QUEEN'S UNIVERSITY BELFAST

GUIDELINES ON AUTHORSHIP AND PUBLICATION

1. Integrity

The authorship of a research output refers to a variety of medium, not just those relating to the publication of a manuscript. These guidelines apply to research articles, book chapters, monographs, datasets, original creative pieces such as live performances, recordings, public art. This is not an exhaustive list, rather the researcher producing the output should reflect on the research undertaken and the output(s) generated and utilise these guidelines accordingly.

There is no universally accepted standard for assigning authorship that meets the needs of all disciplines as principles and customs differ. In some areas of arts and humanities, sole authorship may be the norm whilst in STEM areas having several or multiple authors involved in a publication is common.

No matter what discipline author(s) belong to it is important that the process for assigning authorship is undertaken in accordance with the principles of research integrity – with **open and transparent communication,** and with **honesty**. Authorship is a shared responsibility for scholarly work; therefore, all those named as authors are **equally accountable** for the work being reported.

2. Good Practice

2.1 Co-authored outputs and disciplinary norms

At the commencement of a research study, it is important to consider and acknowledge discipline norms, this is particularly relevant in collaborative/inter-disciplinary research. Therefore, it is important to understand and respect disciplinary norms, ensuring these are openly discussed and an agreement reached as to which processes are to be followed at the outset.

2.2 Discussions and record keeping

The topic of authorship should be discussed at an early point in the research project. Central to the authorship process is to consider, at regular intervals in the lifecycle of the research, the contributions being made by individuals. This is particularly important in co-authored outputs that are later submitted for assessment, e.g. through REF. A record should be maintained of all discussions; projects can continue for years so it is important to be able to reflect transparently on contributions and plans for outputs. For those engaged with external partner(s) the Consortium/collaboration agreement may have specific requirements in terms of authorship, copyright, intellectual property (IP).

2.3 Substantial contribution

Through these discussions the research team can define what is meant by a substantial contribution to merit authorship. Securing funding, being a supervisor, providing support, administration or technical, or being the leader of a research group does not necessarily qualify you as an author.

As there can often be power imbalances within a research group, it is vital that these discussions are undertaken with **care and respect**, **honesty** and with **open and transparent communication**.

2.4 Journal requirements
Journals have different requirements in terms of authorship and capturing contributorship. It is important to take cognisance of these, especially as final outputs are being prepared. Many journals are now part of the Committee on Publication Ethics (COPE). COPE has developed several documents to support the authorship process.

For staff in editorial positions, who may have concerns raised regarding the integrity of research outputs guidance is available on the COPE website.

2.5 Contributorship
The level of contribution will vary depending on the conducted research and the output prepared to report that research. The CRediT taxonomy provides a framework for the production of an author contribution statement. The University encourages its use, as it is a tool that can support submissions to REF.

2.6 Acknowledgement
Not all contributions will merit authorship. Technical or administrative support provided during the course of the research may not merit authorship. Others may have provided resources to support the research such as reagents, samples, animals or computing supplies through hardware, software or technology. These types of contributions should be considered from the outset, a record kept and a shared understanding of contributions that may merit acknowledgement but not full authorship. The agreement of any individual to be acknowledged should be sought prior to publication.

2.7 Publications and Copyright
Scholarly outputs can be under the partial or complete ownership of publishers, once in the public domain. When considering the publication of research output researchers must check the Research Publications and Copyright Policy, developed by The Library.

2.8 Student research
For many students their aim is to complete and achieve their chosen degree award. They may have conducted research as part of this process but do not intend to pursue academia further. Their work may add value to the wider research team and/or their supervisor's work. Clear, open communication will enable plans and aspirations to be explored by both parties as the degree programme comes to an end. Where the intention is not to publish on completion of the award, the supervisor/research team must keep clear records of their communication with the student, ensuring the good practice identified in this document is complied with.

3. Assigning Authorship

The most commonly used criteria for authorship are those developed by the International Committee of Medical Journal Editors (ICMJE). Also known as the 'Vancouver Guidelines' (ICMJE Recommendations for the Conduct, Reporting, Editing and Publication of Scholarly Work in Medical Journals, 2013) the ICMJE recommends that authorship is based on all four of the following criteria being met:

(i) Substantial contributions to conception and design of the work, or the acquisition, analysis, or interpretation of data for the work; AND
(ii) Drafting the work or reviewing it critically for important intellectual content; AND
(iii) Final approval of the version to be published; AND

(iv) Agreement to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

The University endorses the use of the ICMJE criteria. It must be noted that the criteria are not intended to be used to deny authorship to those who deserve credit. Persons who meet the first criterion should have the opportunity to participate in the review, drafting and final approval of the article or manuscript. Records kept in those early discussions of the research project will support the identification of relevant colleagues who should be invited/included in the authorship process.

4. Authorship and the deceased

From time to time a situation may arise where a person has died before the work they were involved in is published. In such circumstances the criteria listed above cannot be fulfilled. The responsibility rests with surviving authors to continue to consider all those involved in the research and their contribution. Where it is appropriate to include a deceased person as an author this should be made clear. Further guidance on this topic has been produced by the BMJ.

