

Conference Information

4th International Conference on 3D Construction Printing 4IC3DcP

19 - 21 July 2023
Singapore Center for 3D Printing (SC3DP)
Nanyang Technological University, Singapore

Content

Conference Scope	3
Committee	4
Important Events	6
Important Information	7
Information for Presenters	8
Information for Exhibitors.....	9
Travelling to NTU Guide.....	12
By Grab/Taxi	12
By public transport	12
Recommended Hotels	16
Conference Layout.....	18
Conference Timetable.....	18

Conference Scope

In recent years, 3D printing technology, also known as additive manufacturing, is becoming more widely applied to the field of the building and construction, such as extrusion-based concrete printing and spray-based concrete printing, since the 3D construction printing (3DcP) has the potential of the high-level automation, design freedom, cost reduction, and waste reduction.

The International Conference on 3D Construction Printing aims to promote this rapidly developing field and provide an opportunity for researchers and industry experts to find out the latest developments in this potential field. With the inaugural conference in the series held at Swinburne University of Technology, Australia in 2018 and the second by Hebei University of Technology, China in 2019, the third is co-organized by Tongji University and Hebei University, China in 2022. The 4th International Conference on 3D Construction Printing will be hosted by Nanyang Technological University (NTU) in July 2023. This conference series have established itself as the leading forum for communicating the latest research and practical achievements in 3DcP, particularly in the Asia Pacific region where many successful applications of 3DcP have been witnessed in full scale constructions.

The Scope of the conference covers all aspects of Construction 3D Printing, to include established technology, modeling, simulation, materials, recycled materials, and concrete, geopolymers, fiber reinforcement and composite materials, testing and standards, applications, Building Information Modeling (BIM), design, optimization, structural and intelligent monitoring, robotics, and automation.

Committee

Conference Chairs



Paulo Bartolo
NTU, Singapore



Tan Ming Jen
NTU, Singapore



Wong Teck Neng
NTU, Singapore

International Scientific Committee

Berok Khoshnevis University of Southern California, USA	Theo Salat Eindhoven University of Technology, Netherlands	Liu Alexander ASTM International
Michael Fiske Jacob Space/NASA Marshall	Richard Buswell Loughborough University, UK	Ma Guowei Hebei University of Technology, China
Erik Schlangen Delft University of Technology, Netherlands	Stephan Mansour Wohlers Associates, USA	Yamei Zhang Southeast University, China
Jay Sanjayan Swinburne University of Technology, Australia	Vittoria Laghi Massachusetts Institute of Technology (MIT), USA	Liew Kim Meow City University of Hong Kong, Hong Kong
Jianzhuang Xiao Tongji University, China	Timothy Wangler ETH Zurich, Switzerland	Weng Yiwei Hong Kong Polytechnic University, Hong Kong
Victor Mechtcherine TU Dresden	Biranchi Panda Indian Institute of Technology Guwahati, India	

Organizing Committee

Adeline Tan (SC3DP, NTU)	Jessie Tee (SC3DP, NTU)	Lim Jian Hui (SC3DP, NTU)	Daniel Tay Yi Wei (NTU)	Tommy Francis (SC3DP, NTU)
Caroline Fok (SC3DP, NTU)	Li Mingyang (SC3DP, NTU)	Wang Lining (SC3DP, NTU)	Henry Heng (SC3DP, NTU)	Sangeetha Sreekamal (SC3DP, NTU)
Chaw Peiwei (SC3DP, NTU)	Lu Bing (SC3DP, NTU)	Shum Chee Wai (SC3DP, NTU)	Cyberia Lim (SC3DP, NTU)	

Supported By



Sponsors

Platinum



Gold



Silver



Important Events

Conference registration

Location: The Arc - Learning Hub North (LHN) - Basement 1 (Reading room)
Date/Time: 19th July 2023, 8:30am

Lab tour

Location: The Arc - Learning Hub North (LHN)
Date/Time: 19th July 2023, 3:20pm

Welcome Cocktail

Location: The Arc - Learning Hub North (LHN) - Basement 1 Foyer
Date/Time: 19th July 2023, 5:20pm

