

# AI4X – Accelerate Conference 2026

## Attendees: Know Before You Go!

[www.ai4x.cc](http://www.ai4x.cc)

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## 15th June 2026 – Pre-Conference Tutorials

### Location:

Faculty of Science, National University of Singapore (NUS)

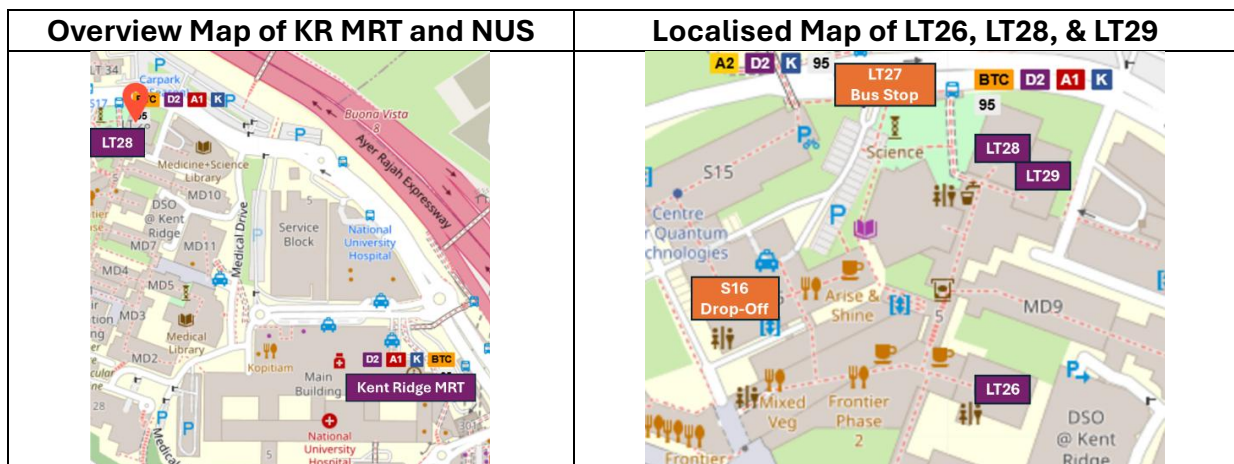
2 Medical Dr, Singapore 117593

Lecture Theatres 26, 28, and 29

<https://maps.app.goo.gl/1uxtp38MoBpnZ7hN9>

### Getting Here:

1. By MRT and NUS Shuttle Bus
  - a. Take the MRT to Kent Ridge MRT Station (Circle Line - Orange)
  - b. Turn right when you exit the station, and head towards Bus Stop 3
  - c. Take any of the following NUS Shuttle Buses: A, D2, BTC, K
  - d. Alternatively, take public bus service number 95 (fee chargeable)
  - e. Alight at Bus Stop “LT27 - Lim Seng Tjoe Lecture Theatre”
2. By Taxi or Ride-Hailing Services
  - a. Set your destination to “NUS S16 Drop-Off Point”
  - b. Follow the pictorial guide [here](#) to get to the LT28 Information Desk



**Tutorial Programme:** <https://ai4x.cc/2026/pre-conference/>

**Food & Beverage:** Light Breakfast will be served starting at 8am, with all-day coffee & tea. Lunch and Dinner **not provided** for 15th June Tutorials. Food & Beverage outlets are available on the NUS campus. The nearest cafeteria is 2 minutes away. Credit Cards are generally not accepted by most vendors – we recommend participants bring cash.

# 16th – 19th June 2026 – Main Conference Programme

## Location:

Raffles City Convention Centre (Stamford Foyer)  
80 Bras Basah Rd, Level 4, Singapore 189560  
<https://maps.app.goo.gl/139LGWZpFvgoZBPz7>

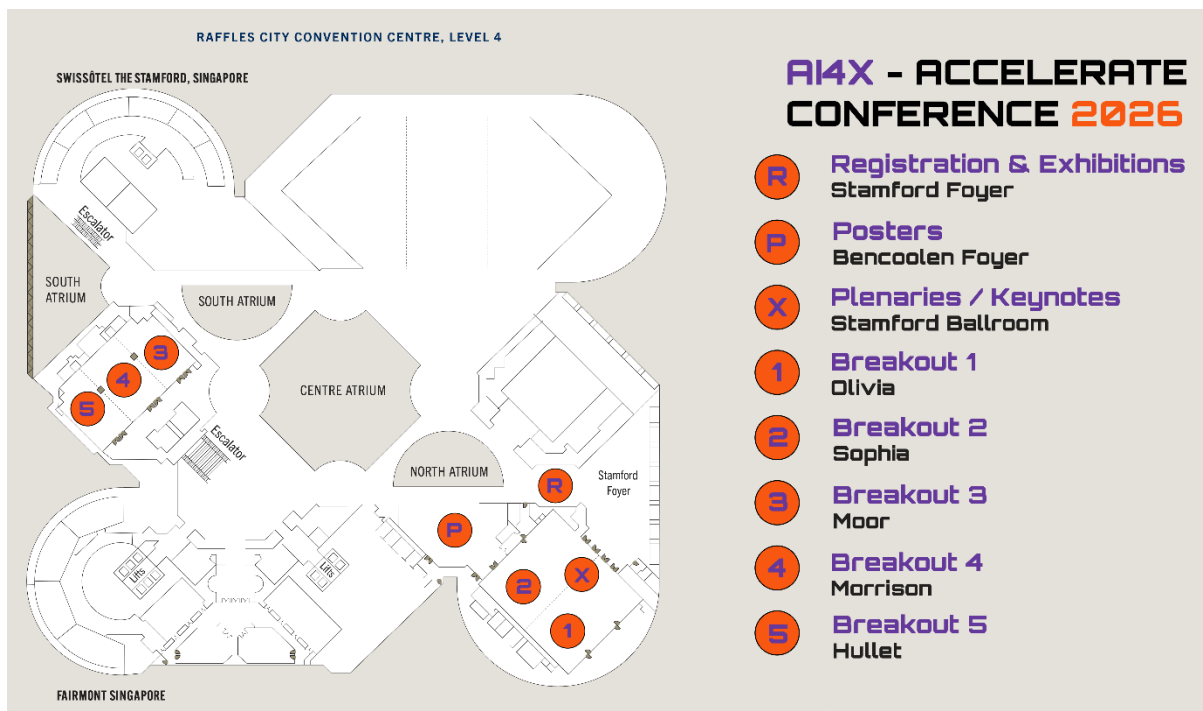
## Getting Here:

### 1. By MRT

- a. Take the MRT to City Hall MRT Station (East-West Line - Green & North-South Line - Red)
- b. Follow the directional signs into Raffles City Shopping Centre
- c. Follow the directional signs to Swissotel the Stamford
- d. Enter the lobby of the Swissotel the Stamford
- e. Take 3 flights of escalators up to level 4 and you will arrive at the Raffles City

### 2. By Taxi or Ride-Hailing Services

- a. Set your destination to “Swissotel the Stamford”
- b. From the Swissotel lobby, take 3 flights of escalators up to level 4 and you will arrive at the Raffles City Convention Centre



**Registration:** Please check in at the registration kiosks at Stamford Foyer upon arrival at the conference on the 16th of June 2026. Please have QR code ready for scanning.

