Research Authorship Policy

Section 1 - Purpose

(1) This Policy details the criteria for the attribution of authorship for all research outputs and:

a. outlines the responsibilities associated with authorship of a research output;
b. outlines the necessary steps to be taken to confirm authorship of a research output, prior to its submission for publication and distribution, or its submission as a component of a Higher Degree Research thesis by publication;
c. describes the standards which must be applied to the assignment of credit and fair acknowledgment of others' contributions in work presented in research records (such as in research proposals or grant applications).

Background

(2) This Policy reflects the expectations outlined in Authorship - A guide supporting the Australian Code for the Responsible Conduct of Research (Authorship Guide) issued by the National Health and Medical Research Council (NHMRC), the Australian Research Council (ARC) and Universities Australia (UA). Some sections of this Policy are partially reproduced from the Authorship Guide.

Scope

(3) This Policy applies to:

a. anyone who conducts research or research support under the auspices of Macquarie University which must be conducted in accordance with the Macquarie University Code for the Responsible Conduct of Research; and
b. all research outputs by researchers of Macquarie University, including but not limited to those that are published or distributed academically or publicly, such as books, monographs, journal articles, conference papers, creative works, web-based publications, professional blogs, reports or exhibitions, and may equally apply to other research records such as research proposals, grant applications and other peer reviewed research-associated documents.

(4) Authors may consult with a Research Integrity Advisor (RIA) at any time for advice in relation to the implementation of this Policy.

Section 2 - Policy

Planning

(5) The individuals involved in a research activity, and their proposed roles, should be planned and documented at the early stages of a project and revised regularly. As research proceeds it may be appropriate for further individuals to be invited to contribute and the level of involvement of individuals may change. The following principles apply to recognising the involvement of all those who have contributed to research:

a. all contributors to the research must be honestly and equitably acknowledged, and their involvement fairly

represented in research outputs; and

b. researchers must ensure that authors of research outputs are all those contributors, and only those, who have made a substantial intellectual or scholarly contribution to the work being reported.

Criteria for authorship attribution in a research output

(6) To be eligible as an author of a research output, a person must have been directly involved in its creation by making a substantial intellectual or scholarly contribution, in at least one, and usually a combination of two or more, of the following criteria:

a. conceiving or designing the project or output;
b. acquiring data where this has involved significant intellectual judgment, planning, design or input;
c. contributing knowledge, where justified, including indigenous knowledge;
d. analysing and interpreting the data; or
e. writing or critically revising significant parts of the intellectual content of the research output, to the extent that this contributes to its interpretation.

(7) Students and junior researchers who have made a substantial intellectual or scholarly contribution as above, are entitled to authorship, notwithstanding that they may have been closely supervised.

(8) To the extent that Aboriginal and Torres Strait Islander Peoples contribute their own or community knowledge to any research which affects, or is of particular significance to them, their knowledge and contributions must be acknowledged in any subsequent research output, including as an author where appropriate.

(9) A contributor who has had a significant involvement in the work underpinning a research output, but does not meet any of the above criteria, should not be listed as an author, but should be acknowledged (see clause 20).

(10) Authorship cannot be ascribed to Generative Artificial Intelligence, Large Language Models, or Foundation Models because these tools cannot assume responsibility for content.

(11) Authorship should not be attributed solely based on:

a. the provision of funding, data, materials, infrastructure or access to equipment;
b. the provision of routine technical support, technical advice or technical assistance;
c. the position or profession of an individual, such as their role as the author's supervisor or head of department, research centre or school ('gift authorship');
d. whether the contribution was paid for or voluntary; or
e. the status of an individual who has not made a significant intellectual or scholarly contribution being such that it would elevate the esteem of the research ('guest authorship').

