



Australian
National
University



ANU Merit Allocation Scheme 2025 Call for Applications

Information for Applicants

Updated 16 October 2024

Key Dates

1 November 2024	Applications open
30 November 2024	Applications close (5:00pm AEDT)
9 December 2024	Allocation Committee meeting
22 December 2024	Allocations announced by

Introduction

The ANU Merit Allocation Scheme (ANUMAS) 2025 Call for Applications will be open on 1 November 2024. Applications close at 5:00pm AEDT on 30 November 2024.

The ANUMAS 2025 call will follow the same format as used in the 2024 call. A streamlined application form will collect essential Lead Chief Investigator and project information and accept a PDF proposal document upload for each application. The application process is designed to minimise workload and time commitments for all applicants.

All applicants (Lead CIs) and members of their research groups should read the following application guidelines and reference information in full before preparing an application.

This document may be updated during the 2025 Call for Applications to clarify rules and processes as determined by the Committee Chair, NCI or the ANU Research Initiatives and Infrastructure team.

The **ANUMAS 2025 Call for Applications** is expected to be competitive due to resource oversubscription. Last year:

- A total of 315 million SU (service units) on the NCI Gadi system was requested by ANUMAS applicants.
- The total SU budget available to ANUMAS applicants was 250 million SU, that is less than 80% of the request.

If you have further questions about the ANUMAS 2025 Call for Applications, they can be submitted by email to anumas@nci.org.au. Emails to this address will create an issue ticket in the NCI user support system.

Application Categories

The ANUMAS 2025 call uses a simplified application model and online form.

<p>Existing Projects (>100KSU)</p>	<ol style="list-style-type: none"> 1. An established ANU project with a 2024 allocation can request renewal of the allocation for 2025. The application includes a short proposal of maximum 5 A4 pages in length describing the direction of research during the 2025 calendar year, and progress report on 2024. 2. A project using at least 85% of its 2024 allocation (pro-rata) will be considered for renewal of the allocation for 2025, or for an increased allocation if this is well justified in the proposal. If insufficient justification is provided, a project with less than 85% usage is considered underutilized, and is not eligible for an allocation increase in 2025. 3. An ANU project using less than 85% of its 2024 allocation will be considered for renewal at the level of actual 2024 usage.
<p>New Projects (>100KSU)</p>	<ol style="list-style-type: none"> 1. Applications for new 2025 projects will be accepted using a condensed online form, which will capture a brief proposal and the resource request. 2. New proposals requesting more than 100 kSU/year will be assessed by the ANUMAS Committee. If you are seeking 100 kSU please discuss your needs directly with NCI, as this potentially fits within the ANU Startup allocations and may not require an application. 3. The application includes a brief proposal of maximum 5 A4 pages in length describing the direction of research during the 2025 calendar year. 4. New proposals with requests of 1000 kSU (1 MSU) or greater are required to demonstrate effective usage of provisional allocations at-scale in 2025 Q1-Q2. ANU and the Committee will review Q1-Q2 usage for large new allocations in mid-2025 and may redistribute resources.

ANUMAS 2025 – Information for Applicants

Startup Projects Existing and New ≤100KSU	Applicants do not need to submit an ANUMAS application to access this level of resourcing. Startup projects (up to 100KSU/year) are available by using the “Propose a project” functionality through the MyNCI system at any time of year, under the “ANU Startup” scheme. Existing projects can lodge a help ticket to renew an existing project or propose a new project.
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Application Instructions

ANUMAS 2025 uses a fast and easy application process.

The Lead CI or Delegate Lead CI on a project must submit the ANUMAS 2025 application for that project.

Step 1 – Update your NCI user profile and project memberships (existing projects).

- Go to the NCI registration system – <https://my.nci.org.au> – and update your ‘About me’ including contact details and career profile.
- After you update your account profile, nothing further is required at my.nci.org.au.

Note that during the ANUMAS 2025 call, the “Propose a project” functionality on your MyNCI home page will not allow selection of the ANU scheme. You must use the links to the dedicated ANUMAS 2025 form listed below to submit your application.