**Scientific Programme:** <https://ai4x.cc/2026/scientific-programme/>

**Food & Beverage:** All-day coffee & tea will be available. Buffet-style catering will be provided for morning tea break, lunch, and afternoon tea break. Food will be labelled with information on common allergens (nuts, sesame etc.)

If you indicated that you require Halal, Kosher, or gluten-free meals, please collect your bento boxes from the Information Desk, located within Stamford Foyer.

## Poster Sessions

Posters will be on display all day between 16 June and 19 June at the Bencoolen Foyer, Raffles City Convention Centre.

**Poster Format:** A0 Size, Portrait Only.

**Poster Printing:** We ask that all poster presenters print their own posters and bring them to the conference.

Local print shops in Singapore include:

- [Acid Print](#)
- [Doorstep Prints](#)
- [Goh Brothers](#) - Located within National University of Singapore
- [Landmark Print](#)

## Poster Set-up, Judging, and Tear-down

Poster Presentation Grouping and Poster Numbers will be published at this link:  
<https://ai4x.cc/2026/scientific-programme/>

**\*New\* Poster Groupings are now available in Annex A.**

Presenters are expected to be by their posters to answer audience questions at one of the specified times, depending on the group they are assigned:

Poster Group	Activity	Date and Time
Poster Group 1	Set-Up	16th June, Tuesday, 8:00AM
	Poster Judging	17th June, Wednesday, 12:30PM
	Tear-down By	17th June, Wednesday, 5:00PM
<hr/>		
Poster Group 2	Set-Up	17th June, Wednesday, 5:00PM
	Poster Judging	18th June, Thursday, 12:30PM
	Tear-down By	19th June, Friday, 5:00PM

The poster prize presentation will be held at the conference dinner on 18th June 2026, Flower Field Hall, Gardens By the Bay. Prizes not collected at the conference dinner will be available for collection at the Information Desk on 19th June, Friday from 10:00AM onwards.

## Oral Abstract Presentations

The time and location of your presentation will be published at this link:

<https://ai4x.cc/2026/scientific-programme/>

The format of contributed oral presentations will be a 10-minute presentation, followed by 5-minutes of Q&A.

### **Before you attend:**

You are required to upload your slides at the dropbox link below in either ppt. / pptx.format. Please ensure that your slides are in the 16:9 format. Links within a presentation (for example, if you have a YouTube video linked) should be downloaded and inserted into your presentation. AV techs cannot click on a YouTube link within a presentation while the presenter is on stage.

File Name Convention: Day\_FirstNameLastName

E.g. If your presentation is on the 16 June: 16\_JohnSmith.pptx

Upload your slides at this link **by 5th June 2026:**

<https://www.dropbox.com/request/Cvh8SGhSUgeq1A3Vqtrf>

## Conference Dinner

### **Location:**

Flower Field Hall, Gardens by the Bay

18 Marina Gardens Dr, Singapore 018953

<https://maps.app.goo.gl/7rAXfmEXkM1ngdv97>

The conference dinner will be held on Thursday, June 18th at the Flower Field Hall in the iconic and award-winning Gardens by the Bay. The evening promises free access to the Flower Dome, light show at the Super Tree Grove, a lovely dinner of international flavours and a cultural show. Celebrate scientific achievements at the poster prize presentation and embrace the opportunity to network and form new scientific relationships.

### **Pre-paid ticket Collection**

For those who have purchased tickets to the Conference Dinner, please collect your conference ticket on 18 June at conference registration desk from 9 am to 4.30 pm. There will be a check-in process using the QR code specific to your badge. The ticket you will receive is a wristband which you should put on your wrist before departing for the dinner venue in the evening. There will be no replacement for the wristbands so please treat with care.

## Transport to Dinner

Buses will be provided to ferry guests from Raffles City Convention Centre to the dinner venue. Please join the bus queue at Stamford Foyer if you wish to take the bus to dinner.

Buses will depart at 6.15 pm and at 6.40 pm. The goal is for you to reach the gardens by 7 pm to enjoy the gardens before dinner at 8 pm.

## Dinner Programme

Time	Event	Remarks
6.15 pm And 6.45 pm	Board buses at Raffles City Convention Centre for Gardens by the Bay	Look out for conference Marshals (purple lanyards) who will guide you onto buses.
7 pm	Reach Gardens by the Bay and a short 5 minute walk to the Flower Dome	Remember to put on your wrist straps for free entry into the Flower Dome
7 – 7.35 pm	Walk through the award-winning Flower Dome and enjoy the on-going Tulip flower exhibition	
7.35 pm	Take a short 5 minute walk to the adjacent iconic Super Tree Grove where you will enjoy a 10-minute light and music show	
7.45 pm	Start of light show	
8 pm	Return to the Flower Field Hall and Dinner commences	
8.30 pm	India Recital performance	
8.40 pm	Malay Kompang and Silat performance	
8.50 pm	AI4X – Accelerate Conference 2026 poster Prize Presentation	
9.15 pm	Chinese Lion Dance Performance	
9.30 pm	End of Evening and good night	
6.15 pm And 6.45 pm	Board buses at Raffles City Convention Centre for Gardens by the Bay	Look out for conference Marshals (purple lanyards) who will guide you onto buses.

