

# 研究生出席國際學術會議報告

2024 年 07 月 05 日

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時間 會議/地點	23-28 June 2024 Gangwon-do, South Korea		
會議 名稱	(中文) (英文) The 21st Annual Meeting of the Asia Oceania Geosciences Society (AOGS)		
發表 論文 題目	(中文) (英文) From Boreholes to Models: Understanding the Influence of Spatial Borehole Density on the Construction of 3D Heterogeneously Hydrogeological Models		

## 一、參加會議經過

Firstly, I would like to extend my sincere gratitude to the Geophysical Society of the Republic of China (中華民國地球物理學會) for their support, enabling me to attend the 21st Annual Meeting of the Asia Oceania Geosciences Society (AOGS 2024). This symposium will be held in Gangwon-do, South Korea, from June 23-28, 2024.

Founded in 2003, the Asia Oceania Geosciences Society (AOGS) aims to advance geosciences and its applications for the betterment of humanity, with a special focus on Asia and Oceania and a broader commitment to global issues. The Asia Oceania region is particularly susceptible to natural hazards, accounting for nearly 80% of human lives lost globally. AOGS plays a crucial role in addressing hazard-related challenges by enhancing our understanding of these phenomena through scientific, social, and technical approaches.

The annual convention gathers scientists from around the world to discuss global natural hazard issues and explore potential solutions. It also provides young scientists with the opportunity to engage with new scientific perspectives and research methodologies. The vulnerability to natural hazards poses a significant threat to the sustainability of economic development and the livelihoods of millions of people worldwide.

## 二、與會心得

I am delighted to share my experience attending the conference. Meeting scholars from related disciplines and fellow doctoral students with diverse perspectives was an enriching experience that challenged my own beliefs. I am grateful for the valuable connections I made, which will benefit my research and career. The convention, focused on natural hazards, provided a platform for researchers to engage in in-depth discussions. Through conversations with outstanding scientists in the field, I gained valuable knowledge and insights. The symposium was an engaging forum, offering a variety of papers that captivated my interest, particularly those on monitoring, investigating mechanisms, and modeling.

I was thrilled to have the opportunity to meet and discuss with renowned scientists from around the world. The conference provided a professional environment for scientists to share and learn from one another, and I appreciated the chance to exchange ideas with several exceptional scientists in the field. Despite differences in our research methods—ranging from data collected in laboratories and monitoring wells to results from numerical modeling—we shared the common objective of understanding the natural mechanisms of our research subjects and applying our findings to improve people's lives.

## 三、考察參觀活動(無是項活動者省略)

I am thrilled to share my experience attending the conference and participating in the "Near Surface Investigation and Modeling for Groundwater Resources Assessment" session, convened by Prof. Ping-Yu Chang from National Central University, Taiwan. The discussions in this session focused on the subsurface characteristics essential for modeling and predicting groundwater behavior.

The session featured various presentations where scientists discussed similar mechanisms in different parts of the world. This diversity enriched all participants, and I learned innovative ways to collect data and reduce uncertainty in measurements and predictions. I also discovered some fascinating posters and had the opportunity to speak with authors conducting research related to my topic. Attending the oral presentations provided me with a chance to hear diverse perspectives from experts. Overall, I am grateful for this opportunity to learn from and network with leaders in the field.

Additionally, I was thrilled to participate in the volunteer activities organized by the Earth Science Research Promotion Center (ESRPC), founded in 1996 by the National Science and Technology Council

(NSTC) of Taiwan. During my time volunteering, I met many new friends and professors from around the world. I also gained valuable experience in teamwork and learned how to complete tasks effectively and excellently.

#### 四、建議

The conference, held from June 23rd to 28th, was a busy and enriching event. The welcome reception took place on the 23rd, and the main conference dates featured continuous sessions from 8:30 am to 6 pm. Participants could choose from organized oral presentations, divided into sessions for easy navigation, and browse the poster presentations. The conference served as an interactive forum, offering graduate students valuable knowledge and experiences through meetings and debates with leading scientists in their field.

