

Guidelines for the Investigation of Research Misconduct

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Introduction

This document presents a set of guidelines and advice for American Physical Society staff in the investigation of allegations of research misconduct related to APS journals.

The [APS Guidelines for Professional Conduct](#) describe many of the instances of possible misconduct. Another useful reference is the [APS Statement on Policies for Handling Allegations of Research Misconduct](#) and its appendix: the (U.S.) [Federal Guidelines on Research Misconduct](#), which state that a finding of research misconduct requires a significant departure from accepted practices of the relevant research community, that the act be committed intentionally and that the allegation be proven by a preponderance of the evidence.

Given the large number of articles submitted, APS will not and cannot proactively examine each for evidence of misconduct. Instead we rely on everyone (authors, referees, editors and others) involved in the editorial process to safeguard its integrity and to alert us to possible misconduct when and if it appears. APS will take such allegations seriously and will take steps to examine their validity.

Allegations of research misconduct are usually in the following categories:

- Plagiarism, either pre- or post-publication
- Duplicate submission or publication, in more than one journal
- Misconduct by referees (e.g., deliberate delay or misuse of privileged information)
- Improper assignment of credit or authorship (omission of those who should be authors, or inclusion of those who should not be authors)
- Fabrication or falsification of data
- Financial or institutional conflict of interest

Generally for cases of plagiarism, duplicate submission, and referee misconduct, APS will carry out the primary investigation, although the individual's institution may be informed or asked to carry out a further inquiry. For misconduct related to authorship or fabrication of data the responsibility for investigation lies with the institution of the accused individual. An appropriately high level official (e.g., a department chair or a dean) at the institution should be contacted, presented with the allegation and such evidence as is to hand, and asked to undertake an investigation and to keep the APS informed of progress. This may not always be possible, given the international nature of the APS publications and the fact that there is no globally accepted standard for conduct of research or for response within an institution when a researcher is found to have engaged in misconduct. In such a case the investigation should be carried out by the APS with, as needed, the appointment of outside consultants.

Investigation and Adjudication of Allegations of Misconduct:

On suspecting misconduct or receiving an allegation thereof, the journal editor should consult the Editor-in-Chief and the Editorial Director to discuss the steps proposed, and keep them fully informed of the investigation's progress. The individual editor is not empowered to impose sanctions. The Editor-in-Chief should take the ultimate role in the resolution and adjudication of apparent misconduct. Consideration of cases begins and ends in the Editorial Office except in cases where the Editor in Chief may decide to go to external consultants.

0. Initial Considerations and Steps: The professional reputation of an individual may be severely and perhaps irreversibly damaged by an accusation which, in the end, may prove to be unwarranted. To protect against this the following considerations and steps are recommended:

- Presumption of innocence but an obligation to investigate
- If indicated, freeze action on any papers involved
- Strict observation of confidentiality, fairness, and impartiality
- Maintenance of file of communications, documents, and other materials related to case
- Prompt resolution, but not at the expense of fairness or confidence in process

1. Inform the Parties: The next step is to conduct rapid preliminary research, inform the involved parties of the existence of the problem and what is known, state that investigation is pending, and (if indicated) that papers will be held until the situation is resolved. In cases where an honest mistake or miscommunication has caused the problem, this may be all that is required. A plausible explanation and perhaps an apology is offered by the accused and the Editor-in-Chief sends a written reprimand if warranted.

When the referee is involved/accused, particular attention to preservation of confidentiality is required. Contacting the referee's institution may or may not be advisable. The identity of the referee is never confirmed or denied to an author, even when evidence is irrefutable.

2. Research: If initial inquiry does not resolve the situation, further research may be required, such as: preparation of a dated summary of events; review of internal records if the situation concerns a paper already published or considered by Physical Review; obtain pertinent papers that appeared in other journals; and/or consultation of editors of other journals.

3. Results: *If misconduct is not apparent,* contact individuals involved, thank them for patience and apologize for any delay in processing of paper(s). The case record is sealed unless the accused wishes his or her exoneration to be made public. This step could be taken in unusual cases, but only when it would not discourage future reporting of possible or suspected misconduct.

If misconduct is apparent, contact individuals involved, summarize research and evidence, and explain what the case appears to be. Ask for any further information or clarification. Explain actions that will

follow if no exculpatory information is received. Suggest acceptable responses or alternatives for the individual believed to have engaged in misconduct.

4. Resolution in event of determination of misconduct: If no information is forthcoming that would change a determination of misconduct, contact laboratory heads or department chairs of individuals suspected of misconduct, inform them of case, and ask that they invoke their own procedures for further investigation or discipline. Contact legal counsel if appropriate. Issue any errata or editorial notes that are necessary. Possible database flagging of referees involved, or addition of author to alert list for scrutiny of future submissions.

Special steps in the case of published plagiarism: These steps may be followed when plagiarized material has appeared in Physical Review or when Physical Review material is plagiarized in another journal.

- Inform the other journal immediately and commence rectification process.
- The plagiarized paper may remain in the journal's electronic version, provided that it has a significantly visible notice of the plagiarism appearing above the abstract in the article itself and in the table of contents. The offended journal (PR or another journal) should be consulted on the wording of the notice.
- An editors' note or retraction appears as soon as possible in the print version of the journal and in the electronic version, with a link back to the article in question and a link forward from the article to the note or retraction.
- As above, the plagiarizing author's laboratory head or department chair is informed

In conclusion, it is important to note that the guidelines in this document are intended to assist Editorial Office staff in the resolution of allegations of misconduct. No set of instructions can fully cover the variety of situations that may arise. A cautious, thoughtful and consultative approach is called for in these cases.