日本土木学会水工学委員会

基礎水理部会　第13回流砂勉強会

2025 Japan-Taiwan Joint Symposium on River Hydraulics and Sediment Transport

2025
March 14-15

@ Disaster Prevention Research Center,
National Cheng Kung University, Tainan, Taiwan
(field trip in Kaohsiung, Taiwan)

Visit https://www.dprc.ncku.edu.tw/news/detail/112
for detailed and updated information about the symposium

日本土木学会水工学委員会基礎水理部会　第 13 回流砂勉強会

2025 Japan-Taiwan Joint Symposium on River Hydraulics and Sediment Transport

【Organizers】

日本土木学会水工学委員会基礎水理部会 [Hydraulic Engineering Committee, Japan Society of Civil Engineers (JSCE), Japan]

https://www.jsce.or.jp/committee/hydraulic/kisosuiri/

臺灣國立成功大學防災研究中心 [Disaster Prevention Research Center, National Cheng Kung University (DPRC, NCKU), Taiwan]

https://www.dprc.ncku.edu.tw

【Date】	2025.03.14 (Conference) & 03.15 (Field Trip)
【Participants】	Approximately 40 participants (including 23 from JSCE, Japan)
【Venue】	2nd Floor Conference Hall, Department of Marine Engineering Building, NCKU (https://maps.app.goo.gl/pmhBX3P99UCrAhhv6)
【Language】	English
【Schedule】	As shown in the itinerary on the following page
【Registration】	The Registration Fee is JPY 20,000
【Banquet】	5th Floor Meeting Room of DPRC, Department of Marine Engineering Building, NCKU (https://maps.app.goo.gl/pmhBX3P99UCrAhhv6)

Department of Marine Engineering Building, NCKU

(Photo source)
https://www.twarchitect.org.tw

Agenda for the Symposium and Field Trip

Time	Agreement	Remark	
Agenda for the Symposium on March 14			
09:00 - 09:10	Opening	Board Member, Chinese Institute of Civil and Hydraulic Engineering Emeritus Prof., National Cheng-Kung University	Shan-Hwei Ou
		Leader of River Hydraulics & Sediment Transport Working Group, JSCE Associate Prof., Kyoto University	Shinichiro Onda
		Director, Disaster Prevention Research Center, National Cheng-Kung University Prof., National Cheng-Kung University	Hsiao-Wen Wang
09:10 - 10:10	Keynote Speaking Chair: Hsiao-Wen Wang (National Cheng-Kung University)	Chjeng-Lun Shieh (Prof., National Cheng-Kung University) **Early Warning System for Large-Scale Landslides in Taiwan**	
10:10 - 10:30	Coffee Break		
10:30 - 12:30	Session A Chair: Steven Yueh Jen Lai (National Cheng-Kung University)	1. Hsiao-Wen Wang (Prof. and Director of Disaster Prevention Research Center, National Cheng-Kung University) **Restoring Connectivity for River and Reservoir Sediment Management**	
		2. Hiroshi Cho (Prof. and Advisor to the President, Kumamoto University) **Research Developments in Flow and Sediment Transport around Spur Dykes**	
		3. Chih-Ping Lin (Prof. and Dean of College Of Engineering, National Yang Ming Chiao Tung University) **Advancing Sediment Transport Monitoring: Innovations and Applications of the TDR Technique**	
		4. Ryosuke Akahori (Prof., Aichi Institute of Technology) **Transport mechanism of high density large wood on movable riverbeds**	
12:30 - 13:00	Lunch		
13:00 - 14:30	Poster Presentation	A total of 20 posters	
14:30 - 16:30	Session B Chair: Takuya Inoue (Hiroshima University)	1. Kazuaki Ohtsuki (Associate Prof., University of Yamanashi) **Nature and catchment based flood control measures for an alluvial fan river: a case study in the basin of the Fuji River**	