Banquet Dinner

Location: Marina Bay Sands
Begonia Junior Ballroom 3011 to 3112
Banquet type: Chinese dinner
Date/Time: 20th July 2023, 6:30pm

Please confirm your dietary preference for the conference dinner (no preference, halal or vegetarian) to the conference committee by 30th June via email to SC3DPoutreach@ntu.edu.sg

The shuttle service from NTU to MBS will depart at three different timings: **5.15pm**, **5.30pm** and **5.45pm** (one buses with a capacity of 40 passengers each). Kindly indicate your interest for the shuttle service at the registration counter located at Learning Hub North (LHN) - Basement 1 (Reading room).

The shuttle bus to Marina Bay Sands (MBS) will pick up passengers from NTU at The Arc - Learning Hub North (LHN) - B4 Lobby.

Closing Ceremony

Location: The Arc - Learning Hub North (LHN) – Lecture Theater
Date/Time: 21 July 2023, 2:20pm

Exhibition Booths

We are pleased to announce that we will be featuring exhibition booths from esteemed companies in the additive manufacturing and building & construction sectors. These booths will be located at The Arc - Learning Hub North (LHN) - Basement 1 (Student Hub Area).

Important Information

Conference Venue

The Arc - Learning Hub North (LHN), 63 Nanyang Drive, Singapore, 636922
Help Desk: Learning Hub North (LHN)- Basement 1 (Reading room)

NTU wireless network

For detailed instruction on how to access the NTU wireless network, please refer to the following link: <https://www.ntu.edu.sg/life-at-ntu/internet-account-and-policy/how-to-login-to-the-ntu-wireless-network>

Useful Phone Numbers

Police: 999

Ambulance: 995

Fire Brigade: 995

Tourist Information hotline: 1800 736 2000/ +65 6736 2000

Mask-Wearing Regulation in Singapore

As of 13 February 2023, masks are no longer needed in public transport and public areas **except** hospitals, clinics and nursing homes.

All attendees to 4IC3DcP enjoy a 30% discount on the [Additive Construction Specialty Report 2022](#) by Wohlers Associates.
Please utilize coupon code 4IC3DcP.

Information for Presenters

Before presentation:

1. Please arrive at the presentation venue 20 minutes before the start of the Parallel Session and report yourself to the respective Session Chair.
2. Please submit your presentation slides to the registration counter on the first day of the conference at 8:30 am. We will be using the computer in the respective session room to display the slides.
3. Alternatively, you may choose to send your presentation slides by July 18, 2023, 12 pm (GMT+8) to the email SC3DP Outreach (SC3DPoutreach@ntu.edu.sg). If the file size is too large, please utilize WeTransfer or share a Google/OneDrive link for us to download the presentation file. Please include in the header of the email "4-IC3DcP Conference Presentation Slides (your name)" as well as your presentation date and time.
4. Additionally, you have the option to bring your own thumb drive or computer and connect it to the screen in the respective rooms using an HDMI cable. Macbook users are kindly requested to bring their own adaptors for connecting to the HDMI cable.

During presentation:

- a. Your oral presentation should not exceed 20 minutes. At the 15th minutes, the student helper will raise a "5 minute" card to indicate the time left for the presentation and Q&A.
- b. If your presentation and Q&A stretches over 19th minutes, the Session Chair may cut short your presentation to ensure strict adherence to the program. In cases when extra time is available, the session chair(s) may invite further questions from the audience, who can address the questions to any speaker in the session.

