

Digital Rocks Portal, Proposed Effort to Adapt an NSF Geomaterials Data Curation Tool for FE R&D in EDX

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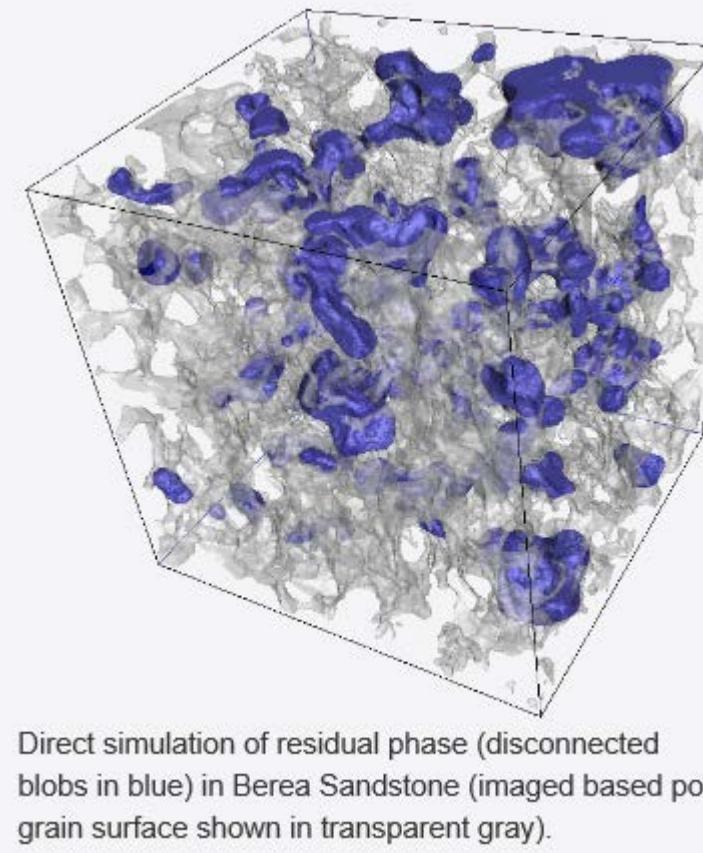
⁴ Mid-Atlantic Technology, Research & Innovation Center (MATRIC), contractor to NETL, Morgantown, WV and Albany, OR

digitalrocksportal.org

Digital Rocks Portal

Released in 2015 with a mission to:

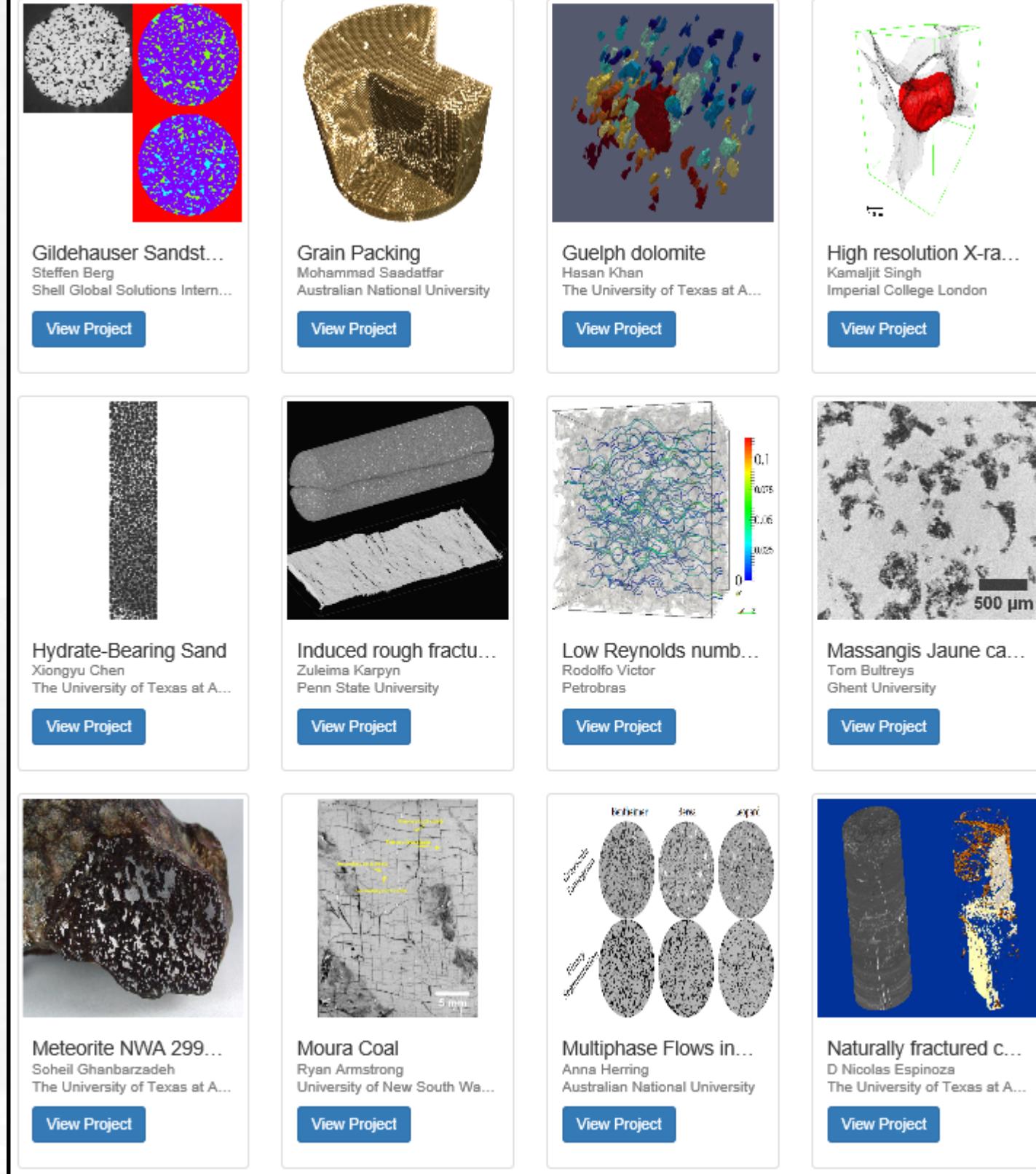
- Organize and preserve images and related experimental measurements of different porous materials.
- Improve access to them for a wider community of geosciences and engineering researchers not necessarily trained in computer science or data analysis, and thus
- Enhance productivity and enable scientific inquiry and engineering decisions founded on a data-driven basis.



Enabling Data Discoverability and Citations

- Part of EarthCube collaborative to enhance access to Geoscience data, models and resources.
- Member of the EarthCube Council of Data Facilities.
- Registered in Registry of Research Data Repositories.
- Registered data repository for Geosciences Data Journal.
- Issues digital object identifiers (DOIs) for referencing and discoverability.

Wide Variety of Datasets, Simulation and Experimental



Built for Digital Data Sharing and Direct Viewing/Analysis

Niobrara formation fracture

Project [Related Publications](#) [Linked to relevant publications](#)

Description: Microtomography image of a fracture from Niobrara formation, CO, USA (tight carbonate).

Author: Maša Prodanović (The University of Texas at Austin)

Collaborators: Christopher Landry (Bureau of Economic Geology), Adrienne Tokar-Lawell (The University of Texas at Austin), Peter Eichhubl (The University of Texas at Austin)

