

Tools for Handling Big Data and Computing Demands

Humanities and Social Science Scholars



compute | **calcul**
canada | canada

Outline

- Overview of Compute Canada and WestGrid
- Focus on Humanities and Social Sciences
- The Resource Allocation Competition – Overview
- How to apply for an RPP
- Other Compute Canada Services
- Research Showcase

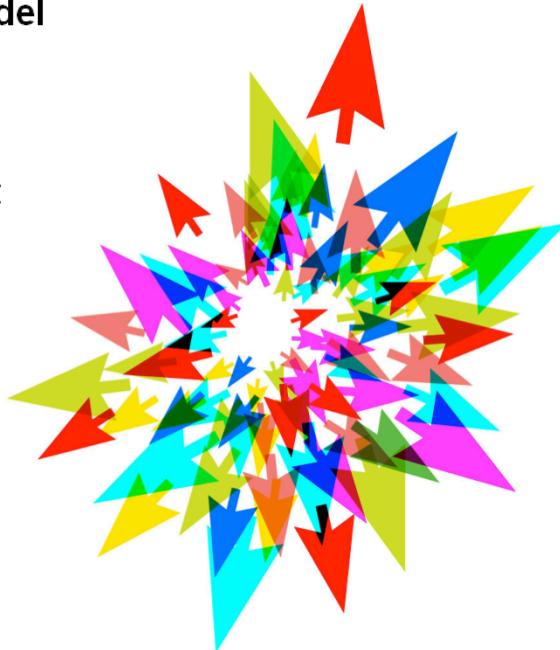
Compute Canada

Compute Canada is a not-for-profit organization that provides the **essential digital infrastructure for industry and researchers in Canada.**

Our ~200 staff are world class experts and train thousands of researchers a year in computation and big data analytics - ensuring we produce highly skilled workers for competitive industries.

This infrastructure is used to **design new jet airplanes, create new drugs and model oil reservoirs.**

It is globally recognized that investment in digital infrastructure is required to ensure countries remain **economic leaders.**



