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Fair Attribution Practice

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Aims of today

1. Shared understanding of fair authorship practice and the common differences between author and acknowledgement

2. Benefits of using the CRediT taxonomy to capture research contributions

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What is an author?

No universal definition, but usually means:

1. Substantial contribution to the work
2. Responsibility for your contribution and integrity of the work
3. Meeting the journal requirements for authorship

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UofG (and SUERC) authorship criteria

Authors are expected to meet the following 4 criteria:

1. Substantial contributions to the conception or design of the work; or the acquisition, analysis, or interpretation of data for the work; AND

2. Drafting the work or revising it critically for important intellectual content; AND

3. Final approval of the version to be published; AND

4. 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.

[Source: UofG Code of Good Practice in Research; based on the ICMJE guidelines]

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UofG: Acknowledgements



"**All individuals** who make a substantial contribution to a paper must be listed on the publication"



"Contributions to the work that **do not qualify for authorship** must be **acknowledged formally"**



"Authors are responsible for obtaining **written permission** from persons acknowledged by name"



"Financial support from **funders and sponsors** that has directly supported the research must also be acknowledged"

Source: UofG Code of Good Practice in Research

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Fair Attribution Decisions

- Appropriate recognition of contributions from everyone involved in the research, including non-academics

- Increased awareness of the importance of this:
  - UKRIO advise that "individuals who have not traditionally been offered authorship opportunities are recognised when their contributions meet the chosen criteria"
  - Includes: technical staff, data specialists, librarians, community partners (e.g. patients, carers, creative practitioners)

[Source: UKRIO Good Authorship Practice Guide]

SUERC publications policy

1. If the SUERC PI thinks that a technical contribution may lead to authorship, this is discussed at an early stage in the project within the research team.
2. The SUERC PI promotes sharing and contribution to paper drafting across the co-authors
3. All authors agree on the final submitted version and accept responsibility for the published version

Where the threshold of authorship has not been met but there is a contribution to be recognised, it is expected that normal practice will be to recognise SUERC technical contribution in the formal acknowledgments sections of the output.

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Bad authorship practice

- Ghost authorship (meeting authorship criteria but omitted from authorship list)
- Gift authorship (authorship without meeting criteria, often as a favour)
- Guest authorship (authorship without meeting criteria, often to add prestige or impact)

Discussion 1

- *Discuss the work that you do with others*
- *What do you think is the key difference between authorship and acknowledgement?*
- *Where do you think technical staff could potentially meet the threshold for ‘**substantial contribution**’?*

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Scenarios for technicians: U of Southampton

When they think technicians merit authorship (= 'intellectual contribution' AND taking accountability for the accuracy and integrity of the data):

- Designing experiments, custom equipment, software, or script
- Developing new data generation or analysis methodology
- Interpreting data
- Significantly redeveloping existing methodology or equipment to suit new sample types or research questions

...and formal 'Acknowledgements' on a paper:

- Performing instruction-led acquisitions of data or routine sample preparations
- Monitoring and maintaining experiments or equipment
- Laboratory supervision of a research student

[Source: University of Southampton 'Technicians and Publications: Fair Attribution Guidance']

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Royal Microscopy Society recommendations

Source: https://www.rms.org.uk/resources/publication-policies-and-guidelines.html

Example scenarios with baseline recommendations:

Sample Preparation	Fast, routine sample preparation with standard protocol.	Simple acknowledgement
	Development of new sample preparation protocols. Optimisation of existing protocols for specific samples.	Inclusion of specific facility member on author list
Image Acquisition	Training of users to acquire images themselves. Simple acquisition of raw data.	Simple acknowledgement
	Operational image acquisition with input and decisions dependent on expertise. Design or re-design of experimental conditions.	Inclusion of specific facility member on author list
Image Analysis	Recommendation of analysis software and tools. Basic data analysis help and advice.	Simple acknowledgement
	Constructive data analysis and interpretation. Creation of complex custom image analysis tools.	Inclusion of specific facility member on author list

Based on the publication policy compiled by Natasha Stephen, Plymouth Electron Microscopy Centre, after discussions with the RMS EM-UK community

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UofG Cellular Analysis Facility (CAF) Publications Policy

Developed by CAF to encourage appropriate credit for the work of the Centre and individual staff. There are 3 scenarios:

1. If the researchers use the equipment: acknowledge the Facility
2. If the researchers had help from an individual at the facility: acknowledge individual at the facility
3. If the individual provided more than 'just routine techniques': potential for co-authorship in papers

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Cellular Analysis Facility (CAF) Publications Policy

Work that could potentially merit co-authorship:

- Development or adaptation of protocols to suit sample materials
- (Re)designing experiments
- Extensive data analysis and interpretation

Discussion 2

- *Now that we've discussed some scenarios, could this also be applied to the work at SUERC?*