## Other matters for your attention

### Social Media

LinkedIn: [/ai4xconf](#) | [/acceleration-consortium](#)

X & Bluesky: [@acceleration\\_c](#) | [@accelerationc.bsky.social](#)

#AI4XAccelerate2026

Web: [I-FIM NUS](#) | [Acceleration Consortium](#)

### Photography and Videography

The National University of Singapore (NUS), Institute for Functional Intelligent Materials (I-FIM), The University of Toronto (UofT), & Acceleration Consortium (AC), as well as authorised personnel for and acting on behalf of these organisations, may take photographs and videos during the Event. NUS, I-FIM, UoT, & AC may use photographs and videos it takes and/or taken by authorised personnel for NUS, I-FIM, UofT, or AC marketing and publicity purposes in print, electronic and social media

### Survey

As part of the Acceleration Consortium's commitment to supporting equity, diversity and inclusion, and in alignment with the requirements of the Canada First Research Excellence Fund (CFREF) we are collecting demographic self-identification data from all participants in CFREF-funded initiatives, including the AI4X-Accelerate Conference 2026.

As a registered attendee, you will receive a unique, private link to the survey sent directly from [acceleration.data@utoronto.ca](mailto:acceleration.data@utoronto.ca). If you have already completed this survey as part of a previous engagement with the Acceleration Consortium, you will not be asked to complete it again.

This survey also helps us understand the demographic diversity of our participants and to develop programs to increase the diversity and inclusivity of our research community. Any information directly related to you is confidential and cannot be accessed by the Acceleration Consortium team, and results will be reported only in aggregate.

## FAQs

**Q:** Is there a preferred rate at a hotel?

**A:** There is no official hotel of the conference, but if you're looking for options in and around the area, here are a few:

- Carlton Hotel Singapore (76 Bras Basah Road, Singapore 189558)
- Citadines Rochor Singapore (2 Serangoon Road, #03-01, Singapore 218227)
- Oakwood Bencoolen Singapore (30 Bencoolen Street, Singapore 189621)
- Rendezvous Hotel Singapore by Far East Hospitality (30 Prinsep Street, Singapore 188647)
- Swissôtel The Stamford Singapore (2 Stamford Road, Singapore 178882)
- The Robertson House (1 Unity Street, Singapore 237983)

More details and to book: <https://ai4x.cc/2026/accommodation/>

**Q:** What is the dress code?

**A:** Business-casual

**Thank you for your participation!**  
**We are excited to see you at the AI4X - Accelerate Conference 2026. If you require any additional support, please reach out to [info@ai4x.cc](mailto:info@ai4x.cc).**

**We look forward to connecting with you soon!**

## Annex A – Poster Groupings

<b>Session 1 – Tuesday – Wednesday</b>				
<b>Judging: Wednesday, June 17<sup>th</sup> 1:30 – 2:30 pm</b>				
AL for Materials Science				
1.1	9	AI-driven computational workflows for scalable innovative materials design	Stephan Roche	
1.2	65	Deep Learning of Accurate Force Field of $\text{Hf}_x\text{Si}_{1-x}\text{O}_2$	Yingtao Yang	
1.3	27	LapidaryEngine: Feedback-Guided Iterative Text-to-Crystal Structure Generation	Yusei Ito	
1.4	45	Identification of MOFs with Unique Pore Shapes Using Computer Vision	Saad Aldin Mohamed	
1.5	47	aLloyM: A Large Language Model for Alloy Phase Diagram Prediction	Yuna Oikawa	
1.6	54	Unveiling Process–Structure–Property Coupling in CNT Fibers via Multimodal AI Analytics	Daisuke Kimura	
1.7	59	Space-Group Identification from Multi-Phase Powder XRD via Latent Phase Modeling	Tomoya Murata	
1.8	76	Machine Learning Analysis of Literature Dataset on CO <sub>2</sub> Reduction toward Prediction of High-Activity Multi-Elemental Catalysts	Umi Shin	
1.9	78	A Unified Diffusion Framework for the End-to-End Generation of Symmetry-Constrained Complex Molecular Crystals	Wendi Cai	
1.10	84	Large Language Models in Materials Science: Assessing RAG Evaluation Frameworks through Graphene Synthesis	Zen Han Cho	
1.11	87	CSX Framework for Synthesis-Oriented Generative Materials Discovery	Shuya Yamazaki	
1.12	97	Automation of the Polishing-Etching Process in Metallographic Observation	Daijiro Hashimoto	
1.13	100	A Shortcut Towards Simulating Millions of Atoms Using Machine Learning Potentials	Linh La	
1.14	108	Multi-task Attention for Doped Thermoelectric Properties Prediction	Leng Ze Tang	

AL for Materials Science					
1.15	110	Generative Symmetry in Crystal Modelling	Jianghai Wang		
1.16	116	Crystalline Phase Projection and Identification from High-Temperature Diffractograms Using Graph Neural Networks	Léonard Imbert		
1.17	119	Nanostructured Material Design via a Retrieval-Augmented Generation (RAG) Approach	Ekaterina Skorb		
1.18	142	An Accurate Deep Learning Force Field for Dielectric and Ferroelectric $\text{Hf}_x\text{Zr}_{1-x}\text{O}_2$ Solid Solutions	Zhe Su		
1.19	143	A Comparative Study of Molecular Dynamics Approaches for Simulating Ionic Conductivity in Solid Lithium Electrolytes	Dounia Shaaban Kabakibo		
1.20	169	AI-Enabled Development of Cooling Device for High-Power Electronics	Vassilis Christophides		
1.21	178	Mapping Materials Science: A Multi-Modal Toolbox to Curate Broad Synthesis Procedure Databases from Scientific Literature	Mathilde Franckel		
1.22	189	AtomWorld: A Benchmark for Evaluating Spatial Reasoning in Large Language Models on Crystalline Materials	Alexander Chen		
1.23	191	An Autoregressive Approach for Material Generation	Niklas Dobberstein		
1.24	194	Recent Developments and Applications of the Machine-Learned Moment Tensor Potentials	Nikita Rybin		
1.25	217	A Topological Equilibrated Configuration Space Analysis of Nanoparticle Systems	Alexandros Keros		
1.27	225	Accurate and Rapid Measurement of Fluid Thermal Conductivity	Mohammad Zargartalebi		

