

## Computation and Data Committee Report to the CASCA Board, May 2019

### Current Committee membership:

James Wadsley (McMaster) (Former Chair)	Term ends: 30 June 2020
Pauline Barmby	Term ends: 30 June 2021
Catherine Lovekin (Chair)	Term ends: 30 June 2021
J. J. Kavelaars (HIA/NRC/CADC):	Term ends: 30 June 2021
Erik Rosolowsky (Alberta)	Term ends: 30 June 2020 (OBO)

Catherine Lovekin is taking over the role of Chair as of December 2019. James Wadsley will remain on the committee for the following year to assist with the transition. We are seeking new members at the current time with the goal of replacing Erik Rosolowsky and James Wadsley who have been members for a while. Several names have been put forward and the individuals will be approached over the next few weeks.

### Digital Research Infrastructure (DRI)– New Organization

The new DRI organization that will take over the responsibilities of Compute Canada with added responsibilities for Research Data is consulting with the user community. Consultation sessions occurred in November 2019 and were attended by C. Lovekin and JJ Kavelaars. The coordinator for the current phase is Lori MacMullen, Chair, Applicant Board (NDRIO) and Executive Director, Canadian University Council of Chief Information Officers (CUCCIO). The website is given as [www.engagedri.ca](http://www.engagedri.ca) and they invite comments at [info@engagedri.ca](mailto:info@engagedri.ca).

The discussion was consistent with prior information. The federal government is committing funds up to \$375M over several years and expects a not-for-profit organization to be incorporated over the next year that will smoothly take over from Compute Canada. The exact governance structure is still under discussion. It is unclear how they propose to allocate funding, acquire infrastructure and manage it. In particular, it is unclear what role the provinces and existing consortia (i.e. the current managers of equipment and front-line user support) will play if any.

As raised in prior CDC reports, a key concern is how major research areas will be represented. For Compute Canada this was rather indirect, through consortia and provincial organizations. The new organization is explicitly national and does not require provincial matching so its degree of partnership with existing consortia and the provinces is unclear. This leaves the membership (universities and colleges) and some form of user committee as the main connections to the community. A key concern is that the user committee for Compute Canada has been ineffective and was not representative. With such a committee, the members only speak for themselves and do not represent specific communities (e.g. Astronomy). In prior feedback provided on behalf of CASCA, we urged the new org. to provide direct representation for professional societies as a way to fill this gap but the proposal writers were fairly non-committal. The final DRI proposal suggested a second (non-voting) tier of membership including professional societies and other stakeholders. At the consultation sessions, the organizers did acknowledge the potential for representative input from the professional societies and similar groups.

The new organization has explicitly called for input on governance. The CDC recommends that CASCA provide a written submission outlining concerns and providing suggestions. One suggestion is that we could provide nominations for the proposed ~15 member board of the new organization.

## Astronomy Usage of Compute Canada Resources

As part of the LRP process we acquired information about Compute Canada allocations pertaining to astronomy. We provide this information here for the board. It shows exponential growth in astronomy needs over time but a fairly stable number of applications. Astronomy has an outsize share of storage particularly and a substantial amount of the available CPU resources. These are both well beyond our fraction of the total user community.

### ComputeCanada Resource Allocation Competition Requests and Allocations for Astronomy, :

10/16/2019

#### Amount requested by Astronomy projects

Year	Applications submitted	CPU (kCPU-yr)		GPU (GPU-yr)		Storage (PB)	
		Requested	Allocated	Requested	Allocated	Requested	Allocated
2019	24	41.1	18.4	190	16	22.3	15.1
2018	25	20.1	12.7	170	13	12.4	8.4
2017	18	14.1	11.0	20	10	7.8	7.4

#### Average requested and allocated per astronomy application

Year	Applications submitted	CPU (kCPU-yr)		GPU (GPU-yr)		Storage (TB)	
		Requested	Allocated	Requested	Allocated	Requested	Allocated
2019	24	1.70	0.77	8	1	928	629
2018	25	0.80	0.51	7	1	498	335
2017	18	0.78	0.61	1	1	432	414

#### Fraction requested by and allocated to Astronomy projects compared to total amounts for the competition

Year	Applications submitted	CPU		GPU		Storage	
		Requested	Allocated	Requested	Allocated	Requested	Allocated
2019	4.66%	10.48%	11.72%	2.92%	1.19%	24.77%	19.37%
2018	5.23%	6.96%	8.01%	4.15%	1.53%	20.68%	19.23%
2017	4.30%	5.50%	7.43%	0.71%	0.95%	15.63%	15.30%