Consolidating and Renewing Services

Technology Renewal by 2018

Consolidating from 24 Data Centres/50 Systems → 5 Data Centres/Systems

National Data Cyberinfrastructure

New Cloud, HPC, HTC

Major migration of data and users

Service Delivery

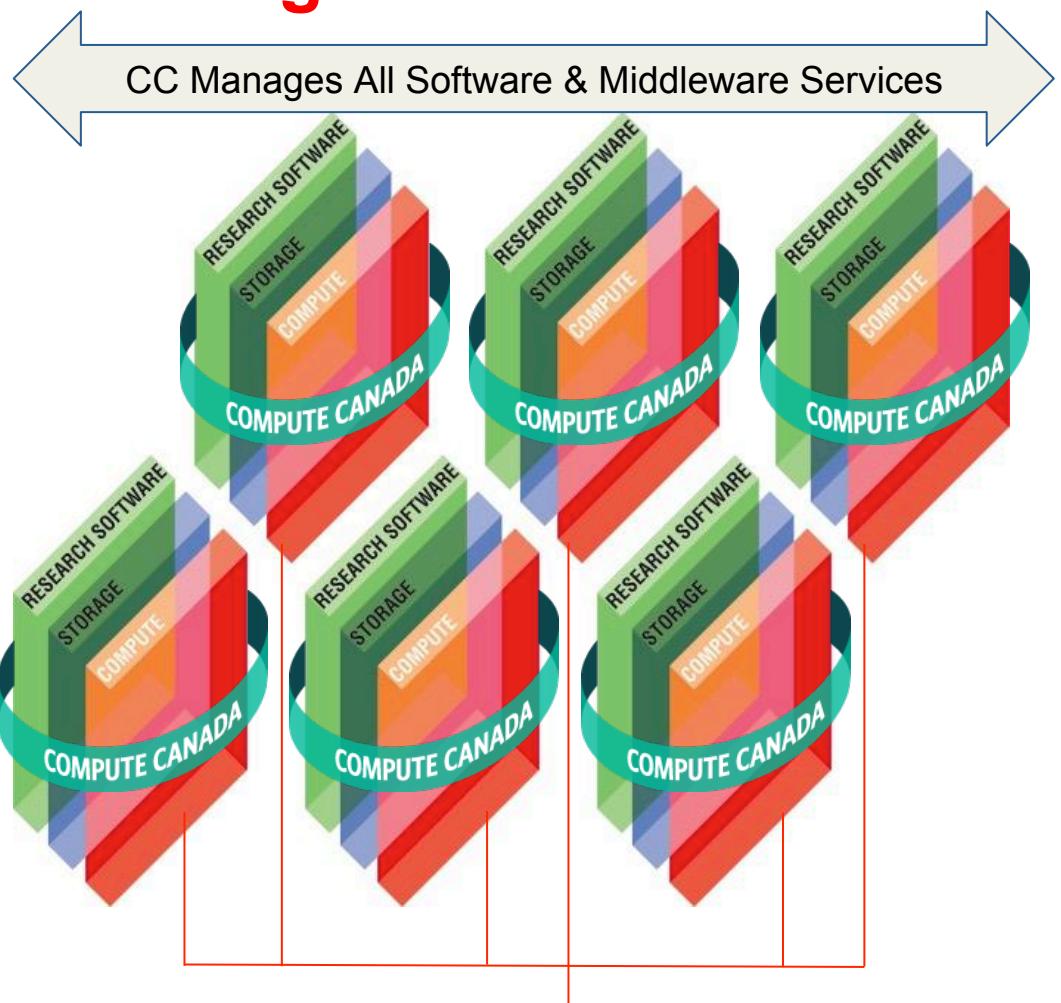
Common middleware across sites

New national services (Cloud, RDM)