Time	Agreement	Remark
		2. Hsien-Ter Chou (Prof., National Central University) **Experimental study on the deposition and dissection processes of alluvial fans**
		3. Takahiro Koshiba (Assistant Prof., Kyoto University) **Experimental study on self-lining with triangular strip roughness elements for abrasion countermeasure**
		4. Wen-Ping Tsai (Assistant Prof., National Cheng-Kung University) **From calibration to parameter learning: Harnessing the scaling effects of big data in geoscientific modeling**
16:30 - 17:00	Discussion, Poster Awards	
17:00 - 17:10	Closing Remarks	Hsiao-Wen Wang (National Cheng-Kung University)
17:30	Banquet	Meeting Room in Disaster Prevention Research Center 5th Floor Meeting Room, DPRC, Marine Engineering Building
Schedule for the Field Trip on March 15		
08:20 - 08:30	Preparation	Gathering at the Hotel Lobby for Departure
08:30 - 10:30	Transportation Time	
10:30 - 11:30	Site A [Mingba Kelu Bridge]	The Mingba Kelu Bridge is an important access road for a mountain community. In 2021, it was severely damaged by a massive debris flow caused by a typhoon, which directly destroyed the bridge. Since then, tributary sediments have continued to flow out, and the bridge has been repeatedly repaired without success. It remains a key area for recurrent disaster events.
12:00 - 13:00	Lunch	
13:00 – 14:00	Site B [Baolai Landslide]	The riverbank near Baolai village has been continuous landslides due to the scouring effects of river flow. During the typhoon in 2021, the situation worsened, and the area has now been designated as a potential large-scale landslide zone. Following the typhoon, a dam-break evacuation drill was conducted to enhance the community's disaster resilience.
14:00 - 14:30	Transportation Time	
14:30 - 15:30	Site C [Miaochong Temple]	During Typhoon Morakot, a large-scale landslide occurred on the slope behind Miaochong Temple, along with multiple debris flows in the surrounding areas, making it a key region for compound sediment-related disasters. Through monitoring and long-term mitigation plans, slope stability has been improved.
15:30 – 17:00	Transportation Time	
17:00	Return to the Hotel	

【Poster Presentation】

ID	所属	学年	姓名	ポスター発表タイトル
01	北海道大学	D2	Soichi Tanabe	Characteristic of fine-sediment runoff by earthquake-triggered landslides and prediction of their impact on downstream riverbed morphology
02	寒地土研		Yu Inami	Investigation of re-sedimentation phenomena after river excavation
03	山梨大学	M1	Kazuki Karasawa	Transverse ribs and gigantic rocks distribution in alluvial fan rivers and influence of geological and anthropogenic impacts
04	京都大学	M2	Shunsei Ono	Estimation of rainfall patterns based on spatial-temporal matching of d4PDF and ensemble rainfall forecast
05	京都大学	M2	Haruki Matsui	Virtual sewer network for pluvial flood analysis estimated from road network
06	広島大学	D2	Chonlada Yuangyai	Numerical simulation of sediment transport, abrasion, and weathering in bedrock rivers.
07	広島大学	D1	Daichi Matsuo	The fast and accurate sediment transport analysis using average component acceleration method
08	広島大学	D1	Riho Kido	Impact of climate change on sediment production and discharge in mountainous area
09	広島大学	M2	Yu Chiao-Chu	Assessing the impact of climate change on sediment discharge using combined rainfall data from the debris flow potential stream watersheds area of Aiyuzi River, Taiwan.
10	九州工業大学	B4	Keigo Ohtsu	Impact of earthquake disasters on the formation of distribution patterns of knickpoint
11	九州工業大学	B4	Souma Matsushima	Temporal analysis of land use change and flood risk for NbS implementation in Johor State, Malaysia
12	國立陽明交通大學	M2	Cheng-Hung Chou	Rapidly assessing coseismic landslides using logistic regression model and initial P-wave amplitude
13	國立成功大學	D4	Sam Yan Jyun Huang	Experimental study of fan-delta evolution driven by density currents
14	國立成功大學	M2	Chung Kai Wang	Lateral alluvial fans affect braided river evolution: experiments and numerical modeling
15	國立中興大學	M2	Chieh-Ya Liao	Modeling debris flow transitions: Experimental validation and field-scale application
16	國立中興大學	M2	Tzu-Hung Chan	Integrating smart rocks, UAV-based sensing, and large-scale field experiments for bedload transport analysis in river systems
17	國家災防科技中心		Wei-Lin Lee	Promotion and Achievements of Disaster Documentation and Environmental Education
18	國立成功大學 防災研究中心		Shang-Ming Wang	The phenomenon of stream confluence changes following large-scale landslide-induced sediment outflow.
19			Ting-Yu Lin	Post-earthquake typhoon-induced sediment outflow in the Hongyeh River.
20			Hsin-Yu Chen	The limitation of using Japanese pipe-hydrophone on monitoring sediment transport

