THE CYPRUS INSTITUTE
RESEARCH•TECHNOLOGY•INNOVATION

CALL FOR PROPOSALS FOR PRODUCTION ACCESS TO CyI HPC RESOURCES

GUIDELINES FOR APPLICANTS

1. Introduction

The Cyprus Institute (CyI) is a world-class, non-profit research and educational institution with a strong scientific and technological orientation. It is a regional Center of Excellence (CoE), addressing issues of regional interest but of global significance, with an emphasis on cross-disciplinary research and international collaborations.

Hosted at CyI, the High Performance Computing Facility (HPCF) stands as the national supercomputing facility of Cyprus, dedicated to delivering advanced computing, information, and communication technology services. Its mission includes the support of CyI' s activities and those of its Research Centers. The HPCF also provides computation and data resources to other users in Cyprus.

The Call for Proposals for Production Access to High Performance Computing (HPC) Resources is designed to allow researchers and scientists from academia, industry, and public sector to apply for time on the HPC system "Cyclone" hosted at the HPCF of the CyI.

Cyclone is the national supercomputer of Cyprus and it consists of 17 compute nodes and 16 GPU nodes with a theoretical peak performance of 600 TFlop/s. For more information about the Cyclone resources, see Annex 1.

Production Access is intended for production-ready projects where a significant amount of computing resources is required.

Production Access to Cyclone resources is meant to be used for open R&D purposes and is free of charge, provided that the eligibility criteria are fulfilled.

The allocations are granted for one year. Calls for Proposals for Production Access to CyI HPC Resources are issued regularly and have strict closing dates.

2. Assessment Process

All eligible proposals for Production Access will undergo a thorough review process in terms of both the proposal's scientific/innovation merit and the justification for the requested Cyclone resources.

The review will be conducted by experts in the broader field of the proposal and by CyI HPCF staff. The reviews can recommend an increase or decrease in the requested amount of HPC time. Applicants are

strongly encouraged to request an amount of CPU/GPU resources that is appropriate for the computational needs of their project, as this is one of the evaluation criteria.

The Cyprus Institute's Program Advisory Committee will finalize the selection process, considering both the review recommendations and the 80% allocation for projects that align with Cyprus' Smart Specialization Strategy.

Applicants will receive a consolidated review report at the end of the process.

Proposals should conform to the following criteria:

- The research proposed in the project must exhibit scientific excellence (for proposals submitted under the Scientific Track) and demonstrate the potential for high innovation and impact (for proposals submitted under the Industry Track). Proposals should be novel, well-integrated within the context of the call, and timely.
- The project should aim to develop an important topic of major relevance to research and/or innovation, describe possible transformative aspects, and expected advances.
- The methodology used should be described clearly and be appropriate to achieve the goals of the project.
- There must be a solid management structure that will ensure that the project will be successfully completed.
- The software necessary for the project should be available on the system requested and/or, in case of community code or code developed by the applicants, it should have been sufficiently tested for efficiency, scalability and suitability (either via proposals for preparatory access or on similar HPC systems).
    - In case of code that requires a license, it is important that the applicants are able to provide a valid license to the HPC center that will allow them to run upon the requested resources.
- The project proposed should be suitable to run on the available HPC architecture (Cyclone). If not, the review process may redirect some projects to a more appropriate machine that can be accessed by applicants via other calls.
- The number of core hours requested must be justified with a detailed work plan.
- Ensure that the requested number of core hours aligns with the proposed job size and the number of executed jobs.
- All data must be removed from the execution system a month after the end of the project. Please state clearly in your proposal the amount of data that needs to be transferred after the end of your project to your local system. Special arrangements for data transfer can be discussed with the HPC center directly.
- The project should be able to start immediately (a maximum of one month at the beginning of the project for fine tuning of parameters) and is expected to use the requested resources continuously. Please state clearly in your proposal if you need more time for fine tuning and the length of time that will be required.

The HPC center will be actively monitoring resource usage. In the event of delays in resource consumption, there might be a partial reduction in the allocated computational quota. Additionally, if, after the first six months, a project achieves significantly less than its expected usage without a valid reason, there could be a proportionate adjustment to the allocation. This adjusted allocation may either be returned to the allocation pool for the next Production Access call or reassigned to other projects with higher utilization.

3. Allocation

Computational resources will be allocated to proposals based on the decisions of The Cyprus Institute's Program Advisory Committee. The applicants will be promptly informed if their proposal has been successful and the resources allocated to their application. After signing the user agreement, applicants will receive a username and instructions in order to access the awarded HPC resources.

Applicants must inform The Cyprus Institute's Program Advisory Committee promptly of any changes to a successful proposal, either regarding the amount of resources needed or the usage time distribution. Requests for the extension of allocation time need to be fully justified and will be analyzed on a case by case basis. The maximum extension period cannot exceed 3 months for a Production Access project and the awarded resources cannot be increased.

All notifications of changes or requests for extensions should be sent to hpc.help@cyi.ac.cy

4. Terms of Access

The PI shall lead the project and is expected to be an essential participant in its implementation. The PI will have the overall responsibility for the management of the project.

