



# NSF Campus Cyberinfrastructure PI and Cybersecurity Innovation for Cyberinfrastructure PI Workshop

September 23 – 25, 2019 | Minneapolis, MN

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**NSF Program: CC**

**Award Number: 1925596**

**Program Area: Campus Computing and the Computing Continuum**

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**Project Title: CC\* Compute: Accelerating Computational Research  
for Engineering and Science (ACRES) at Clarkson University: A  
Campus Cluster Proposal**



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## Quad Chart for:

### *CC\* Compute: Accelerating Computational Research for Engineering and Science (ACRES) at Clarkson University*

#### **Challenge Project Seeks to Address:**

- Aging campus high-performance computing (HPC) resource
- Demand for HPC outpacing campus supply, no framework for expansion
- Computational researchers were building siloed infrastructure
- Need a way to resource new/planned faculty hires

#### **Solution(s) or Deliverables:**

- Centralized HPC cluster as a shared campus resource
  - 60 CPU-based compute nodes
  - 1 GPU-based compute node
  - 1 bigmem CPU-based node
  - MPI low-latency interconnect
- Expandable under 'condominium computing' model (2 faculty members already participating-12 more nodes!)
- Integrated with OSG (and/or XSEDE) to provide scalability



#### **Scientific Impact or Broader Impact:**

- Research and faculty productivity in University's core research areas: Data Analytics, Healthy World Solutions, Advanced Materials Development, and Next Generation Healthcare
- Student benefits: research training, educational experiences, and direct work exposure

#### **Metadata tag:**

- <https://sites.clarkson.edu/acres/>
- Current status: equipment ordered, pending delivery, build-out started using VM infrastructure