Information for Exhibitors

Exhibition Venue: Student Hub @ the ARC (level B1)

Exhibition Dates: 19 - 21 Jul 2023

Exhibition Opening Hours:

19th Jul: 9 am – 5 pm

20th Jul: 9 am – 3 pm

21st Jul: 9 am – 3 pm

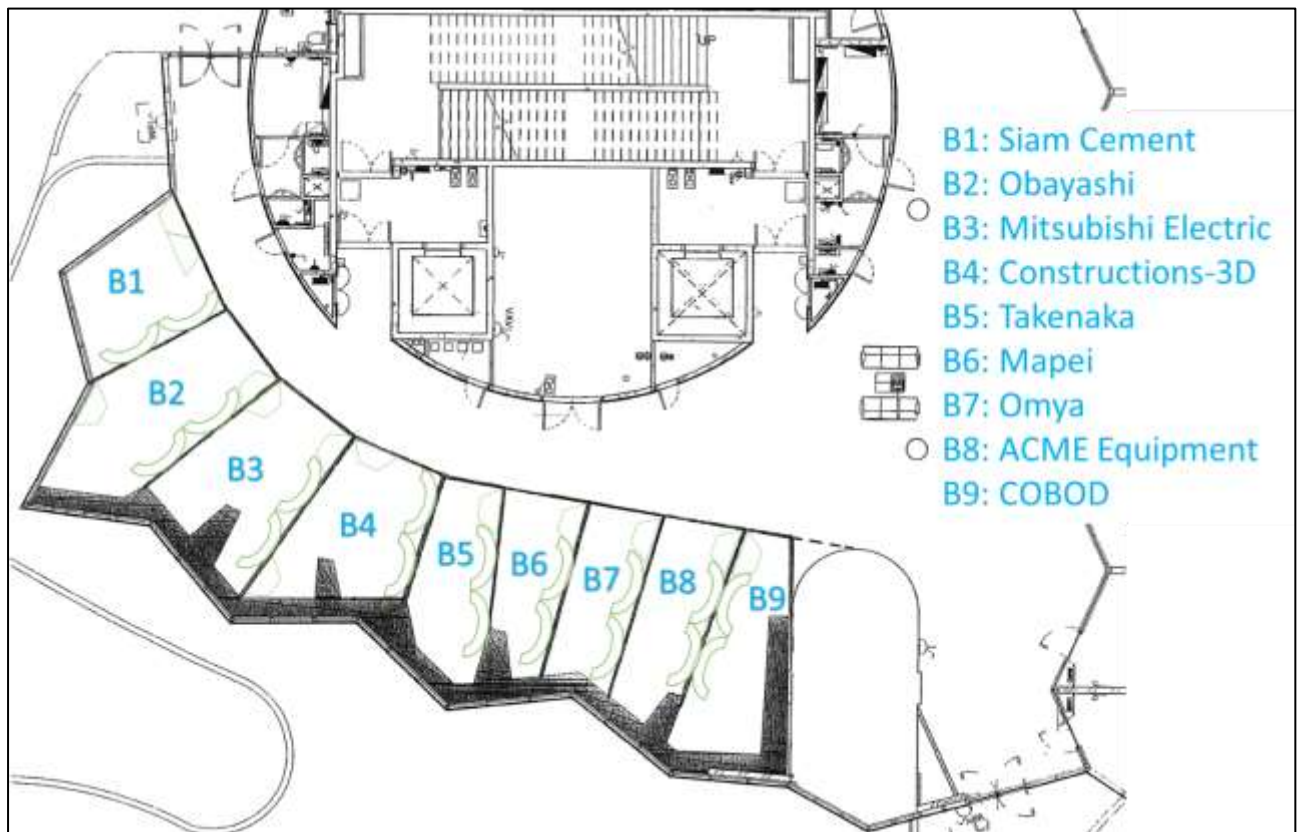
- 18 Jul 2023, 2 pm – 5 pm: moving-in for booth setup at Student Hub
- 21 Jul 2023, 3 pm – 5 pm: removal of exhibits from the booth

- Exhibitors are to use the lift nearest to the loading bay (@ Level 1) for transporting the exhibits to Student Hub (@ level B1 at the ARC).
 - Lift load capacity: 1,500 kg
 - lift door opening: 1.0 m width x 2.0 m height
 - lift depth: 2.0 m