AL for Materials Science				
1.28	229	Generalized convolutional many-body distribution functional representations	Anatole von Lilienfeld	
1.29	239	Toward Self-Driven Microscopy Exploration for the Characterization of Functional Materials	Claudia Bazan	
1.30	249	Machine Learning-Based Surrogate Models for Performance Prediction of Triboelectric Nanogenerators	Shashank Mishra	
1.31	106	A Multi-Modal Deep Learning Platform for Cross-Domain Property Prediction in Chemical Process Design	Mikhail Tsitsvero	
1.32	261	SWORD: A compositional disorder-aware crystal representation for cross-dataset curation and disordered novelty assessment	Yuyao Huang	
1.33	263	Computational investigation and generation of site-disordered sodium ion cathode materials	Martin Hoffmann Petersen	
1.34	272	EGMOF: Efficient Generation of Metal-Organic Frameworks Using a Hybrid Diffusion-Transformer Architecture	Yeonghun Kang	
1.35	278	Application of digitization and large language models for digital twins in permanent magnet materials	Hongbin Zhang	
1.36	285	MatSeek: An Automated Knowledge-Driven Framework for Materials Research	Huang Jianguo	
1.37	296	Rapid, Room Temperature Synthesis of a Biomass-Derived, Recyclable Copper Metal-Organic Framework Utilizing Automation for CO <sub>2</sub> Capture	Daniel Davidson	
1.38	321	Using genetic algorithms to explore compositional space of perovskite thin film	Jérôme Gautier	
1.39	332	Anomalyspy: A Generative Defect Localization in Semiconductor Packages, with X-Ray Microscopy	Pawan Kumar	
1.40	348	Predictive Modeling for Quantitative Compositional Engineering of InZnHfO Thin-Film Transistors	Jiho Lee	
1.41	351	Machine Learning-Based Optimization of SOC Windows for High-Performance $\mu$ -Si Anodes	Taehoon Choi	

AL for Materials Science				
1.42	352	Quantum Annealing-Driven Active Learning Benchmark for Nanophotonic Design	Serang Jung	
1.43	358	Model–Data Coevolution as the Basis of Stateful, Problem-Scoped Materials Databases	Fengyu Xie	
1.44	360	Literature-Grounded LLMs for Predicting High Ionic Conductivity Solid-State Electrolytes	Kunik Jang	
1.45	375	Expanding Catalyst Discovery Across Material Classes by Machine Learning	Junseok Moon	
1.46	379	Simulation-to-Experiment Transfer Learning for XRD-Based Autoencoder Modeling of SOEC Half-Cell Materials	Hunmin Park	
1.47	381	TropicalField-Tandem: Physics-Informed Indoor→Outdoor Translation and Uncertainty-Aware Forecasting for Perovskite–Si Tandem Reliability	Romika Sharma	
1.48	385	Label-Efficient Battery SOH Estimation via Domain-Aware Self-Supervised Learning	Ji Young Yun	
1.49	387	Accelerating Catalyst Design via AI: High-Throughput Screening and Machine Learning Reveal Defect-Enhanced Activity in Pt–Au Nanoclusters	Ilia Chepkasov	
1.50	388	AI-Assisted Architected Cementitious Microstructures for Durable and Low-Carbon Infrastructure	Abhimanyu Goel	
1.51	393	MOFology: Ontologically-Grounded MOF Knowledge Graph and Prediction Framework	Matthew Hart	
1.52	407	3D Microstructure Reconstruction of X70 Pipeline Steel from 2D EBSD Data Using SliceGAN	Joonas Lahikainen	
1.53	415	Multiscale Modeling of Resistive Switching in Two-Dimensional Heterostructures	Vitalii Kapitan	
1.54	435	A Hybrid Physics-Driven Neural Network Force Field for Liquid Electrolytes	Junmin Chen	
1.55	441	Motif-Driven Scalable Design of Multi-Cation Rutile Oxides for Oxygen Evolution Reaction	Yiwen Yao	

AI for Chemistry					
2.1	16	Improving the univariate calibration approach with Bayesian modeling for IR reaction monitoring	Jiayu Zhang		
2.2	43	Selective and Sustainable Oxidation of Allyl Alcohol in Water Using a TS-1 Catalyst in Continuous Flow: A Machine-Learning-Driven Approach	Riko I Made		
2.3	44	Eliminating Cryogenic Constraints in Ipsenol Synthesis through Real-Time Reaction Landscape Mapping	Charlotte Smith		
2.4	443	AI-Assisted Reaction Network and Catalyst Exploration for CO <sub>2</sub> Conversion	Mikhail Polynski		
2.6	153	BigSolDB 2.0, Dataset of Solubility Values for Organic Compounds in Different Solvents at Various Temperatures	Krasnov Lev		
2.7	184	GoFlow: Efficient Transition State Geometry Prediction with Flow Matching and E(3)-Equivariant Neural Networks	Leonard Galustian		
2.8	198	iGRASP: A Modular Platform for Improved, Graph-Based Spectra Prediction	Nick Wierich		
2.9	205	Future-Proofing Data for Catalyst Fingerprinting and Better Design Validation	Wesley McNutt		
2.10	212	ChemSIE: From Document Based Records to Machine Actionable Experimental Data	Itamar Wallwater		

AI for Chemistry					
2.12	271	An automatically generated reaction network for the synthesis of hBN using the Molecular High-Index Saddle Dynamics Search method	Vitalii Sagan		
2.13	282	Multi-fidelity Bayesian optimisation for DFT-in-the-loop discovery of manufacturable homogeneous catalysts, auxiliaries, and ligands	Yong Lee		
2.14	288	Beyond Greedy Acquisition: A Distribution-Aware Active Learning Framework for Molecular Discovery	Ruixuan Chen		
2.15	290	A Flexible, Code-Free, and Scalable Workflow for Structured Data Extraction from CO <sub>2</sub> Electrochemical Reduction Literature	Haiwen Dai		
2.16	301	The Medicinal Chemistry Self-Driving Lab – Accelerating Hit Optimisation with a Direct-to-Biology Approach	Stuart Green		
2.17	327	Smarter Electrolysis in Rock Reactors	Joseph Chiong		
2.19	349	Automated Process Synthesis via Generative AI-Based Dual-Loop Simulation and Optimization	Yeong Woo Son		
2.20	353	Evaluating Chemistry-Guided Filtering Heuristics Using LLM-Extracted Reaction SMILES	Chaewon Lee		
2.21	367	ADMET Scoring Models for Real-World Drug Design	Zihan Wang		
2.22	380	Predicting Mechanisms and Outcomes of Complex Radical Cascades via a Hybrid Network-QM-AI Approach	Kangjie Lin		
2.23	432	MolViBench: Evaluating LLMs on Molecular Vibe Coding	Jiatong Li		

