National Computational Merit Allocation Scheme

2024 Call for Applications

NCMAS guidelines, eligibility, anonymisation

Followed by open Q&A

NCMAS Secretariat

We acknowledge and celebrate the First Australians on whose traditional lands we meet, and pay our respect to Elders past and present.

Artist: Lynnice Letty Church – Tribes: Ngunnawal, Wiradjuri & Kamilaroi (ACT and NSW)
Gadi - "to search for" in Ngunnawal language - January 2020 for NCI Gadi Supercomputer

National Computational Merit Allocation Scheme

1. **NCMAS – General Overview**
2. NCMAS 2024 Call for Applications
3. Recommendations for Applicants

2024 Call for Applications

1. Applications open**:** 21 August

2. **Deadline: Tuesday 3 October 8:00pm AEDT / 5pm AWST**

3. Merit assessment: November

4. SAC meeting for allocations: 4-5 December

5. Allocations announced: 18 December

National Computational Merit Allocation Scheme (NCMAS)

"…provides access, *based on research and computational merit,* for researchers at Australian universities and publicly funded research agencies, to resources at the major national HPC facilities."

Supported by Commonwealth Government NCRIS program.

"NCMAS Terms of Reference" document defines the scope and processes for the scheme.

National Computational Merit Allocation Scheme (NCMAS)

Calls for applications are made on a yearly basis, usually in Quarter 3.

Allocations of resources are determined through a competitive merit-based peer review process.

Allocations are awarded for the following calendar year, starting in January, with allocations managed and installed on a quarterly basis.

NCMAS Roles

The following roles are defined in the *NCMAS Terms of Reference*

1. Scientific Advisory Committee (SAC)

    Is a facility-independent expert committee that determines the relative scientific merit of applications and determines allocations that applicants receive.

2. Facilities: NCI (Gadi), Pawsey (Setonix)

    The host organisations (systems offering compute resources available under the scheme.

3. Custodians: NCI, Pawsey

    These are the Tier 1 HPC facilities that are responsible for the governance of the national scheme.

4. Secretariat: NCI

    The secretariat provide logistical and administrative support to the SAC and host the application portal.

Assessment Stages

1. Administrative assessment
   Focus: eligibility, compliance, completeness
   Agent: Secretariat

2. Facility Technical assessment
   Focus: facility suitability = advice to SAC
   Agent: Facilities

3. Merit assessment and allocation meeting
   Agent: SAC

Administrative Assessment – 2024 Call

The proposal component of an application must comply with the anonymised, third-person (A3P) proposal format used in the previous two NCMAS calls.

Proposal document non-compliance with A3P will result in disqualification.

No appeals related to A3P compliance will be considered.

Technical Assessment

Technical reviews are performed by facilities to assess the viability and efficiency of a proposed computational workflow - i.e. its overall suitability at a specific facility

Results of a technical assessment are provided to the Committee as advice, and do not constitute an assessment of a project's scientific merit.

A technical assessment may include information about a project's history at a facility.

Merit Assessment

The Scientific Advisory Committee (SAC) assesses all applications on merit and determine final allocations.

All Standard/Unrestricted applications are assessed by at least two Committee members having experience in the appropriate field of research. The number of assessors is proportional to the level of resources requested.

All allocations determined by the SAC are final.

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NCMAS 2024 Scientific Advisory Committee (SAC)

The Committee includes representation across:

- scientific research fields

- institutions: academia and government

- geography: states and territories

- gender and ethnicity

Committee members are experienced computational scientists.

NCMAS 2024 HPC Resources

Resources listed represent the resources allocated to NCMAS and are expressed in Millions of Service Units (SU), awarded for the calendar year 2024.

NCI/Gadi	300 MSU	https://nci.org.au
Pawsey/Setonix CPU Request	325 MSU	https://pawsey.org.au
Pawsey/Setonix GPU Request	160 MSU	

NCMAS 2023 – Previous Call

189 compliant applications were submitted in total.

146 applications received allocations at one or more facilities.
Overall success rate ~77%

817 million service units of computing time were awarded to applicants on the Gadi and Setonix supercomputers.

NCMAS is a prestigious national scheme; it is highly competitive.

NCMAS 2024 Eligibility

An applicant (Lead CI) must be based in Australia and hold a substantive position at an Australian university, research institute, or Government science agency, with appointment at 0.2 FTE or greater.