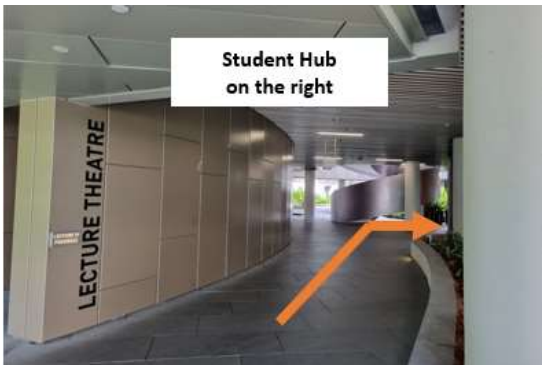
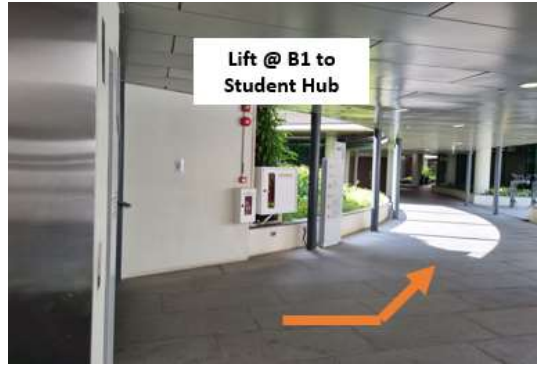
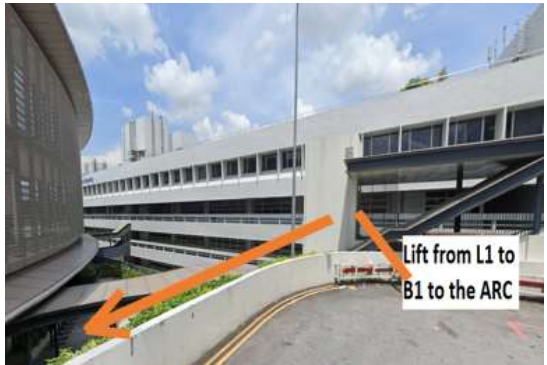
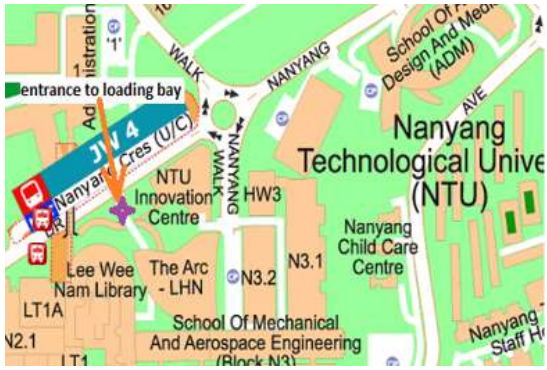
- Each booth has the following:
 - company name label
 - 1 or 2 trapezium shape tables & chairs (Silver or Gold Sponsor)
 - trapezium shape table size: 1.5m width x 0.65m depth x 0.75m height
 - sofa set
 - 13A three-pin socket point (please bring your own power extension cord)

- Student Hub area:
 - Aircon facility with carpeted flooring
 - Please refrain from damaging the carpet area with heavy and rough / abrasive-based exhibits.
 - Arrangements can be made to place heavy exhibits in the B1 foyer @ the ARC (open area outside the Lecture Theatre)
 - This is a common area for students to access the individual rooms within the Student Hub
 - The hub is accessible during the conference and is locked during the night
 - NTU is not held liable for any missing exhibits or items in the Student Hub

Student Hub Area



Loading bay at level 1 to level B1 Student Hub



Travelling to NTU Guide

Getting to the conference venue

The Arc - Learning Hub North (LHN)

By Grab/Taxi

The most convenient way of getting to The Arc - Learning Hub North (LHN) (63 Nanyang Dr, Singapore 636922) is by Grab or Taxi. Grab can be easily hailed using the Grab app, which prices will be quoted prior to the ride. Aside from credit/debit card payment through the app, one can also opt for cash payment. Alternatives to Grab app are Gojek, CDG Zig, etc.

