

Brock Institute for Scientific Computing

Research computing at Brock

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The Brock Institute for Scientific Computing (BISC) advances scholarship at Brock University through enabling research utilizing high performance computing (HPC).

Executive Committee

- Thad Harroun (Physics)
- Sidney Sigalowicz (Psychology/Lifespan Centre)
- Thomas Wolf (Mathematics)
- James Desjardins (Sharcnet)

<https://brocku.ca/research-at-brock/institutes-and-centres/computing>

Aims:

- To facilitate inter-departmental knowledge sharing and creation in computationally driven research.
- To extend the breadth of the computationally driven research fields to additional Faculties and Schools at Brock.
- To facilitate the communication and sharing of resources (expertise and hardware) among BISC members.
- To work with [SHARCNet](#), [Compute Ontario](#), and [Compute Canada](#) to develop HPC support expertise and train researchers to use HPC effectively and efficiently.

Renewed by the Senate as a 5-year interdisciplinary institute in April, 2016.

There are currently 20 Brock faculty with active Compute Canada accounts used to access SHARCNet HPC resources in Ontario.

- 13 in Mathematics and Science
- 4 in Social Sciences
- 2 in Applied Health Sciences
- 1 in the Goodman School

James Desjardins – Sharcnet HPC consultant
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BISC : Activities and plans

2016 – Renewed Agreement of Cooperation with Kobe University.

2017 – Planned student exchange with Prof. Ombuki-Berman (COSC).

2017 – SOCIP participation?

Southern Ontario Smart Computing Innovation Platform (SOCIP) is a research and development consortium that pairs academic and industry researchers with advanced computing tools to fuel Canadian innovation.

Access to Canada's most powerful advanced computing platforms, expert technical support, dedicated funding for post-doctoral fellows and graduate students,

Working with Stephen Cheung (Kinesiology) to advance a pilot project.

2017 – Local hardware/software availability

Develop Brock portal for access to local hardware.

- Library cluster (online)
- Physics lab cluster?
- Chemistry cluster?

Secure access to key software.

- Identify research/scholarship software requirements.
 - Shared common access
 - Student training (in-person, software carpentry)
 - Align requirements with Compute Canada/Compute Ontario
- Single site licenses for training/visualization/computation

2017+ – Library Digital Scholarship Lab

“...assist students and researchers in finding, using interpreting, and analyzing data sets”

“...assist researchers in navigating networks and services”

- Data Visualization and Analysis (infrastructure req'd)
- High Performance Computing (training spaces, software req'd)

Steps to moving scholarship and research beyond the capability of the desktop.