The primary applicant (Lead CI) must have a track record of research funding via ARC, NHMRC, or industry funding scheme.

NCMAS 2024 Eligibility

The Lead Chief Investigator (Lead CI) on an NCMAS application must be a Chief Investigator on any research grants listed in the application.

Any Chief Investigators (CIs) on an NCMAS application must be named as a Chief Investigator (CI) or Primary Investigator(PI) on any grants listed in the application.

NCMAS 2024 Eligibility

A person can be a Lead CI or CI on **one NCMAS application only.**

Postdocs are eligible to apply and are encouraged to apply as ECRs. Postdocs and ECRs are expected to provide evidence of an ARC DECRA Fellowship or institutional Vice Chancellor Fellowship, or similar independent support.

Not eligible: adjunct faculty, research students.

NCMAS Application Categories

1. Standard (Unrestricted)

2. Early Career Researcher (ECR)

3. Special Consideration (SC)

4. Emeritus

ECR, SC and Emeritus allocations are the minimum allocation of the requested facility. Compute requests for ECR, SC or Emeritus applications must be on **one** HPC facility only.

Facility-System	Minimum Allocation (kSU/year)
NCI - Gadi	1000
Pawsey - Setonix CPU	1000 (combined CPU+GPU)
Pawsey - Setonix GPU	

The Special Consideration category is intended to accommodate career interruptions or specific individual circumstances.

Early Career Researchers

ECR Eligibility

1. PhD conferred within the previous five (5) years, relative to opportunity.

2. Expectation of independent funding support, such as an ARC DECRA Fellowship or institutional Vice-Chancellor Fellowship, or similar award.

An ECR application requires a less detailed proposal than Standard/Unrestricted.

ECR allocations are the minimum allocation of the requested facility.

ECR requests must only be made on one HPC facility.

Facility-System	Minimum Allocation (kSU/year)
NCI - Gadi	1000
Pawsey - Setonix CPU	1000 (combined CPU+GPU)
Pawsey - Setonix GPU	

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Recommendations for Applicants – Logistics

Read all NCMAS background information and follow the application guidelines.

Respect the application deadline. Submission is final. Addenda can only be provided to update information e.g. grants, publications.

Administrative Assessment provides an opportunity to correct completeness or eligibility errors.

Extended groups of collaborating researchers should submit a single, combined application. Cross-linked applications (Lead CI or CI) will be rejected outright.

Recommendations for Applicants – Grants

Remember - Research grants listed in an application must be directly attributable to a Lead CI or a CI of the project group. *Listing a grant that is not attributable to a project Lead CI or CI is a breach of NCMAS rules.*

An NCMAS application must list at least one grant attributable to the Lead CI, i.e. the NCMAS Lead CI must be named in at least one of the listed grants.

Include grants and publications from the previous five (5) years only.

Recommendations for Applicants – Requests

Applications requesting >= ~5 MSU are assessed by a larger number of assessors and receive a higher level of scrutiny. Competition for allocations at >= 5 MSU/year scale is extremely strong.

New applications to NCMAS at the 5 MSU-scale are especially challenging. A new project must provide a compelling proposal and a thorough justification for the resources requested and demonstrate an ability to use HPC effectively.

Recommendations for Applicants – New Applicants

If you do not have demonstrated experience at a facility you have requested, the Secretariat recommends that you:

- Describe HPC experience at other facilities
- Obtain a facility start-up grant as soon as possible, and use it to demonstrate experience and obtain performance data for your application
- Add a CI to the application who has experience at the facility with the software, and include their performance data.
  - Ensure the CI is not part of another NCMAS application or **BOTH** applications will be ineligible

nci.org.au

Recommendations for Applicants – Scalability

Demonstrate the ability to use the HPC facilities at scale in your application. You should also provide evidence of an ability to run applications which efficiently utilise the compute and data interconnect fabric at a facility.

Projects reliant on single-cpu, serial workflows should demonstrate a requirement for embarrassingly parallel workflows *at scale*, and dependencies on large-scale datasets or national research data collections.

Recommendations for Applicants – Adapter Scheme

Proposals targeting NCI that are based on single-cpu, serial workflows should consider the NCI ADAPTER scheme as an alternative to NCMAS.