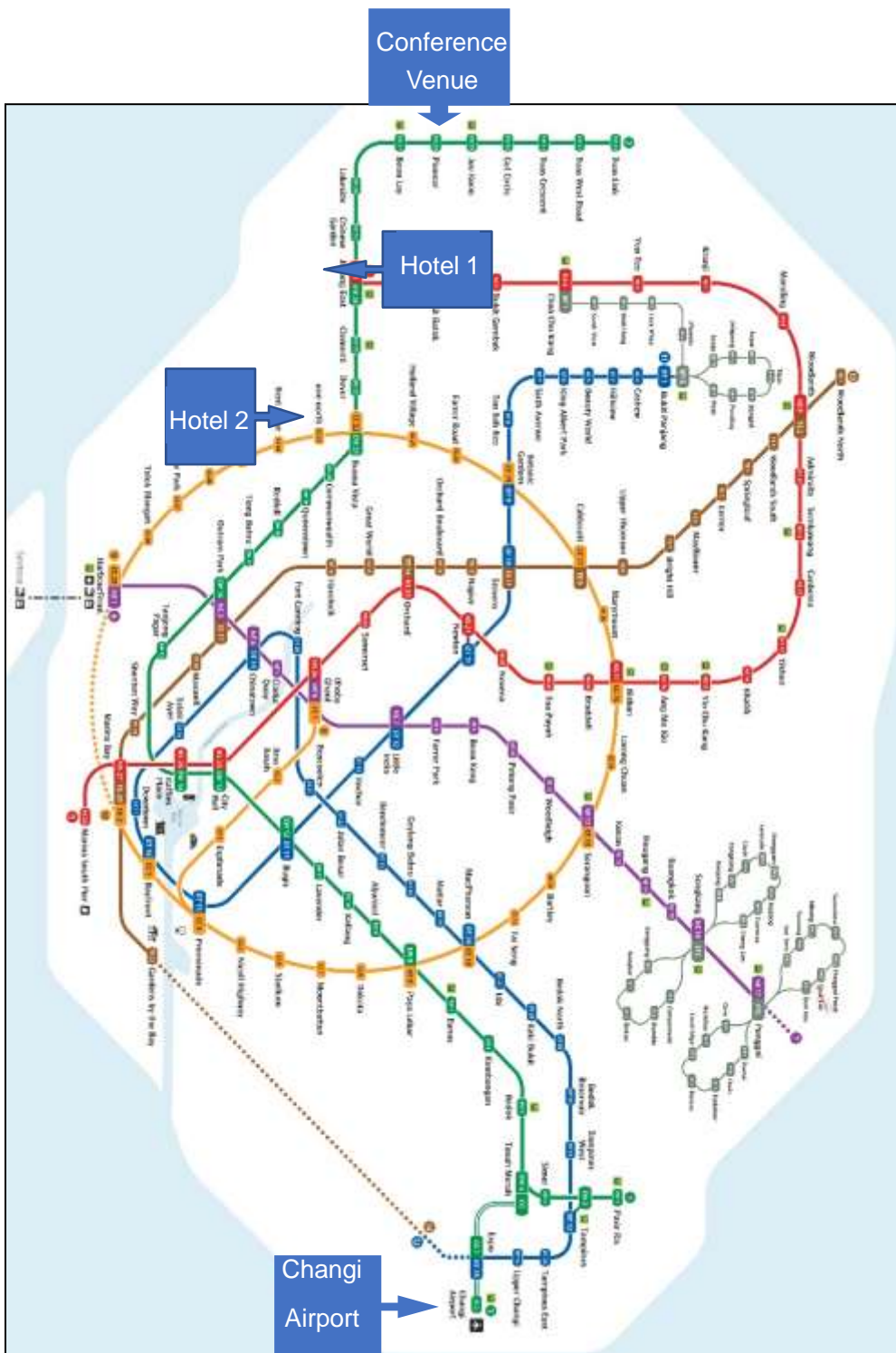
Meanwhile, taxis can also be hailed from taxi stands. Most taxis accept both cash and debit/credit card payment. Nevertheless, one should always check with the driver before boarding, about your intention to pay by debit/credit card (sometimes the card machine might be down).

