

# Academic Workshop on Subsurface Modeling and AI Applications

- Date: October 20, 2025 (Monday)
- Time: 9:00 AM – 5:00 PM
- Venue: International Conference Hall HK-106, College of Hakka Studies, National Central University

## International Guest Speakers



### Dr. Heejun Suk

Principal Researcher

Korea Institute of Geoscience and Mineral Resources (KIGAM)

Topic : Groundwater management and recent issues in South Korea



### Dr. Eungyu Park

Full Professor

Kyungpook National University

Topic :

Collaborative AI Agents: A New Decision Support Platform for Sustainable Groundwater Management

## Domestic Experts

- **Dr. Chuen-Fa Ni**  
Distinguished Professor  
National Central University
- **Dr. Shih-Jung Wang**  
Associate Professor  
National Central University
- **Sheng-Wei Wang**  
Assistant Professor  
National Central University
- **Dr. Kuan-Ying Hsieh**  
Research Assistant  
National Atomic Research Institute
- **Mr. Wei-Chun Chien**  
Assistant Researcher  
National Atomic Research Institute
- **Dr. Cheng-Yueh Wu**  
Assistant Research Fellow  
National Cheng Kung University
- **Dr. Bo-Tsen Wang**  
Deputy Project Manager  
Geophysical Technology & Engineering Co., Ltd.
- **Zhong-Yi Liao**  
Postdoctoral Researcher  
National Central University

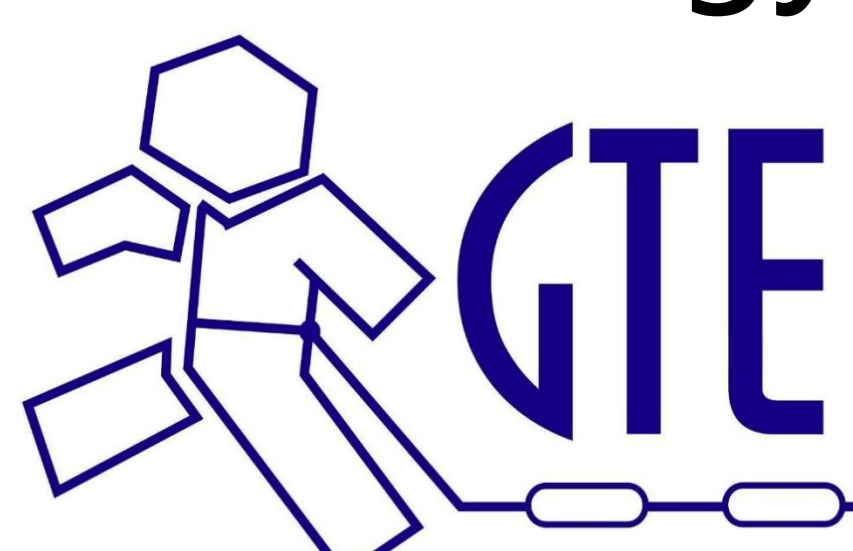
Organizers : National Atomic Research Institute  
National Central university



國家原子能科技研究院  
National Atomic Research Institute



Co-organizer : Geophysical Technology & Engineering Co., Ltd.



# Speech Agenda

| Time                                                                                  | Agenda item/Topic                                                                                                                                                   | Speaker                                                |
|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|
| 8:50-9:10                                                                             | Registration                                                                                                                                                        | -                                                      |
| 9:10-9:20                                                                             | Opening remarks                                                                                                                                                     | Dr. Ming-Hsu Li<br>Dean<br>College of Earth<br>Science |
| Chair : Dr. Kuo-Chin Hsu, Professor, National Cheng Kung University                   |                                                                                                                                                                     |                                                        |
| 9:20-10:00                                                                            | Groundwater management and recent issues in South Korea                                                                                                             | Dr. Heejun Suk                                         |
| 10:00-10:40                                                                           | Collaborative AI Agents: A New Decision Support Platform for Sustainable Groundwater Management                                                                     | Dr. Eungyu Park                                        |
| 10:40-10:50                                                                           | Coffee Break                                                                                                                                                        |                                                        |
| Chair : Dr. Shao-Yiu Hsu, Professor, National Central University                      |                                                                                                                                                                     |                                                        |
| 10:50-11:20                                                                           | Flow and transport modeling in fractured media: recent advances and challenges                                                                                      | Dr. Chun-Fa Ni                                         |
| 11:20-11:50                                                                           | Applying a Coupled Hydraulic-Mechanical-Chemical Model to Investigate the Influence of Over-Pumping on Land Subsidence and Saltwater Intrusion in a Coastal Aquifer | Dr. Shih-Jung Wang                                     |
| 11:50-12:50                                                                           | Lunch and Break                                                                                                                                                     |                                                        |
| Chair : Dr. Tsuey-Lin Tsai, Deputy Director, National Atomic Research Institute       |                                                                                                                                                                     |                                                        |
| 13:00-13:30                                                                           | Feasibility of applying machine learning methods to predict groundwater level changes                                                                               | Dr. Sheng-Wei Wang                                     |
| 13:30-14:00                                                                           | Numerical Modeling of scCO2 Flow and Mineralization in saline aquifers                                                                                              | Dr. Kuan-Ying Hsieh                                    |
| 14:00-14:30                                                                           | Case Study on Safety Assessment of CO2 Geological Storage                                                                                                           | Mr. Wei-Chun Chien                                     |
| 14:30-14:50                                                                           | Coffee Break                                                                                                                                                        |                                                        |
| Chair : Dr. Yun-Chen Yu, National Deputy Director, National Atomic Research Institute |                                                                                                                                                                     |                                                        |
| 14:50-15:20                                                                           | Numerical Simulation Study on Fault Reactivation in CO2 Geological Storage                                                                                          | Dr. Cheng-Yueh Wu                                      |
| 15:20-15:50                                                                           | Three-dimensional Hydraulic Tomography Analysis of Soil and Groundwater Pollution Remediation                                                                       | Dr. Bo-Tsen Wang                                       |
| 15:50-16:20                                                                           | Applications of THMC Software in Groundwater, Carbon Capture and Storage, Geothermal Energy, and Nuclear Waste Management                                           | Dr. Zhong-Yi Liao                                      |