InterPore2023



Contribution ID: 931

Type: Poster Presentation

Expanding Digital Rocks Portal with benchmark datasets and engineered porous media

Thursday, 25 May 2023 15:30 (1h 30m)

Digital Rocks Portal (DRP, https://www.digitalrocksportal.org) organizes and preserves imaged datasets and experimental measurements of porous materials in subsurface, and beyond, with the mission to connect them to simulation and analysis, as well as educate the research community. We have over 150 projects represented in more than 200 publications, and an active community that reuses the data, most recently in multiple machine learning applications for automating image analysis as well as the prediction of transport. Such automation is crucial for performing formation evaluation tasks in near-real time. We present benchmark datasets that have played a role in recent machine learning prediction successes in the field. We further discuss the vision for further research advances, educational materials, as well as growth and sustainability plan of this digital rock physics community resource. In particular, we are in the process of expanding into a broader repository of engineered porous materials, specifically those for energy storage and the portal will transition to Digital Porous Media (DPM) in near future.

Participation

In-Person

References

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Energy Transition Focused Abstracts

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Primary author: PRODANOVIC, Masa (The University of Texas at Austin)

Co-authors: Dr ESTEVA, Maria (The University of Texas at Austin); MCCLURE, James (Virginia Tech); CHANG, Bernard (The University of Texas at Austin); Ms RADHAKRISHNAN, Anuradha (The University of Texas at Austin); Dr E. SANTOS, Javier (Los Alamos National Laboratory); SINGH, Ankita (UNSW Sydney); Dr KHAN, Hasan (University of Illinois at Urbana-Champaign)

Presenter: PRODANOVIC, Masa (The University of Texas at Austin)

Session Classification: Poster

Track Classification: (MS10) Advances in imaging porous media: techniques, software and case studies