

NSF Campus Cyberinfrastructure PI and Cybersecurity Innovation for Cyberinfrastructure PI Workshop

September 24 – 26, 2018 | University of Maryland, College Park, MD

NSF Program (either CC or CICI):CICI

Program Area: RDP Award Number: 1840218

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Project Title: Open Science Chain (OSC) - A Novel Distributed Ledger-Based Framework for Protecting Integrity and Provenance of Research Data



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Quad Chart for: Open Science Chain (OSC) - A Distributed Ledger-Based Framework for Protecting Integrity and Provenance of Research Data

Challenges:

- Issues of credibility and reproducibility of scientific results impact data sharing and hinder further growth of the research.
- No efficient solutions for researchers to
 - Securely verify and validate research datasets independently
 - Associate ownership/identity with data
 - Track lineage information of data

Our Solution

- Open Science Chain (OSC) a web-based CI platform built using open source distributed ledger technologies.
- Metadata, identity and verification information of the dataset will be managed in OSC independent of existing storage repository solutions.
- Researchers have ability to verify and validate datasets in a secure manner.
- OSC will be designed using real work datasets from diverse domains

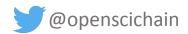
Broader Impact:

OSC will

- **spur data reuse** which can be audited and tracked regardless of the science domain.
- increase citations because of the easier access to reliable data.
- ensure greater provenance of data, thereby encouraging sharing and distribution of scientific research data.

Follow the Project:

www.opensciencechain.org



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