

POWER

SHARCNET, structured as a “**cluster of clusters**” across southwestern, central and northern Ontario, is designed to meet the computational needs of researchers in diverse research areas and to facilitate the development of leading-edge tools for high performance computing grids. The infrastructure is established so that there are four primary resource centres located at the Universities of Western Ontario, Guelph, McMaster and Waterloo providing specific architectures designed to accommodate the range of user applications, plus a number of special purpose systems and labs situated across the consortium. SHARCNET’s expanded infrastructure now has 20,000 processors and more than a Petabyte of storage. The infrastructure is available to all SHARCNET users irrespective of where the equipment is located.

PARTNERSHIP

Established in June 2001, SHARCNET is a consortium organization which now consists of 17 leading academic institutions in Ontario. Substantive computational facilities are provided across the consortium by several computing industry partners, with the primary computational

partner being Hewlett Packard. A partnership with the Ontario Research and Innovation Optical Network (ORION) has allowed SHARCNET to deploy a **high performance computing grid**, which currently connects systems across the consortium with a 10 Gb network, to facilitate increased collaboration and computationally-intensive research.

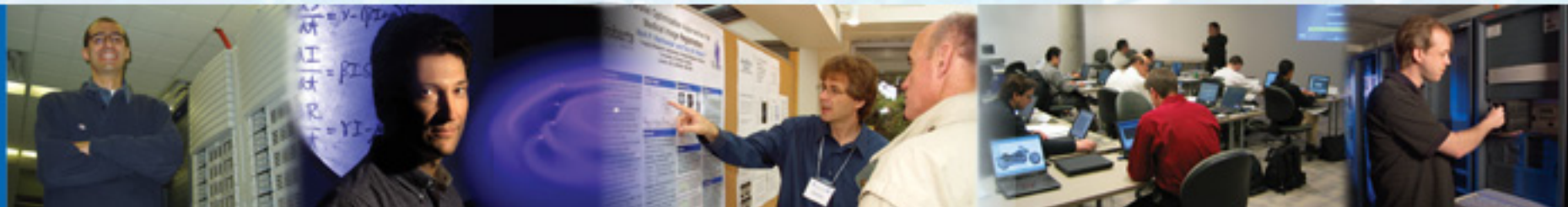
SHARCNET is founded on academic-industrial collaboration and is generously supported by institutional members, private sector partners, and both federal and provincial governments.

PERFORMANCE

SHARCNET has the requisite infrastructure, networks, and resources to provide facilities for world-class computational research. Development of an effective HPC culture, which is a central element of competitive science, business and industry, drives SHARCNET’s philosophy. SHARCNET is committed to **creating an HPC culture in Canada** - a critical mass of people highly trained in computational techniques - by sponsoring technical workshops, seminars and research colloquia across its sites. To date, over 4,000 researchers, students, and private sector representatives have received training from SHARCNET HPC Consultants and System Administrators on high performance computing and the applications of computational methods to research.

SHARCNET is **dedicated to building Canada’s knowledge-based economy**. The SHARCNET Chairs Program is designed to enable strategic faculty hiring and to attract world-renowned experts in a variety of fields to SHARCNET institutions. The SHARCNET Fellowships Program provides comprehensive matching funds to enable research and training at the undergraduate, graduate and postdoctoral level.

SHARCNET researchers, over 1,000 national and international groups, have reported success in a multitude of research areas, including computational materials, mathematical finance, bio-computing and HPC tools.





our goals are to:

- Accelerate the production of research results to meet the needs of researchers and industry partners in today's competitive fast-paced academic and business environments.
- Attract and retain the best students, researchers and companies by providing cutting edge computational expertise and hardware.
- Link academic researchers and corporate partners in a search for new business opportunities.



SHARCNET is one of seven HPC consortia in Canada that operates under the umbrella of Compute/Calcul Canada.

SHARCNET Funding

Canada Foundation for Innovation
Ontario Government

Private Sector Partners

Bell Canada: www.bell.ca
Hewlett Packard: www.hp.com
Nortel Networks: www.nortel.com
Ontario Research & Innovation Optical Network:
www.orion.on.ca
Platform Computing: www.platform.com
Quadrics Supercomputing World: www.quadrics.com
Silicon Graphics: www.sgi.com

Academic Partner Institutions

The University of Western Ontario, London
University of Guelph, Guelph
McMaster University, Hamilton
Wilfrid Laurier University, Waterloo
University of Windsor, Windsor
Fanshawe College, London
Sheridan College, Oakville
University of Waterloo, Waterloo
Brock University, St. Catharines
University of Ontario Institute of Technology, Oshawa
York University, Toronto
Lakehead University, Thunder Bay
Laurentian University, Sudbury
Trent University, Peterborough
Perimeter Institute, Waterloo
OCAD University, Toronto
Nipissing University, North Bay



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