Author order and accountabilities

(12) When there is more than one author of a research output:

a. all authors are collectively responsible for the accuracy and integrity of the authorship list; and
b. author order should be assigned fairly and in accordance with authorship conventions appropriate to the discipline. These requirements may vary over time according to discipline, publisher requirements and funding provisions. Researchers should be familiar with international best practice in their discipline.
    i. In general, the person who has completed most of the work should be listed as the first author (for example, in many cases, a Higher Degree Research candidate or post-doctoral fellow).
    ii. In some research outputs, where typical convention is not being followed, or where multiple authors have

made equal contributions (making ascription to first or lead author difficult), a note should be added to the output detailing how authorship order has been decided (e.g., a statement that “These authors contributed equally” or “authorship order has been assigned alphabetically”.

c. one co-author should be nominated as the corresponding author for the purpose of administration and management of the research output. The corresponding author will generally take primary responsibility for all associated record keeping. This includes maintaining a record of authorship agreements (clause 16, 17), overseeing drafts and changes, managing the production of the final version and directing communication with publishers, co-authors and or other stakeholders. The corresponding author is also responsible for making sure any journal requirements regarding authorship, publication or data management (including data dissemination) are met (for example – ensuring that author contribution statements or data availability statements are accurately completed). The responsibilities of the corresponding author may differ according to discipline and publisher requirements.

(13) An author is responsible for ensuring the accuracy and integrity of their contribution to the research output and must adhere to the principles of the Macquarie University Code for the Responsible Conduct of Research.

(14) An author’s role in a research output must be sufficient for that person to take public responsibility for at least that part of the output in that person’s area of expertise.

a. Authors must take reasonable steps to ensure the accuracy and integrity of the contributions of all other co-authors. They must at the least be able to identify which co- authors are responsible for specific parts of the work and raise any concerns prior to publication.
b. Following publication, all authors must ensure that any concerns about the accuracy or integrity of any part of the output are appropriately responded to. This may mean providing all necessary evidence to demonstrate the integrity of their contribution or seeking such evidence from the other co-authors. It may result in correcting the public record by way of erratum or retraction.
c. Each author from Macquarie University must have an Open Researcher and Contributor ID (ORCID).

Planning for and approving authorship

(15) A list of contributors that may qualify as authors should be discussed as early as is reasonable following the commencement of a project and should be revised throughout the research project. Researchers can use the Authorship Planning Form Template to record their plans as they develop and as the research progresses.

(16) Where the involvement of more than one contributor to a research output qualifies them as an author (as per clause 6), it is best practice for an authorship plan to be in place before the commencement of writing up a research project (researchers can use the Authorship Planning Form to record their plans early in their project). At the least, authorship (including the author order) must be agreed upon prior to a research output being published or distributed. A record of authorship agreement, any changes to the agreement and a summary of author contributions must be retained as follows:

a. For any research output that will be submitted as a component of a Higher Degree Research thesis, a record of the contributions of all authors and their agreement to authorship (using the Macquarie University Authorship Contribution Statement Form) should be established prior to its submission for publication and distribution. A copy of the completed Authorship Contribution Statement must be submitted with the thesis for examination and a copy retained by the corresponding author.
b. For all other research outputs, a record of the authorship contributions and agreement can be documented via the Authorship Contribution Statement template. However, the use of this form is optional and any method of written confirmation of authorship is sufficient (an agreement may be in the form of emails, a transcript of an online discussion or similar).

(17) In addition to the criteria for authorship outlined in clause 6, all authors must give their agreement to the final version of the research output to be published or distributed and retain a record of that agreement (via the Authorship Contribution Statement Form provided, or email for example). Minor corrections (e.g., correction of typographical errors) to proofs may be completed by the corresponding author without the need for further agreement. However, substantial changes in content (e.g., new results, corrected values, and changes of title and authorship) should not take place without the approval of all authors.

(18) A person who qualifies as an author must not be included or excluded without their express written agreement, except in rare cases where all the following conditions are met and special permission for their inclusion or exclusion has been gained from their Deputy Dean, Research and Innovation:

a. the person who would qualify as an author has left Macquarie University and appropriate attempts have been made to contact them;
b. the data or materials on which the research output is based are stored in an appropriate institutional repository or in accordance with the Research Data Management Policy accompanying the Macquarie University Code for the Responsible Conduct of Research;
c. where that person (referred to above) was responsible for the collection or generation of the data or materials upon which the research output is based, another researcher who qualifies as an author (according to clause 6) was nominated as a custodian of the data or materials when they left the University, or reasonable grounds exist to assign custodianship to another of the proposed authors (for example they are the principal supervisor of the person or the principal investigator on the project); and
d. the other authors have confidence in the accuracy and integrity of that person's contribution, to the extent that they will subsequently be taking on the full responsibility for that part of the output.

