

Virtual Residency Intermediate Workshop 2018

Low Cost Solutions for Research Computing Hardware and Maximizing Value from Acquisitions

Moderator

William Burke - **George Washington University**

Panel

Christopher Simmons - **University of Texas at Dallas**

Brock Palen - **University of Michigan**

Anita Schwartz - **University of Delaware**

Elizabeth Leake - **STEM-Trek**

Corey Frazier - **Intel**

Kevin Goldstein **Neeve Research**

- What is considered low cost solutions?
- How to procure resources that is low cost or FREE?
- What is considered a low enough of a cost?
- What low cost resource meets researchers needs?

COST FOR RESEARCH COMPUTING

- Equipment costs: for initial acquisition, software licenses, security, and maintenance.
- Staff costs: operations (FTEs, Post Docs, grad students, and undergrad internships).
- Space and environmental costs: data center space, power, and cooling.

- How does building social networks in research create low costs?
- How important is low-cost to the faculty or the institution?
- The number of FTEs for research computing?
- How do we reduce the TCO of the low-cost solution?
- How does data layout affect processing times therefore lowering costs?
- What are the costs of cyberinfrastructure for research?
- What are the alternatives to using the commercial cloud (e.g. AWS, Azure, and Google)?
- What cost benefits of liquid cooling for producing more energy efficient data centers?
- What are re-purposing strategies an organization can do to maximize the value of older computing resources?