Summary of APS Ethics Guidelines

(*Adopted by the APS Council on 10 April 2019; https://www.aps.org/policy/statements/summaryethics.cfm*)

As citizens of the global community of science, physicists share responsibility for its welfare. The success of the scientific enterprise rests upon two ethical pillars. The first of them is the obligation to tell the truth, which includes avoiding fabrication, falsification, and plagiarism. The second is the obligation to treat people well, which prohibits abuse of power, encourages fair and respectful relationships with colleagues, subordinates, and students, and eschews bias, whether implicit or explicit.

I. THE RESEARCH RECORD AND PUBLICATIONS

RESEARCH RESULTS: Falsification, fabrication, or omission of data with the intent to mislead or deceive is an egregious departure from the expected norms of scientific conduct, as is the theft of data or other research results.

AUTHORSHIP: Authorship should be limited to, and should not exclude, those who have made a significant contribution to the concept, design, execution, or interpretation of the research study.

REDUNDANT PUBLICATION: Redundant publication occurs when two or more papers by the same author share the same hypothesis, data, discussion points, and conclusions. Re-publication of previously published results or verbatim text is not acceptable unless the publication is intended to be and is clearly represented as a review article.

PLAGIARISM: Plagiarism is the unreferenced use of others' published and unpublished ideas, data and writings. Plagiarism is never acceptable.

PEER REVIEW: Peer review can serve its intended function only if the members of the scientific community are prepared to provide thorough, fair, and objective evaluations based on requisite expertise. All steps in the peer review process should be executed as expeditiously as possible. Privileged information must be kept confidential. Reviewers should disclose conflicts of interest.

REFERENCES IN SCIENTIFIC COMMUNICATION: Authors of papers and other scientific communications have an obligation to include a set of references that indicates the precedents, sources, and context of the reported work.

II. POLICIES FOR HANDLING ALLEGATIONS OF RESEARCH MISCONDUCT

Each institution and organization establishes its own policies and procedures for handling allegations of misconduct, in compliance with legal requirements. APS members are expected to be aware of and fully adhere to and support these policies and procedures to uphold the integrity of their institution and the broader scientific enterprise. A person who witnesses a colleague engaging in research misconduct is obligated to act in accordance with institutional requirements, and to ensure those whom they supervise are aware of these policies.

III. TREATMENT OF COLLEAGUES AND SUBORDINATES

EXPLICIT, SYSTEMIC, AND IMPLICIT BIAS: The APS specifically rejects discrimination based upon race, color, national origin, sex, religion, disability, age, gender identity, sexual orientation, and political ideology. Discrimination results from bias, which can be explicit, systemic, or implicit. Explicit bias occurs when conscious attitudes or beliefs about a group of people manifest themselves in discriminatory speech or action. Systemic bias occurs when policies, procedures, and practices of an institution result in the exclusion of some groups, and the promotion of others. Implicit bias occurs when an individual has a preference for, or aversion to, a group of people, or a member of the group, without conscious knowledge. The APS strongly encourages members to participate in efforts in their workplace designed to counteract explicit, systemic, and implicit bias and reduce discrimination.

HARASSMENT: Harassment is disrespectful behavior of any kind with the intent or effect of humiliating and controlling another person. It can include verbal and physical interactions, and display or circulation of written materials or images. Behaviors include, but are not limited to, requests for sexual favors, unwanted touching, persistent unwanted attention, and unwanted sexual advances. Observers of harassment have an obligation to report instances to the appropriate institution.

TREATMENT OF SUBORDINATES: Subordinates should always be treated with respect and with concern for their well-being. Contributions of subordinates should be properly acknowledged. Mentoring of students, postdoctoral researchers, and employees with respect to intellectual development, professional and ethical standards, and career guidance, is a core responsibility for supervisors.

CODE OF CONDUCT FOR MEETINGS: Creating a supportive environment to enable scientific discourse at meetings such as conferences and workshops is the responsibility of all participants. Participants need to treat each other with respect and consideration to create a collegial, inclusive, and professional environment that successfully advances physics. This responsibility encompasses both formal sessions and informal interactions in connection with

the meeting. The policy of the APS is that violations of this code of conduct at its own meetings will not be tolerated, and the APS will pursue an appropriate course of action if complaints are received.

IV. RESPONSIBILITIES TO THE PROFESSION

SOCIAL MEDIA: Social media communications should be accurate and not misleading, regarding both their content and correct attributions to prior work when appropriate. Claims of impacts to science, technology, and society beyond those that have been rigorously established should be avoided.

ETHICAL USE OF PUBLIC FUNDS: The acceptance of public funds comes with the expectation that these funds will be spent in a manner that upholds the public trust in science and in the physics community. All research funding sources must be accurately reported. The time devoted by research personnel to research activities must accurately reflect the funding.

CONFLICTS OF INTEREST AND COMMITMENT: Conflicts or potential conflicts of interest must be fully disclosed. Conflicts of interest relevant to the publication process must be declared to editors by researchers, authors, and reviewers. Conflicts of commitment include acceptance of projects or roles that are beyond one's available time and resources, and should be avoided.

V. IMPROVING EDUCATION FOR PROFESSIONAL ETHICS, STANDARDS, AND PRACTICES

Education in professional ethics is an essential part of science education. Scientists must ensure the integrity of data, analysis, and presentation of results. Scientists must treat students and colleagues in an ethical fashion. It is part of the responsibility of all scientists to ensure that all their students receive training that specifically addresses this area. The APS will develop, maintain, and disseminate materials to support this training.