Step 2 – Complete the ANUMAS 2025 application form

- Go to <https://anumas.nci.org.au> and use the link provided there to access the online application form. The form can also be accessed directly through the following link: <https://nci-australia.typeform.com/to/RpvFrG7W>
- The online application form will ask you to upload a PDF document for your 2025 project proposal and progress report. The proposal should describe the research planned for 2025 and expected outcomes.
- If you are requesting an increased allocation the proposal should provide a justification for the request.
- The progress report component should describe how 2024 allocations were used and any notable outcomes achieved.
 - The progress report can also include an explanation of special circumstances for the project in 2024.
- Your PDF file should be no longer than 2500 words, or approximately five (5) A4 pages in length, excluding references.
- If you wish to be considered as a Special Consideration applicant, please describe the circumstances for this in your proposal.
- Use the following naming convention for your PDF file:

ANUMAS2025-YOURSURNAME-PROJECTCODE.pdf

substituting your name and project code in the appropriate places.

- If your application is for a new project, substitute “NEW” for the project code.
- In your PDF document please be sure to include the project title, project code, your name, and the name of your ANU School, Department, or research unit.

The ANUMAS Allocation Committee will assess complete applications only. Incomplete applications will not be considered.

Spurious applications submitted by persons who are not a Lead CI or Delegate Lead CI on the nominated project will be removed from consideration. All applicants are advised to review ANUMAS eligibility rules.

When to use <https://my.nci.org.au>

- To register for a new user account
- To reset your password
- To update personal details
- To update your research track record
- To update project memberships

When to use the form on the ANUMAS 2025 website: <https://anumas.nci.org.au>

- To submit your ANUMAS 2025 application

When to email anumas@nci.org.au

- To ask a question about ANUMAS or request help on your application

Application Deadline

The application deadline for the ANUMAS 2025 call is **17:00 (5pm) AEDT 30 November 2024**.

Getting Help

Read the supporting documentation including FAQs if you have questions. Contact anumas@nci.org.au if you require assistance with your application.

Acknowledging ANUMAS and NCI

A condition of accepting an ANUMAS allocation is that applicants acknowledge both ANUMAS and NCI in all publications and presentations of the associated work. The following is a standard acknowledgement template:

This work was supported by computational resources provided by the Australian Government through the National Computational Infrastructure (NCI) under the ANU Merit Allocation Scheme.

Guidance for Applicants

The recommendations below are provided as general advice to help you improve your ANUMAS application and chances for success. These recommendations address questions received and the experiences of applicants, the Secretariat (NCI) and the Allocation Committee in previous ANUMAS calls.

All Applicants

- Submit your application before the final submission deadline. Late submissions will not be accepted.
- Read all ANUMAS announcements and supporting documentation in full. Watch for updates from the ANUMAS Secretariat throughout the Call for Applications period.
- You must provide the year of award for your highest degree in your applicant profile.
- Ensure that personal profiles and research track records of the Lead CI and all CIs on your application are fully up to date.
- Provide a comprehensive justification of your request for HPC resources.
- Successful proposals will demonstrate an ability to use HPC facilities at scale, and leverage efficient multi-CPU jobs, data interconnects and high-performance storage.
- Cite publications that acknowledge ANUMAS and NCI in the progress report.

Cite only those research grants that are directly attributed to the Lead CI or CIs on the application. Citing a grant on which the Lead CI or CI is not directly named is not acceptable and will disqualify the application.

The “What to Include in Your Application” section provides further guidance on the information to be included in your application.

If your 2024 ANUMAS application was not successful, you are welcome to apply again. A demonstration of lessons learned and advancement of your experience and capability will work in your favour.

Eligibility Criteria

In accordance with guidelines for access to Commonwealth-funded research infrastructure and relevant Australian Government legislation, Chief Investigators (CI) and Lead Chief Investigators (Lead CI) of ANUMAS projects must hold at least a 0.2 FTE research position at the ANU for 2025. Applicants (Lead CI) who hold a fixed-duration contract for at least 0.2 FTE for the calendar year 2025 are eligible to apply. Additionally, academics with an emeritus appointment status at ANU are also eligible to serve as Lead CI or CI on ANUMAS projects.