I am grateful for the organizers' meticulous attention to detail and their care for all attendees. They provided a buffet and shuttle bus service for participants. This experience has inspired me to continue pursuing my research and attending future conferences. I believe it would be beneficial if the Geophysical Society of the Republic of China could offer more support for graduate students to attend specialized conferences.

#### 五、攜回資料名稱及內容

I had the honor of presenting my paper, "From Boreholes to Models: Understanding the Influence of Spatial Borehole Density on the Construction of 3D Heterogeneously Hydrogeological Models," to a prominent audience of scientists working on relevant topics on the morning of June 24th. In this section of my article, I focus on how the distribution of hydrogeological materials significantly impacts fields such as geotechnical engineering, groundwater dynamics, and geomechanics. This influence primarily stems from geological borehole data that reveal aquifer configurations. Spatial borehole density is a crucial factor in constructing hydrogeological models.

During my presentation, I received several insightful questions from the audience, which helped me refine both my methodology and results. After the presentation, I had the opportunity to discuss my topic with several academics. This experience was both enlightening and inspiring, and I look forward to

participating in future conferences to continue expanding my research.

#### 六、其他

I would like to extend my sincerest gratitude to the Geophysical Society of the Republic of China for their support and for providing me with the opportunity to attend AOGS 2024 in South Korea. This experience has been truly inspiring and has given me a wealth of knowledge and ideas to further my studies and future pursuits. Thank you for investing in my education and professional development.

**Scientific Program: AOGS2024**

1. Double click on the Session Code to view the session program  
 2. Due to late changes, actual presentation order in the session program may vary