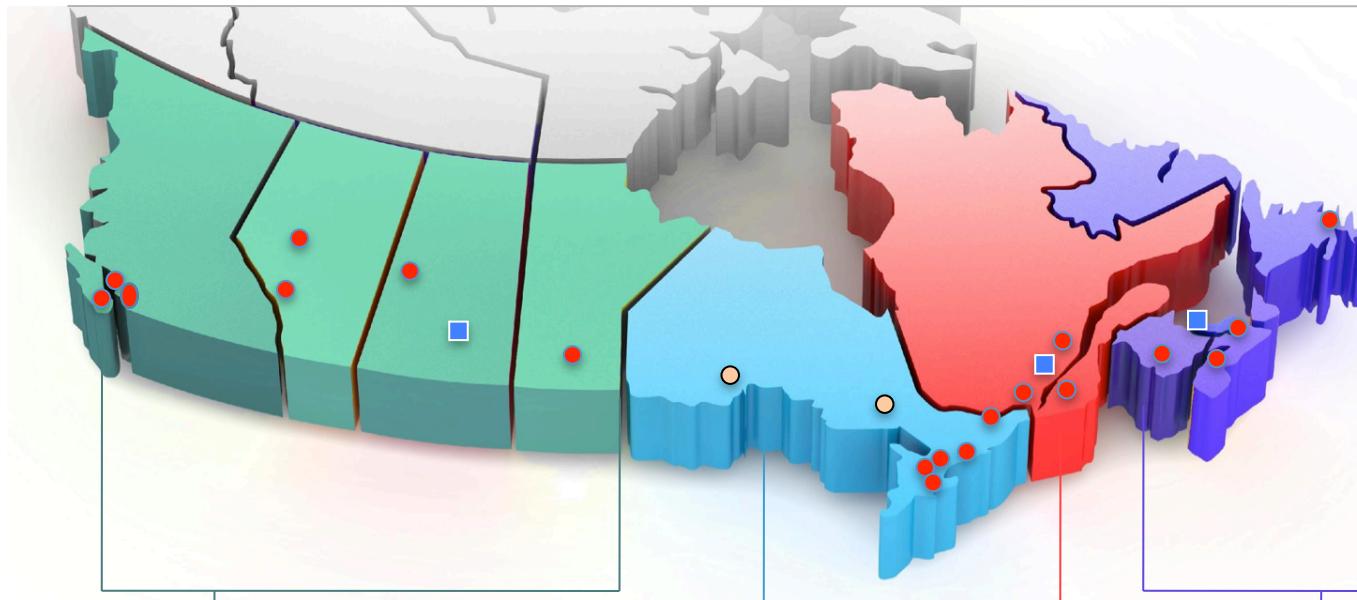
New documentation site

200 distributed experts, national teams

Improve platform ease-of-use



Regional Consortia



- Member University
- Member University + Personnel Site
- Member University, Personnel + Infrastructure Site
- Personnel + Infrastructure Site

