chieh Lin<br>National Taiwan Ocean University, Taiwan |
| 13:10 | #7 | **非獨立同分布數據對聯邦學習的影響分析**<br>洪士程, 賴胤佑<br>朝陽科技大學資訊工程系 |
| 13:20 | #22 | **程式設計課程中大型語言模型之對抗性測資生成**<br>姜柏仰, 吳宜鴻<br>中原大學資訊工程學系 |
| 13:30 | #80 | **提示微調結合自訓練技術於少樣本情緒原因組合提取**<br>簡瑋霆, 吳宜鴻<br>中原大學資訊工程學系 |
| 13:40 | #166 | **Can We Trust LLM Agents as Playtesters? A Benchmark of Behavioral Diagnostics for Monetization Design**<br>Szu-Yu Chou, Ting-Kang Wang, Yueh-Po Peng<br>Gamania Digital Entertainment Co., Ltd., Taiwan |
| 13:50 | #132 | **基於階層式記憶與雙代理協同之個人化食譜推薦機制**<br>郭馨妤, 王佳佳, 林其誼<br>淡江大學資訊工程學系 |
| 14:00 | #152 | **導入語意之ERP Agent：基於 WebMCP 的跨文件流程**<br>陳禹璋, 謝文川<br>國立高雄科技大學智慧商務系 |

## PS6 Domestic Poster Session 6

Poster Area • 2F Liquan Hall exhibition area • 12 papers • Session chairs: Prof. Huai-Sheng Huang (National Taipei University); Chuei-Huei Kung (Fu Jen Catholic University)

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|---|---|---|---|
| Board DP-25 | #86 | **Fusion Limitations and LLM-Assisted Decision Integration for Conversational Emotion Recognition**<br>Melvin Liew Lip Wei, Cheng-Tso Chiang, Hao-Ming Hung, Lieu-Hen Chen<br>National Chi Nan University, Taiwan |
| Board DP-26 | #72 | **INTEGRATING LARGE LANGUAGE MODELS AND IOT SENSING FOR AN INTELLIGENT DECISION-SUPPORT SYSTEM IN MARINE CORAL RESTORATION**<br>Shi-Jim Yen, Jia-Huei Wu, Yi-Hao Pai<br>National Dong Hwa University, Taiwan |
| Board DP-27 | #197 | **HMPA: A Neuro-Symbolic Framework for Natural-Language-Driven, Multi-Emotion Motion Generation on a Low-Cost Humanoid Robot**<br>Zhi-Zhong Chen, Shih-Hung Wu<br>Chaoyang University of Technology, Taiwan |
| Board DP-28 | #198 | **LLM Proposals and Deterministic Adjudication for Observable Decision Tracing in Quadruped Robots**<br>Po-Yu Lu, Wei-Feng Tung<br>Fu Jen Catholic University, Taiwan |
| Board DP-29 | #91 | **An LLM- and Multi-Source Bibliographic API-Based Automated System for Academic Publication Registration**<br>Ruei-Chen Wang, Wen-Hung Liao<br>National Chengchi University, Taiwan |
| Board DP-30 | #192 | **通用語言模型 Embedding 至領域特定空間之遷移方法研究 ——以監督式 Embedding 適配於 UK 簽證法規語意分群為例**<br>陳翔暐, 黃昭義<br>國立雲林科技大學資訊管理系 |
| Board DP-31 | #28 | **台股加權指數波動度預測：新聞情緒特徵之穩健性驗證**<br>林芳螢, 黃文楨<br>國立高雄科技大學資訊管理所 |

Board DP-32 **#136** **原生語言與翻譯語言作為語言模型訓練資料集之比較-以垃圾簡訊為例**
吳函諺, 楊翔丞, 沈宏霖, 劉嘉慶, 黃詠浚
亞洲大學資訊工程學系

Board DP-33 **#34** **基於修辭角色與語意一致性片段擾動之法律文本分類解釋研究**
黃柏熏, 杜明道, 吳孟倫
淡江大學資訊工程學系

Board DP-34 **#46** **地表線型判釋、地表溫度異常預測與大型語言模型問答：地熱探勘之 GeoAI 應用與初步成果**
林采蓁[1], 鄭錦桐[1], 黃瑞賢[1], 陳亭佑[1], 吳笙緯[1], 蘇宗正[2], 陳致言[2]
[1]興創知能股份有限公司 [2]經濟部地質調查及礦業管理中心