By public transport

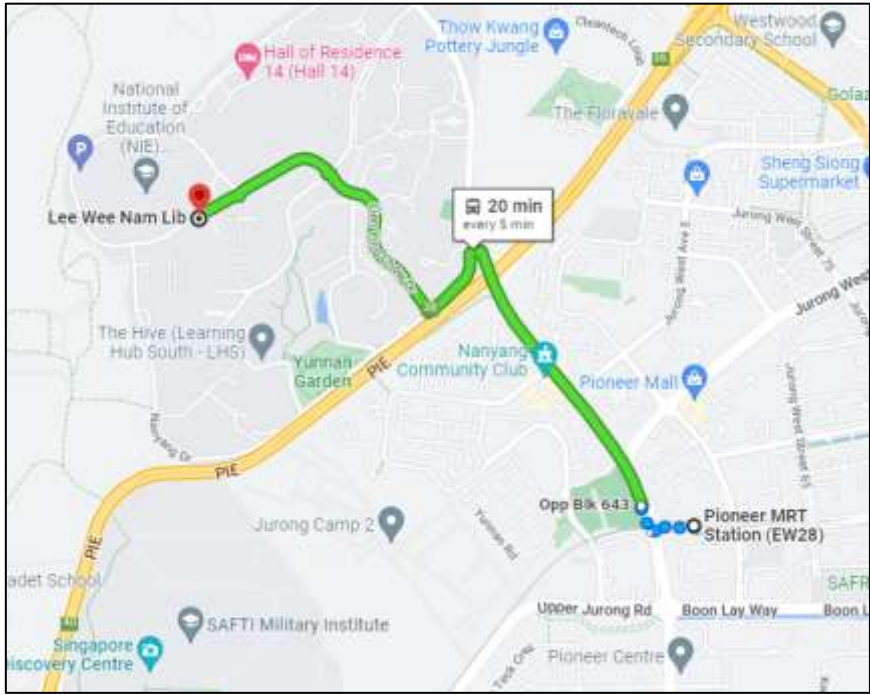
Singapore boasts one of the most efficient public transport systems in the world. The Singapore's Mass Rapid Transit (MRT) is a railway system used typically for long distance commute. Bus transportation is meant (usually) for the last mile. Visa or Mastercard can be used to tap into public transport. If you do not have one, simply buy the EZ-Link card from any of the MRT stations. Feel free to ask around if needed, most people in Singapore are nice and helpful. Note that a mask is recommended by not mandatory on public transport. The NTU Omnibus app is useful for tracking the location of different bus services associated with NTU.

Assuming that you are coming from Changi Airport:

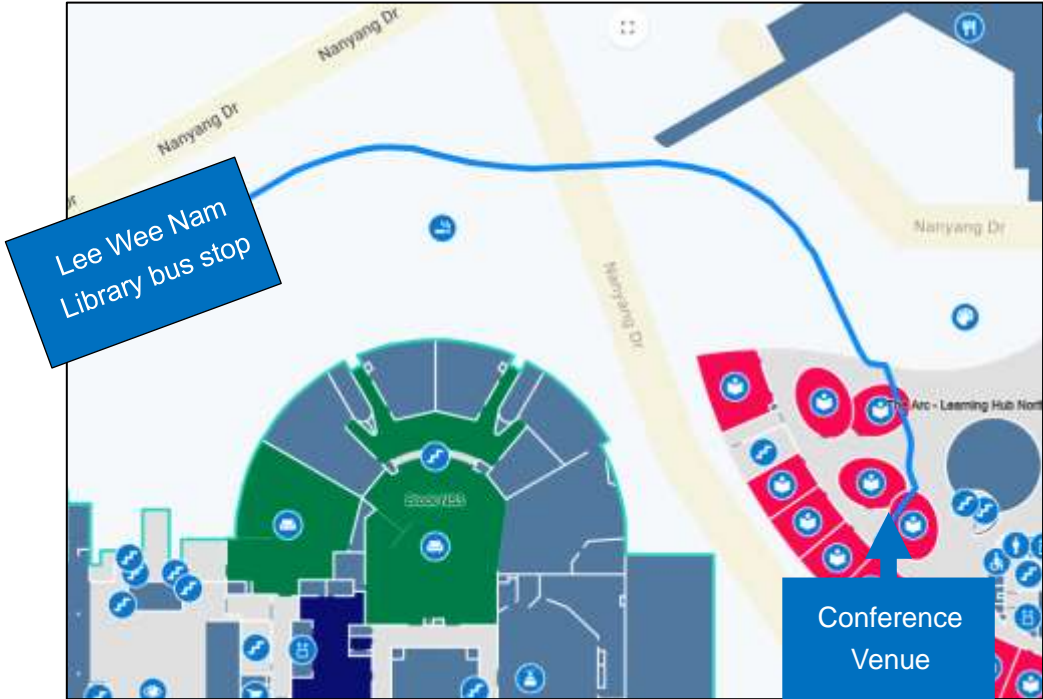
- 1) You should take the East West MRT line (Green line) from Changi station to Pioneer station.
- 2) Upon reaching Pioneer station, take exit A and head towards Pioneer station Exit A bus station (22521).
- 3) Take Bus 179 and get off at the Lee Wee Nam Lib (27211) stop. Ask the bus driver if you are unsure of where to alight.
- 4) Walk towards The Arc - Learning Hub North (LHN) (300 m). Please continue reading for the picture guide.