【Field Trip】

[Site A Mingba Kelu Bridge]

The Mingba Kelu Bridge is an important access road for a mountain community. In 2021, it was severely damaged by a massive debris flow caused by a typhoon, which directly destroyed the bridge. Since then, tributary sediments have continued to flow out, and the bridge has been repeatedly repaired without success. It remains a key area for recurrent disaster events.

Google Map: https://maps.app.goo.gl/hK7sGt5si7UYFP1E9

Photo taken on January 18, 2023: Sediment from a tributary of Mingba Kelu Bridge continued to flow into the main channel, forming a large-scale sediment deposition fan.

The cover photo also features Mingba Kelu Bridge, showing ongoing sediment removal efforts following sediment accumulation.

[Site B Baolai Landslide]

The riverbank near Baolai village has been continuous landslides due to the scouring effects of river flow. During the typhoon in 2021, the situation worsened, and the area has now been designated as a potential large-scale landslide zone. Following the typhoon, a dam-break evacuation drill was conducted to enhance the community's disaster resilience.

Google Map: https://maps.app.goo.gl/gCaG6P9ics2poooj7

Photo taken on July 6, 2023: The landslide site across from Baolai, located opposite the well-known Baolai Hot Spring area, has the potential to form a landslide dam if sediment continues to collapse.

This area faces a combination of large-scale landslides, landslide dam formation, and riverbed erosion and deposition, making it a key location for sediment-related disaster prevention in the mountainous regions of southern Taiwan.

[Site C Miaochong Temple]

During Typhoon Morakot, a large-scale landslide occurred on the slope behind Miaochong Temple, along with multiple debris flows in the surrounding areas, making it a key region for compound sediment-related disasters. Through monitoring and long-term mitigation plans, slope stability has been improved.

Google Map: https://maps.app.goo.gl/widXdcnddU5bxvBt5

Photo taken on December 20, 2022: Following the occurrence of a large-scale landslide, government agencies initiated monitoring and analysis of the affected area. Sediment management measures were also implemented in the adjacent debris-flow-prone streams.

After planning and discussions with local stakeholders, this area was designated as a Large-Scale Landslide Special Soil and Water Conservation Zone in Taiwan, with ongoing annual assessments to evaluate landslide conditions and debris flow management efforts.

【**Accommodation**】GRAND BANYAN HOTEL (禧榕軒大飯店)

Website: https://www.grandbanyanhotel.com/

No. 28, Chenggong Rd., North Dist., Tainan City 704003, Taiwan (臺南市北區成功路 28 號)

+886-6-2222188

Google Map: https://maps.app.goo.gl/CjUMppa46hKSWnaK7

(Photo source) Google Map

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【Additional information on transportation in Taiwan】

1. **Transportation from Songshan Airport (Taipei Songshan Airport) to the Taiwan High-Speed Rail (Taipei HSR Station):**

   - The transfer information is as follows (it's not a direct route, 2 transfers are required).:

     (1) MRT Boarding Area: From Songshan Airport, take the **MRT Wenhu Line (Brown Line)**, heading toward **hongxiaoFuxing Station**, then transfer to Bannan Line (Blue Line) to **Taipei Main Station**, transfer to the Taiwan High-Speed Rail (HSR) to Taipei HSR Station.

