



Guidelines on Publication Ethics and Authorship

1. Introduction

This guideline must be read in conjunction with the KAUST Policy of Research Integrity and the Singapore Statement on Research Integrity (2010).

2. Objective

The objective of this guideline is to provide a framework for international best practices in authorship, publications, and collaboration of research conducted by the KAUST research community¹, including:

- 2.1. To delineate the responsibilities of authorship of a manuscript submitted for publication.
- 2.2. To ensure that contributions by the KAUST research community are properly and fairly acknowledged.
- 2.3. To ensure an author is properly credited for their work and that they understand their role in taking accountability for its integrity.
- 2.4. To provide guidance on potential order of authorship in multi-author publications.
- 2.5. To provide guidance on the management of authorship issues of multi-authorship publications.
- 2.6. To establish the fundamental principles for the promotion of responsible conduct of all research undertaken by the KAUST research community in relation to authorship and publications.

3. Definitions²

- 3.1. **Author** - An individual who has made a direct and significant intellectual or scholarly contribution to research and its output and who has agreed to be listed as an author.
- 3.2. **Corresponding author** - The author who is, as agreed by all co-authors, responsible for communication between the publishers, managing communication between the co-authors, and maintaining records of the authorship agreement.
- 3.3. **Co-author** - An individual who is not the corresponding author but meets the criteria of author.
- 3.4. **Ghost authorship** - Where an individual meets the criteria for authorship but is not acknowledged as an author, for example, a research assistant or industry researcher.
- 3.5. **Guest, gift, or honorary authorship** - Where an individual who is named as an author but did not contribute to the design, research, analysis, or writing of the publication.
- 3.6. **Research Output or Publication** - A research output or publication communicates or makes available the findings of research that may be in hardcopy, electronic, or other forms. Examples of research outputs include journal articles, book chapters, books, conference papers or posters, reports, datasets, patents and patent applications, performances, videos, and exhibitions.

¹ As described in the paragraph 2 of the KAUST Research Integrity Policy

² Authorship: A guide supporting the Australian Code for the Responsible Conduct of Research. National Health and Medical Research Council, Australian Research Council and Universities Australia. Commonwealth of Australia, Canberra. (2019). Pg. 6

3.7. **Significant intellectual or scholarly contribution** - must include one and should include a combination of two or more of the following:

- a. conception and design of the project or output
- b. acquisition of research data where the acquisition has required significant intellectual judgment, planning, design, or input
- c. contribution of knowledge, where justified, including Indigenous knowledge
- d. analysis or interpretation of research data
- e. drafting significant parts of the research output or critically revising it so as to contribute to its interpretation.

This is the minimum threshold for authorship; however, some journals or disciplines may require a higher threshold. Researchers are strongly encouraged to be familiar with these requirements.

4. Fundamental Ethical Principles

KAUST endorsed the Singapore Statement on Research Integrity (2010). This internationally accepted Statement promotes 4 core principles and 14 responsibilities.

The four principles are:

- 4.1. **Honesty** in all aspects of research;
- 4.2. **Accountability** in the conduct of research;
- 4.3. **Professional courtesy and fairness** in working with others; and
- 4.4. **Good stewardship** of research on behalf of others.

Principle 3 of the Singapore Statement (above) generally applies to the conduct of research; however, this principle of '*fairness in the treatment of others*³' is specific to the context of authorship and publication practices. This principle requires researchers to give (authorship) credit to those who have contributed to the research and subsequent manuscript.

5. Authorship: Criteria and Eligibility

- 5.1. In general, authorship must be a true reflection of a significant intellectual or scholarly contribution to a research output.
- 5.2. Authorship credit should be based on substantial contributions to the conception and design, or acquisition of data, or analysis and interpretation of data; drafting the article or revising it critically for or important intellectual content; and final approval of the version to be published.
- 5.3. Acquisition of funding, collection of data, or general supervision of the research group, **alone**, does not meet the criteria for authorship.
- 5.4. Authorship must not be attributed when an individual has not made a significant intellectual or scholarly contribution to a research output or publication as this would result in ghost authorship.
- 5.5. If an individual is unwilling to be accountable for their contribution by being named as an author, then their contribution should not be included in the research output or publication.
- 5.6. To claim, demand, or accept authorship without having made a significant intellectual or scholarly contribution (ghost authorship) would constitute a breach of the KAUST Research Integrity Policy. It would also constitute a breach of the said Policy for an individual to offer or

³ Authorship: A guide supporting the Australian Code for the Responsible Conduct of Research. National Health and Medical Research Council, Australian Research Council and Universities Australia. Commonwealth of Australia, Canberra. (2019). Pg. 1

attribute authorship to someone who has not made a significant intellectual or scholarly contribution.

- 5.7. Postgraduate students, Core Labs Staff, and junior researchers such as postdoctoral fellows who have made a significant intellectual or scholarly contribution may also be entitled to authorship.