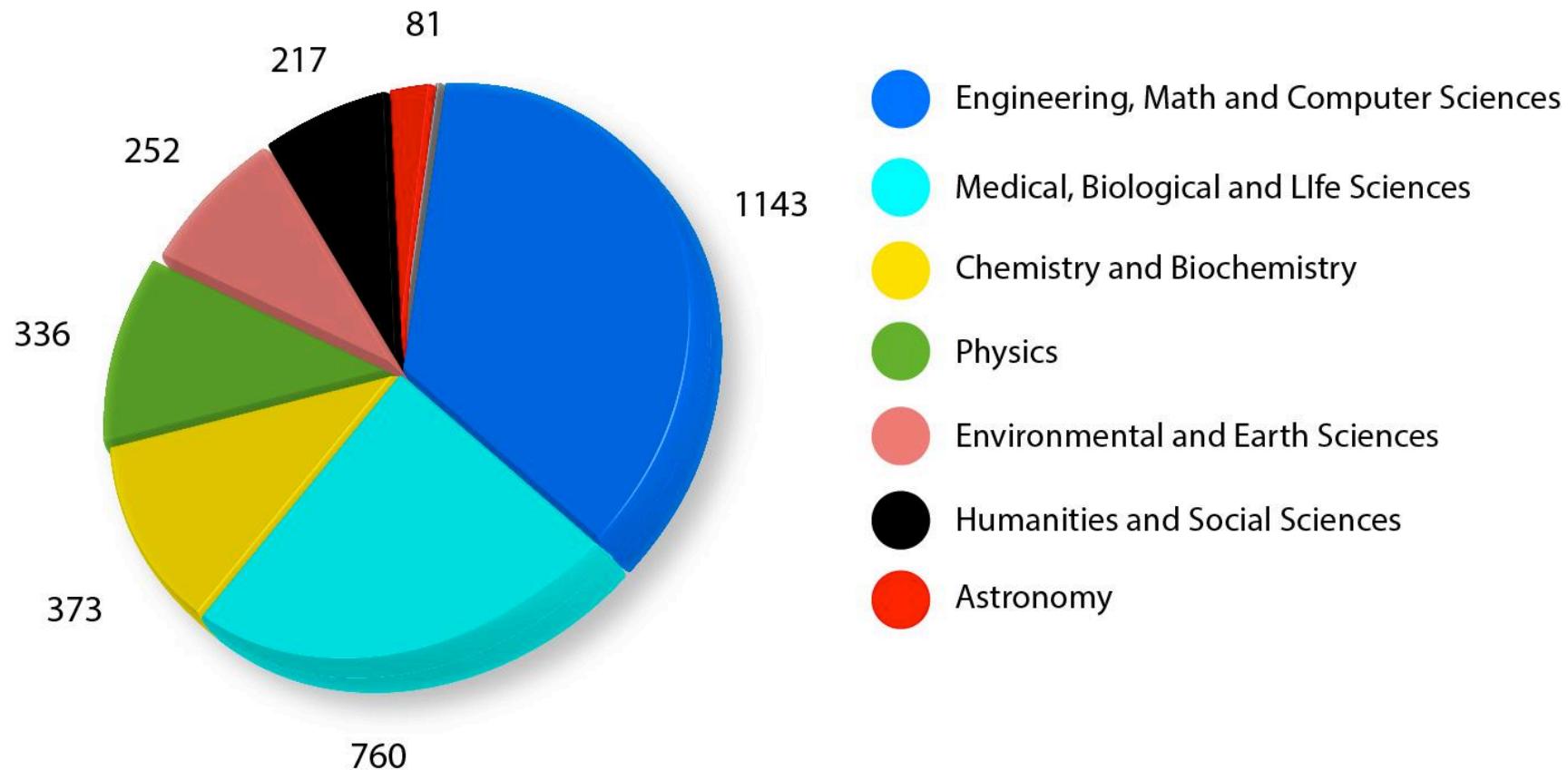
Regional Organizations



- Role of regions: Coordinate local activities, such as training, staff management and ensuring needs of the institutions and provinces are being met.
- Role of Compute Canada: Leadership role and national scale initiatives: Resource Allocation Competition (RAC), procurement, coordinating research data management and other national services, securing funding, advocacy, national/international partnerships

Serving Researchers in all Disciplines

Active faculty by research area (Jan 1, 2016)



Humanities and Social Sciences National Team

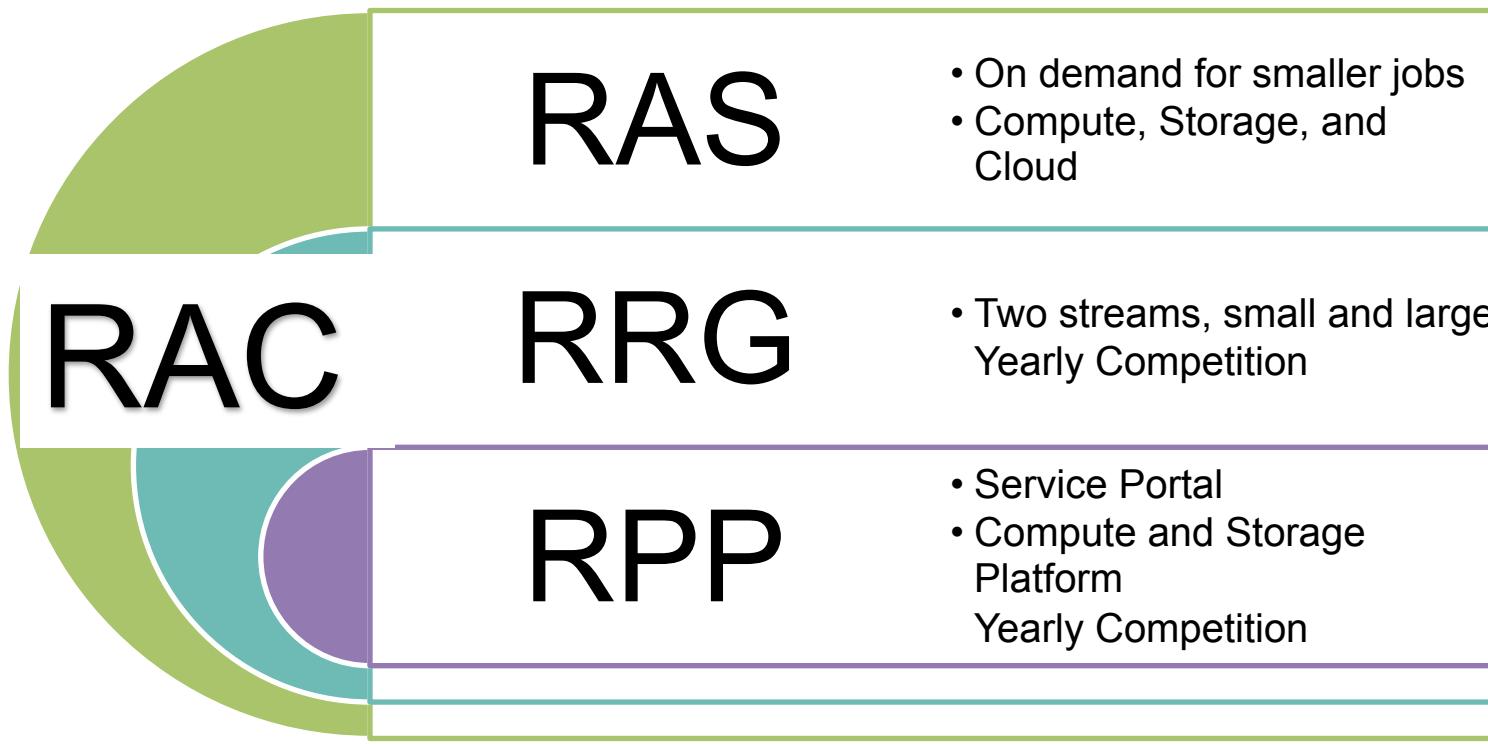
1. 1 FTE Digital Humanities expert at University of Alberta, $\frac{1}{4}$ FTE DH expert (me), a number of Systems administrators across the country, as well as a Visualization expert.
2. CC sponsored courses at DHSI
3. DH related training courses – Software and Data Carpentry
4. New research portals for DH scholars – Cloud based software stacks