Board DP-35 **#169** **Automated Trust Management under LLM Monitoring Uncertainty: Adversarial Risk-Aware Deployment in a Decentralized Multi-Agent Network**
Zong-Ye Li[1], Weiyang He[2], Chip-Hong Chang[2]
[1]City University of Hong Kong, Hong Kong [2]Nanyang Technological University, Singapore

Board DP-36 **#31** **邁向 AI 情緒建模：句向量嵌入空間中情緒表徵之幾何分析**
黃嘉瑜[1], 劉錦燕[1], 吳茹婷[1], 何浩瑋[2], 黃健峯[1]
[1]國立高雄大學資訊工程學系 [2]亞馬遜公司

## 14:40–15:30

### I07 International Oral Session 7
Room A • 2F Lijing Hall A • 4 papers • Session chair: Prof. Chuang-Chieh Lin (National Taiwan Ocean University)

14:40 **#69** **Bridging Static and Agentic RAG for Taiwanese Historical Question Answering**
Kai-Hsin Chen, Wei-Yu Chen, Xuanjun Chen, Su-Ling Yeh, Jyh-Shing Roger Jang
National Taiwan University, Taiwan

14:50 **#88** **SAFE-T: A Safe Agentic Framework for Evidence-Grounded Malware Triage**
Mai Xuan Ha, Le Chanh Thanh Tin, Aquata Theodora Thyme, Po-Wei Harn
National Central University, Taiwan

15:00 **#60** **DIAL-ROS: Defense-in-Depth Analysis of Layered ROS 2 Security**
Hassan Abbas[1], Chinyang Henry Tseng[1], Po-Cheng Chen[2], Ke-Cheng Tan[1], Javad Ghofrani[3]
[1]National Taipei University, Taiwan [2]Taichung Municipal Dongshan Senior High School, Taiwan [3]Hochschule Bonn-Rhein-Sieg, Germany

15:10 **#77** **V-ADAPT: A Verified Adversarial Discovery and Dual-Path Defense Framework for Hardening WAFs Against XSS**
Hua-You Chen[1], Po-Cheng Chen[2], Chinyang Henry Tseng[1]
[1]National Taipei University, Taiwan [2]Taichung Municipal Dongshan Senior High School, Taiwan

### D07 Domestic Oral Session 7
Room B • 2F Lijing Hall B • 5 papers • Session chair: Prof. Mao-Hsiu Hsu (National Formosa University)

14:40 **#160** **迎向自主性大型語言模型代理與長程規劃時代：歐美比較法論我國 AI 安全規範、風險管控與責任歸責**
陳薇如
東海大學法律學系

14:50 **#107** **語音對抗淨化之實證稽核：表徵混淆與自適應攻擊的梯度保真度**
劉冠廷, 黃意婷
國立臺灣科技大學電機工程系

15:00 **#61** **基於 LLM 與多代理人架構之國文會考適性學習平台：AI 國文會考備戰系統**
何念慈, 洪詠煜, 曾俊諭, 顏士淨
國立東華大學資訊工程學系

15:10 **#9** **邁向可解釋的智慧教育代理人： 基於測驗理論之大型語言模型認知對齊與異常行為評估**
賴明如[1], 劉安萱[2], 林裕仁[1]
[1]國立清華大學數理教育研究所 [2]元培醫事科技大學

15:20 **#20** **基於自監督聲學表徵與大規模弱監督模型之病理語音辨識效能評估與範式對比**
梁文瀚, 潘欣泰
國立高雄大學資訊工程學系

### PS7 Domestic Poster Session 7
Poster Area • 2F Liquan Hall exhibition area • 10 papers • Session chairs: Prof. Ya-Tang Yang (National Tsing Hua University); Prof. Min-Te Sun (National Central University)