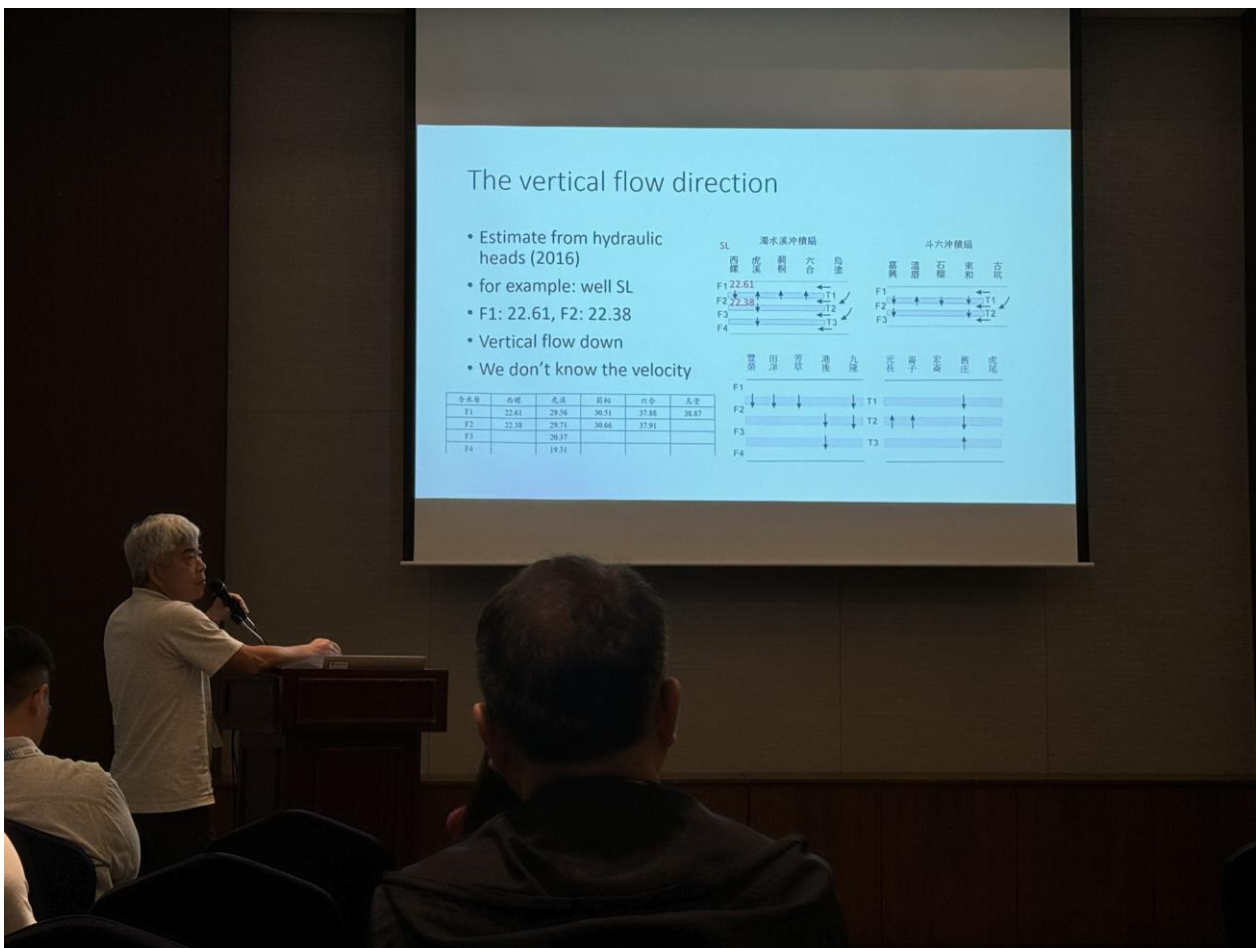
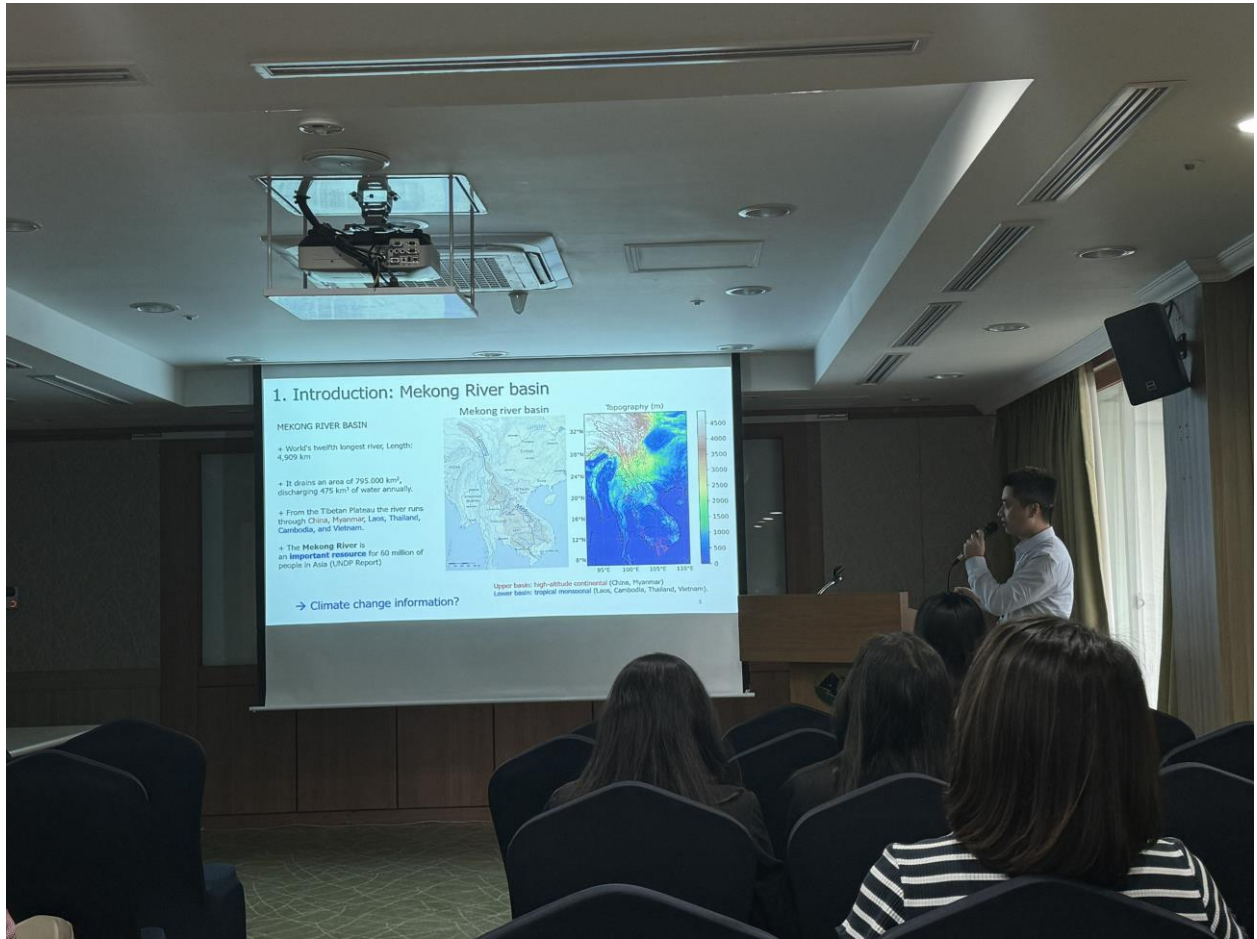
<b>Timeslot</b>	24/06/2024 8:30 AM - 10:30 AM	120 minutes	<b>Room (Capacity)</b>	Pyeongchang Hall I, Alpensia Convention Center (100)
<b>Total Presentation Time Scheduled</b>	60 minutes			
<b>IG06</b>	Near Surface Investigation and Modeling for Groundwater Resources Assessment			
<b>Main Convener</b>	Prof Ping-Yu Chang (National Central University, Taiwan) pingyuc@ncu.edu.tw			
<b>Session Chairs</b>	Jui-Pin TSAI			

