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**PEARC22 Papers Submitted by ERN Address Sharing of Vast Data Created by Technology-Enabled Research**

*Projects Outlined in Papers Seek to Increase Cooperation on Technical, Policy and Business Issues while Lowering Barriers to Broader Access*

Boston, Massachusetts, June 28, 2022 – Technological advances and multi-institutional collaborations are accelerating the pace of scientific discovery, but they are also creating vast amounts of data that will require increased cooperation on technical, policy and business issues, according to three papers by the Ecosystem for Research Networking (ERN, formerly the Eastern Regional Network). The papers all advance ERN’s fundamental goal of lowering barriers to computationally intensive cross-institutional research. The papers will be explored at the PEARC22 conference to be held in Boston July 10-14.

One paper, “The ERN Cryo-EM Federated Instrument Pilot Project,” addresses technical issues related to the sharing of data created by the Cryogenic Electron Microscope (Cryo-EM), which supports the work of hundreds of researchers. The paper outlines a project that seeks to simplify remote access to Cryo-EM facilities through the ERN Federated OpenCI Lab’s Instrument CI Cloudlet design. It also supports workflows for data movement, edge computing, and campus or cloud computing in order to process the large amounts of data that these instruments generate. The goals of the project include fostering team science and expanding access to this valuable, sought-after instrumentation.

A second paper, “Federating CI Policy in support of Multi-institutional Research: Lessons from the Ecosystem for Research Networking,” focuses on the creation of a federated CI policy and the alignment of institutional policies and governance procedures to support scientific collaboration and distributed research. This work complements the technical efforts of ERN by examining ways to simplify inter-campus collaboration on issues such as security and regulatory compliance.

The third paper, “Broadening the Reach for Access to Advanced Computing: Leveraging the Cloud for Research,” seeks to advance the democratization of computationally intensive research by leveraging cloud computing. A Broadening the Reach (BTR) working group is reaching out to understand the needs of the nearly 2,000 public and private colleges and universities located in the Northeast, the majority of which are small to medium size. It is also exploring how ERN can be more inclusive and have the broadest impact across multiple research disciplines, pedagogical approaches, and university and college stakeholders.

[**About the Ecosystem for Research Networking**](https://www.ernrp.org/about/)

The Ecosystem for Research Networking (ERN, formerly the Eastern Regional Network) was formed to simplify multi-campus collaborations and partnerships in the Northeast, in order to advance the frontiers of research, pedagogy, and innovation. The ERN is first and foremost a network of people interested in pursuing this goal, and who use and manage the campus and regional research computing, data, storage and network resources that can make it happen. The vision and mission of the ERN reflect the reality that multi-institutional collaborations are on the rise, but the data sets that support them are getting too large to transfer easily, the computing resources that they require often exceed the capacity of a single institution, and the expertise needed to support compute intensive research is scarce. To address these challenges, the ERN leverages the special relationship between researchers and the people who build and support research cyberinfrastructure in the region that it serves.

[**About PEARC**](https://pearc.acm.org/about/)

The PEARC organization coordinates the PEARC conference series in order to provide a forum for discussing challenges, opportunities, and solutions among the broad range of participants in the research computing community. This community-driven effort builds on successes of the past, and aims to grow and be more inclusive by involving additional local, regional, national, and international cyberinfrastructure and research computing partners spanning academia, government and industry. The PEARC conference series is working to integrate and meet the collective interests of our growing community.

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