Board DP-37 **#140** **TAIDE醫療衛教RAG問答評估：人工評分與QCI&AI模糊推論**
林鈺耀[1], 陳履恒[1], 曾俊杰[2], 陳心瑋[2], 李健興[2]
[1]國立暨南國際大學資訊工程學系 [2]國立臺南大學資訊工程學系

Board DP-38 **#5** **混合專家模型之異質專家探索**
洪士程, 李耕維
朝陽科技大學資訊工程系

Board DP-39 **#49** **適性評量之多輪對話式提問生成**
王柏甯, 吳宜鴻
中原大學資訊工程系

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|---|---|---|
| Board DP-40 | #128 | **A Source-Aware Agentic RAG Architecture for Study-Abroad Admissions Advising: Design and Evaluation**<br>Po-Yuan Huang, Ting-Han Wu, Kai-Ting Chen<br>National Chengchi University, Taiwan |
| Board DP-41 | #8 | **具來源追溯與人工檢核之RAG數位證物對話線索整理流程**<br>陳勇行[1,2], 鄧皓允[3]<br>[1]臺北市政府警察局刑事警察大隊科技犯罪偵查隊 [2]國立中央大學資訊管理學系 [3]內政部警政署刑事警察局 |
| Board DP-42 | #6 | **應用Rapidminer和Optuna預測學生的學業表現**<br>洪士程, 李常遠<br>朝陽科技大學資訊工程系 |
| Board DP-43 | #134 | **基於強弱人工智慧決策差異驅動之適應式五子棋教學系統**<br>蘇奇威[1], 薛筑軒[2], 簡暐哲[1]<br>[1]國立東華大學 [2]北陸先端科學技術大學院大學 |
| Board DP-44 | #170 | **整合程式評測與程式碼分析智慧出題之VS Code擴充套件設計與實作**<br>黃筱婷, 白文君, 劉子安, 吳宜鴻<br>中原大學資訊工程學系 |
| Board DP-45 | #99 | **以效標關聯效度錨定之無人機操作員複合信任評分：設計科學研究 (A Validity-Anchored Composite Trust Score for Commercial UAS Operators: A Design Science Study)**<br>黃政傑[1], 邱恩芹[2], 林佑彬[3], 彭進德[1]<br>[1]偲愷動力股份有限公司 [2]元智大學國企系 [3]財團法人資訊工業策進會 |
| Board DP-46 | #157 | **基於題項關聯表徵與注意力導向資料擴增之親密暴力問卷深度分群**<br>練妍伶[1], 李翊嘉[1], 曾秀雲[2], 王雅書[3], 涂瀞珽[1]<br>[1]國立中興大學資料科學與資訊計算研究所 [2]實踐大學社會工作學系 [3]國立中興大學應用數學系 |

高中生口頭場次

# High School Oral Sessions

Papers from the High School Student Session on Artificial Intelligence and Its Applications are presented in two sessions on Day 2 in Room C, in the order listed below. Times are Asia/Taipei (UTC+8). For the call for papers and presentation rules, see the High School Session page.

## HS 1 High School Oral Session 1: Long Papers

Day 2, Sat, Nov 21, 2026 • 13:00–14:20 • Room C • 2F Liquan Hall C1

Session organizer: Prof. Jen-Wei Huang, National Cheng Kung University • 4 papers • presented in the order listed

| | | | |
|---|---|---|---|
| 1 | HS-1 | **Evaluating Style Transfer for Ulcerative Colitis Severity Classification**<br>Jasper Wu[1], Furen Xiao[2]<br>[1]Taipei American School [2]National Taiwan University College of Medicine |
| 2 | HS-17 | **Generative Agents City Simulation**<br>Daniel Tsen[1,2]<br>[1]Li Po Chun United World College, Hong Kong SAR [2]MIT City Science Lab @ Taipei Tech, Taipei, Taiwan |
| 3 | HS-19 | **Evaluating Audio-Visual Atmosphere Alignment without Paired Ground-Truth Labels**<br>Yu-Lin Wu[1], Yen-Ting Lin[2]<br>[1]National Changhua Senior High School [2]Department of Computer Science and Artificial Intelligence, National Pingtung University |
| 4 | HS-20 | **Sensor-Grounded Verification of UAV Fault Claims with Local Language Models**<br>Wei-Chun Zeng, Bo-Wen Hsieh<br>Taipei Digital Experimental High School |