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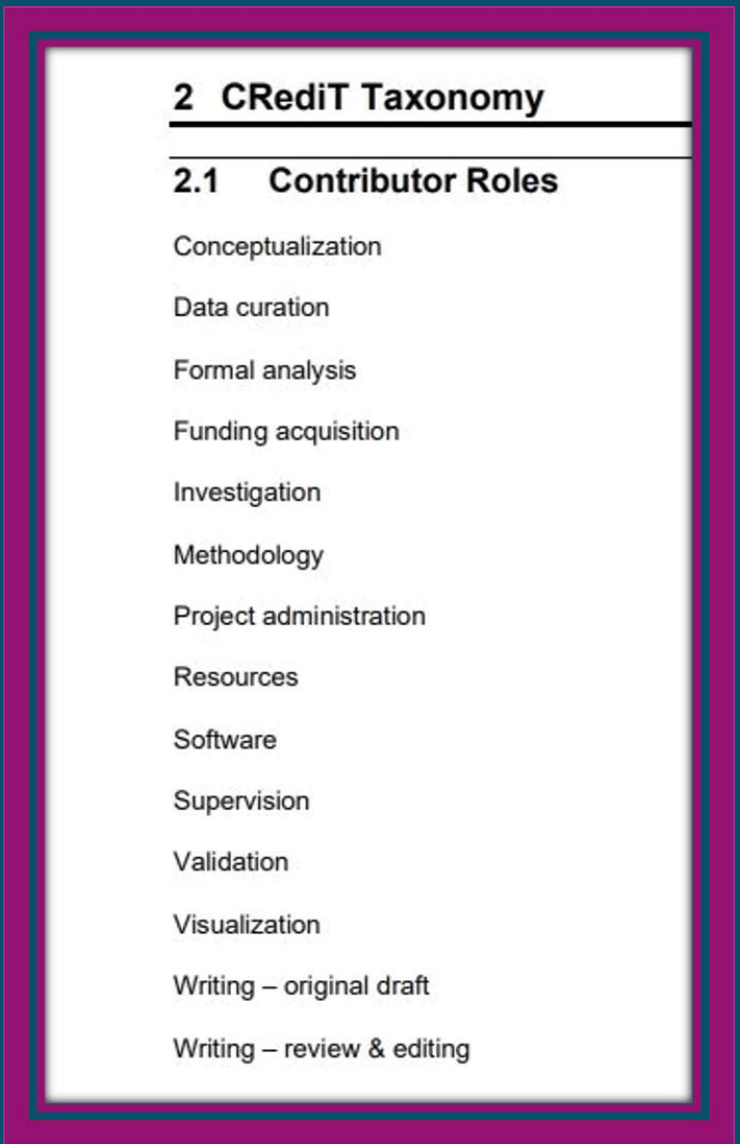
The Contributor Roles Taxonomy (CRediT)

- International standard to describe individual contributions to research publications
- CRediT website: https://credit.niso.org/
- 14 roles covering a diverse range of tasks in research
- A CRediT role doesn't mean authorship
- UofG expects a CRediT statement on publications [Code of Good Practice in Research]
- Adopted by many academic publishers – shown as a 'contributor statement' e.g. from this SUERC article:

Author contributions

FME: data curation (lead), formal analysis (lead), investigation (lead), methodology (lead), resources (lead), software (lead), writing – original draft (lead), writing – review & editing (lead)

[Article link: 10.1144/sjg2025-005]



2 CRediT Taxonomy

2.1 Contributor Roles

Conceptualization

Data curation

Formal analysis

Funding acquisition

Investigation

Methodology

Project administration

Resources

Software

Supervision

Validation

Visualization

Writing – original draft

Writing – review & editing

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Benefits of CRediT

- Visibility of individual contributions to the research
- Supports fair attribution and recognition
- Provides evidence of skills for professional development
- International standard and adopted by many publishers
- It's not a perfect solution! (But it can help in conversations about contributions to research)

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How does CRediT work in practice?

- Researchers discuss expectations using CRediT to map contributions
- These roles are agreed and reviewed during the project
- CRediT roles can be used in decisions about who meets the authorship criteria
- CRediT statement is added to the publication at the submission stage
- The CRediT contributor list is published in the article

Discussion 3

- *Looking at the CRediT handout, can you map (or find a close match!) to the work that you do?*
- *Do you think CRediT is useful?*

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Quotes from UofG academic staff

“I was inspired by the formal integration of the CRediT taxonomy. In my field, the line between technical support and intellectual contribution can often be blurred. I have previously seen technicians feel their specialized work was overlooked in the final author list. Action: I will use CRediT to set explicit expectations early, ensuring every contributor’s role is recognized and tied to their specific responsibility."

"I am also heartened to see the inclusion and discussion of technicians and other staff members as vital parts of research; definitely often overlooked!”

“I had not previously considered the distinctions between authorship and acknowledgement for technician contributions before so this is something I will consider going forward and newly working alongside some technicians.”

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Positive changes in the wider sector

- UKRIO Authorship Guidance and Toolkit
- Research Excellence Framework (SPRE)
- New UKRI Research Data Policy:

Providing acknowledgement and recognition

To support recognition, visibility and citation, the contributions of those involved in generating, processing, analysing and curating data and research-relevant digital objects must be appropriately acknowledged and recorded in dataset metadata, research publications and other research outputs.

Clear and permanent references to contributions should be provided in publications, for example using a recognised taxonomy such as the Contributor Roles Taxonomy (CRediT).

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Relevant work at UofG

- Research Culture Action Plan (recognition of research professionals)
- Technician Commitment
- InFrame RELAX Project
- Research Integrity central team: Research Integrity course for staff, UofG Authorship & CRediT guide, sessions for staff and PGR students about fair authorship and attribution practice
- Good Research Practice Champions & Advisers (role in promoting good research practice locally)

Discussion 4

- *With the information we've covered today, is there anything you will now do differently?*
- *Do you feel more confident in raising the topic with PIs or lab managers? (If so, what questions might you ask them?)*
- *Are there any grey areas that you think need further discussion?*

Q&A (with Prof. Derek Fabel)

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Takeaways

- Formal guidelines
  - Code of Good Practice in Research covers expectations for authorship, acknowledgement and use of CRediT
  - SUERC Publications policy
- University-level practical guidance
  - Guide to Good Authorship Practice & Adopting CRediT
- Fair attribution decisions
  - Recognises the contributions from everyone involved
  - Example scenarios can give clarity on authorship or acknowledgement
  - CRediT can raise visibility of contributions and support discussions

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Thank you!

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