

NSF ACI-1620695: “RCN: Advancing Research and Education Through a National Network of **C**ampus **R**esearch **C**omputing Infrastructures - The **CaRC** Consortium”

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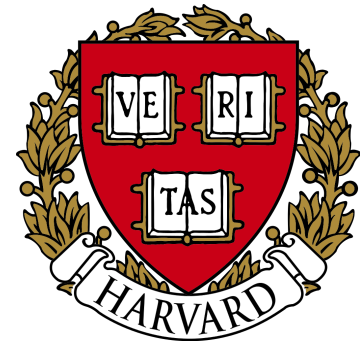
Director of Research Computing & Center for High Performance Computing, UIT

<http://www.chpc.utah.edu>



In addition to deploying and operating high performance computational resources and providing advanced user support and training, CHPC serves as an expert team to broadly support the increasingly diverse research computing needs on campus. These needs include support for big data, big data movement, data analytics, security, virtual machines, Windows science application servers, protected environments for data mining and analysis of protected health information, and advanced networking. Visit our [Getting Started](#) page for more information.

NSF ACI-1341935: “Advanced Cyberinfrastructure - Research and Educational Facilitation: Campus-Based Computational Research Support” – **ACI-REF Phase I**



Advancing Scientific Discovery through a National Network of Advanced
Cyberinfrastructure (ACI) Research and Education Facilitators (ACI-REFs).

<https://aciref.org>

- Campus research computing needs are rapidly growing...
[MRIs, start-up packages, condo/co-lo, big data + XSEDE/BW/OSG]
- **...but operations are thin, especially with user facing people**
- ACI-REF “Advanced Cyberinfrastructure Research and Education Facilitator” – Experiment from NSF to:
 - Seed investments in user facing people—Facilitators—at six universities (\$5.3M, 2 ACI-REFs per, 2 years, in NCE)
 - Build inter-institutional collaborative networks of knowlege to share expertise across campuses
 - Develop best practices
 - CC < Facilitators < AUSS/ECSS @ XSEDE

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ACI-REF Best Practices of Facilitation

What is an ACI-REF, and What Activities Exemplify Facilitation?

Introduction and Main Ideas

Major Activities of Facilitation

Definitions

Appendix

Contribute

Acknowledgements

+ blog, ...

Learn more about the ACI-REF program



Challenges:

- We all have different approaches, styles, funding models, experience, ...
- Collaboration with other organizations (XSEDE CC, regional entities, CASC, ...)
- Sustainability
- Workforce Development / Identity?
- How to elevate visibility and importance of facilitation on campuses and nationally?

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- **How to scale / grow? ACI-REF Phase II**

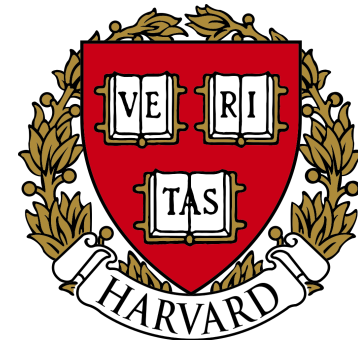
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USC University of Southern California



UNIVERSITY OF MIAMI



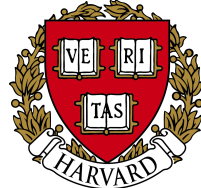
THE UNIVERSITY OF UTAH

How to scale / grow / serve campuses & share?

- Many universities want to join ACI-REF (yet *we are not ready* as we are still learning how to collaborate and scale).
- Who/where is our “home” or “parent”?
- What broader activities (beyond Facilitation)?
- Who else to collaborate with? (CC, CI Engineers, CI Practitioners, Technical Leads, ...)

(RCN → CaRC)

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CaRC Council

Interim Chair: Cheatham (Utah)

One representative from each institution

Leadership Team (interim)

- Cheatham
- Bottum
- Joel Gershenfeld (facilitator)
- Gail Krovitz (Internet2, PM)
- Tsinoremas (Miami)
- Sherman (Yale)
- Marinshaw (Stanford)

By-laws Committee

Sherman

Outreach Committee

Tsinoremas

Administration Committee

Marinshaw

What should CaRC do?

What should CaRC do?

...throw parties? 🤔



What should CaRC do?

...try to bring communities together to improve CI awareness, innovation and capabilities on campuses...

Define a collaborative space – a consortium – that will provide the organizational, intellectual, and technical anchor for a nationwide (or world-wide) network of research computing infrastructures and projects...

What should CaRC do?

1. Funding Models / Advocacy

Enabling Research Computing on Campuses

Funding models, sustainability, measures of impact and ROI, means to advocate to constituents and leadership.

2. Advancing / Innovating CI

Empowering Research Computing on Campuses through designing, engineering, innovating, and deploying advanced cyberinfrastructure (CI)

Best practices; problem solving; responding to customer needs and constraints; communication of capabilities, limitations and risks; facilitating engagement as facilitators, technical leads, and decision makers; and actively pushing innovation and costs savings.

What should CaRC do?

3. Workforce development / Defining CI Practitioner Roles and Terminology

Finding, developing, maintaining and empowering the campus CI workforce

How do we find people, train them, keep them, and actively work to make them better?

Use CaRC to help refine, define, and advocate the roles, areas of operation, and responsibilities, liabilities, and requirements of “facilitators”, CI practitioners, “champions”, and others involved in various CI roles.

Defining career paths and advocating for research computing staff, in general.

What should CaRC do?

4. Resource Sharing & Expert Teams / Consultants

Sharing of people and expertise among peer groups (technical, systems administration, networking, security, software, facilitation) and sharing of physical resources.

Also, potentially within CaRC, define expert teams to serve as CI consultants (i.e. a skunk works or strike force team) for short-term “hire” to help rapidly translate, innovate and deploy CI on campuses.

5. Knowledge Base

Within CaRC develop a database or knowledge base of areas of CI and domain expertise, knowledge, a listing of CI resources available, and set of providers willing to help or offer services.

6. Training / Workshops

Leveraging CaRC in participation in local, regional, and national CI in training, domain meetings, conferences and workshops.

ARCC/PEARC? Taking advantage of existing training opportunities.

What should CaRC do?

7. **Proposals / Grants**

Leveraging CaRC for collaborative proposals, grants, and/or innovative capabilities for campuses and the community.

Potentially proposal support or advice (data management plans, innovative areas, strategies for success).

8. **Large Project Management / Project “Home”**

Leveraging CaRC infrastructure as a home for financial or project management of multi-campus or large collaborative projects.

9. **Lobbying**

Using the power of CaRC to lobby.

A potential vision for bringing communities together...