5. Artificial Intelligence

Given the growth in artificial intelligence (AI) technologies it is important that authors are open and transparent in terms of their use. This can be achieved through describing their use in the appropriate section(s) of the research output and in any covering document to the journal/or data repository. It is the authors' responsibility to ensure any use of AI does not compromise the integrity of the research and/or its outputs, for example, through image manipulation, plagiarism or the generation of inaccurate narrative.

6. Integrity breaches relating to authorship

The University considers the **gifting of authorship** i.e. including an author who did not contribute to the research, as a breach of research integrity. This equally applies to anyone who is gifted authorship either from internal or external collaborations. Likewise, where an individual has made a substantial contribution, meeting the criteria listed in section 3, yet has not been included in the manuscript, this is considered **Ghost authorship** and will be viewed as a breach of research integrity. Research integrity breaches identified via published work will be considered under the Regulations Governing the Allegation and Investigation of Misconduct in Research.

Once agreed, the **authorship list/position** must not be changed during submission/revision without seeking agreement of all involved. Challenges to authorship list/position must be resolved at local level, bearing in the mind ethical and integrity implications for not publishing work that contributes to scholarly understanding of a topic.

7. Authorship roles

All authors accept accountability and responsibility for the full content of the manuscript/research output and the integrity of the research being reported. This is a shared role and extends to the text, figures produced, code written etc. The journal to which the manuscript/research output is being submitted to may have requirements for

specific authorship roles. This should be checked, understood and complied with before proceeding. For example, many publishers now require research data to be submitted to a data repository and issued a DOI, before the research output can be considered.

Normally, the author named as **corresponding author**, takes responsibility for submitting to the journal, and when possible, the repository of data. They are also responsible for any subsequent documentation requested by the journal, for example proof of ethical review, the details surrounding authorship, certain types of registration / pre-registration. The corresponding author will ensure all authors have approved the manuscript/research output. It is important that they meet the deadlines set, ensure the author's details are correct and take the lead in terms of open access.

In certain disciplines the concept of **first author** can be important, for other disciplines it is not relevant. Where it is pertinent the principles of research integrity should be applied when determining who should hold this position. Often it is the person or persons (where it has been an equal contribution to the research and in writing the results) who have undertaken the research and written/generated the manuscript, however, this can be dependent on a variety of factors. Respectful, open communication are necessary to minimise potential challenges to this process.

8. ORCID iDs

ORCID provides an identifier for researchers that distinguishes you and enables you to ensure the credit for your work is claimed by you. The University strongly encourages the use of ORCID as a unique identifier. Further information can be found here.

9. Authorship Disputes

Preventing disputes through early engagement is important. Where an internal authorship dispute occurs, involving research that is not yet published or presented, researchers should attempt to resolve the dispute at a local level**.** Records of conversations held and evidence of contributorship will be necessary to support the resolution process. Where it is not possible for the researchers to resolve the dispute, the matter should be referred to the Head of School or Institute/Centre Director to review and mediate an agreed solution.

Research outputs for which there is an unresolved authorship dispute should not be submitted for publication before consulting with the Head of School or Institute/Centre Director. Where there is a conflict of interest, an alternative Head of School or Institute/ Centre Director or the relevant Faculty Pro-Vice Chancellor should be asked to consider the dispute.

Where an issue arises in published research, it may be necessary to consider this under the procedures detailed in the University's Regulations Governing the Allegation and Investigation of Misconduct in Research. (All) those involved with concerns should raise the matter in writing with their Head of School or the Director of Research and Enterprise providing robust evidence to support their concerns.

If an external authorship dispute arises for published works and involves collaborators or contributors from another institution, the procedures for dispute resolution at the lead author's institution should be followed.

10. Publishing

Once completed it is important that research, including research data is disseminated. Reproducible science requires transparent reporting. However, it is also necessary to ensure **legal requirements** pertinent to your research are adhered to. These may form part of a collaboration agreements and/or Terms of Conditions of Funders. Areas for consideration include the following:

10.1 Export Control
Where researchers are working in sensitive technologies it is important to consider the risks in terms of export control (this should be considered at the start and throughout the lifetime of a study, especially if collaborating/working in partnership with researchers outside of the UK) and not at the point when it comes to publishing results. The intention to publish a paper containing controlled research **does not mean** it is in the public domain. Sharing research, in particular with peer reviewers, journals or publishers outside the UK as part of a publication process may require a licence.

It is the researcher's responsibility to ensure that they have assessed their work for export control implications, and where necessary have obtained the appropriate license(s).

10.2 Data Protection Legislation You must be aware of and comply with your responsibilities to protect any personal data you hold, either through your research, your collaborations or of your staff.

10.3 Open Access
It is best practice to make research data as open as possible but as closed as necessary, while embracing FAIR principles. The Library's Open Research Team provide support and guidance on Sensitive Data, Funder requirements, Data Management Plans, Copyright, Uploading Datasets to Pure and Storage Options for your Data.