     (2) HSR: Transfer to the **High-Speed Rail (HSR) Taipei Station** to **Tainan HSR Station**

   - Total Travel Time after Airport: Approximately 3hours, depending on the transfer time.

   - Fare: The MRT fare is about 20 TWD, and you will need to purchase a separate ticket for the High-Speed Rail from Taipei Main Station to Tainan Station (about 1,350 TWD).

2. **Transportation from Taoyuan Airport (Terminal 1/Terminal 2) to the Taiwan High-Speed Rail (Taoyuan HSR Station):**

♦ The transfer information is as follows (it's not a direct route, 2 transfers are required).:

  (1) MRT Boarding Area: Take the escalator down to the Taoyuan Airport MRT Station on the B2 floor, and get to the MRT to A18 Taoyuan HSR Station.

  (2) HSR: Transfer to the **High-Speed Rail (HSR) Taoyuan Station** to **Tainan HSR Station**

♦ Total Travel Time after Airport: Approximately 3hours (depending on the transfer time).

♦ Fare: The MRT fare is about 30 TWD, plus the fare from Taoyuan Station to Tainan Station (about 1,190 TWD).
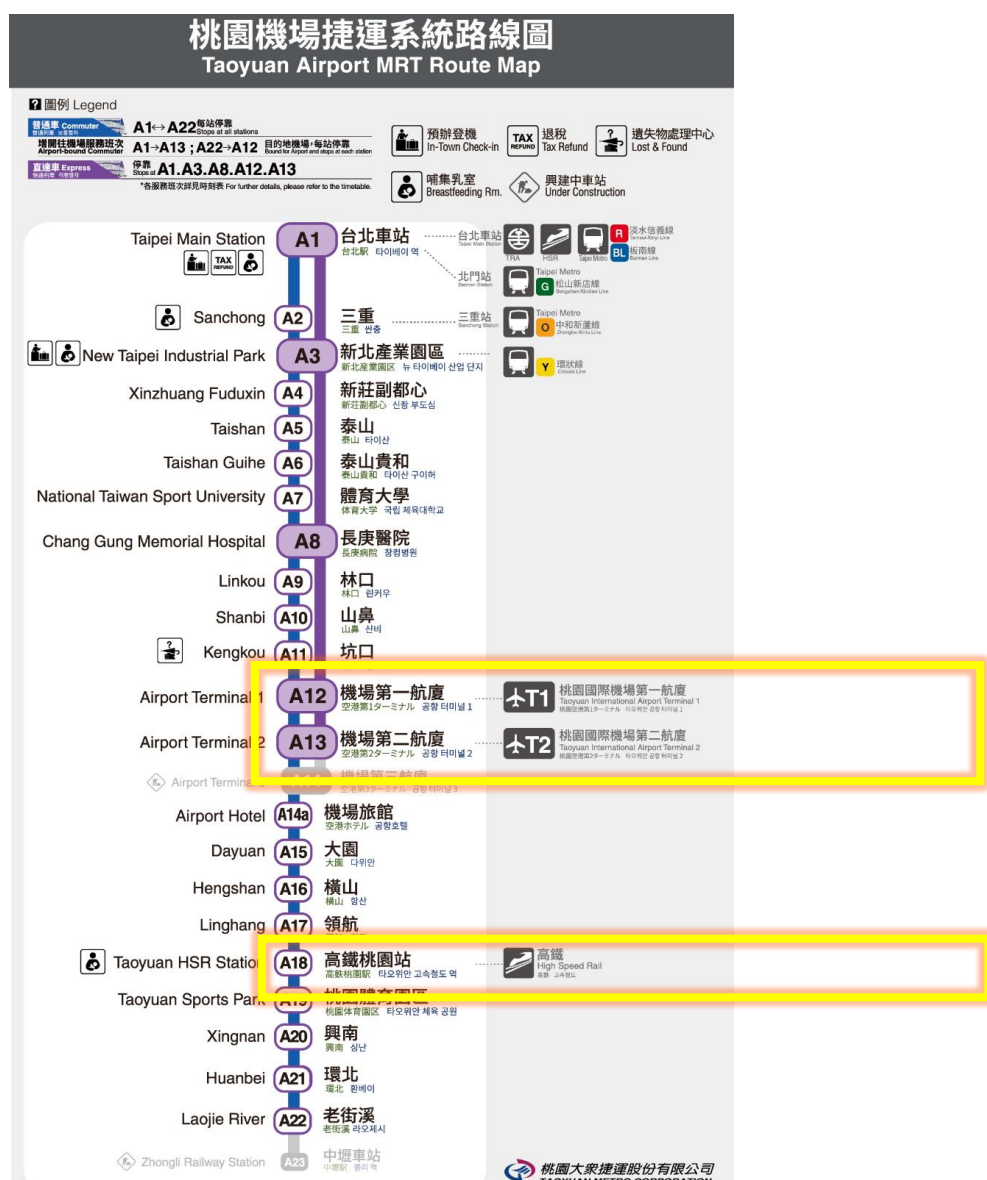
3. Transportation from Tainan HSR Station to The Grand Banyan hotel
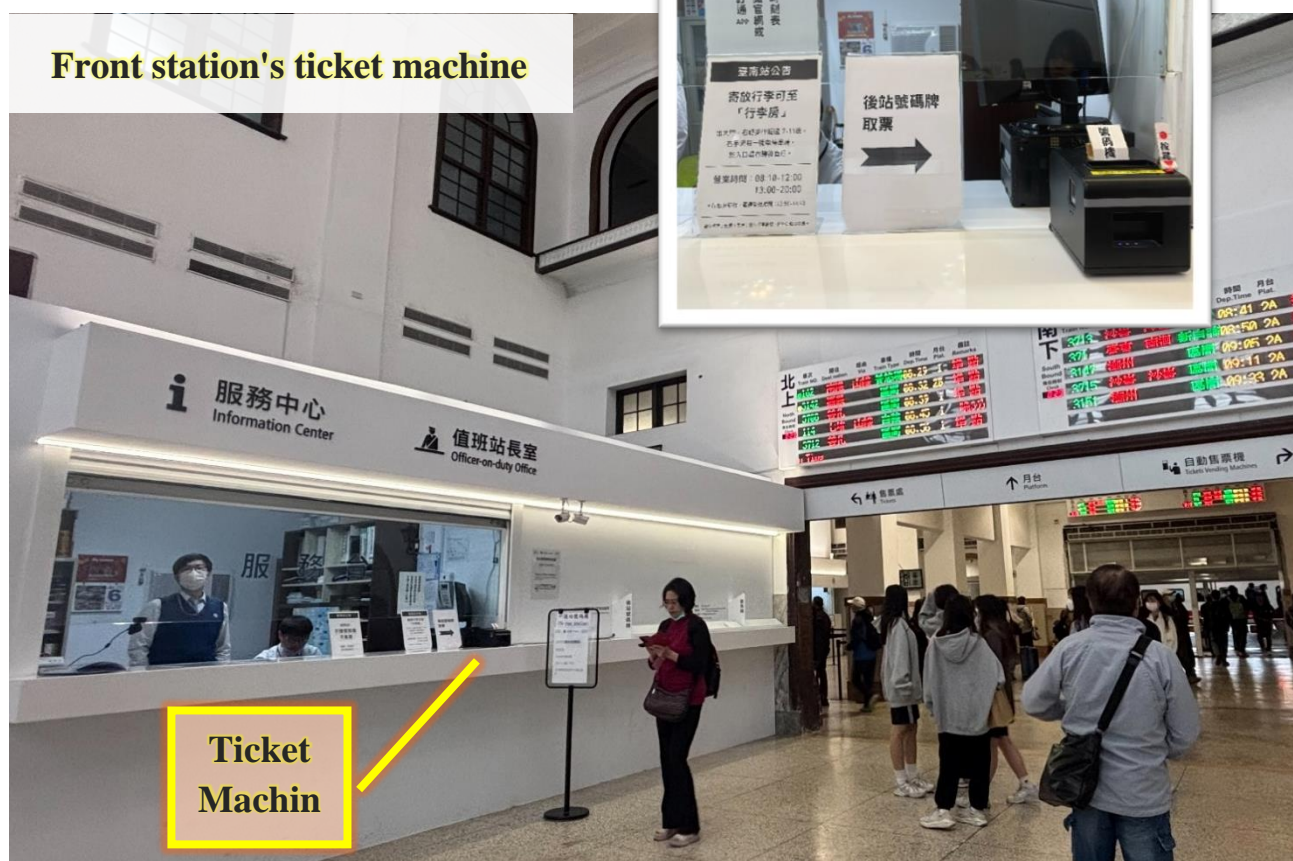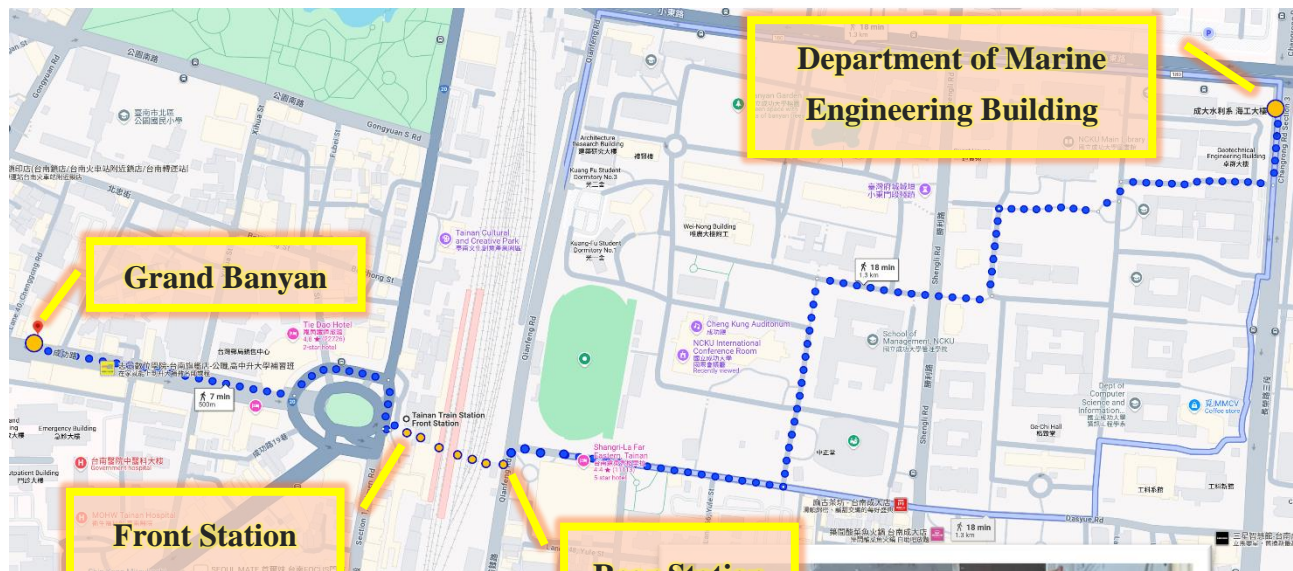
(1) Transfer from the 2nd floor of Tainan HSR Station via the connecting corridor (after exiting the HSR ticket gate, you will see signs on your left directing you to the Taiwan Railways Shalun Station). Then, take the Taiwan Railway local train to Tainan Train Station.

