



MCERI Annual Meeting

**OXY Woodlands Campus
1201 Lake Robbins Dr.
The Woodlands, Texas**

November 6-7, 2025

Agenda

DAY 1 – Thursday, November 6, 2025

- 7:30 AM Breakfast
- 8:30 AM Opening Remarks
Akhil Datta-Gupta and Michael J. King, Texas A&M University (15 min)
- 8:45 AM Real Time CO₂ Plume Monitoring and Visualization Considering Geologic Uncertainty at the Illinois Basin-Decatur Carbon Sequestration Project
Takuto Sakai (25 min)
- 9:10 AM FMM-SIM Application to Geothermal Systems: Surface–Subsurface Coupling and Field Deployment at Utah FORGE
Chin-Hsiang Chan (25 min)
- 9:35 AM Multi-Resolution Modeling: A Pre-Simulation Strategy for Preserved Ratio Determination
Masaru Sawata (25 min)
- 10:00 AM Development and Application of Novel Physics-Based Algorithms for Multiphase Flow Upscaling
Yaser Alghawi (25 min)
- 10:25 AM Break (20 min.)
- 10:45 AM Physics-informed Machine Learning for Reservoir Connectivity Identification and Production Forecasting for Water flood and CO₂-EOR
Masahiro Nagao (25 min)
- 11:10 AM Acceleration of Data-Driven Proxy Models Using Physics-Based Reduced-Order-Model: Pseudo-Steady-State-Based Simulation
Koki Nakano / Chin-Hsiang Chan (25 min)
- 11:35 AM Recent Extensions and Applications of Transient Drainage Volume Production Analysis for Unconventional and Conventional Reservoirs
Ismail Mohamed (25 min)
- 12:00 PM Lunch (75 min.)
- 1:15 PM **Industry Presentation - OXY**
Applications of SWIFT for Geologic Model Upscaling in Oxy
Krishna Nunna (OXY)
- 1:55 PM Horizontal Well Performance Predictions for Carbon Storage Using Deep Neural Networks
Jia Fu / Sauvik Das (25 min)



- 2:20 PM Robust Geological Model Parameterization for Field-Scale History Matching with Complex Heterogeneity and Channel Architecture
Jun Watanabe (25 min)
- 2:45 PM Break (20 min.)
- 3:05 PM Screening Geostatistical Models Through Identification of Preferential Flow Paths Using Physics Informed Machine Learning
Masahiro Nagao/Sauvik Das (20 min)
- 3:25 PM The Impact of Near Well Grid Design on Fluid Flow Accuracy
Turgut Ahmadov (15 min)
- 3:40 PM Discussion and Wrap-up
Michael J. King and Akhil Datta-Gupta, Texas A&M University (50 min.)
- 4:30 PM Walk/Drive to The Westin
- 5:00 PM Reception
- 6:00 PM Dinner

DAY 2 – Friday, November 7, 2025

- 7:30 AM Breakfast
- 8:00 AM Opening Remarks
SWIFT/Sim for Scalable Flow Simulation
Mike King (15 min)
- 8:15 AM DESTINY: Streamline Tracing, Visualization and History Matching
Takuto Sakai
- 9:15 AM Fast Marching Based Simulation of Unconventional Reservoirs (FMM-SIM)
Chin Hsiang Chan
- 10:15 AM Break
- 10:45 AM SPADES: Novel Production Data Analysis for Unconventional Reservoirs Using Transient Drainage Volume
Ismail Mohamed
- 11:15 PM SWIFT: Upgridding and Upscaling of Full Field Geomodels
Yaser Alghawi
- 12:00 PM Lunch and Adjourn