SN	Abstract ID	I	M2	Title	First Author	Duration
2	IG06-A003	C	O	New Analytical Solution of Single-well-push-pull Test Considering Transient Flow	Dr Heejun Suk (Korea Institute of Geoscience and Mineral Resources, Korea, South)	12 min
3	IG06-A018	C	O	From Boreholes to Models: Understanding the Influence of Spatial Borehole Density on the Construction of 3d Heterogeneously Hydrogeological Models	Mr Duc-Huy Tran (Graduate Institute of Applied Geology, National Central University, Taiwan)	12 min
4	IG06-A001	C	O	Nitrate Mediated Biostimulation of Petroleum-based NAPLs in Subsurface Environment with Dynamic pH Scenarios: a Hydrogeochemical Modelling Approach.	Ms Akanksha Srivastava (IIT (ISM) DHANBAD, India)	12 min
5	IG06-A006	C	O	Exploring Hydrogeological Characteristics in the Yunlin Area of the Choshui River Alluvial Fan Using Transient Electromagnetic Methods	Dr Ping-Yu Chang (National Central University, Taiwan)	12 min
6	IG06-A019	C	O	Long-term and Inter-annual Groundwater Storage Changes Over the Haihe River Basin from Satellite Gravimetry and in Situ Measurements	Dr Jin Li (Shanghai Astronomical Observatory, Chinese Academy of Sciences, China)	12 min

**Figure 1:** The oral presentation belonging the session on “Near Surface Investigation and Modeling for Groundwater Resources Assessment” held on 24<sup>th</sup> June.