(2) Or you can choice Taxi at Tainan HSR Station

(3) The Grand Banyan hotel (禧榕軒大飯店) is located on Chenggong Road, and you can reach it by walking straight from the Tainan Train Station Front Station.

4. **There are two transportation options between the seminar venue and the hotel:**

    (1) **Walking**: Follow the map instructions. When walking, pass by Tainan Railway Station and stop at the ticket machine to obtain a crossing permit for the area between the Rear and Front station. After it is checked by the staff, you can proceed smoothly.

        If you choose to walk, symposium staff will meet you in the hotel lobby at 08:10 AM on March 14 and guide you to the venue.
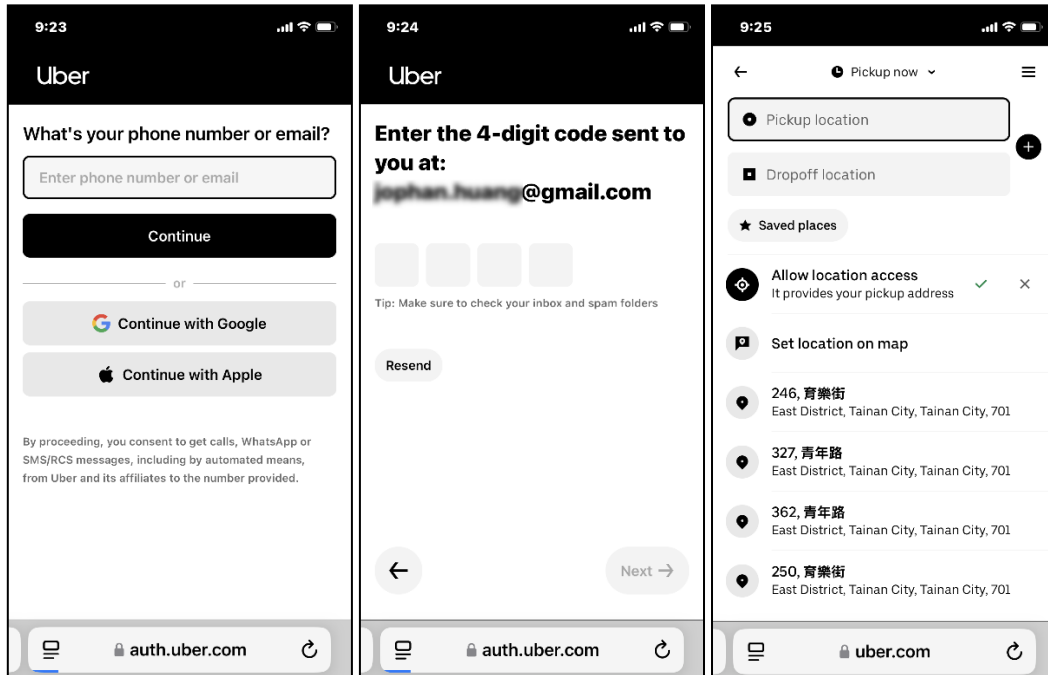