ADAPTER offers allocations of up to 250 kSU/quarter through a quarterly call for applications. ADAPTER allocations can utilise a mix of Gadi compute, Cloud compute and persistent Gdata storage.

nci.org.au/users/how-access-nci/adapter-scheme

Recommendations for Applicants – Scheme Purpose

Ambit claims for large allocations or an unjustified large increase in a previous NCMAS allocation will not be supported.

The primary criterion for NCMAS allocations is scientific merit. Applicants seeking resources to support ongoing mission or operational service workloads are advised to frame their applications in terms of scientific merit.

Due to the competitive nature of the NCMAS, partner schemes may be a better option to support mission-based or operational workloads.

Recommendations for Applicants

Consider partner schemes or a start-up grant if your NCMAS competitiveness is uncertain or needs development.

Projects which have received previous NCMAS allocations should demonstrate progress in the Proposal.

Success in previous NCMAS calls does not guarantee continuing support.

Women in STEM Ambassador National Trial

NCMAS 2021, 2022 and 2023 took part in the National Trial of Anonymising Research Funding Proposals, in collaboration with Australian research organisations.

- The aim was to assess whether the anonymised review of proposals reduces unconscious bias in STEM grant programs.

- Other Australian research organisations and funding bodies participated in this study: CSIRO, AAL, ANSTO.

Women in STEM Ambassador National Trial

UNSW Women in STEM Ambassador is currently assessing data for the anonymisation trial from from NCMAS 2021, 2022 and 2023.

The NCMAS 2024 call for applications will use the proposal anonymisation protocol used in NCMAS 2021, 2022 and 2023 calls.

Women in STEM Ambassador National Trial

Further information:

National Trial of Anonymising Research Funding Proposals – Women in STEM Ambassador

https://womeninstem.org.au/research-projects/national-trial-of-anonymising-research-funding-proposals/

NCI as Secretariat for NCMAS - Research Collaboration Agreement with UNSW for this study.

Women in STEM Ambassador National Trial

Further information:

Anonymous review FAQs

https://womeninstem.org.au/faqs-12-frequently-asked-questions-and-answers-about-the-anonymous-review-study/

NCMAS 2024 Call - Anonymisation

NCMAS <u>Proposal</u> and <u>Computational Details</u> must be written in anonymous, third-person format (A3P).

Assessment by SAC will be performed in two phases:

1. Primary = A3P <u>Proposal</u> and <u>Computational Details</u> with anonymised track record metrics
2. Secondary = identifiable track record data - if necessary

2024 call: Compliance advice will be provided on request only, in advance of the application deadline. Submitted applications are final. There are no second chances or appeals on A3P compliance!

NCMAS 2024 Call - Anonymisation

NCMAS <u>Proposal</u> and <u>Computational Details</u> must be written in anonymous, third-person format (A3P).

For example, instead of writing:

*If **our** model from Rogers et al. (2014) is correct, then the single-degenerate channel for SNe Ia production must exist.*

You would write:

*If **the** model from Rogers et al. (2014) is correct, then the single-degenerate channel for SNe Ia production must exist.*

NCMAS 2024 Call – Online Application Form

Proposal and Computational Details

1. Submit (upload) as a combined, single pdf file
2. A3P format is mandatory

Key Takeaways for Applicants

- Respect the NCMAS rules and process.

- NCMAS is competitive; allocations are based on merit.

- Demonstrate your ability to use HPC facilities effectively *at scale*.

- Consider partner or facility HPC schemes if you need to develop capabilities and gain experience.

- The anonymisation process aims to address unconscious bias in allocation processes.

  - *"…while a system that provides perfectly unbreakable anonymity would be ideal, our goal is to obscure identity, discourage guessing, reduce unconscious bias…"*

- Anonymisation (A3P) compliance is mandatory for NCMAS 2024. Appeals about A3P compliance will not be considered.

nci.org.au

How to Apply

NCMAS information and online application forms are available at:

https://ncmas.nci.org.au

All applicants should read the Information for Applicants document and all supporting documentation in full.

Getting Help

ncmas@nci.org.au – NCMAS Secretariat

help@nci.org.au – NCI User Support

help@pawsey.org.au – Pawsey User Support

Thank you!

NCMAS Secretariat

ncmas@nci.org.au