The usage of Cyclone resources needs to be acknowledged for all scientific findings and data produced through Cyclone resource allocations, both in publications and when depositing the data to other infrastructures.

The PI commits to:

- Submit a **Final Report** within two months of the completion of an allocation, using the proper template (which will be sent to applicants prior to the end of their project's allocation period). The report should summarize the results obtained through this project.
- **Acknowledge** the HPC resources used in all publications resulting from this project. Users can use the following wording in such acknowledgements:

  "This work was supported by computing time awarded on the Cyclone supercomputer of the High Performance Computing Facility of The Cyprus Institute under project ID **PROJECTID**."

  Where technical support has been received the following additional text can also be used:

  "The assistance of [name of person/people] from [organization name], [country] in achieving

the technical requirements is gratefully acknowledged."

The abstract of successfully awarded proposals, as well as parts of final reports may be published in relevant websites or publications. Information will not be published during the 1-year access period if the applicants have declared that their proposal includes confidential information or is covered by copyright. Applicants should identify in their application any confidentiality issues and provide a valid justification for the reason that confidentiality is necessary.

5. Application details

5.1 How to apply

All proposals must be submitted using the online tool found HERE.

A successful proposal application entails completing 1) the online application form, and 2) uploading the 'Project Detailed Description' document in PDF format in the specified section of the online application form. Proposals lacking this document will be rejected.

Please note that the 'Project Detailed Description' document should follow all the stated requirements regarding format, structure, and content. **Deviations from those requirements will lead to the rejection of the proposal without peer review.**

All proposals must be submitted electronically in **English**, and the PI is responsible for the accuracy of the data provided in the application.

All proposals must be fully completed and submitted before the deadline in order to be considered for evaluation. Applicants are advised to make sure that they submit proposals as early as possible before the given deadline, in order to ensure that all mandatory fields are completed and submission is accepted.

All mandatory fields of the online application form and Project Detailed Description document must be completed before it can be submitted. Please note that only submitted proposals will be put forward for the review process.

5.1.1 Instructions for the Online Tool

If you are a first-time user of the online tool, namely OpenReview, you will need to create a profile by visiting the following website: https://openreview.net/signup. To register you will need to fill in your email address in the text field next to the 'Sign Up' option and click the button. You will then be prompted to enter a new password and send a confirmation email. Clicking the link in the confirmation email will bring you to the registration page.

At the profile registration page you will need to fill in your personal and professional information, including institutional data. After clicking 'Register for OpenReview' button, your profile will either be activated

immediately or sent to moderation. Providing an **institutional email** address and valid **personal homepage**, such as a LinkedIn, GitHub, or Google Scholar profile, will increase your chances of being **quickly activated**. If your profile is rejected, you can return to the signup page, enter your name, and click 'Resend Activation Link' next to the email address you previously attempted to register with.

Once your registration is activated you can then sign in into the online tool and begin to fill in the online application form here. After completing the online application form, you may submit it by clicking the 'Submit' button. If you require revisions post-submission, you can access the application form through the 'Recent Activity' tab. Click on your submitted application, then select the 'Edit' button located on the right-hand side to make necessary changes and resubmit. It's important to note that once the deadline passes, no further alterations to the online application form will be possible.

All PIs and their collaborators **must have** an OpenReview profile. PIs are required to include the profiles of their collaborators in the online application form under the 'Authors' section to enable them to access or modify their proposal submission before the call deadline.

5.1.2 Creating a new proposal

Initially, you should navigate to the 'CYI HPCF 2024 Production Access Proposals Round 2 Submission' tab of the online application form. This selection will directly lead you to the application form designated for this Production Access call.

Applicants are required to fill in the online application form which supports only supports text (no graphics or tables) and upload the 'Project Detailed Description' document in a PDF format. This document can incorporate various elements such as graphics, tables, and textual content outlining the details of the project. Most of the requested information is mandatory because it will give the experts who will review your application as much information about the proposed project as possible. Each section of the 'Project Detailed Description' document has a word limit which must **not** be exceeded. Please try to be as complete and concise as possible when providing details in this document. The word limit excludes references. This means you may add your references at the end of the document without impacting the word count limit. However, please ensure that the number of references is kept to a **reasonable** amount.

Your proposal will only be submitted if you receive an email indicating this.

6. Contact Details

For any queries related to applications, please contact: hpc.help@cyi.ac.cy with email subject: "**Call for Proposals for Production Access to CyI HPC Resources (2024b)**".

ANNEX 1

Cyclone Computational Resources

Peak/Sustained Performance	~ 600 TFlop/s
Number of Nodes	17 forty-core CPU nodes 16 forty-core compute nodes, each with 4 NVidia V100 GPUs
Processors/node	2 twenty-core sockets per node, each is Intel Xeon Gold 6248
Memory/node	96 GB memory per CPU node 192 GB memory per compute node
Scratch disk storage	135 TB NVMe Storage
Disk storage	3.2 PB Storage
Node-node interconnect	HDR 100 - 100 Gb/s InfiniBand connectivity
Accelerators	4 NVidia V100 GPUs per GPU node
Operating System	OS, Compute Node: CentOS OS, Front End & Service Nodes: CentOS