Department of Marine Engineering Building

Grand Banyan

Front Station

Rear Station

Front station's ticket machine

Ticket Machin

Rear station's ticket machine

Ticket
Machin

往前站號碼牌
Take a Pass to Front Station

抽號碼機
前站通行證

抽號碼機
前站通行證
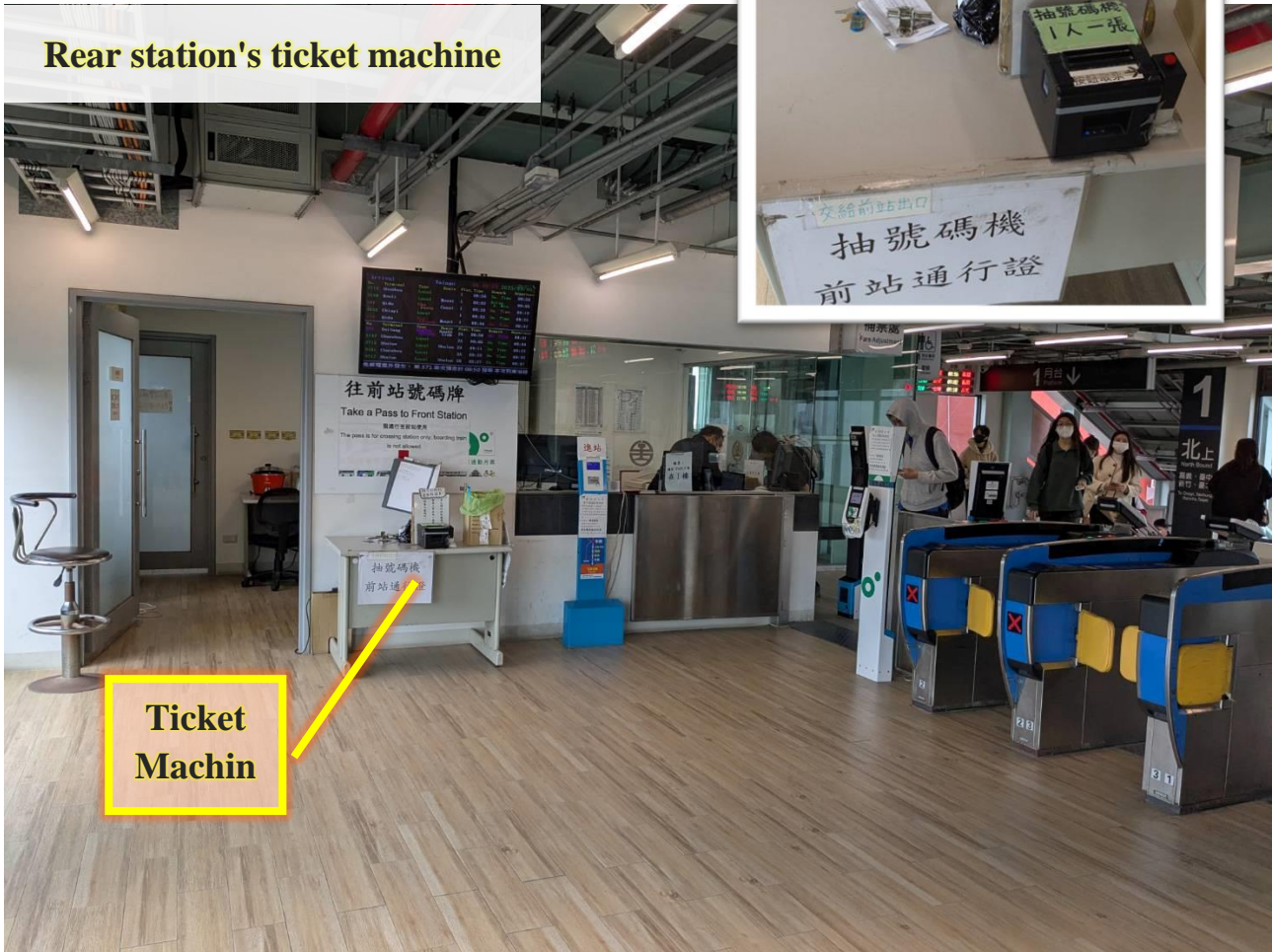
(2) **Using the Uber**:

Step 1: Scan the QRCode

Step 2: Enter the E-mail address, and get the account verification code form mailbox.

Step 3: Choose the pick-up and drop-off points from the map, or directly enter the place name.