How to Get Started

1. Visit **ComputeCanada.ca** and sign up for an account.
2. Receive confirmation of your Rapid Access Service and start experimenting right away. Many research groups can meet their needs through using only the Rapid Access Service. Users requiring larger resource quantities can apply to one of our annual [Resource Allocation Competitions](#) (RAC)
3. Email Support@computecanada.ca to set up a consultation with one of our experts.

Resource Allocation Competition

1. Annual Competition beginning each Fall
2. Compute and Storage resources
3. Applications are evaluated for technical feasibility and scientific excellence



RAC – General Information

Schedule:

Process	Opens	Due
<u>Fast Track application (by invitation only)</u>	Early October	Nov 2, 2017
<u>Research Platforms and Portals (RPP) application</u>	Early October	Nov 16, 2017 10:00 pm EST
<u>Resources for Research Groups (RRG) application</u>	Early October	Nov 16, 2017 10:00 pm EST
RAC 2018 allocation letters sent to all applicants	–	late March 2018
Public Announcement & Implementation of Awards	–	mid-April 2018

RAC – Information Sessions

English Session

(online only, English presentation with English Q&A)

Wednesday, October 11

12:00 – 1:30 pm Eastern (EDT)

Location: Online – connection instructions will be emailed to all RSVPs.

[Register Online](#)

Visit

<https://www.computecanada.ca/research-portal/accessing-resources/resource-allocation-competitions/>

Or email rac@computecanada.ca.

French Session

(Online and in person, French presentation with bilingual Q&A)

Friday, October 13

12:00 pm – 1:30 pm Eastern (EDT)

Locations: Online & at these in-person locations – U. Laval, U. de Sherbrooke, U. McGill, and U. de Montréal

[Register Online](#)

Resource Allocation Competition – Rapid Access Service

1. Compute

1. Two national all purpose clusters, Graham and Cedar.

2. Storage

1. Four different types of storage with varying space available by default to users.

3. Cloud

1. Compute
2. Persistent

Resource Allocation Competition – Research Platforms and Portals

The Research Platforms and Portals (RPP) Competition was created to enable communities to develop projects that improve access to shared datasets, enhance existing online research tools and facilities, or advance national or international research collaborations.

- Resources requested on behalf of a large community of users that will be reallocated to individuals and small groups following the award.
- Applications that provide a public platform that will make use of Compute Canada computing or storage.
- Groups engaging in international agreements to provide multi-year computing or storage solutions based in Canada.
- Groups that are providing shared data sets accessible using a third party (non-Compute Canada) interface

Resource Allocation Competition – Research Platforms and Portals

Service Portal:

- Web portals which serve datasets or tools to a broad research community.
- Do not require large computing or storage resources
- Often use the Compute Canada Cloud
- Generally require a static IP address

Compute and Storage Platform:

- Platforms which serve significant compute and storage resources to a community of users.
- May include a user-friendly front-end that submits traditional batch jobs on the back-end.
- Any proposal requiring at least 50 core years (or 50 VCPUs in the cloud) OR at least 50 TB of storage is considered to be a Compute and Storage Platform.