A person undertaking a higher degree by research is not eligible to be a Chief Investigator or Lead Chief Investigator on an ANUMAS proposal. If you are a research student and are interested in applying to ANUMAS, please discuss with your supervisor.

An individual may be named as a Chief Investigator or Lead Chief investigator on only one ANUMAS 2025 application.

Definitions and responsibilities for Lead Chief Investigator and Chief Investigator roles are listed in a following section – Project Roles and Responsibilities.

Commercial Use Disclosure

Projects intending to incorporate commercial use must explicitly disclose this at the time of application. The eligibility of such projects will be assessed to ensure alignment with Commonwealth-funded research infrastructure policies and ANU guidelines.

Early Career Researcher

Early Career Researcher (ECR) researchers are those who have been awarded a PhD within the last five (5) years. They are welcome to apply as either an Existing or New Applicant.

Early Career Researcher conditions:

- The applicant (Lead CI) must have been awarded a PhD within the previous five (5) years, exclusive of any career interruptions.
- The applicant should not be nominated as a Researcher, CI or Lead CI on another ANUMAS application.

Special Consideration

Allocations will be considered for other applicants who may otherwise not be competitive in the ANUMAS, for example, an individual who has returned to a research role following a significant career interruption.

Special Consideration conditions:

- The applicant (Lead CI) must have been awarded a PhD within the previous nine (9) years, exclusive of any career interruptions.
- The applicant should not be nominated as a Researcher, CI, or Lead CI on another ANUMAS application.

A brief explanation of a Special Consideration request should be included in the proposal-report document for the project.

Project Roles and Responsibilities

Lead Chief Investigator

- Leads and manages the project research team.
- Approves or rejects project team membership requests and removes persons who are no longer active participants from the project.
- Provides a track record of research output and funding support in the ANUMAS application.
- Approves and submits the final ANUMAS application for the project.
- Acts as the official point of contact between the project, the ANUMAS Secretariat and the Allocation Committee.

Chief Investigator:

- Supports the Lead Chief Investigator in preparing the ANUMAS application and managing the project.
- Provides a track record of research output and funding support for the ANUMAS application.
- Can be promoted to Delegate Lead CI role in cases where the Lead CI wishes to delegate project management responsibilities.

Delegate Lead Chief Investigator

- Appointed by Lead Chief Investigator to actively manage a project and ANUMAS application.
- Responsibilities are those of the Lead Chief Investigator.
- Expectation that the Lead Chief Investigator will appoint a Chief Investigator as Delegate.
- Research track record is not included for consideration in the ANUMAS application.

Researcher

- Member of the project research team.
- Research track record is not included for consideration in the ANUMAS application.

Assessment Criteria and Scoring

ANUMAS applications will be scored on the following criteria.

Project quality and innovation (30%)

- Significance of the research
- Originality and innovative nature of the computational framework
- Advancement of knowledge through the goals of the proposed research
- Potential for the research to contribute to [Australian Science and Research Priorities](#)

Investigator track records (30%)

- Research record and performance relative to opportunity (publications, research funding, recognition, and esteem metrics)
- Prior HPC Experience and for existing projects a short report on previous efficient usage of the HPC system.

Computational feasibility (30%)

- Adequacy of the time commitment of investigators to undertake the research and utilise the resources successfully
- Capacity to realise the goals of the project within the resources requested
- Appropriate track record in the use of high-performance computing systems, relative to the scale of the resources requested.
- Suitability of the system to support the research, and an appropriate and efficient use of the system

Benefit and impact (10%)

- Ability of the project to generate impactful outcomes and produce innovative economic, environmental, and social benefits to the ANU, Australia, and the international community.

What to Include in Your Application

Your application should be organized in three Sections as detailed below.