6. Order of Authorship

- 6.1. The order of authorship is contingent on the specific scientific discipline or professional standard, e.g., alphabetical or contribution-based.
- 6.2. For contribution-based names, the order of the names in a publication is typically decided according to the:
 - a. quality of the contribution;
 - b. extent of the responsibility and accountability for the results; and
 - c. customs of the discipline.
- 6.3. The order of authorship should be discussed amongst members at the onset of the research project.

7. Affiliation

- 7.1. The primary affiliation for each author should be the institution where the majority of the research was conducted or work was done. If an author has subsequently moved, the current address may also be stated⁴.
- 7.2. Researchers should use their affiliation that applied when the manuscript was being prepared or when and where the research was undertaken⁵.

8. Artificial Intelligence (AI)⁶

- 8.1. The use of AI tools such as ChatGPT or Large Language Models in research publications is expanding rapidly. KAUST supports the position statement by the Committee on Publication Ethics (COPE) that AI tools cannot be listed as an author of a paper.
- 8.2. AI tools cannot meet the requirements for authorship, as they cannot take responsibility for the submitted work. As non-legal entities, they cannot assert the presence or absence of conflicts of interest nor manage copyright and license agreements.
- 8.3. Authors who use AI tools in the writing of a manuscript, production of images or graphical elements of the paper, or in the collection and analysis of data, must be transparent in disclosing in the Materials and Methods (or similar section) of the paper how the AI tool was used and which tool was used.
- 8.4. Authors are fully responsible for the content of their manuscript, even those parts produced by an AI tool, and are thus liable for any breach of publication ethics.

⁴ <https://www.nature.com/nature-portfolio/editorial-policies/authorship>

⁵ https://service.elsevier.com/app/answers/detail/a_id/34306/supporthub/publishing/

⁶ <https://publicationethics.org/cope-position-statements/ai-author>

9. Acknowledgements

- 9.1. Researchers must acknowledge KAUST funding as follows: "Research reported in this publication was supported by the King Abdullah University of Science and Technology (KAUST)".
- 9.2. Researchers should acknowledge the names and roles of those who contributed to the research (e.g. KAUST, Core Labs, sponsors, and others), but do not meet authorship criteria. For example, when research is conducted using Core Labs resources, the following acknowledgment should be included in the publication: *"This research made use of the resources of the Core Labs at King Abdullah University of Science & Technology (KAUST)"*⁷.
- 9.3. Any other contributions might be indicated in a footnote or in the "Acknowledgements" section in accordance with the standards of the discipline and the publisher or journal.

10. Responsibilities

- 10.1. The responsibility of KAUST is to ensure that:
 - a. Policies and Procedures, such as the Research Integrity Policy or guidelines, are in place to facilitate a potential research misconduct associated with the authorship dispute.
 - b. Provide appropriate training to KAUST research community.
- 10.2. The Researcher:
 - a. Researchers should clearly state KAUST as their primary affiliation in any of their publications. See Appendix I.
 - b. Researchers are expected to make a reasonable effort to publish the results of their research in some form of recognized academic media.
 - c. Researchers should take responsibility for their contributions to all publications, funding applications, reports and other representations of their research. Lists of authors should include all those and only those who meet applicable authorship criteria⁸. [See section 5 above for the authorship criteria].
 - d. The corresponding author is responsible for:
 - i. submitting the manuscript for publication;
 - ii. ensuring the list of authors meets the journal's criteria for authorship;
 - iii. send each co-author a draft copy of the manuscript;
 - iv. should make a reasonable attempt to obtain consent to co-authorship; and
 - v. any other contributions are included in the "Acknowledgements" section.

11. Best Practices

- 11.1. Researchers should discuss authorship issues frankly and early in the course of their work together.
- 11.2. The best practice is to have a written Authorship Agreement (see Appendix II) between all parties concerned. This agreement is based on consensus prior to the commencement of the proposed research. In addition, a Scoresheet (see Appendix III) could be used to determine the order of authorship.

⁷ Research Computing Resource Allocation Procedures, pg. 2. Date Issued: October 14, 2015

⁸ Singapore Statement (2010). Pg. 2

- 11.3. A person who qualifies as an author should not be included or excluded without their written agreement. Each author in a timely fashion should provide this written agreement (as cited in 10.1. above). A record of each written agreement should be kept.
- 11.4. If an author is deceased, this should be noted in the publication.
- 11.5. Authorship contribution might change during the course of a research project. Hence, that is why continuous communication about authorship contribution is crucial to avoid potential authorship disputes.
- 11.6. Researchers should familiarize themselves with journal requirements, for example, authorship definition, use of AI, affiliation, order of authorship, etc.