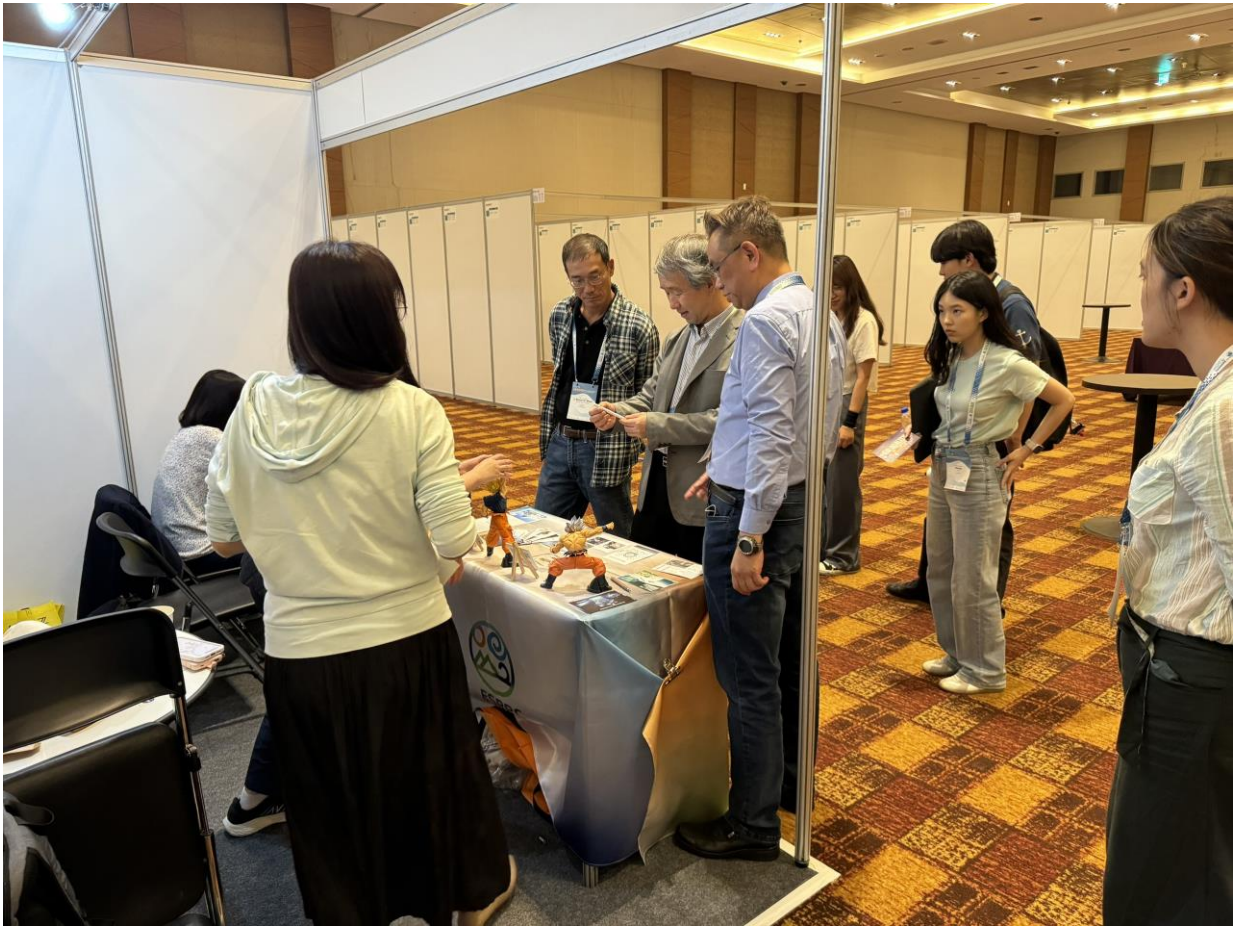


**Figure 2:** My oral presentation entitled “From Boreholes to Models: Understanding the Influence of Spatial Borehole Density on the Construction of 3D Heterogeneously Hydrogeological Models.”



**Figure 5:** The interesting oral presentation research topic relevant to my research from a lot of professors in the world.