(19) Subject to agreement with the publisher of the research output, if there are reasonable grounds to believe that a deceased person would have agreed to be an author, the deceased person meets the criteria for inclusion as an author listed in section clause 6, and the additional conditions for authorship listed above can be met (listed in clause 18b to 18d), they should also be included. There should be an appropriate author information note indicating that the author is included posthumously and outlining their contribution. Similarly, if a deceased person meets the criteria for acknowledgement, and there are reasonable grounds to believe they would have agreed to be acknowledged, they should be so acknowledged (clause 20).

Acknowledging other contributions

(20) Contributors who do not qualify as authors should be named in the footnotes and/or in the acknowledgements (where the publisher/medium provides for this) in a manner consistent with the norms of the research field or discipline.

(21) An author must ensure the work of others (including but not limited to cultural advisors, reference groups, students, research assistants and technical officers) are recognised in a publication derived from research to which they have contributed. Individuals and organisations providing services or access to facilities, samples or reference collections must also be fully acknowledged.

(22) It is best practice to obtain permission from named contributors before acknowledging them in research outputs. Regarding the publication of indigenous knowledge (obtained, for example, through unpublished manuscripts, audio or video recordings), approval should be obtained from the people or community from which the knowledge originates prior to acknowledgment of the contribution.

Author affiliations

(23) Each author's institutional affiliation/s must be stated in the research output to appropriately reflect support and

investment in research and to ensure the research output is appropriately linked to an institution.

(24) Any author who conducted research under the auspices of Macquarie University should cite 'Macquarie University, Sydney, Australia' as an affiliated University in the by-line following the Macquarie University Research By-Line Guidance Note. This includes where Macquarie University expertise, resources, facilities or services have been used in the research.

(25) All research being disseminated with Macquarie University in the by-line (following the Macquarie University Research By-Line Guidance Note) must meet the standards of the Macquarie University Code for the Responsible Conduct of Research and associated policies and procedures (including this Authorship Policy).

(26) Macquarie University should only be reported in the by-line when the research was conducted under the auspices of Macquarie.

Mentor early career researchers in authorship

(27) Research mentors and supervisors have a responsibility to assist research trainees (including but not limited to Higher Degree Research candidates and early career researchers) in understanding and applying this policy.

Breach of the Macquarie Research Code

(28) Failure to comply with the requirements of this Policy may amount to a breach of the Macquarie University Code for the Responsible Conduct of Research. Potential breaches of the Macquarie University Code for the Responsible Conduct of Research will be managed in accordance with the Macquarie University Research Code Complaints, Breaches and Investigation Procedure. Authorship disputes do not necessarily relate to a potential breach. Examples of the types of conduct in authorship that may represent a breach can be found in section 6 of the Authorship Guide.

Section 3 - Procedures

(29) Disputes or complaints relating to the attribution of authorship or the fair assignment of credit to those who have contributed to research must be managed according to the process described the Research Authorship Grievance Procedure.

Section 4 - Guidelines

(30) Macquarie University Research By-Line Guidance Note.

Section 5 – Definitions

(31) The following definitions apply for the purpose of this Policy. These definitions have been adapted and modified from the Australian Code for the Responsible Conduct of Research, 2018 and the Authorship Guide.

Term	Definition
Author	An individual who has made a substantial intellectual or scholarly contribution to research and its output (as detailed in section 2 clauses 5-11) and agrees to be listed as an author.
Author Contribution Statement	A statement outlining the contributions of each author to a research output. An authorship statement is often required by publishers and a brief version may accompany an article being published. An Authorship Contribution Statement must be completed for all research outputs that form a component of a Higher Degree Research Thesis, and must accompany all theses submitted for examination.

