



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

September 23 – 25, 2019 | Minneapolis, MN

## Quad Chart for:

### *CC\* Compute: Integrating Georgia Tech into the Open Science Grid for Multi-Messenger Astrophysics*

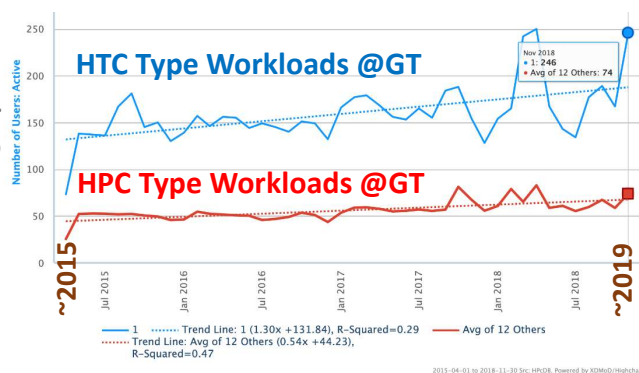
#### Challenge Project Seeks to Address:

- GT can't run some research workflows that rely on the "Open Science Grid" (OSG) ecosystem, regardless of available resources.
- Currently no centralized campus support to integrate Georgia Tech researchers (or their resources) into OSG.
- OSG doesn't have a regional storage cache in the Southeast.
- Large number of single-core jobs (HTC) constantly bringing down our HPC scheduler.

#### Solutions:

- Support "OSG integration" as a standard and centralized service campus-wide.
- Add new shared CPU and GPU compute capabilities into OSG.
- Build the first storage cache (StashCache) to serve member institutions in the Southeastern US.
- Allow OSG-Connect jobs to flow into Georgia Tech managed resources
- Redirect some of the HTC type workloads on campus to OSG for more effective use of existing HPC-optimized local resources.

#### Growing HTC community at GT:



#### OSG projects to be supported (initially):



#### Broader Impact:

- Enables new projects that currently can't be conducted at Georgia Tech (GT).
- Contribute OSG's existing computer power and capabilities with national impact.
- New StashCache in SE US with regional impact.
- Allows addition of GT-funded existing and future resources directly into OSG.
- Equal access priority for all users of the same OSG project (VO) – not just GT users!

#### Metadata:

- GT Team: M. Belgin (PI), S. Sarajlic, I. Taboada, L. Cadonati, N. Otte
- GT's PACE Team: [www.pace.gatech.edu](http://www.pace.gatech.edu)
- Hiring an XSEDE/OSG system architect! [www.pace.gatech.edu/careers](http://www.pace.gatech.edu/careers)
- We know how to do LIGO, but new to CTA/VERITAS, ICECUBE and OSG Connect. We'd love to hear from other centers successfully supporting these projects.
- GT has PerfSonar, Globus and a cool DMZ, so let us know if you'd like to test campus connectivity, large data transfers, etc.