How do we help researchers?

SERVICES

- ownCloud on a dedicated, managed server, offering data integrity and 50GB of space across multiple devices
- Globus file transfers to share and transfer terabytes of data in a fast and secure environment
- Portals for specialized data and tools available for research disciplines, like JupyterHub
- Videoconferencing
- Research Data Management
- Software distribution

How do we help researchers?

EXPERTISE

- Consultation - Helping to determine the resources needed
- Designing, optimizing and troubleshooting computer code
- Customizing tools
- Installing, operating and maintaining advanced research computing equipment.
- Visualization specialist
- Cybersecurity

How do we help researchers?

TRAINING

- Working directly with our regional partners, Compute Canada offers nationwide training across all disciplines, at all levels, in-person and online, as well as via self-help documentation.
- Summer schools hosted across the country
- Group and individual training and ongoing support from novice to advanced
- Standard and discipline-specific customized training
- Quickstart guides, training videos and online workshops
- National provider for Software Carpentry - basic computational research skills

Partnership with CARL – Research Data Management

The screenshot shows the homepage of the Federated Research Data Repository (FRDR). At the top, there is a navigation bar with the FRDR logo, a 'BETA' indicator, and links for Feedback, Log In, Help, and EN. Below the navigation bar is a large banner featuring a blue network graphic and the text 'Find and Share Canadian Research Data'. To the right of the banner is the FRDR logo, which includes the text 'FEDERATED RESEARCH DATA REPOSITORY' and 'DÉPÔT FÉDÉRÉ DE DONNÉES DE RECHERCHE'. Below the banner is a search bar with a 'Search' button and a magnifying glass icon, followed by a 'Deposit Data' button with a download icon. At the bottom of the page, there are three main sections: 'About FRDR', 'Deposit Data', and 'Find Data'.

About FRDR

The Federated Research Data Repository (FRDR) is a joint initiative led by the Canadian Association of Research Libraries (CARL) and Compute Canada to

Deposit Data

Any researcher affiliated with a Canadian institution can deposit data in the Federated Research Data Repository (FRDR) at no direct cost. The platform can efficiently

Find Data

Search the Federated Research Data Repository (FRDR) to find research data sets originating from researchers affiliated with Canadian institutions. Data deposited to

Partnership with PIMS - Jupyter Notebooks

UBC.SYZYGY.CA

ABOUT

TUTORIAL

PARTNERS

SIGN-IN



Sign in with your University of British Columbia account



[Terms and conditions / Privacy Policy](#)

Cirrus

Terms

Links

?

Reader

?

Trends

Document Terms

?

Terms:

Summary

Documents

Phrases

This corpus has 1 document with 693 total words and 316 unique word forms. Created now.

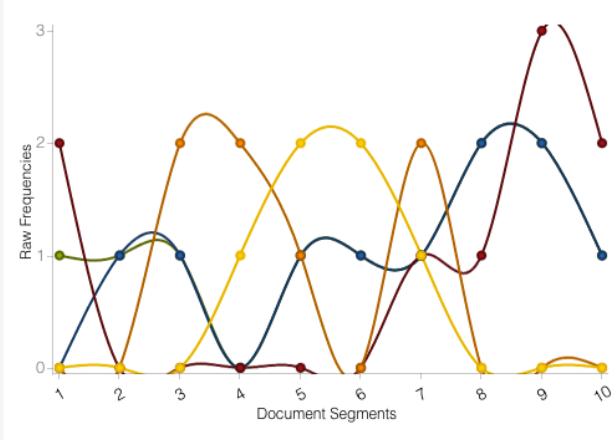
Most frequent words in the corpus: [canada](#) (11); [compute](#) (10); [cc](#) (9); [data](#) (7); [software](#) (6)items:

Ok, now for the Whirlwind Tour through what CC ...