AI for Biology					
3.1	15	A Modular and Interpretable Pipeline for Unsupervised Learning on Scientific Spatiotemporal Imaging Datasets	Timothee Levilly		
3.3	215	CryoEM 2D Classification with Translational and Rotational Invariant Features	Yong Mingda		
3.4	287	Single-Shot Phase Retrieval in Cryo-EM via Latent Conditional Diffusion Model	Xiaodong Yang		
3.5	347	Simulation-to-Real Alignment for Cryo-EM Image Modeling via Conditional GAN-Based Refinement	Ziyue Jiang		
3.6	359	Flow-Matching-Based Posterior Sampling for Single-Shot Phase Retrieval in Cryo-EM	Rongtao Zhang		
3.7	404	Evolving Robust Drug Candidates via Co-Evolutionary Artificial Life Simulators	David Scott Lewis / Junhan Wang		
3.8	425	Recent Progress in AI-Driven 3D (Bio)Printing for Tissue Engineering	Mihaela-Raluca Dobrisan		

AI for Medicine & Healthcare				
4.1	5	Spatial Machine-Learning Prediction of Lung Function and Body Mass Index in Australian Cystic Fibrosis Patients	Arul Earnest	
4.3	126	Post-PCI Cardiac Death Prediction via Synthetic Minority Augmentation and Stress-Tested Probability Quality	Mikhail Lazarev	
4.4	248	A Connected Workflow to Streamline Tablet Manufacture and Dissolution Testing	Maria Chang	
4.5	394	FedAdaPriv-CPU: Adaptive Differential Privacy with Frozen Backbone for Resource-Constrained Federated Medical Imaging	Anusha Randhawa / Muhammad Hamza Zaman	
4.6	405	Toward TheraAgent: Evidence-Grounded, Self-Verifying AI for Oncology Treatment Recommendation	Junhan Wang	
4.7	446	A Fairness Audit of Medical Imaging Foundation Models on a Multimodal Structured Clinical Benchmark	Saketh Lingisetty	

AI for Society				
5.1	18	Translating Natural Language Processing Frameworks in Humanistic Data Analysis	Kenneth Y T Lim	
5.3	18 2	AI-Enabled 3D Glare Assessment Framework for Urban Solar Planning	Huixuan Sun	

**Session 2 – Thursday - Friday**  
**Judging: Thursday, June 18<sup>th</sup> 1:30 – 2:30 pm**

**Self-Driving Labs**

1.1	39	Development of an automated system for ceramic powder process	Daijiro Hashimoto; Woosuck Shin		
1.3	42	Dynamic Parameter Scanning: a Novel Method for Mechanistic Elucidation	Dylan Pyle		
1.4	57	MaiML: A Common Data Format for Measurement and Analysis and Its Application to an Autonomous Experimental System	Akira Aiba		
1.5	60	Robotic-arm-based self-driving laboratories powered by NIMO and IvoryOS	Naruki Yoshikawa		
1.6	68	Affordable 3D Printed Automation for Self-Driving Laboratory: Expanding Access to High-Throughput Experimentation	Sayan Doloj		
1.8	73	Autonomous Workflows and SHAP Interpretation of Deposition-Rates in Bipolar HiPIMS	Manuel Kober-Czerny		
1.12	88	Automation of Thermal Ageing and Tensile Tests for Adhesively Bonded Single Lap Joints	Kazumasa Shimamoto		
1.14	118	On-the-fly reaction monitoring using correlated spectroscopies	Jan Günzl		

Self-Driving Labs				
1.15	122	Electrochemical Feedback for Closed-Loop Facet Control in Pd Nanoparticles	Shao Rong Choo	
1.17	157	ATLAS: accelerating materials discovery at Imperial College London	Lana Lee	
1.18	190	Autonomous Search for Grinding Conditions using Robots and Bayesian Optimization	Yuto Yotsumoto	
1.19	195	RAISE: A self-driving laboratory for interfacial property formulation discovery	Aaron Clasky	
1.20	196	MicroMAP: A Material Acceleration Platform for the Synthesis of Organic Nanoparticle Dispersions	Alexander Colsmann	
1.21	202	An automated gel screening platform	Aaron Clasky	
1.22	203	Accelerating small organic molecules scale up with data-rich experimentation	Ekaterina Trushina	
1.24	231	Challenging to formulation through autonomous experiments and consideration of digital twin framework application	KESAAKI MINEMURA	
1.25	234	Towards Optimal Mixing: Enabling Autonomous Experimentation via Quantitative Emulsion Assessment	Hitoha Sato	
1.26	244	Physical model-informed automated reaction optimization within a digital platform	Shuyuan Zhang	
1.27	245	An Automated, Calibration-Free Platform for High-Throughput Reaction Screening and Data Analysis	Manh Hung Tran	
1.28	267	DIY, Modular Automation Platform Built from Affordable Components for Directed Evolution and Molecular Biology, Toward Closed-Loop Workflows	Jonathan Lee	

Self-Driving Labs					
1.30	275	Robotic Mechanochemical Synthesis of HKUST-1 with Process Monitoring	Kazuki Ishizaki		
1.31	281	Bayesian optimization for self-driving liquid coating laboratory	Jisoo Song		
1.32	286	A Provenance-First, AI-Ready Data Platform for Large-Scale Memristor Experiments	Lai Gan		
1.33	292	Autonomous Discovery of Pareto-Optimal Gas-Diffusion Electrode	Zahra Azimi Dijvejin		
1.34	299	A low-cost, high-throughput solid dosing platform for self-driving laboratories	Rui Zhang		
1.35	303	Robot-Enabled Biofabrication of Tissue Cultures with Micrometer-Scale Precision	Daniel Hocevar		
1.36	305	Automated and Interpretable Experimental Platform for Process-Structure-Property Analysis via Raman Spectroscopy	Takuya Miyajima		
1.37	306	Digitalizing Slurry Mixing for an Electrode Fabrication SDLs	Jaehyun Oh		
1.38	307	Robotic Kneading for Organic Reactions: A Deterministic Platform for Data-Driven Synthesis in Semi-Solid Media	Yuki Nishihori		
1.41	325	HELIOS – Holistic Experiment Learning Intelligent Orchestration System	Sissi Feng		
1.42	326	Membrane Optimization for Electrochemical CO <sub>2</sub> Storage	Jordan Rumscheidt		

