



*Accelerating discovery in Atlantic Canada through
Advanced Research Computing*

ACENET ADVANCED RESEARCH COMPUTING SPONSORSHIP PROGRAM 2015-17

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What is Advanced Research Computing (ARC)?

ARC involves using high performance computing and storage, Big Data and data analytics, leading edge GPU systems, secure high-speed networks, large-scale storage, cloud environments, and other tools to address challenges that are too large or complex for a desktop computer.

Used by researchers, governments and industry, ARC can remove years from timelines for research and innovation, and makes new types of analysis and problem solving possible. It is advancing Canada's expertise and capabilities in science and technology, with resulting benefits to both economic development and society at large.

The availability and quality of advanced computing services is critical to attracting top research talent in the region and Canada.

Context for ACENET ARC Sponsorship Program

ACENET is a consortium of post-secondary institutions in Atlantic Canada and a regional partner of Compute Canada. Our mission is to accelerate discovery in Atlantic Canada through leadership and innovation in advanced research computing resources, expertise and training.

ACENET clients have access to high performance, Big Data and GPU computing and storage, secure fire-and-forget file transfer for terabytes of data, cloud environment development space, specialized portals and an extensive variety of applications and software.

Beyond infrastructure, ACENET provides computational research assistance and training. Some of what we do includes:

- Helping to determine computing needs;
- Designing, optimizing and troubleshooting computer code;
- Customizing tools; and
- Providing both general and specialized ARC training and ongoing support to groups and individuals, from novice to advanced.

In fulfilling our mission, ACENET encourages the adoption and expansion of ARC usage in Atlantic Canada. Advanced computing skills are increasingly in demand across post-secondary institutions, government and the private sector, and this demand will continue to increase as computing capabilities grow and Big Data becomes more accessible.

Program Objectives

1. To foster use of Advanced Research Computing (ARC).
2. To facilitate development of highly qualified people (HQP).
3. To increase visibility of Atlantic Canadian research that depends on ARC.
4. To seed new collaborations.
5. To increase visibility of ACENET.

Program Overview

ACENET has allocated \$30,000 in each of FY2015/16 and FY2016/17 to sponsor ARC-related eligible activities (as outlined below) across Atlantic Canada. Applications for these funds are encouraged across all disciplines; from those that have a strong history of ARC usage, to those that do not.

Evaluations of proposals will consider the impact on Atlantic Canadian research, training, and the advancement of ARC as a tool for discovery, as well as synergies with ACENET activities. Our priority will be to facilitate and support multi-institutional and multi-provincial proposals.

Typical allocations will be up to \$5000, but may also include "in kind" requests for dedicated support time from ACENET Computational Research Consultants.

Eligible Activities

1. Seed money to support collaborative grants or initiatives with a strong ARC component (i.e. NCE, NSERC CREATE, HFSP, industrial funding).
2. Conference funding to support ARC speakers or sessions.
3. Seminar funding for special ARC guest speakers.
4. ARC training sessions or courses.
5. Student prizes at conferences with a strong ARC component.

Proposals can include a combination of these activities, and be anything from a one-time event to a multi-year initiative.

Groups of researchers in the same field of study are encouraged to apply. Note that the ACENET Institutes Program is subsumed by this new ARC Sponsorship Program.

Application Process

Interested groups can apply to ACENET at any time of year. The lead proponent must be a faculty member (including librarians) at an ACENET member institution. All proposals should be submitted using the *ACENET ARC Sponsorship Program Application Form*. (web link) The completed form is to be submitted to arcsponsorship@ace-net.ca

Applications will be reviewed for approval by a committee comprised of the Executive Director of ACENET, the ACENET Marketing & Business Development Manager and one member of ACENET's Research Directorate.

Evaluation Criteria

Proposals will typically be evaluated only at the end of each quarter, with funds allocated accordingly. The review, approval and allocation process is expected to take approximately six weeks from the time review begins. Please apply at least three months before funding is required.

Priority will be given to excellent proposals that address the following criteria:

1. Does the proposal advance ARC as a tool for discovery?
2. Will the activity help develop HQP with significant ARC skills?
3. To what degree will the funding increase the visibility of ACENET and ARC in Atlantic Canada?
4. Is the proposal collaborative within a research community?
5. Will the proposal help advance ARC in a community without a strong history of its use?

Promotion and outreach should be an explicit part of all proposals, and both student engagement and ACENET liaison in these activities is encouraged.

Reporting

Following their project, funding recipients are requested to provide a brief report within 30 days outlining the outcome of their project or event, the ARC-related benefits accrued and any follow-up activities planned.

Along with this, a signed financial report outlining all sources and uses of funds should be submitted.

Note that reports on the previous use of ACENET sponsorship funds by any of the applicants are required before new applications will be reviewed.

Administration

Administration is provided by:

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General inquiries regarding the ACENET Advanced Research Computing Sponsorship Program may be directed to arcsponsorship@ace-net.ca