

Juanes Research Group Itinerary AGU 2020

- [H009-0013A fixed-stress split for the simulation of coupled pore-scale flow and grain mechanics](#)
Yue Meng¹, **Wei Li²**, **Bauyrzhan Primkulov¹** and **Ruben Juanes¹**, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)Massachusetts Institute of Technology, Department of Civil and Environmental Engineering, Cambridge, MA, United States

Monday, 7 December 2020
07:00 - 23:59

- *Poster*

- [H018-04Fluid-fluid displacement in porous media: completing Lenormand's phase diagram for arbitrary wettability.](#)
Bauyrzhan Primkulov¹, **Amir A Pahlavan²**, **Xiaojing Fu³**, **Benzhong Zhao⁴**, **Christopher W MacMinn⁵** and **Ruben Juanes¹**, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)Princeton University, Princeton, NJ, United States, (3)University of California Berkeley, Earth and Planetary Science, Berkeley, CA, United States, (4)McMaster University, Hamilton, Canada, (5)University of Oxford, Oxford, United Kingdom

Monday, 7 December 2020
19:12 - 19:16

- *Virtual*

- [H018-05Fluid-fluid displacement in mixed-wet porous media](#)
Ashkan Irannezhad¹, **Bauyrzhan Primkulov²**, **Ruben Juanes²** and **Benzhong Zhao³**, (1)McMaster University, Hamilton, ON, Canada, (2)Massachusetts Institute of Technology, Cambridge, MA, United States, (3)McMaster University, Hamilton, Canada

Monday, 7 December 2020
19:16 - 19:20

- *Virtual*

- [H023-06The Effects of Motile Bacteria on Viscous Fingering](#)
Jane Chui¹, **Harold Auradou²** and **Ruben Juanes¹**, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)Université Paris-Sud, CNRS, Orsay, France

Monday, 7 December 2020
20:45 - 20:48

- *Virtual*

- [H067-04Forced Imbibition in Rough Fractures](#)
Yu Qiu¹, **Ke Xu²**, **Amir Pahlavan³** and **Ruben Juanes¹**, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)Peking University, Beijing, People's Republic of China, (3)Princeton University, Princeton, NJ, United States

Wednesday, 9 December 2020
10:12 - 10:16

- *Virtual*

- [S027-0014 Slip stability at heterogeneous interfaces with large-slip kinematics](#)

Maryam Alghannam¹, **Jan M Nordbotten**² and **Ruben Juanes**¹, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)University of Bergen, Bergen, Norway

Thursday, 10 December 2020
07:00 - 23:59

- Poster

- [S027-0008 Impact of dilatant strengthening on fault slip stability](#)

Antoine Jacquey¹, **Manolis Veveakis**² and **Ruben Juanes**¹, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)Duke University, Civil and Environmental Engineering, Durham, United States

Thursday, 10 December 2020
07:00 - 23:59

- Poster

- [OS034-06 Crustal fingering facilitates free-gas methane migration through the hydrate stability zone](#)

Xiaoqing Fu, University of California Berkeley, Earth and Planetary Science, Berkeley, CA, United States, **Joaquin Jimenez-Martinez**, EAWAG Swiss Federal Institute of Aquatic Science and Technology, Department of Water Resources and Drinking Water, Dübendorf, Switzerland, **Thanh Phong Nguyen**, Los Alamos National Laboratory, Los Alamos, United States, **James W Carey**, Los Alamos National Laboratory, Earth & Environmental Sciences, Los Alamos, NM, United States, **Hari Selvi Viswanathan**, Los Alamos National Laboratory, Los Alamos, NM, United States, **Luis Cueto-Felgueroso**, Universidad Politécnica de Madrid, Madrid, Spain and **Ruben Juanes**, Massachusetts Institute of Technology, Cambridge, MA, United States

Friday, 11 December 2020
20:52 - 20:56

- Virtual

- [S057-04 Seismic or aseismic: a machine learning approach to classification of frictional fault systems](#)