Self-Driving Labs				
1.43	336	Development of a Scalable High-Throughput Platform for Plasmid Transfection in 3D Mammalian Cell Culture	Rosanna Jiang	
1.44	338	Reinforcement Learning to Increase Nuclear Fusion Efficiency	Joseph Koh	
1.45	361	Accelerated Discovery and Characterization of Nanoscale-Covalent Organic Frameworks for Photocatalytic Water Splitting	Ziheng Xiao	
1.47	373	Bayesian Optimization-Guided Experimental Design for Graphene-Reinforced Cementitious Composites	Abhimanyu Goel	
1.48	391	LabDroid “Maholo”-Centered Automation and Autonomization of Life Science Experiments	Akari Kato	
1.49	400	Audited Causal Discovery Agents for Brain Resilience and Alzheimer's Reversal	David Scott Lewis	
1.50	402	PD-NCA AutoLab: Self-Organizing Neural Intelligence as a Testbed for Autonomous Science	David Scott Lewis	
1.51	411	AI-Guided Optimization of EIS Measurements: Minimizing Low-Frequency Sampling for Data-Efficient Electrochemical Characterization	Yonatan Kurniawan	
1.52	413	Transferable Impedance-Grounded Learning for Interfacial Degradation Across Energy Systems	Hithesh Rai Purushothama	
1.55	434	Reinforcement Learning-Enabled Control of Single DNA Molecule Manipulation in Microfluidics	Fuhai Zhou	
1.57	445	Accelerating Electrolyte Discovery via a Closed-Loop Physical AI Platform	Vanesa Munoz Perales	

AI Agents & LLMs					
2.1	14	A Multi-Agent LLM Framework with Hierarchical Citation Graph for Automated Survey Generation	Duy Dung Le		
2.3	156	Beyond Statelessness: Engineering Subjective Cognition via Hierarchical Memory Consolidation and Tunable Agency	Malik Saif		
2.4	210	A Multi-agent Framework for Physical Laws Discovery	Bo Hu		
2.5	236	Defending Federated Learning: Adaptive Integration of Differential Privacy, SMPC, and Byzantine Robustness	Syed Momin Naqvi		
2.6	247	Black-box Membership Inference Attacks on Synthetic Text via N-gram Overlap	Yidan Sun		
2.7	284	FHIR-Driven Medical Network Traffic Simulation for Multi-Departmental Healthcare Security Testing	Miro Moffett		
2.8	376	An Explainable Conversational AI Framework for the Discovery of Cobalt Electrocatalysts in Industrial Water Electrolysis	Jongyeop Baek		
2.9	377	ZKBioVault: A Privacy-Preserving Biometric Authentication Framework for Fraud-Resilient Financial Identity Management	Izza Sohail		
2.10	389	When Designs Explain Themselves: Report Cards for Evolutionary LLMs	Alex Siek		
2.11	390	IFC-QA: A Benchmark for Evaluating LLM Reliability over Industrial Building Information Models	Anastasiia Volkova		

ML Algorithmic Advances				
2.13	117	Spectral Analysis of the Weighted Frobenius Objective	Vladislav Trifonov	
2.14	218	Sparse Global Mixing via Compact-Support Graph Kernels	Himanshu Singh	
2.16	246	Electronic Circuit Optimization With Graph and Sheaf Neural Networks	Eva Maria Hita Sogorb	
2.17	319	Scaling Multilingual E-Commerce with GenAI: Content Generation and Sentiment Analysis for Low-Resource Languages	Kathakali Mitra / Harsh Khanna	
2.18	322	Conditional Diffusion for Storage Performance Modeling	Aziz Temirkhanov	

Unconventional Computing				
<b>Evaluation time: 12.30 – 1 pm (Only for 2.19 – 2.20)</b>				
2.19	344	Chiropto-Neuromorphic Devices Based on a Photocatalytic Dye/Polymer Semiconductor Bulk Heterojunction for Circularly Polarized Light Detection	Boesung Kwon	
2.20	346	Enhancing Synaptic Plasticity and Multistate Retention of Organic Neuromorphic Devices Using Anion-Excessive Gel Electrolyte	Jeongwoo Lee	

AI for Physics				
3.1	30	Identifiable learning of dissipative dynamics	Aiqing Zhu	
3.2	103	Learning to Image in Slepian–Pollack Basis – Achieving Super-resolution of Nanostructures	Eng Aik Chan	
3.3	173	Divergence-Constrained Physics-Informed Neural Networks for Time-Domain Maxwell's Equations	Zaifeng Yang	
3.4	186	From Visual Vocabulary to Grammar: An Interpretable Paradigm for Scientific Discovery in Spatiotemporal Data	Zhen Yuan Yeo	
3.5	207	DarkMatterFM: An Agentic Foundation Model for Multimodal Dark-Matter Inference with GPU-Accelerated Emulators	Ioana Zelko	
3.7	223	OnsagerFlow: Learning Mesoscopic Dynamics from Microscopic Simulation	Shiqi Wu	
3.8	256	Multi-Modal Classification of Extended 1D Cellular Automata	Zhaoyun Chen	
3.9	276	Data-Driven Detection of Nonlinear Mode Interactions Using Post-Hoc Interpretable Deep Learning	Bayan Abusalameh	
3.10	345	Partial-Physics Pretraining for Transfer-Learning in Computational Aerodynamics	Benjamin Y. J. Wong	
3.11	399	Application of Automatic Differentiation and Optimization with PDE Constraints to Forward and Inverse Problems	Alexander Ryabov	
AI for Earth Science				
4.1	50	Toward a Global SAR Foundation Model for SAR-to-Spectral-Indices Mapping	Ziyi Song	
4.2	395	Physics-informed local-global underground fluid flow modeling with multiple sinks	Alexander Ryabov	
4.3	137	A Field-Deployable IoT-Edge-AI Framework for Landslide Prediction and Early Warning	Amrita Joshi	
4.4	222	Riemannian Diagnostics for Decoder-Consistent Latent-Space Analysis in Subsurface Modeling	Anton Shirokov	
4.5	317	AI Stretch-Grid Model for Kilometre-Scale Weather Prediction over Deep Tropics	Ka Wing Chui	
4.6	340	AI in Life Cycle Assessment	Alexei Lapkin	
4.7	342	Improving Value Chain Transparency in Bioprocess Life Cycle Assessment Using Surrogate Models	Michail Vousvoukis	

