Sharing Research Results

Why write peer-reviewed papers?
  Claim priority for discovery
  Allow use of results by others (with citation)
  Better documentation of preliminary results -
    (posters, abstracts, conference talks)
  Peer review provides quality control

How should authorship be determined?
“Young” scientists are concerned about authorship:

Ethics and the Welfare of the Physics Profession.
Kirby and Houle (2004), Physics Today.
Results of a survey of junior members of APS.
Duncan’s Reference Database
600-1000 papers/decade
Who has authored a peer reviewed paper?

How many have been first author? How was that status earned/achieved?

How many thought they should have been and were not?
What warrants authorship?

It was my idea!
I wrote the proposal!
You used my code!
I ran a model for you!
You used my data!
You used my lab! my equipment! myspace!
I spent all last year working on this (even though it didn’t work)!
Who should be first author?

the student?
the advisor?
the person who wrote the paper?
the person who got the work funded?
the person who did most of the work?
the head of the lab?
can technicians be authors?
What constitutes most work?

the greatest amount of time on the project?
the greatest intellectual input?
the key idea(s)?

Who did what?

some journals want to know
sometimes your promotion depends on being able to define your contribution
Author’s contributions: S.C. conceived the experiment, obtained funding, provided instrumentation, was chief scientist on the cruises, and co-wrote the letter with G.H. In addition, G.H. provided instrumentation, processed long period MT data, and supervised D.R., who carried out 2D MT modelling. J.B., supervised by S.C., processed the EM data, carried out the EM inversions, and assisted with the experimental work. K.K. processed short period MT data, contributed to the 2D modelling, and assisted with the experiments. L.M. provided the transmitter for the EM experiment, and assisted with the cruises. M.E. provided computer code to model EM anisotropy, and assisted with the experimental work.

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CSE says Authorship Credit requires all of the following:

(1) substantial contributions to conception and design, or acquisition of data, or analysis and interpretation of data;
(2) drafting the article or revising it critically for important intellectual content;
(3) final approval of the version to be published.
There are three ways to acknowledge contributions:

Offer an authorship (it need not be accepted).
Provide an acknowledgement.
Cite the work.

The boundaries can be difficult. For example..

If a you used a computer code that was not yet published and the owner gave you a lot of help, an offer of authorship is probably appropriate.

If a paper about the code is published, but you got the code from the author and ran it without help, an acknowledgement may be enough.

If you downloaded code from a public web site, a citation may be sufficient (but an acknowledgement would be appreciated and costs little).
How many authors should there be?

“Honorary” authorships should be discouraged. They should not be offered, and they should not be accepted.

Generally, the person who does the writing should be first author (corollary: the first author has an obligation to do the writing).

It is best to come to a working agreement before anyone starts writing. The authorship can be changed (by mutual consent) as the project develops.

No “ghost” or “guest” authors - misleading to readers
Your responsibilities as an author:

Do
Tell all authors that you are including them
Send every author a copy of the submitted ms
Send them the reviews when they come in
Read any paper you have been made author of -
you are responsible for all the content.

Don’t
Submit a ms without giving all authors chance to
comment - they are also responsible for content
Abstracts and Seminars versus papers:

Are the standards for authorship the same?

Should you submit an abstract without telling your co-authors, and/or allowing them to review it?

What if you give a seminar using results of collaborative work?
Peer Review - a gift that is reciprocated

Purpose
Responsibilities
Confidentiality
Anonymity

Who has reviewed papers?
Peer Review - a gift that is reciprocated

**Purpose**
- allow editor to determine acceptability of manuscript and send opinion plus reviewer reports to authors with decision
- allow authors to improve manuscript... style, data presentation, more experiments, etc.

Responsibilities
Confidentiality
Anonymity
Peer Review ...

Responsibilities
- decide whether you are qualified to review the ms
- evaluate deadline, can you meet it?
- check for complete ms, conflict of interest
- tell the editor ASAP if you cannot review the ms
- no personal comments or criticism of authors
- provide written report on clarity, conciseness, and relevance of ms, rating its accuracy, originality and interest to readers
- ensure article cites relevant work by others
- recommend acceptance or rejection
Peer Review ...

Purpose
Responsibilities
Confidentiality
  -ms is confidential, not for using or sharing
  -no direct contact with authors
Peer Review ... a subjective process?

**Anonymity**

Reviewers may
- take advantage of confidential information
- show bias
- be under-qualified
- abuse position because of lack of accountability

or not?

Reviewers may fear animosity or vengeance making them less critical or impartial

**What about complete transparency?**
- publish the peer review file?
- open peer review (anyone can comment)?

**Double blind peer review?**
- difficult to conceal author identity
Sharing results:

There is an obligation to publish - someone is paying you to do research with the assumption that you will share your results. Value of data is lost when results are not communicated.

If you publish an analysis of a data set, it is nice to make the data available so others can reproduce your work - some funding agencies require this.

Code is tricky. Personally, we don’t like to read papers on results from running code that is not publicly available. But, the University may hold copyright and want to license code to generate revenue. A balance may be to distinguish between academic and commercial use.