Singapore MRT Transit Map



Pioneer Station Exit A bus stop (22521) to Lee Wee Nam Library bus stop (27211) via Bus 179



Walk path from Lee Wee Nam Library bus stop to conference venue.

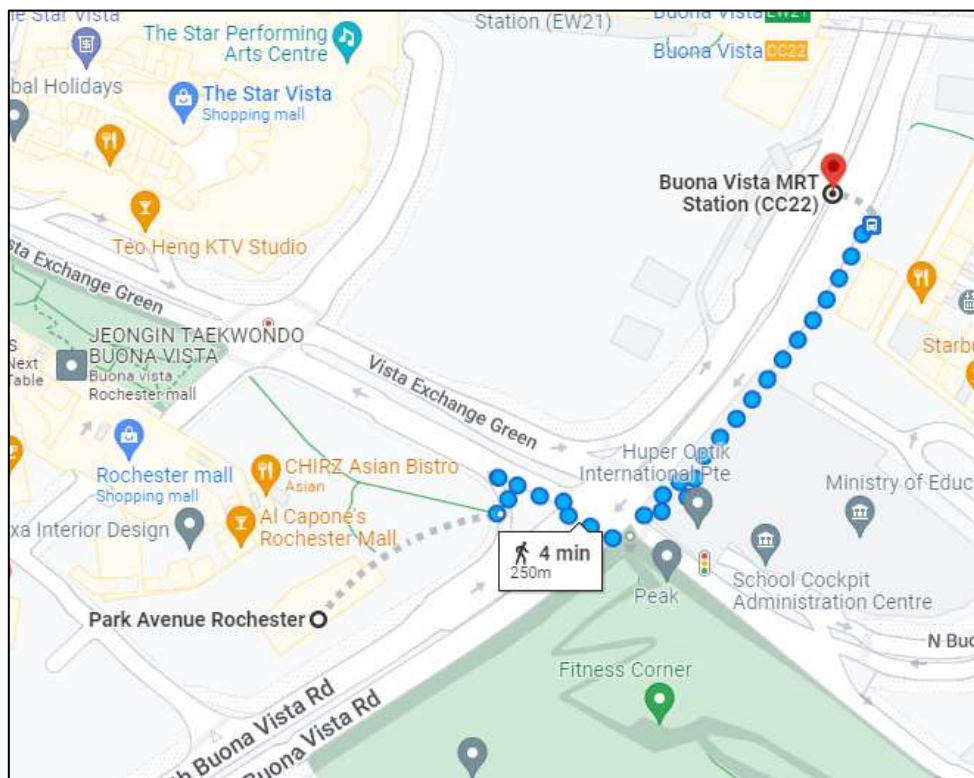


Walking guide from Lee Wee Nam Lib (27211) to LT (The Arc), LHN-B1-15

Recommended Hotels

Park Avenue Rochester (Hotel 1)