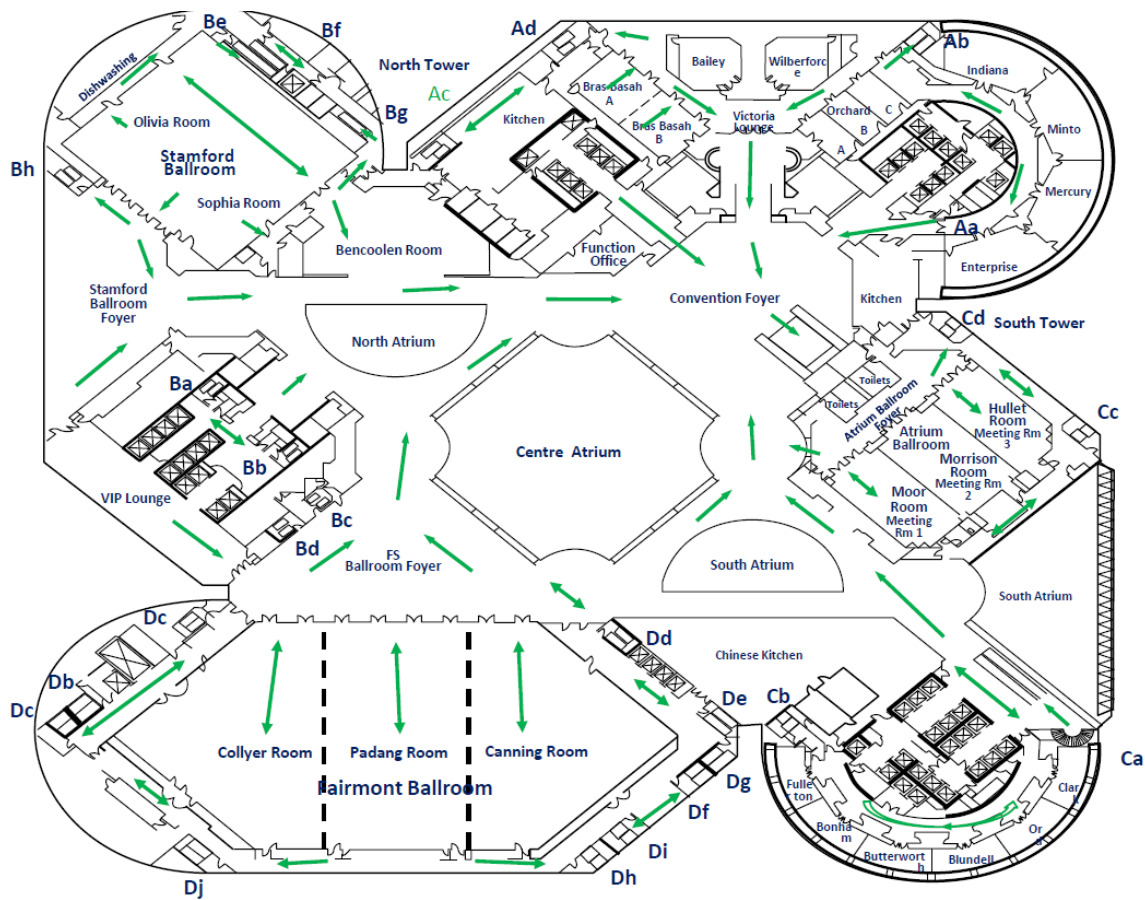
# Annex B – Safety Information

## 1) Raffles City Convention Centre

**Emergency Evacuation:** In the event of an emergency, please follow the evacuation route of Raffles City Convention Centre and assemble at the designated assembly area located near War Memorial Park.

Kindly refer to the evacuation plan as follows:

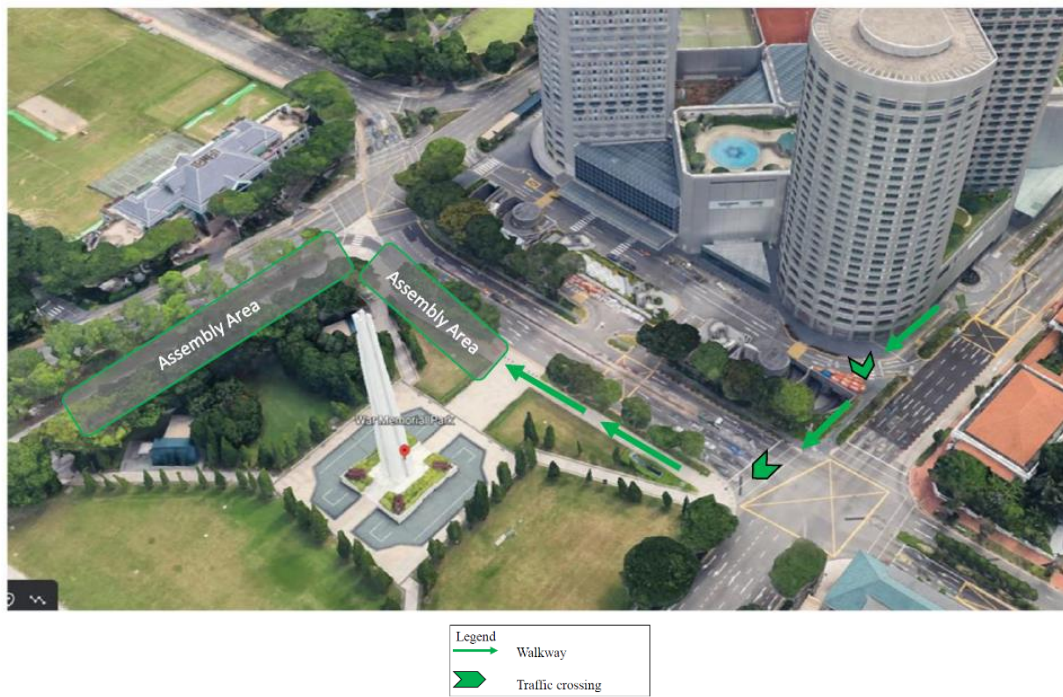
- From Raffles City Convention Centre



- Route 1 towards Assembly Area near War Memorial Park



- Route 2 towards Assembly Area near War Memorial Park

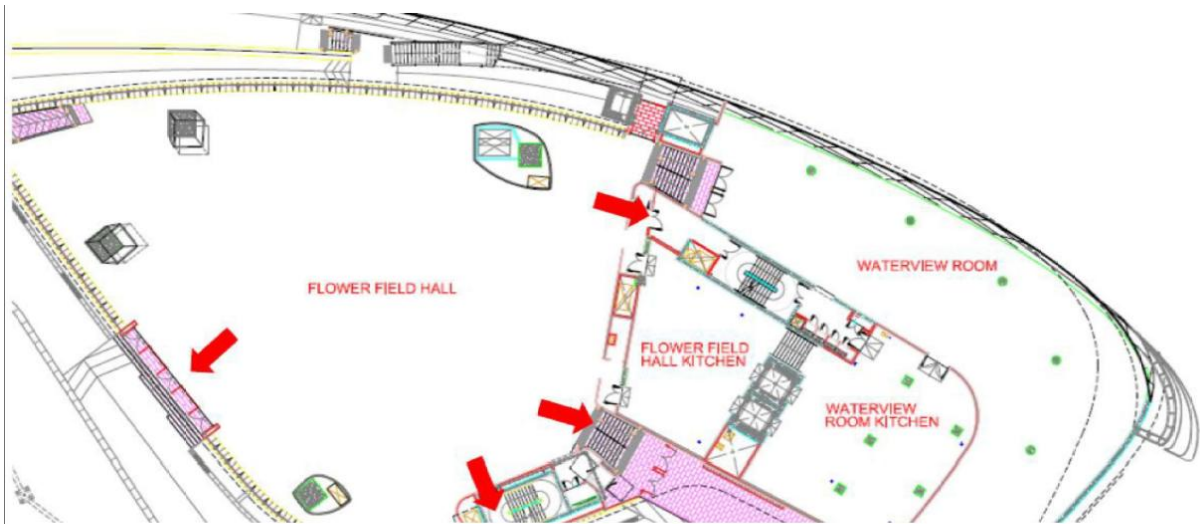


## 2) Flower Field Hall

**Emergency Evacuation:** In the event of an emergency, please follow the evacuation route of Flower Field Hall and assemble at the designated assembly areas located at Silver Garden or Golden Garden.

Kindly refer to the evacuation plan as follows:

- From Flower Field Hall

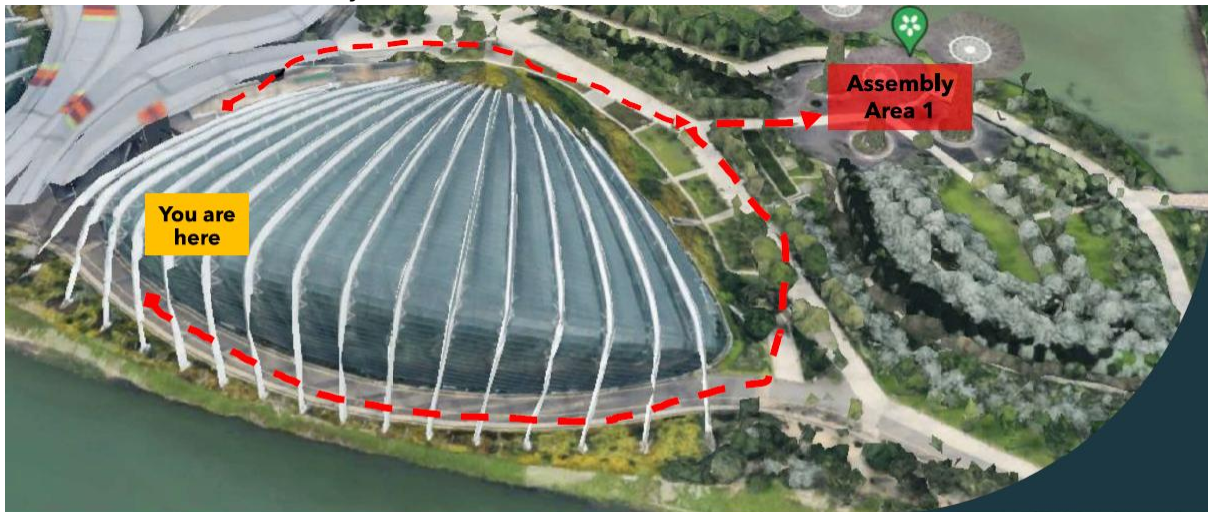


### Emergency Exits in Flower Field Hall

Conference Dinner Venue



- Route towards Assembly Area at Silver Garden

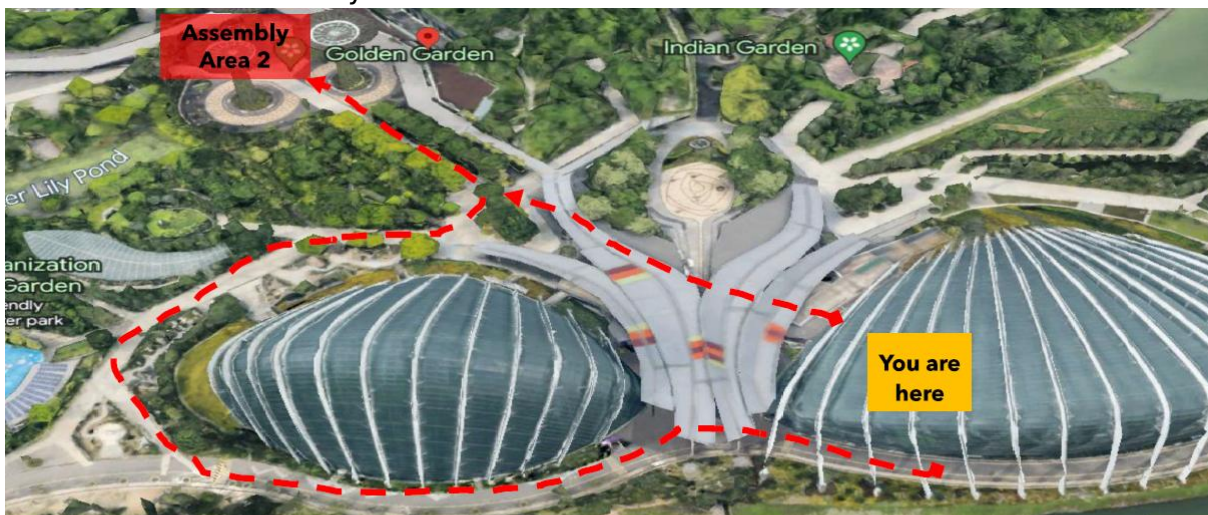


### Primary Evacuation Point - Silver Garden

Conference Dinner Venue



- Route towards Assembly Area at Golden Garden



### Secondary Evacuation Point - Golden Garden

Conference Dinner Venue

