Contribution ID: **55**   Type: **not specified**

The I-GUIDE Cyberinfrastructure Platform

Thursday 27 October 2022 10:10 (1 hour)

The I-GUIDE platform is designed to harness the vast, diverse, and distributed geospatial data at different spatial and temporal scales and make such data broadly accessible and usable to convergence research and education enabled by cutting-edge cyberGIS and cyberinfrastructure. The platform comprises composable and interoperable tools and cyberinfrastructure capabilities integrated through application programming interfaces and information exchange standards. An I-GUIDE science gateway has been created as the primary user environment of the I-GUIDE platform to find, explore, and share data and models with friendly access to software, end-to-end research workflows, hosted services, computational resources, and learning materials. The platform leverages several existing capabilities including services for simplifying access to high-performance computing (HPC) resources, the US national HPC infrastructure, reusable geospatial workflow building blocks, and scalable, interactive computing environments to provide users with a web-based platform to carry out research and education workflows. Notebooks for pilot use case workflows have demonstrated their seamless access to sophisticated geospatial data methods and tools and state-of-the-art computational resources, with significantly improved usability and reproducibility. The I-GUIDE platform is bridging the "missing middle" to enable and accelerate the institute's convergent research and education agendas as well as being made available to the broader community.

Research

Education and Outreach

Data & Cyberinfrastructure

I-GUIDE Cyberinfrastructure Platform

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Session Classification: Poster session I