NATIONAL SCIENCE FOUNDATION
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ALEXANDRIA, VIRGINIA 22314

NSF 22-022

Dear Colleague Letter: Cloud Computing and High-Throughput Computing Resources for Collaborative Research in Computational Neuroscience (CRCNS) Grantees

December 6, 2021

Dear Colleagues:

Many projects funded by the Collaborative Research in Computational Neuroscience (CRCNS) program face data- and computationally-intensive challenges that may benefit from accessing cloud computing or high-throughput computing resources, which provide robust, agile, reliable, and scalable infrastructure.

This Dear Colleague Letter (DCL) describes opportunities available to CRCNS grantees to support the use of such resources. The Cloud Access Program (NSF) and the STRIDES Initiative (NIH) have established partnerships with commercial cloud service providers to provide awardees with cost-effective, flexible access to cloud-based resources. The Partnership to Advance Throughput Computing (PATh) facilitates access to distributed high throughput computing technologies and services. These opportunities are now available to active CRCNS grantees as described below.

CLOUD COMPUTING RESOURCES FOR NSF- AND NIH-FUNDED CRCNS GRANTEES

NSF- and NIH-funded CRCNS Principal Investigators (PIs) may request cloud computing resources to use public clouds such as Amazon Web Services, Google Cloud Platform, Microsoft Azure, and IBM Cloud. Cloud computing resources may be obtained through CloudBank or STRIDES. CloudBank is an external cloud access entity supported by NSF's Cloud Access program, with features and benefits as described on the CloudBank.org website. STRIDES is an initiative of the NIH Office of Data Science Strategy (ODSS), part of a plan for implementing the NIH Strategic Plan for Data Science.

ELIGIBILITY

This opportunity is open to PIs of active NSF- and NIH-funded CRCNS awards. NSF-funded

PIs may apply for cloud computing resources via CloudBank; NIH-funded PIs may apply for resources via STRIDES.

HOW TO APPLY

PIs should contact the NSF or NIH cognizant program officer of their CRCNS project by e-mail, with a description of their cloud computing request. The description should include, in no more than two pages: (1) a technical description of, and justification for, the requested cloud computing resources in relation to the current funded project; and (2) the anticipated annual and total costs for accessing the desired cloud computing resources, based on pricing currently available from the public cloud computing providers. PIs may refer to the CloudBank or STRIDES websites for information on estimating the budget for cloud computing resources. Please include "CRCNS CloudAccess" and the NSF award number, or "CRCNS STRIDES" and the NIH award number, in the e-mail subject line.

Cloud computing requests will be internally reviewed. As appropriate, PIs will be contacted with further instructions on how to submit an administrative action on their NSF award to access CloudBank, or how to request an administrative supplement to their NIH award for STRIDES.

HIGH-THROUGHPUT COMPUTING RESOURCES FOR CRCNS GRANTEES

CRCNS-funded PIs may request high-throughput computing (HTC) resources through the Partnership to Advance Throughput Computing (PATh) project supported by NSF. HTC supports the automated execution of workloads that consist of large ensembles of self-contained inter-dependent tasks that may require large amount of computing power over long periods of time to complete. Available resources include large-scale compute and GPU servers and nearline storage, as described further on the PATh credit accounts web page. Investigators may contact credit-accounts@path-cc.io with questions about PATh resources, using HTC, or estimating credit needs.

ELIGIBILITY

This opportunity is open to the US PIs of all active CRCNS-funded awards.

HOW TO APPLY

PIs should contact the NSF, NIH, or DOE cognizant program officer of their CRCNS project by e-mail, with a description of their HTC resource request. The description should include, in no more than two pages: (1) the anticipated total HTC resources required, with yearly breakdown; and (2) a technical description and justification for the request. The latter should include information regarding (a) the expected number of self-contained tasks per ensemble - note that each task can be packaged into one or more batch job; (b) the resource

requirements for each task type in the ensemble - for example, requirements for cores, memory, wall-time, and scratch space; (c) the expected number of ensembles; (d) the expected input and output data requirements for each task type; and (e) the expected number and size of shared input files within an ensemble - expected number of times each file is read per ensemble. Please include "CRCNS HTCAccess" and the award number for the funded project in the e-mail subject line.

HTC resource requests will be internally reviewed. NSF will work directly with PATh to provision credits for approved requests.

PIs may contact their CRCNS cognizant program officer, NSF CRCNS Coordinator Kenneth Whang (kwhang@nsf.gov), or NIH CRCNS Chair Michele Ferrante (ferrantem@nih.gov) for further information about these opportunities.

Sincerely,

Margaret Martonosi
Assistant Director, CISE