Park Avenue Rochester is an excellent choice for attendees of the 4th International Conference on 3D Construction Printing at Nanyang Technological University. The hotel is centrally located and offers easy access to the university and other major transportation hubs, making it a convenient option for conference attendees. Located a short walk from Buona Vista MRT Station, and just minutes away from business districts located in the Western and Central part of Singapore like One-North, Science Park, International Business Park and Mapletree Business City, it is a perfect place to stay with a pool, gym and many dining options nearby. Additionally, the hotel features a variety of modern amenities such as high-speed internet, a fitness center, and an outdoor swimming pool, making it an ideal choice for those who want to relax and unwind after a day of attending presentations.



Park Avenue Rochester (138637) to Buona Vista MRT Station (CC22) (250m)

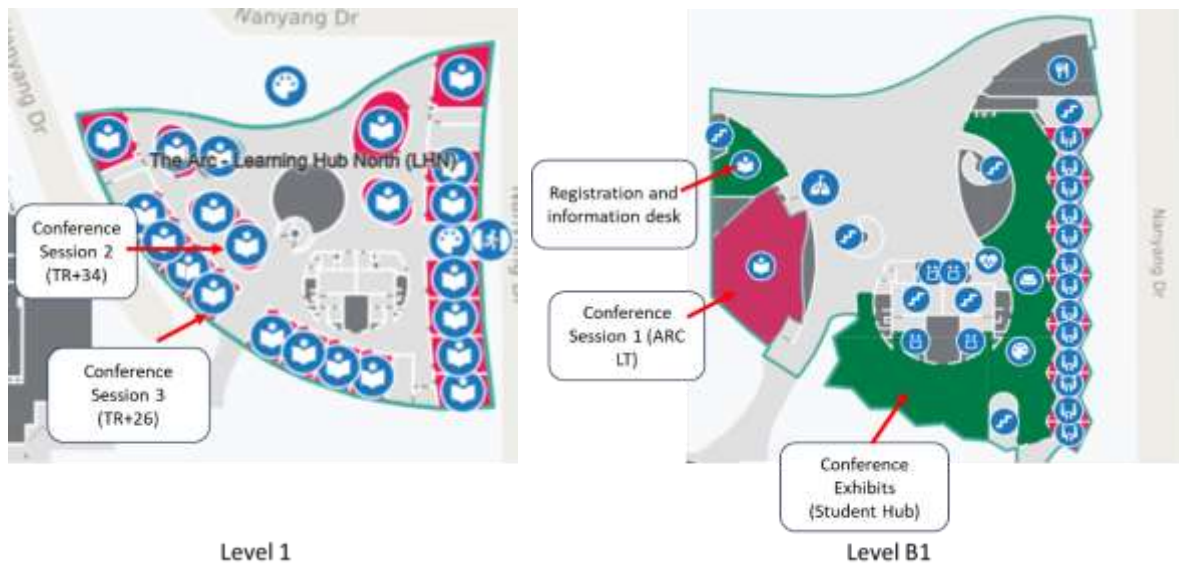
Genting Hotel Jurong (Hotel 2)

Another recommended hotel for the conference is Genting Hotel Jurong. This hotel is located just a short drive away from the university, providing easy access to the event and the surrounding area. Conveniently located close to malls, business facilities and public transportation at Jurong East, it is the perfect stay for conference attendees who may want to be connected yet have a quiet sanctuary among nature. Moreover, the hotel also offers stunning views from the roof garden and sky terraces, while providing a variety of amenities such as a unique café, a fitness center, and an outdoor swimming pool.



Genting Hotel Jurong (608516) to Jurong East MRT Station (NS1/EW24) (550m)

Conference Layout



Shuttle bus to MBS pick up point at B4 Lobby

Conference Timetable

Please download the timetable from the conference website:

<https://www.ntu.edu.sg/sc3dp/43dcp/timetable>