Section 1: Research Proposal

The Research Proposal is the part of your application that describes your proposed research. It should focus on the [assessment criteria](#) of 1) Project quality and innovation and 4) Benefit and Impact.

New Applicants and/or New Project

Describe key elements of proposed research and benefits according to the following key points:

- Provide sufficient background to clearly define the goals of the project.
- Emphasise the significance, impact and innovation of the research.
- Describe the significance and impact in the scientific domain, and on society and industry partners (if applicable).
- Be specific and concise.

Returning Applicants - Existing Projects

- Indicate if the proposed work in 2025 is a continuation of previous research or a new direction for the project.
 - If the proposed work is not a continuation of previous research then follow aforementioned points for “New Project”.
- Provide sufficient background on the existing project and on the goals of the project.
- Provide a progress report for the project with a summary of completed work and achieved outcomes.
- Discuss the continuation plan for the project.
- Should provide a justification for any increased resource request (if applicable).
- Describe the significance and impact in the scientific domain, and on society and industry partners (if applicable).
- Be specific and concise.

Section 1 length: The Proposal should be no longer than two (2) pages (excluding references).

Section 2: Investigator Track Records

As part of your application, you will also provide information on the expertise, background, and experience of the CIs in your research team. This part of the application should focus on the [assessment criteria](#) of 2) Investigator track records.

New Applicants

If you did not receive an ANUMAS grant for 2024, describe your previous experience with HPC. Assessors expect to see:

- A summary of your previous HPC experience.
- Australian or international systems used.
- Experience with other resourcing/allocation schemes, *e.g.* NCMAS, Start-up or Partner schemes – demonstrate your expertise and capability.
- details of application codes, algorithms and workflows.

Returning applicants

- If you received an ANUMAS grant for 2024, you should provide a short usage report to describe your successful use of the system you received an allocation on and the achieved outcomes.
- When applicable provide an underutilization justification (see below).

Underutilisation: Applicants with an existing ANUMAS project are responsible for explaining any underutilisation in the previous year. Unjustified underutilisation may impact negatively on the merit assessment of the application. If your project has used less than 85% of your 2024 allocation at 2024 Q1-3 (pro rata), your project is classified as underutilised. In this case you should provide an explanation for underutilisation of your current allocation. An underutilized project is ineligible for a request of increased allocation in 2025.

Section 2 length: This section should be no longer than one (1) pages.

Section 3: Computational Feasibility

In the Computational Details part of your application, you should focus on the assessment criteria of 3) Computational Feasibility and provide details on:

- Scalability of your code on the Gadi system:
 - Provide strong parallel scaling and the weak parallel scaling (when relevant) of your application code(s).
 - Single node scaling: Provide scalability data with respect to the number of CPU cores or GPUs on a single node.
 - Multi node scaling: For software with multi-node capability, applicants should present scalability data relative to single node performance.
- Provide a summary and justification of the resource requirements in the form of an “SU budget”:
 - When applicable, **Returning Applicants** provide a quantitative justification for increased resource request.
 - Planned major computational steps in the project.
 - Key methods/algorithms required.
 - Expected wall times and SUs accounting for the aforementioned parallel scaling.
- Storage requirements:
 - Describe data storage requirements and data life cycle for your project.

Section 3 length: This section should be no longer than two (2) pages.

Application, Assessment and Allocation Process

The ANUMAS allocation process comprises the following stages:

1. Call for applications announced (Secretariat)
2. Applications accepted (Secretariat)
3. Eligibility and compliance verification; assignment to assessors (Secretariat, Chair)
4. Merit assessment (Committee)
5. Allocation Committee meeting (Committee, supported by Secretariat)
6. Notification of outcomes (Secretariat).

The Secretariat will review all applications for compliance as soon as possible following the application deadline. Potentially non-compliant applications will be referred to the Committee Chair for a final decision. The Secretariat will notify the Lead CIs of all applications confirmed as non-compliant within seven (7) days of the application deadline.

A member of the NCI will join the Allocation Committee’s proposal assessment as a technical advisor. Whilst the Allocation Committee operates independently of the NCI operations, the Committee may seek technical and feasibility advice from the NCI representative to assist with the proposal assessment process.