Breach	A failure to meet the principles and responsibilities of the Macquarie University Code for the Responsible Conduct of Research (including failing to meet the standards accompanying the Macquarie University Code for the Responsible Conduct of Research). Breaches occur on a spectrum from minor to more serious occurrences. A serious breach of the Macquarie University Code for the Responsible Conduct of Research which is also intentional or reckless or negligent constitutes research misconduct. For example, the following conduct in authorship would constitute a breach: Failure to acknowledge the contributions of others fairly Misleading ascription of authorship including failing to offer authorship to those who qualify or awarding authorship to those who do not meet the criteria.
By-line	This is a standard way to reflect an affiliation. This type of acknowledgment is recorded on a research output to disclose the organisation or institution accountable for the author and the research being disseminated.
Contributor	A person who has contributed to research being reported in a research output or research record. The criteria described in this Policy should be used to determine if a contributor qualifies as an author or if their input should be acknowledged in another way.
Corresponding author	The corresponding author is the one agreed upon by all co-authors to be responsible for record keeping and administrative matters regarding the research output. This may include, but is not limited to: overseeing drafts and managing changes, handling or directing communication among co-authors/publishers, and maintaining a record of authorship agreements. The responsibilities of the corresponding author may differ according to discipline and publisher requirements.
Data	Data refers to research data, which includes primary materials or information held in any digital format or media, or anything that can be digitised on which an argument, theory, test or hypothesis, or another research output is based. Research data may be in the form of facts, observations, images, computer program results, recordings, questionnaires/surveys, biographies, audio files, physical specimens or artefacts, measurements, experiences or various other forms. Data may be numerical, descriptive, visual or tactile and could be raw, cleaned or analysed.
Generative Artificial Intelligence, Large Language Model and Foundation Model	Generative AI is the popular name for a service, built on top of Large Language Models or foundation models which may create an output, such as text, images, video, audio, code, or the analysis of data, from source materials they are trained on. A foundation model is a single Machine Learning algorithm called a neural network or Generative Pre-trained Transformer (GPT) trained on a huge amount of data, adaptable to many applications. A Large Language Model (LLMs) is a foundation model trained on very large corpora of texts intended to respond to user instructions or chat-based prompts.
ORCID	An Open Researcher and Contributor ID (ORCID) is a unique researcher identifier. ORCID provides a lifelong digital name to prevent ambiguity of the identity and attribution of researchers and research.
Macquarie University Research Code Complaints, Breaches and Investigation Procedure	The Macquarie University Research Code Complaints, Breaches and Investigation Procedure outlines the process for managing complaints, concerns or allegations regarding the conduct of research, and describes how potential or actual departures from the principles and responsibilities outlined in the Macquarie University Code for the Responsible Conduct of Research should be reported, assessed, investigated and managed.
Research	The concept of research is broad and includes the creation of new knowledge and/or the use of existing knowledge in a new and creative way so as to generate new concepts, methodologies, inventions and understandings. This could include synthesis and analysis of previous research to the extent that it is new and creative.
Research output	Any record that communicates or distributes the products of research. A research output may include any form (hardcopy, electronic, creative work or other) of academic or public communication of the research from any stage of the research process, including but not limited to: a professional blog, web-based publications, books, performances, book chapters, Higher Degree Research thesis chapters, conference papers or journal articles.
Researcher	Any person who conducts, or assists with the conduct of, research under the auspices of Macquarie University which may include staff members (academic and professional), visiting students, visiting fellows, volunteers, honorary and adjunct title holders, Emerita/us Professors, occupational trainees and any student in any course at the University who conducts or assists with the conduct of research at or on behalf of the University.

Research Integrity Advisor (RIA)	A member of Macquarie University staff who has been nominated by the DVC(R) to promote the responsible conduct of research and provide advice to those with concerns or complaints about potential breaches of the Macquarie University Code for the Responsible Conduct of Research. RIAs are people with research experience, wisdom, analytical skills, empathy, knowledge of the University's policy and management structure, and familiarity with the accepted practices in research.

The following abbreviations apply for the purpose of this Policy.

Abbreviation	**Definition**
NHMRC	National Health and Medical Research Council
ARC	Australian Research Council
Australian Code	Australian Code for the Responsible Conduct of Research 2018
Australian Guide	Guide to Managing and Investigating Potential Breaches of the Australian Code for the Responsible Conduct of Research
Authorship Guide	Authorship – A guide supporting the Australian Code for the Responsible Conduct of Research issued by the National Health and Medical Research Council (NHMRC), the Australian Research Council (ARC) and Universities Australia (UA).
DREI	Director of Research Ethics and Integrity
DVC(R)	Deputy Vice-Chancellor (Research)
RIA	Research Integrity Advisor

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