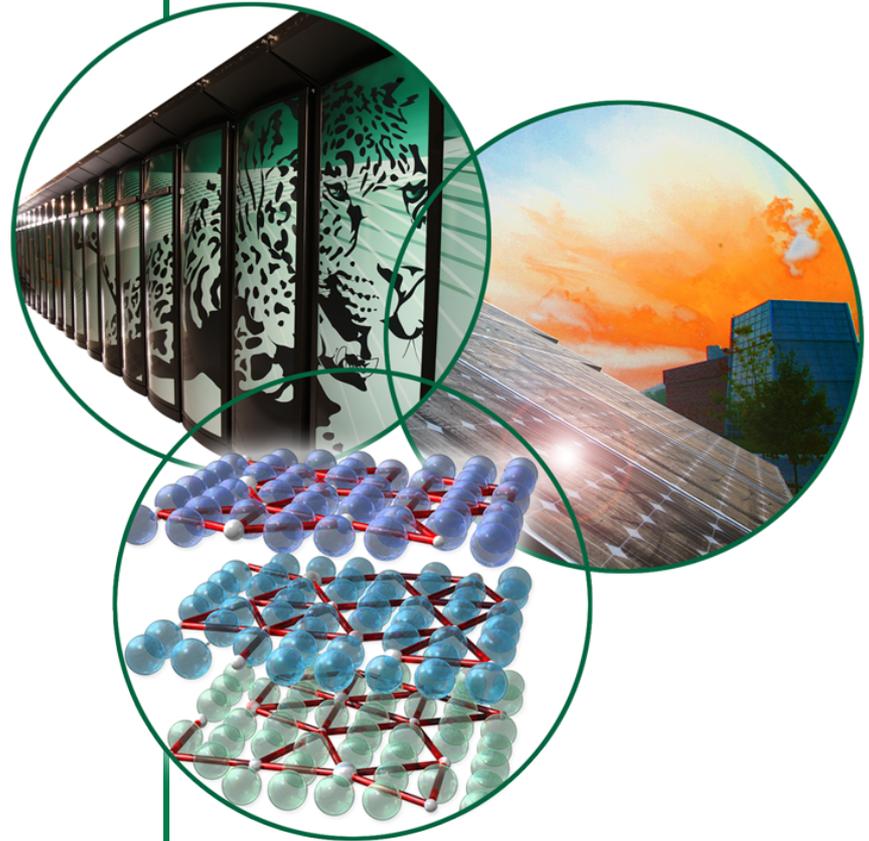


Big Data-Aware Terabits Networking

Barney Maccabe

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Terabit data-aware network technologies

Innovative network technologies optimized for sharing complex data over ultra-high-speed optical networks

- **Scalable and composable transport network protocols that can be dynamically configured to handle different modes of data transfer**
- **Automated high-speed data movement software that dynamically adapts to a wide variety of transport protocols**
- **Intelligent traffic management schemes**
- **Intelligent high-speed network security technologies**
- **Data movement workflows that simplify or automate the sharing of complex data sets for scientist**

Network-aware storage and file system middleware

Improving the performance and reliability of end systems (storage systems, file systems, metadata, disk-to-network I/O, and data transfer nodes) involving high-speed data transfers

- Storage resource brokers and co-schedulers to coordinate end-to-end data movement resources
- End-system QOS mechanisms that are linked to WAN provisioning schemes such as ESnet's OSCARS
- Scalable parallel file systems and metadata extensions to improve disk-to network I/O performance
- Network-aware storage system virtualization capabilities

Funding Available

- **Up to \$3M per year**
- **Single-investigator/single-institution up to \$400,000 per year**
- **Multi-investigator/multi-institution up to \$800,000 per year**
- **Expected**
 - **8 single-investigator awards**
 - **1-2 multi-investigator/multi-institution**

Deadlines

- **Communicate intent to participate by 4/10**
 - Barney Maccabe maccabeab@ornl.gov
- **Proposals submitted to DOE 4/19**

http://science.doe.gov/grants/pdf/LAB_13-883.pdf