Created: April 19, 2016

License: CC-BY 1.0

Digital Object Identifier: 10.17127/73962

Data Citation

Original data sets and segmented altered data linked with parent child structure

Datasets

Origin Data: Partially cemented Niobrara Formation fracture

Origin Data: Segmented subvolume from numerical cementation study

Analysis Data: Segmented data with 0.3mm of uniform numerical cement

Analysis Data: Segmented data with 0.5mm of uniform numerical cement

Analysis Data: Segmented data with 0.7mm of uniform numerical cement

Analysis Data: Segmented data with 0.9mm of uniform numerical cement

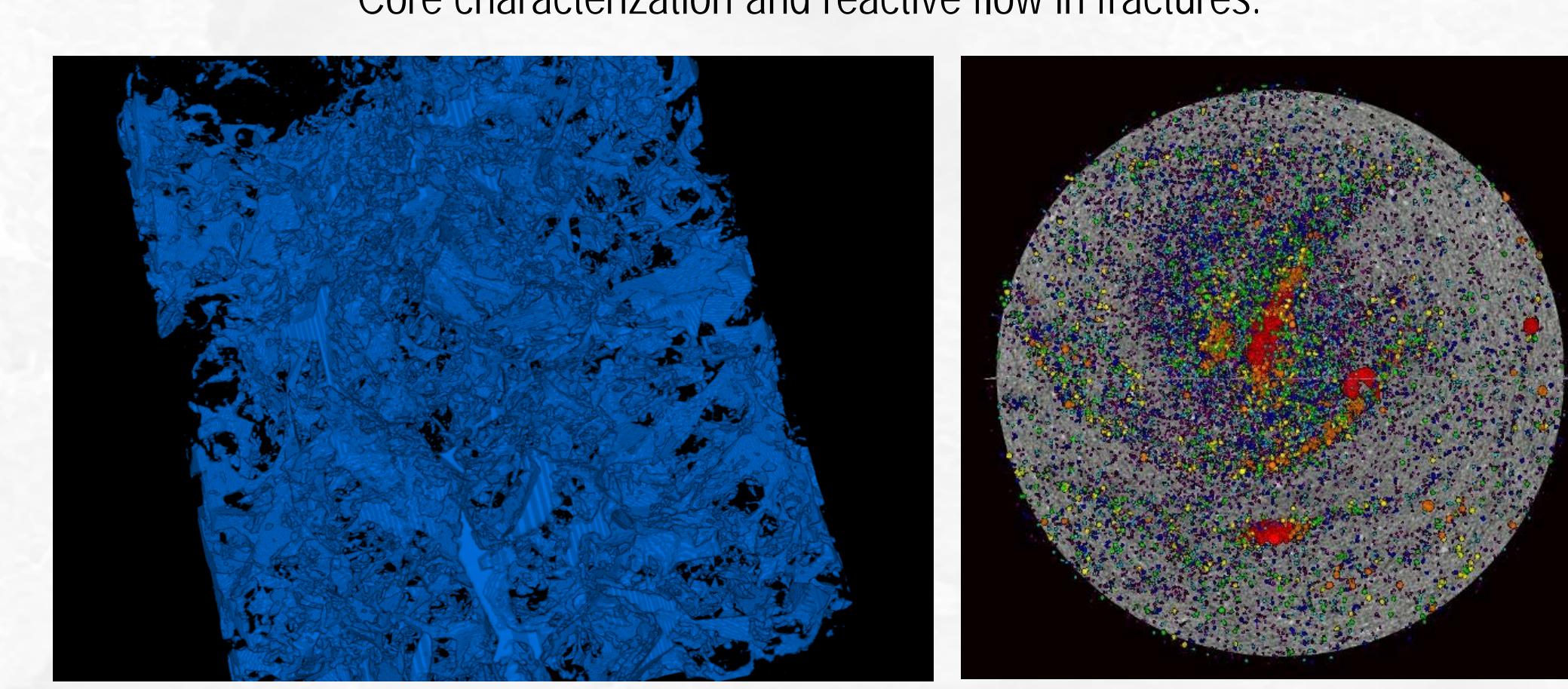
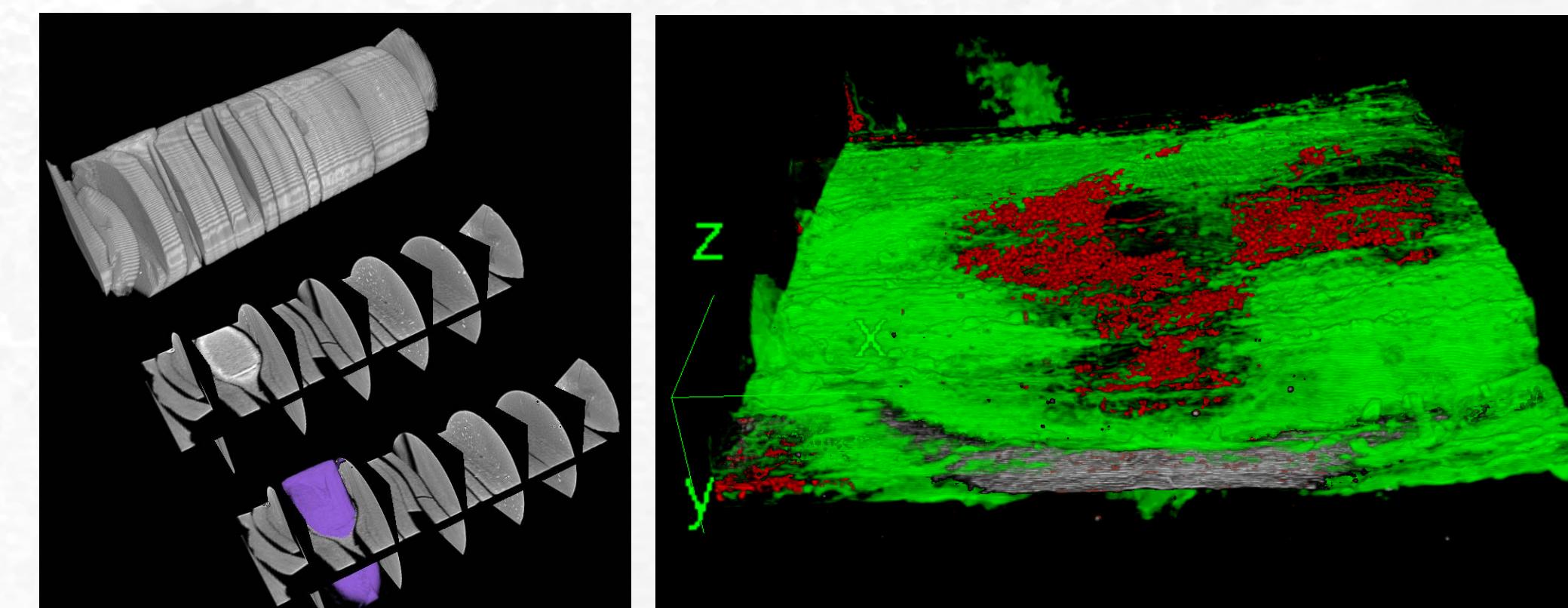
Origin Data: Segmented subvolume for fracture permeability study