## HS 2 High School Oral Session 2: Short Papers

Day 2, Sat, Nov 21, 2026 • 14:40–15:30 • Room C • 2F Liquan Hall C1

Session organizer: Prof. Jen-Wei Huang, National Cheng Kung University • 6 papers • presented in the order listed

| | | | |
|---|---|---|---|
| 1 | HS-5 | **Model Tier, Tool Access, and Cost in LLM-Based Cryptographic Algorithm Identification: A 2 × 3 Controlled Experiment**<br>Zi-Cheng Lin<br>Taichung Municipal Taichung Industrial High School |
| 2 | HS-11 | **Which Direction Matters? A Paired Single-Path Ablation of Embedding Re-injection in Post-LN Transformers**<br>Jue-Hao Chen<br>Taipei Municipal Daan Vocational High School |
| 3 | HS-13 | **How Much of Speech Recognition Must Be Learned? A Parameter-Free Analysis of Lexical Decoding**<br>Po-Ting Lin<br>National Tainan Chia-Chi Senior High School |
| 4 | HS-14 | **Disaster Hub: An Open-Data-Driven RAG-GIS Decision Support System for Disaster Response with Scenario Stress Testing**<br>Yi-Le Liu[1], Chih-Hung Chung[2]<br>[1]Tamkang Senior High School (TKSH) [2]Department of Educational Technology, Tamkang University |
| 5 | HS-15 | **Evaluating Cost-Sensitive Learning Strategies for Large Wildfire Classification Under Severe Class Imbalance**<br>Andrea Feng<br>Hsinchu County American School |
| 6 | HS-18 | **Design and Analysis of a Model-Inversion-Inspired CTF Challenge**<br>Yu-Chen Huang<br>National Changhua Girls' Senior High School |

合作活動

# Partner Events

The finals of the NAPAI Agentic AI Innovation Competition for Campus Applications are a partner event held at the conference venue. Times are Asia/Taipei (UTC+8).

### NAPAI NAPAI Agentic AI Innovation Competition for Campus Applications • Finals & Award Ceremony

Day 2, Sat, Nov 21, 2026 • 13:00–16:30 • Room D • 7F Summit Hall

Partner event • Organized by the NAPAI Project Office (National Agentic & Physical AI Initiative) • 16 finalist teams (9 minutes each: 5-minute demo + 4-minute Q&A)

The competition rules, finals submission requirements and latest announcements are published on the official NAPAI competition website.

| | | |
|---|---|---|
| 12:30 | **Participant and jury registration** | On-site registration, projection equipment and network testing |
| 13:00 | **Opening remarks and jury introduction** | Opening by Project Investigator Prof. Chia-Hui Chang; introduction of Co-Investigator Prof. Min-Yuh Day and the jury |
| 13:10 | **Demo evaluation, first half: Teams 1–7** | 1. thon • 2. 火矩方舟 • 3. Loopy • 4. 補助同行 • 5. 關東組 • 6. AgentLab • 7. 牛排群組 |
| 14:20 | **Tea break** | Conference refreshment area |
| 14:40 | **Demo evaluation, second half: Teams 8–16** | 8. 五夠補 • 9. 讀伴 • 10. 就是藥對決 • 11. NOVA5｜新星 5 號 • 12. 你愛我對不隊 • 13. INMU KING • 14. FEAF • 15. 20 分鐘燒完 token • 16. PINWISE |
| 16:10 | **Intermission and score aggregation** | Jury score calculation, deliberation and final ranking confirmation |
| 16:15 | **Award ceremony** | Jury summary feedback, awards for both tracks, and group photo |

# TAAI 2026 Awards

## Paper Awards

Announced at the Welcome Banquet: Day 1, Friday, November 20, 2026, 18:00–20:00, 1F Lichi Hall (麗池廳).