12. Dispute resolution

- 12.1. The dispute resolution procedure provides for a graduated method of dealing with disputes about authorship, for example:
 - a. Bring the dispute to the attention of the corresponding author(s).
 - b. The co-authors are expected to resolve the dispute amongst themselves.
 - c. Failing resolution at this level, the matter may be referred upwards to the Head/Lead of the research team, unit, or faculty who should use the criteria as outlined in this guideline to attempt to resolve the dispute.
 - d. Failing resolution at this level, the matter may be referred upwards to the Dean.
 - e. If at any point during the course of the authorship dispute resolution a potential research misconduct is identified, please refer to the KAUST Research Integrity Policy.

13. References

- 13.1. KAUST Policy of Research Integrity, 2022.
- 13.2. Research Computing Resource Allocation Procedures, 2015.
- 13.3. Singapore Statement on Research Integrity, 2010.
- 13.4. Authorship: A guide supporting the Australian Code for the Responsible Conduct of Research. National Health and Medical Research Council, Australian Research Council and Universities Australia. Commonwealth of Australia, Canberra, 2019.
- 13.5. UK Research Integrity Office: Good practice in research: Authorship, 2017.
- 13.6. Masud N, et al. Development and Validation of Authorship Order Score (AOS) for Scientific Publication. Health Professions Education. (2020). Vol. 6, 434-443.

14. Help

For questions about this guidance document, please contact research.compliance@kaust.edu.sa.

Appendix I: Examples of Primary and Multiple Affiliation

King Abdullah University of Science and Technology (KAUST),
Division Name (Acronym),
 (+ Program/Initiative name if wished)
and/or
Center Name (Acronym),
and/or
Core Laboratory Name,
Thuwal, 23955-6900, Saudi Arabia

Examples of multiple affiliations

Should it be necessary for a researcher to indicate that he/she is also affiliated with an institution outside KAUST, such information may be included in separate lines that **follow** the KAUST listing.

Correct	Incorrect
FirstName LastName ^{[a], [b]} [a] King Abdullah University of Science and Technology (KAUST), Advanced Membranes and Porous Materials Center (AMPMC), and, Physical Science and Engineering Division (PSE). Thuwal, 23955-6900, Saudi Arabia [b] Ohio State University, Department of Chemistry and Biochemistry, 100 West 18th Avenue Columbus, OH 43210-1173	FirstName LastName ^{[a], [b]} [a] Ohio State University, Department of Chemistry and Biochemistry, 100 West 18th Avenue Columbus, OH 43210-1173 [b] King Abdullah University of Science and Technology, Advanced Membranes and Porous Materials Center, Physical Science and Engineering Division, Thuwal, 23955-6900, Saudi Arabia

Appendix II: Authorship Agreement**Research project:****Title of publication:****Proposed order of authors for this publication (add rows as required):**

1.
2.
3.
4.
5.

The corresponding author for this publication is:

.....

Details of authors' contributions/responsibilities/roles (add rows as required):

Author 1 (Add name)	
Author 2 (Add name)	
Author 3 (Add name)	
Author 4 (Add name)	
Author 5 (Add name)	

In addition, each author agrees to:

1. Adhering to the KAUST Guideline for determining the order of authorship
2. If authors cannot resolve the matter amongst themselves, then the decision of the Dean is final and binding.

Confirmation of this agreement and to the listing order in the above publication (add rows as required):

Author 1	Signed	Date
	Name	
Author 2	Signed	Date
	Name	
Author 3	Signed	Date
	Name	
Author 4	Signed	Date
	Name	
Author 5	Signed	Date
	Name	

Appendix III: Example of a Scoresheet for Authorship Order⁹

No	Items	Weight	Author #1		Author #2	
			Contribution Factor	Score	Contribution Factor	Score
2	Study concept/research question	9				
7	Literature review	8				
5	Identifying aims and objectives	8				
4	Study design	9				
12	Instrument selection or construction	7				
3	Proposal writing	9				
10	Data collection	7				
11	Data management	7				
9	Statistical analysis	7				
6	Interpretation and finalization of results	8				
1	Manuscript writing	9				
8	Editing and critical revision of manuscript	7				
13	Correspondence with journal	5				
Total Score out of 100:		100				

Author contribution	Factor	Score calculation
No contribution	0	(Weight X 0)/2
Partial contribution	1	(Weight X 1)/2
Full contribution	2	(Weight X 2)/2

Calculating Author Score:

The weight multiply by the author's contribution and divided by 2 will result in the author's score, which adds up to a total score out of 100.

Guidance on managing equal contribution:

When more than one author has an equal score after the application of this criteria, this might lead to a difficult situation when deciding which of those authors should be first. This is called equal contribution. The issue of equal contribution should be managed with fairness, for example, by counting the number of items (1-13 in the score sheet above) to which the contributions were made. If one author contributed to 9 items, but the other contributed to eleven items, the author contributing to more items should be considered higher in order of authorship.

⁹ Masud N, Masuadi E, Moukaddem A, Omair A, Mohamud M, Al Dubayee M, Althubaiti A, *et al.* Development and Validation of Authorship Order Score (AOS) for Scientific Publication. *Health Professions Education* 6 (2020) 434-443.