Assessment and Allocation Protocol

Assessment of proposals will be based on a combination of technical and scientific merit (see selection criteria section) based on material provided in the proposal. All applicants are expected to provide a detailed justification of the resources requested and are expected to demonstrate the capacity to utilise the requested HPC resources effectively. All requests must be proportional to the scientific merit of the proposal. The ANUMAS Committee reserves the right to allocate all or part of the resources available, and all or part of any specific request.

Assessment and allocation decisions are made by the Allocation Committee only. The ANUMAS Secretariat and NCI provide advice or supporting information to the Allocation Committee but are not otherwise involved in determining allocations.

Resource requests for ANUMAS are not subject to a maximum limit (cap). Unbounded resource requests allow researchers to prepare a single proposal that can be considered by multiple allocation schemes, and which reflects their actual demand for HPC resources.

A request for more than 5,000 kSU (5 MSU) per year would normally be associated with a team of experienced researchers who clearly demonstrate a track record of efficient and productive use of HPC resources. Note that any proposal deemed not to have fully justified the resources requested will be rejected by the Committee.

ANUMAS Committee: Conflict of Interest and Confidentiality Considerations

Members of the ANUMAS Committee may be applicants to the ANUMAS, and are indeed encouraged to apply, thereby demonstrating currency of their expertise and experience.

However, committee members who are applicants to the ANUMAS cannot be associated with the assessment of their own applications, or those of members of their research group(s), or of other applicants with whom they have published recently (i.e., within the past five years). Any such conflicts must be declared when assessment tasks are being assigned.

Furthermore, members of the ANUMAS Committee cannot be associated with the assessment of applications from their own School at ANU.

The aforementioned rules are not novel. They are consistent with, and more restrictive than the NCMAS ones, and they have been historically enforced.

Members of the ANUMAS Committee must treat information contained in applications and ANUMAS Committee discussions as confidential.

To maintain the integrity of its decision-making processes, the ANUMAS Committee operates independently of the operators of the facilities on which resources are granted. While staff members of the individual facilities provide advice to the Committee, they cannot be members of the Committee, to avoid conflicts of interest, or perceptions thereof.

Quantised Allocations

Computing resources will be allocated in specific increments (quanta) as indicated on the ANUMAS application form. Allocations are quantised to simplify the work of the allocation committee.

ANUMAS 2025 Allocation Committee

Chair – Computer Science	Giuseppe Barca
Researcher - Earth Sciences	Adele Morrison

Researcher – Astrophysics	Christoph Federrath
Researcher – Biology	Ben Corry
Researcher – Biology	Jiayu Wen
Researcher – Chemistry	Thomas Huber
Researcher – Computational Social Sciences	Rob Ackland
ANU – Colleges of Science Informatics Committee	Adrian Sheppard

Support:

<i>ANU – Research Initiatives and Infrastructure</i>	<i>Teng Pan, Dale Holland</i>
<i>NCI Advisor</i>	<i>Roger Edberg</i>

Appeal Process

All decisions of the ANUMAS Allocation Committee are final. *Appeals will be considered only against administrative or procedural issues and **not against decisions of the Committee or against assessor ratings and comments**, in a manner consistent with the practices of the Australian Research Council.*

NCI [Terms and Conditions of Use](#)

All users of NCI infrastructure and services agree that they will keep themselves informed of and comply with all relevant legislation and The Australian National University policies and rules, including but not limited to:

- [The Australian National University's Acceptable Use of Information Technology Policy](#)
- [The Autonomous Sanctions Act \(2011, Cth\)](#)
- [The Defence Trade Controls Act \(2012, Cth\)](#)

and both acknowledge and understand that a breach of these will result in not only a loss of access to NCI resources but the user may be subject to Federal criminal prosecution resulting in fines and/or gaol legislated under the Acts listed above.

Compliance with Commonwealth legislation is managed through the ANU Research Services Division. Contact the ANU Research Services Division if you have specific questions about Autonomous Sanctions or DTCA compliance.