**TAAI 2026 Best Paper Awards**
For outstanding papers accepted to TAAI 2026.

**TAAI 2026 Best Student Paper Awards**
For outstanding student papers.

**TAAI 2026 Best Industry Paper Awards**
For outstanding industry papers.

## Presentation Awards

Presented at the Closing Ceremony & Awards: Day 2, Saturday, November 21, 2026, 16:30–17:00, Plenary Hall (5F Lishan Hall).

**TAAI 2026 Best Oral Paper Presentation Awards**
For outstanding presentations in the oral paper sessions.

**TAAI 2026 Best Poster Paper Presentation Awards**
For outstanding presentations in the poster paper sessions.

## TAAI 2026 Master's and Doctoral Thesis Awards

Award winners present on Day 1, Friday, November 20, 2026, 14:40–16:00, Room D (7F Summit Hall).

### Thesis TAAI Thesis Award Presentations

Day 1 Friday, November 20, 2026 • 14:40–16:00 • Room D • 7F Summit Hall

TAAI 碩博士論文獎口頭報告

Session chair: Prof. Chia-Ru Chung (National Central University)

Winners of the TAAI Master's and Doctoral Thesis Awards (ROC year 115) • 8 theses • listed by award. Selected in two review rounds, with each thesis read by at least three reviewers. Award committee chair: Prof. Chih-Chieh Hung. See the TAAI announcement (in Chinese).

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| 1 | **Doctoral Thesis Award** | **學習優化策略：多臂老虎機演算法與用於黑箱決策問題的強化學習方法**<br>Yu-Heng Hung (洪鈺恆) • Advisor: Prof. Ping-Chun Hsieh (謝秉均)<br>Institute of Computer Science and Engineering, National Yang Ming Chiao Tung University |
| 2 | **Doctoral Thesis Honorable Mention** | **通用目標追蹤之人類層級感知能力再探**<br>Shih-Fang Chen (陳世芳) • Advisors: Prof. Yen-Yu Lin (林彥宇) and Dr. Jun-Cheng Chen (陳駿丞, Research Center for Information Technology Innovation, Academia Sinica)<br>Institute of Computer Science and Engineering, National Yang Ming Chiao Tung University |
| 3 | **Doctoral Thesis Honorable Mention** | **面向人本導向人工智慧之視覺智慧研究**<br>Ling Lo (羅婈) • Advisor: Prof. Wen-Huang Cheng (鄭文皇)<br>Institute of Electronics, National Yang Ming Chiao Tung University |
| 4 | **Master's Thesis Award** | **用後悔值引導AlphaZero提升學習效率**<br>Yun-Jui Tsai (蔡昀叡) • Advisors: Prof. I-Chen Wu (吳毅成) and Dr. Ti-Rong Wu (吳迪融, Institute of Information Science, Academia Sinica)<br>Institute of Computer Science and Engineering, National Yang Ming Chiao Tung University |
| 5 | **Master's Thesis Award** | **無獎勵表徵到偏好學習：重新思考離線偏好強化學習**<br>Jun-Jie Yang (楊竣傑) • Advisor: Prof. Ping-Chun Hsieh (謝秉均)<br>Institute of Computer Science and Engineering, National Yang Ming Chiao Tung University |
| 6 | **Master's Thesis Honorable Mention** | **適應性雙重知識引導的學習輔助演化最佳化方法**<br>Yu-Tang Hsu (許育棠) • Advisor: Prof. Chuan-Kang Ting (丁川康)<br>Department of Computer Science, National Tsing Hua University |

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| 7 | **Master's Thesis Honorable Mention**<br>**整合語音辨識與合成之雙向流匹配模型**<br>Chih-Chuan Yeh (葉志銓) • Advisor: Prof. Jen-Tzung Chien (簡仁宗)<br>Department of Electrical and Computer Engineering, National Yang Ming Chiao Tung University |
| 8 | **Master's Thesis Honorable Mention**<br>**基於跨空間去噪之快速零樣本三維視覺幻象生成**<br>Siang-Ling Zhang (張驤齡) • Advisor: Prof. Yu-Lun Liu (劉育綸)<br>Institute of Computer Science and Engineering, National Yang Ming Chiao Tung University |

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