Usage Information

Download Project

"The whole is greater than the sum of its parts." - Aristotle

By bringing DRP and EDX together we will enhance the visibility and capabilities of both systems and enable greater access of digital rocks data for multiple lines of research.



Pore scale digital rocks and cement characterization.

edx.netl.doe.gov

Energy Data eXchange



In 2011, EDX was developed for NETL/DOE R&D to facilitate data transfer, enhance collaboration in secure workspaces, and curate data from disparate sources.

- A technical R&D tool built by researchers for researchers
- An online platform for rapid and efficient access to priority submissions
- Provide enduring access to fossil energy products
- Share and "publish" online submissions and data-driven products
- A secure environment for multi-organizational research teams to share, build, and collaborate
- Online tool to disseminate data, information, and results from DOE's Fossil Energy research portfolios

Enabling Data Discoverability and Citations

- Providing external access to technical products and data published by NETL-affiliated research teams.
- Collaborating with a variety of organizations and institutions in a secure environment through EDX's Collaborative Workspaces.
- Coordinating historical and current data and information from a wide variety of sources to facilitate access to research that crosscuts multiple NETL projects/programs.

Wide Variety of Datasets, Simulation and Experimental

EDX NETL's Energy Data eXchange

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Data archived and searchable from numerous NETL and non-NETL related projects.

Workspaces provide collaboration across institutions in a secure environment.

References

Masa Prodanovic, Maria Esteva, Matthew Hanlon, Gaurav Nanda, Prateek Agarwal (2015) Digital Rocks Portal: a repository for porous media images <http://dx.doi.org/10.17612/P7CC7>

Kelly Rose et al (2018) EDX: NETL'S DATA DRIVEN TOOL FOR SCIENCE-BASED DECISION MAKING, NETL Factsheet 184, edx.netl.doe.gov/wiki/images/3/33/R-D184_2017-10-11.pdf