Ehsan Haghghat, **Maryam Alghannam** and **Ruben Juanes**, Massachusetts Institute of Technology, Cambridge, MA, United States

Tuesday, 15 December 2020
10:14 - 10:18

- Virtual

- [GC110-04 Assessing the Potential for CO₂ Migration along Fault Zones during Geologic Carbon Storage in Offshore-Texas Sedimentary Formations](#)

Lluís Saló¹, **Josimar Alves Silva**¹, **John Steven Davis**² and **Ruben Juanes**¹, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)ExxonMobil Upstream Integrated Solutions Company, Spring, TX, United States

Tuesday, 15 December 2020
22:09 - 22:12

- Virtual

- [GC111-02 Large-scale CO₂ Storage in Offshore Sedimentary Formations: 3D Flow-Geomechanics Modeling Assessments of Gulf of Mexico Reservoirs](#)

Ruben Juanes¹, **Josimar Alves Silva**¹, **Lluís Saló**¹, **John Steven Davis**² and **Joseph E Patterson**³, (1)Massachusetts Institute of

Technology, Cambridge, MA, United States, (2)ExxonMobil Upstream Integrated Solutions Company, Spring, TX, United States, (3)ExxonMobil Upstream Integrated Solutions Company, Houston, United States

Tuesday, 15 December 2020
23:34 - 23:38

- Virtual

- **MR015-0006** [Experimental Study on the Seismic Behavior of Fault Gouge under Changing Pore Pressures](#)
Wei Li, Massachusetts Institute of Technology, Department of Civil and Environmental Engineering, Cambridge, MA, United States and **Ruben Juanes**, Massachusetts Institute of Technology, Cambridge, MA, United States

Wednesday, 16 December 2020
07:00 - 23:59

- Poster

- **H202-09** [Gravity fingering control on evaporation and deep drainage in a 3D porous medium](#)
Rebecca Liyanage and **Ruben Juanes**, Massachusetts Institute of Technology, Cambridge, MA, United States

Wednesday, 16 December 2020
08:54 - 08:57

- Virtual

- **H209-03** [Fingered water infiltration in soil suggests higher resilience of ecosystem in water-stressed climate](#)
Xiaojing Fu, University of California Berkeley, Earth and Planetary Science, Berkeley, CA, United States, **Luis Cueto-Felgueroso**, Universidad Politécnica de Madrid, Madrid, Spain and **Ruben Juanes**, Massachusetts Institute of Technology, Cambridge, MA, United States

Wednesday, 16 December 2020
14:36 - 14:39

- Virtual

- **H209-07** [Minimizing water losses during crop irrigation by optimizing irrigation schedule and introducing soil heterogeneity](#)
Santiago Mabres¹, **Rebecca Liyanage**¹, **Xiaojing Fu**², **Luis Cueto-Felgueroso**³ and **Ruben Juanes**¹, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)University of California Berkeley, Earth and Planetary Science, Berkeley, CA, United States, (3)Universidad Politécnica de Madrid, Madrid, Spain

Wednesday, 16 December 2020
14:48 - 14:51

- Virtual

- **MR026-08** [Development of workflow using geologically constrained coupled flow and geomechanics simulations to predict pressure and stress at known microseismicity localities induced by CO₂ injection: validation using the Illinois Basin Decatur Project dataset](#)
Josimar A Silva¹, **Mansour K Rokrok**², **James R Damico**³, **Nori Nakata**¹, **Michael Fehler**¹, **Junzhe Jiang**², **Scott Frailey**³ and **Ruben Juanes**¹, (1)Massachusetts Institute of Technology, Cambridge, MA, United States, (2)Illinois State Geological Survey, Champaign, IL, United States, (3)Illinois State Geological Survey, Urbana, IL, United States

Wednesday, 16 December 2020
15:05 - 15:10

- *Virtual*
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