



MCERI Annual Meeting

La Torretta Lake Resort, Montgomery, Texas

November 1-2, 2018

Agenda

DAY 1 – Thursday, November 1, 2018

- 7:30 AM Breakfast
- 8:00 AM Opening Remarks
Akhil Datta-Gupta and Michael J. King, Texas A&M University (30 min)
- 8:30 AM Optimizing CO₂ and Field Gas Injection EOR in Unconventional Reservoirs Using the Fast Marching Method
Atsushi Iino (25 min)
- 8:55 AM Diffuse Source Upscaling and Multiscale Simulation
Krishna Nunna (25 min)
- 9:20 AM Streamline Tracing and Applications in Naturally Fractured Reservoirs Using Embedded Discrete Fracture Models
Hongquan Chen (25 min)
- 9:45 AM Computing Diffusive Time of Flight in Locally Refined Grids Using the Fast Marching Method
Xu Xue (25 min)
- 10:10 AM Break (20 min.)
- 10:30 AM Post-Combustion CO₂ WAG Pilot in a Mature Field: Model Calibration and Optimization
Feyi Olalotiti-Lawal (20 min)
- 10:50 AM Modeling of Injection and Production Phases of Hydraulically Fractured Shale Wells Using the Fast Marching Method
Jaeyoung Park (20 min)
- 11:10 AM Production Data Analysis from Unconventional Reservoirs with a Novel Data-Driven Drainage Volume Approach
Zhenzhen Wang (20 min)
- 11:30 AM Rapid Field-Scale Well Spacing Optimization in Shale Oil Reservoirs Using the Fast Marching Method
Tsubasa Onishi (20 min)
- 11:50 PM Lunch (60 min.)
FMM Simulation: Technology Transfer Presentation
- 12:50 PM Poster Session (40 min.)
- 1:30 PM **Industry Presentation:** A Physics-Based Data-Driven Model for History Matching, Prediction, and Characterization of Unconventional Reservoirs
Yanbin Zhang, Chevron (30 min)

- 2:00 PM Optimization of EOR with Wettability Alteration in Tight Oil Reservoirs for Various Hydraulic Fracture Geometries
Hye Young Jung (20 min)
- 2:20 PM Analytical Investigation of Spontaneous Imbibition
Lichi Deng (20 min)
- 2:40 PM Multiresolution Grid Connectivity-Based Transform for Efficient History Matching of Conventional and Unconventional Reservoirs
Hyunmin Kim (20 min)
- 3:00 PM Investigation of the End of Linear Flow and Onset of SRV Drainage in Unconventional Reservoirs
Andrew Malone (20 min)
- 3:20 PM Break (20 min.)
- 3:40 PM Integration of Time-Lapse Seismic Data Using the Onset Time Approach: Impact of Frequency
Tian Liu (20 minutes)
- 4:00 PM Optimization of Fracture Completions Using Eagle Ford Field Data
Rongqiang Chen (15 min)
- 4:15 PM SWIFT Upgridding of the Amellago Carbonate Outcrop Model
Imroj Syed (15 min.)
- 4:30 PM Interpreting the Effective Permeability of Carbonate Reservoir Pore Network Using Diffuse Source Methodology
Sherry Liu (15 min)
- 4:45 PM Discussion and Wrap-up
Michael J. King and Akhil Datta-Gupta, Texas A&M University (30 min.)
- 5:00 PM Adjourn/Reception
- 6:00 PM Dinner

DAY 2 – Friday, November 2, 2018

- 7:30 AM Breakfast
- 8:00AM Opening Remarks
Akhil Datta-Gupta and Michael J. King, Texas A&M University
- 8:15AM DESTINY: Tracing and Inversion
Changqing “Peter” Yao
- 9:15 AM GRACE: Optimal Non-Parametric Transformation for Multiple Regression
Rongqiang Chen
- 10:15 AM Break
- 10:45 AM SPADES: Production Data Analysis for Unconventional Reservoirs
Xu Xue
- 11:15 AM SWIFT: Upgridding and Upscaling
Imroj Syed
- 12:00 PM Lunch and Adjourn

Poster Presentations

History Matching and Optimization of ASP Flooding: *Hye Young Jung*

Parameterization of Embedded Discrete Fracture Model for Unconventional Tight Reservoirs with Hydraulic Fractures:
Hyunmin Kim and Tsubasa Onishi

Fast Marching Simulation in Embedded Discrete Fracture Models: *Xu Xue*

Rapid Coupled Flow and Geomechanics Simulation Using the Fast Marching Method: *Kazuyuki Terada*

Novel Approach Toward Faulted Reservoirs with Streamline Simulation: *Kenta Nakajima*

Fast Marching Method-Based Simulation Accounting for Gravity: *Tsubasa Onishi*

Multi-well Simulation for Constant Rate Production Scenario Using the Fast Marching Method: *Atsushi Iino*

Mechanism of Seismicity at the Azle Site, Fort-worth Basin: Flow Visualization in Fine-scale and Basin-Scale Model:
Changqing "Peter" Yao

Amellago Carbonate Outcrop Model Upscaling: *Ching-Hsien "Isaac" Liu and Krishna Nunna*