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ANU Merit Allocation Scheme 2021 Call for Applications

Information for Applicants

Revision 20 Nov 2020

Key Dates

20 November 2020	Applications open
10 December 2020	Applications close (5:00pm AEDT)
15-17 December 2020 (TBC)	Allocation Committee meeting
21 December 2020	Allocations announced

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Introduction

The ANU and NCI have agreed to run a streamlined application process for the ANU Merit Allocation Scheme 2021 Call for Applications. With disruptions this year from COVID-19 and the ANU Recovery Plan, and a compressed time frame, the ANU Research Services Division would like to minimise administrative workloads and disruption for researchers as we prepare to close out the year. The streamlined process will also gather any outstanding demand for new projects and address strategic opportunities for the ANU.

The ANU Merit Allocation Scheme (ANUMAS) 2021 Call for Applications will be open from Friday 20 November 2020 to Thursday 10 December 2020. Applications close at 5:00pm AEDT on Thursday 10 December.

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 2021 Call for Applications to clarify rules and processes as determined by the Committee Chair, NCI or the ANU Research Services Division.

If you have further questions about the ANUMAS 2021 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.

Important Dates – ANUMAS 2021 Call for Applications

Key dates	ANUMAS Milestone
20 November 2020	Applications open
10 December 2020	Applications close (5:00pm AEDT)
14 December 2020	Merit Assessments close
15-17 December 2020 (TBC)	Allocation Committee meeting
21 December 2020	Outcomes announced

Application Categories

The ANUMAS 2021 call uses a simplified application model and online form.

<p>Existing Projects</p>	<ol style="list-style-type: none"> 1. An established ANU project with a 2020 allocation can request renewal of the allocation for 2021, with submission of a brief, combined proposal and progress report of approximately three pages in length. The proposal should describe the direction of the research in 2021. 2. A project using at least 80% of its 2020 allocation (pro-rata) will be considered for renewal of the allocation for 2021, or for an increased allocation if this is justified in the proposal. 3. An ANU project using less than 80% of its 2020 allocation will be considered for renewal at the level of actual usage. 4. The progress report should describe any impacts to the project from COVID-19. 5. All existing ANU Startup/Ongoing allocations will be automatically renewed at 100 kSU/year for 2021. <i>No application or progress report is required for a Startup project unless the project is seeking an increased allocation for 2021.</i>
<p>New Projects</p>	<ol style="list-style-type: none"> 1. Applications for new 2021 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. 3. New proposals with requests of 1000 kSU or greater may be required to demonstrate effective usage of provisional allocations at-scale in 2021 Q1-Q2. The Committee will review Q1-Q2 usage for large allocations in mid-2021.

Special Consideration

A limited number of special allocations will be made available to 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.

Eligibility criteria for each of these categories are listed in the section Eligibility and Project Roles.

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

Application Instructions

ANUMAS 2021 uses a fast and easy application process.

The Lead CI or Delegate Lead CI on a project must submit the ANUMAS 2021 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 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 2021 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 2021 form listed below to submit your application.

Step 2 – Complete the ANUMAS 2021 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 through this link: <https://nci-australia.typeform.com/to/z3L3y8zH>

The online application form will ask you to upload a PDF document for your 2021 project proposal and progress report. The proposal should describe the research planned for 2021 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 2020 allocations were used and any notable outcomes achieved. The progress report can also include an explanation of special circumstances for the project in 2020, for example, impacts due to COVID-19.

Your PDF file should be no longer than 1500 words, or approximately 3 pages in length. 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:

ANUMAS2021-YOURNAME-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.

The applicant, i.e. the Lead CI or Delegate Lead CI on the nominated project, is responsible for updating project memberships at <https://my.nci.org.au>, and completing the full ANUMAS 2021 application web form at the ANUMAS 2021 web site – <https://anumas.nci.org.au> .

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 2021 website: <https://anumas.nci.org.au>

- To submit your ANUMAS 2021 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 2021 call is **17:00 (5pm) AEDT Thursday 10 December 2020**.

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.
- Respect the length guidelines (for word count and degree of detail) for each question in the application form.
- 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.

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.

New Applicants - New Projects

- 1500 words maximum
- Should describe key elements of proposed research and the computational approach.

Returning Applicants - Existing Projects

- 1500 words maximum
- Should briefly summarise work and outcomes during 2020
- Should indicate if the proposed work in 2021 is a continuation of previous research or a new direction for the project
- Should provide a justification for an increased resource request.

If your 2020 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 for the period covered by the application at the ANU. If an applicant (Lead CI) holds a fixed duration contract for at least 0.2 FTE for the calendar year 2021 they are eligible to apply to ANUMAS.

Whilst a person holding a Postdoctoral appointment at the ANU is eligible to apply as a Lead CI, a postdoctoral fellow applying in the Open category is expected to demonstrate competitiveness with more experienced, senior researchers in their field. The Committee recommends that researchers in the early phase of a postdoctoral fellowship first consider applying in the Early Career Researcher category.

A person undertaking a higher degree by research is not eligible to be a Chief Investigator or Lead Chief Investigator on an ANUMAS proposal.

An individual may be named as a Chief Investigator or Lead Chief investigator on only one ANUMAS 2021 application.

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

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.
- The applicant should not be nominated as a Researcher, CI or Lead CI on another ANUMAS application.

Special Consideration

A limited number of special allocations will be made available to 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.
- The applicant should not be nominated as a Researcher, CI or Lead CI on another ANUMAS application.

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
- 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](#)

Investigators

- Research record and performance relative to opportunity (publications, research funding, recognition and esteem metrics)

Feasibility

- 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 request
- 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

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

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 (Secretariat)
4. Technical assessment (by NCI and Secretariat)
5. Merit assessment (Committee)
6. Allocation Committee meeting (Committee, supported by Secretariat and NCI)
7. 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.

NCI will assess each application for suitability/fit for its HPC systems in the technical assessment. NCI may contact an applicant for further information as part of the technical assessment. Technical assessments are provided by NCI as advice to the Allocation Committee. The Committee may also recommend that an applicant consult NCI for further technical advice during merit assessment or after an allocation is awarded.

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 4000 kSU 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.

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 2021 Allocation Committee

Chair – Mathematics and Computer Science	Markus Hegland
Deputy Chair – Earth Sciences	Andy Hogg
Researcher – Astrophysics	Christoph Federrath
Researcher – Biology	Eric Stone
Researcher – Biology	Gavin Huttley
Researcher – Biology	Jiayu Wen
Researcher – Chemistry	Megan O'Mara
Researcher – Computer Science	Giuseppe Barca
Researcher – Computational Social Sciences	Robert Ackland
ANU – Director Research Services	Douglas Robertson
ANU – RSO	Robert Rigby
NCI Advisor (appointed by Director NCI)	Ben Evans

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 an official institutional email address for all correspondence. Chief Investigators and Researchers who currently use a non-institutional email address (for example, [@gmail.com](mailto:example@gmail.com) or [@yahoo.com](mailto:example@yahoo.com)) must register an official institutional email address. It is the responsibility of the project Lead Chief Investigator to ensure that all project staff register and use official 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: 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
- 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 264 MSU (264,000 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 a further 26 Australian universities and research institutes. NCI's infrastructure was established through Commonwealth Government funding.</p> <p>NCMAS allocations for 2021 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>NCI also offers persistent data storage in excess of 50 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	264 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 (2021 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/Gadi+Latest+Software+Update
User support	<p>NCI operates an expert Service Desk for users during normal business hours, Mon-Fri between 9:00 am and 5:00 pm 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>