Email Addresses

To ensure compliance with relevant Australian Government legislation, all researchers named in ANUMAS applications must register and use their ANU email address for all correspondence. It is the responsibility of the project Lead Chief Investigator to ensure that all project staff register and use institutional email addresses. The use of the official ANU email address also provides some protections under the DTCA.

Proposal Format – PDF Upload

Guidelines for proposal formatting follow general ARC conventions. Use plain English and comply with the proposal format and submission requirements. Use Australian English spelling.

All pages (uploaded in PDF form) must be as follows:

- Black type, or occasional coloured type for highlighting purposes
- Single column
- White A4 size paper with at least 0.5 cm margin on each side, top and bottom
- Text must be size 12 point Times New Roman or an equivalent size before converting to PDF format and must be legible to assessors.
 - Otherwise, a highly legible font type must be used e.g. Public Sans, Arial, Courier, Palatine and Helvetica subject to them being an equivalent size to 12 point Times New Roman.
 - Variants such as mathematical typesetting languages may also be used.
- References only can be in 10 point Times New Roman or equivalent and are excluded from the 5-page limit.
- Adhere strictly to word limits designated for the application.
- Applicants should note that colour graphs, colour photographs, detailed graphics, and grey scale objects may be reproduced in black and white.
- Additional text uploaded as PDF may appear slightly reduced in size due to ANUMAS formatting of attachments.
 - Additional text uploaded in PDF form should be directly generated rather than scanned to maximise the quality of reproduction.
- The ANUMAS Secretariat reserves the right to seek an original electronic copy of the Proposal to determine that the text meets these requirements.

Appendix A: NCI - Gadi

ANUMAS provides merit-based access to 250 MSU (250,000 kSU) on [Gadi](#), the NCI’s peak computing system.

National Computational Infrastructure (NCI)	
Facility overview	<p>NCI is Australia's national research computing service. Home to Gadi, the nation's most highly integrated and highest performance supercomputer, NCI provides innovative, world-class services to Australian researchers. NCI operates a formal collaboration between Australia's national university - ANU; the national research agency - the Commonwealth Scientific and Industrial Research Organisation; the national meteorological agency - the Australian Bureau of Meteorology; and the national geosciences agency - Geoscience Australia. Since 2007, NCI's collaboration has expanded to include many other Australian universities and research institutes. NCI's infrastructure was established through Commonwealth Government funding.</p> <p>ANUMAS allocations for 2025 will be on NCI’s petaflop-scale supercomputer – Gadi. This system comprises 3024 Intel Xeon Cascade Lake compute nodes, with 24 x 2 cores/node, configured with 192 GB RAM per node. Gadi also provides 50 Cascade Lake nodes with 1.5TB of memory, utilising Intel Optane DC Persistent memory, and 640 NVIDIA V100 GPUs in 160 nodes. Gadi’s data interconnect is the latest generation Mellanox HDR InfiniBand, capable of data transfers at 200 Gb/sec.</p> <p>Gadi underwent mid-cycle upgrade at the start of 2023 and now has additional 74,880 compute cores (Sapphire Rapids) in 720 nodes.</p> <p>NCI also offers persistent data storage in excess of 70 petabytes. Data holdings include significant national and international data collections. NCI also operates a compute cloud for ancillary computing and data services.</p>
ANUMAS computing resources	250 MSU on Gadi.
ANUMAS storage resources	600 TB available to ANUMAS scheme. Committee to allocate according to project requirement. Allocations are limited to the duration of compute allocation (2025 calendar year).
Software	NCI maintains many software packages for use on its systems. The NCI application software catalogue is available online at https://opus.nci.org.au/display/Help/Supported+Applications
User support	<p>NCI operates an expert Service Desk for users during normal business hours, Mon-Fri between 9am and 5pm AEST/AEDT.</p> <p>NCI Academic Consultants can provide assistance with user and project registration and operational issues, and can provide advice on code development and performance, and the use of scientific software in HPC environments.</p>