10.4 IP
Where there is potential that Intellectual Property (IP) requires protecting, researchers should refrain from any form of publication or disclosure until the necessary protection has been secured, if appropriate.

10.5 Copyright/Self-Plagiarism
Once published (either in pre-print or following peer review) the publisher most likely owns the work. The University's Research Publication and Copyright Policy enables authors to retain ownership rights to their scholarly articles.

10.6 Good Practice when publishing

(i) Researchers must ensure that all publication and presentation of material arising from research is **correct and accurate**. If it subsequently becomes apparent this is not the case, the authors must take appropriate steps to correct the information, and if necessary, make a retraction, in all outlets the information has appeared in. Where appropriate, funding or external agencies should also be informed.
(ii) When publishing, researchers should **not misrepresent** their work by omitting information that changes the meaning or significance of their findings.
(iii) Researchers must **not manipulate or alter images** to create misleading results. Where images have been edited for adjustment or clarity it is vital researchers are honest and transparent as to this process.

(iv) Researchers should make every effort to disseminate research findings as clearly and as widely as possible, ensuring not to breach legal requirements in doing so. Consideration should also be given and adjustments made in terms of language accessibility to support the audience in their understanding of the results. This includes the **sharing of negative results** as appropriate.

(v) There may be occasions when a collaborator, funder, or interested party attempts to suppress results, for example concealing results perceived to be detrimental to their business. In such circumstances the issue must be raised with the Head of School or Institute/Centre Director and then the University will become involved to take the necessary action to counter the matter.

(vi) There may be occasions when you are approached to co-author a manuscript through an informal collaboration. It is important to ensure compliance with the requirements of Trusted Research, undertaking due diligence on potential collaborators, and ensuring personal and institutional reputations and future opportunities are not compromised.

10.7 Publishing results of animal studies

The University is committed to the Concordat on the Openness on the use of Animals in Research. It strongly encourages authors publishing work that involved In Vivo Experiments to be transparent of their use. It also requires collaborators to be open, however, this should have been negotiated as part of a contract/collaboration agreement. The ARRIVE guidelines (Animal Research: Reporting of In Vivo Experiments) provide a checklist of information that authors should include when describing In Vivio work. In turn, this enables readers to scrutinize the work.

10.8 Redundant/Duplicate publication and pre-prints

When relevant, research outputs can be published as a micropublication. There are platforms[1] that enable the step-by-step publishing of research progress. However, the University encourages work to be published as a coherent entity. Authors are responsible for ensuring they do not create redundant or duplicate publication(s) where a micropublication methods has been adopted.

Likewise, there are platforms that facilitate the immediate sharing of work. Pre-print platforms enable the early dissemination of work. It should be noted that this is before any formal peer review has been conducted. It is important to ascertain your chosen journal's policy on the use of pre-print platforms before use to ensure future publication is not made redundant. Only use recognised and reputable pre-print servers.

Redundant or duplicate publication, which is a publication that overlaps substantially with one already published elsewhere (in print or electronic media), is not good practice and should be avoided. There may be exceptions to this, such as a publication of a complete report that follows the publication of a preliminary report, or a paper presented at a meeting but not published in full or that is being considered for publication in a proceedings or similar format. When submitting a manuscript, the author should always make a full statement to the editor about all submissions and previous reports that might be regarded as redundant or duplicate publication of the same or very similar work. The author should alert the editor if the work includes subjects about which a previous report has been published. Any such work should be referred to and referenced in the new paper.

Researchers are encouraged to communicate their results to as wide an audience as possible. In this context secondary publication may be justified and can be beneficial.

[1] E.g. Octopus, Research Equals, microPublication Biology

For example, publication in another language or publication of a more accessible and widely disseminated report, might be appropriate. In this situation the approval should be with the editors of the publication outlets involved and the editor concerned with secondary publication informed.

10.9 Predatory Journals

In order to minimise falling foul of a predatory journal, i.e. one that is prioritising its own interests at the expense of scientific rigour, authors should select the right journal for the research being reported. Further information and tool kits to help identify predatory journals can be obtained from the "Think Check Submit" website, part of the Austrian Transition to Open Access Project that focuses on predatory publishing.

11. Pure

Pure is the University's current Research Information System and links to the Research Portal/Institutional Repository. Academic and research staff must ensure that details of publications in Pure are accurate. Researchers must ensure that information on the publication status is up to date (eg in press, published). Further information and guidance on the use of Pure and publishing your research can be found here.

12. Conflicts of Interest

Transparency is a key principle of integrity. Therefore, when publishing your work it is necessary to disclose any conflicts or competing interests that may be present. You must adhere to the journal's Conflict of Interest Policy. Considerations should include the financial relationships such as employment, consultancies, stock ownership, honoraria, paid expert testimony or personal relationships that may have biased the work. It is the responsibility of those involved in the research to identify and declare any conflicts of interest, whether legal, ethical, moral, financial, personal or other nature, so that it does not become a complicating or actionable issue. Further information can be found in the University's Register of Interests Policy.