Ok, now for the Whirlwind Tour through what CC has to offer for you all sitting there comfortably at your desks.

Collaboration Services – Sites located across Canada are capable of both delivering and viewing large videoconferences. This is a great way of getting guest lectures and such from experts far away without having to pay anything for it! You can use CC to set up online videoconferences that are a bit better than Skype.

Computation/Storage/Cloud – This is the bread and butter of Compute Canada. Expandable power ranging from the equivalent of a second desktop to supercomputers with thousands of cores, terabytes of RAM, and a variety of system architectures. We also have Cloud



Contexts

Bubblelines

?

	Document	Left	Term	Right
[1]	1) Ok, n...	Collaboration Services – Sites located across	ca...	are capable of both delivering
[1]	1) Ok, n...		bread and butter of Compute	ca... . Expandable power ranging from the
[1]	1) Ok, n...		options over your desktop. Compute	ca... also offers consultation in Data
[1]	1) Ok, n...		packages already integrated with Compute	ca... systems. One of these coming
[1]	1) Ok, n...		courses available on request. Compute	ca... also hosts a number of
[1]	1) Ok, n...		a Visualisation expert in Compute	ca... that helps not only teach
[1]	1) Ok, n...		how to get a Compute	ca... account and start using services
[1]	1) Ok, n...		step, go to the Compute	ca... webpage www.computeCanada.ca. Here, yo...

 ?

11

context

expand




The Cabaret Commons
The Cabaret Commons – A Digital Archive and Anecdotal Encyclopedia for Trans- Feminist and Queer Artists, Activists and Audiences This project is dedicated to the challenge of creating digital spaces that can house and encourage feminist, transgender and transsexual and queer cultural and affective

CWRC NEWS / NOUVELLES DU CSÉC



CWRC Launch Conference

Digital Textualities and Canadian Contexts (September 21–22, 2016) celebrates the launch of the Canadian Writing Research Collaboratory's online research environment. Join us for a stimulating program of



CWRC Beta Site Launch

The beta version of The Canadian Writing Research Collaboratory (CWRC) website was launched on May 29th 2016 at the Congress of the HSSFC held at the University of Calgary. The "beta" label means that



Launch of Voyant 2.0

Voyant is "a web-based text reading and analysis environment for digital texts," designed to "make it easy for you to work" with texts or collections of texts in various formats, such as HTML, XML,

What is CWRC?

The Canadian Writing Research Collaboratory is an online project designed to enable unprecedented avenues for studying the words that most move people in and about Canada.

Special Events



Free CWRCshops in September

Two days of half-day workshops on getting started in the Collaboratory as either an individual scholar or a research team, and on contributing to the CWRC-hosted Orlando Project or Modernist Commons, are being held in conjunction with Digital Textuality / Canadian Contexts conference celebrating the launch of CWRC. You do [...]

[READ MORE](#)



British Women Writers Conference 2016

BWWC 2016 will be held in Athens, Georgia, on June 2–5 2016. It will be hosted by the University of Georgia campus. Speakers will focus on women's writing from the 18th and 19th centuries. The topic of this year's BWWC is "Making a Scene" — papers and panels will [...]

[READ MORE](#)

CWRC Beta Site Launch @ Congress

Research Clusters

[Learn more](#)



About

Through innovative practices of research and training this project fosters the next generation of scholars working on Buddhism and East Asian religions. Project members conduct onsite contextual investigation and training in texts, images, artifacts, and practices. New digital materials are gathered for a publicly accessible repository hosted at UBC. We employ interdisciplinary scholarship to enhance public and scholarly understanding of Buddhism and East Asian religions.



[GO TO TOP](#)

Thank You!

For additional help or questions, email:

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