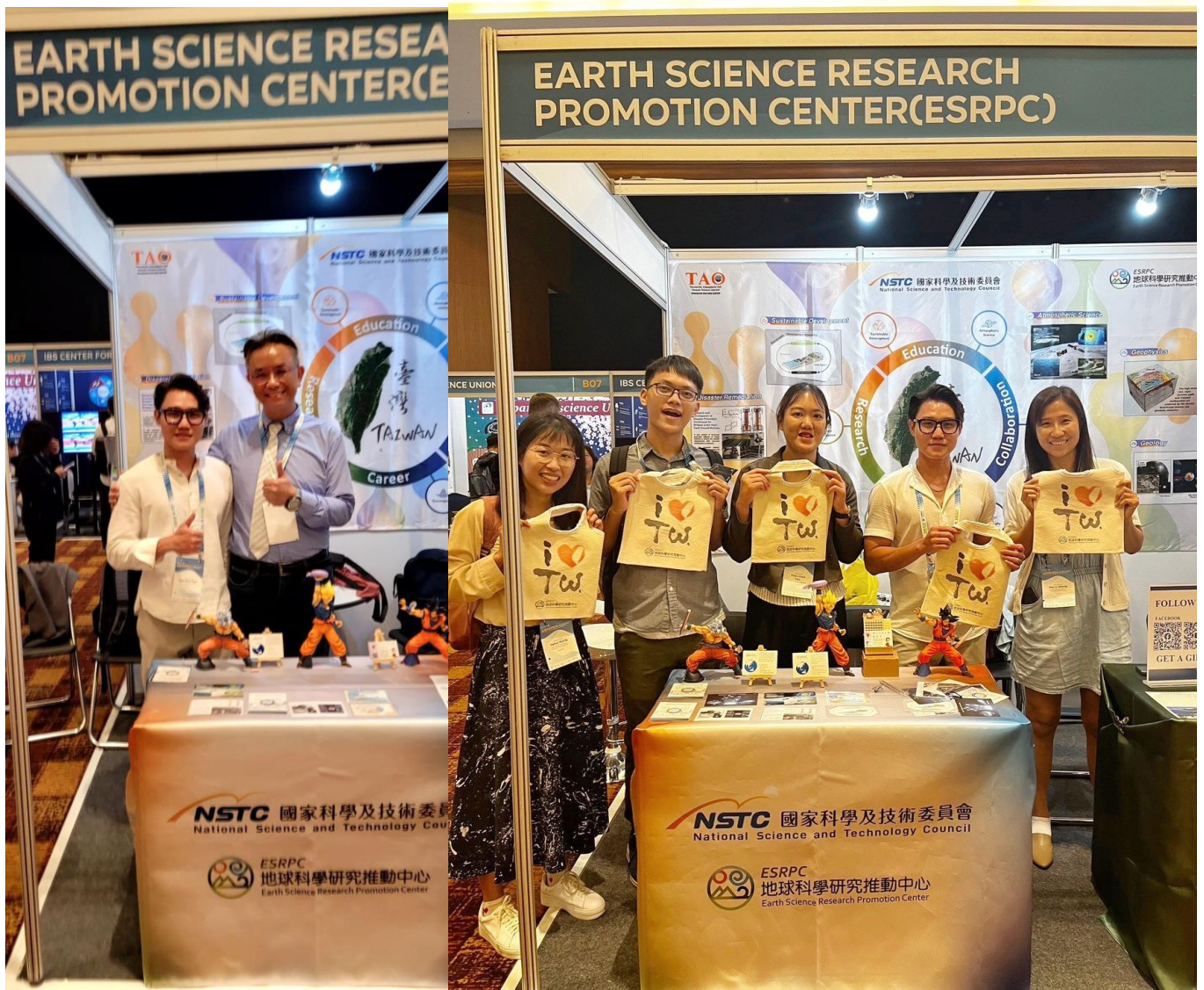
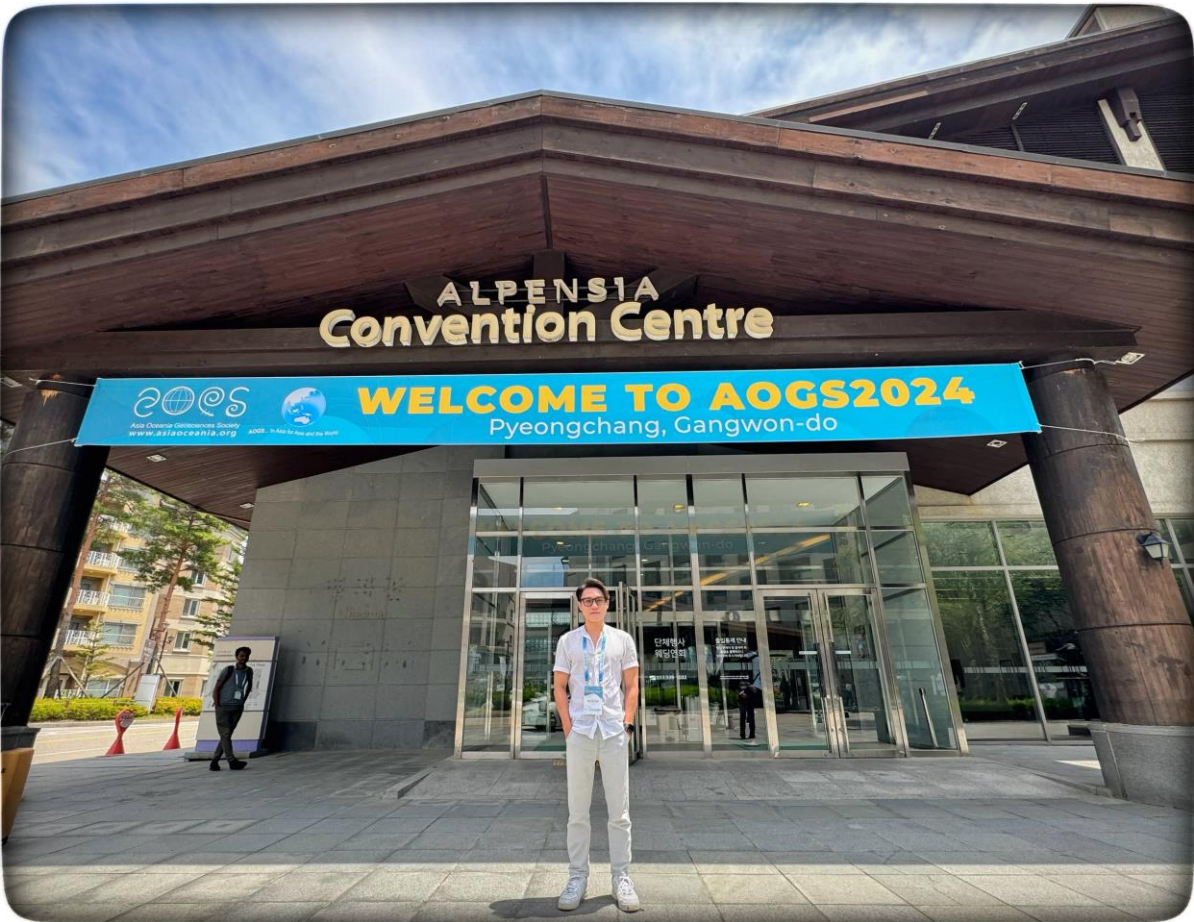


Figure 4: The volunteer for ESRPC, Taiwan.



**Figure 5:** Enjoying the buffet and having the discussion with new friends.





**Figure 6:** Thank to the Ministry of Science and Technology for supporting me and providing me with a valuable opportunity to attend the TISOLS 2023 in Delft, the Netherlands.