TWAS - The World Academy of Sciences
Code of Conduct for Fellows and Young Affiliates

1. Introduction

This Code of Conduct is applicable to all TWAS Fellows and TWAS Young Affiliates Network (TYAN) members, hereafter referred to as "TWAS Members". It embodies the Academy's expectations of ethical conduct. The ethical behaviour of TWAS Members should be an example, both for other scientists and society as a whole. They are expected to act responsibly towards society as disseminators and defenders of science, and to promote adherence to scientific methods.

The concept of academic ethics in the sciences refers to a broad set of standards and values that govern the practice and regulation of scientific activities. They include the duty of honesty in the practice of science as well as responsibility to colleagues, other people, living beings as a whole, the environment and society in the broadest sense. Society trusts that the results of scientific activity are based on research conducted honestly and conscientiously by members of the scientific community, and TWAS Members must live up to that trust. TWAS Members are expected to promote these ethical standards in their work and professional interactions.

TWAS Members should refrain from presenting their personal opinions, not based on scientific principles, as scientific facts in any official capacity. They are not permitted to speak on behalf of the Academy or give an opinion in its name, even if scientifically correct, unless specifically authorised by the Academy.

For the purpose of this code of conduct, we refer to "research outputs" as any research finding that is expressed via manuscripts, data, code, software, documents, devices, digital media or any other medium.

2. Conduct of research

The goal of all academic activity is the production of trustworthy research. Its basis is scientific integrity. TWAS Members are responsible for putting the fundamental values and norms of research into practice, embedding them in their individual conduct and promoting them wherever possible.

The procedures for guaranteeing adequate behavior strongly depend on the objects, objectives, and methods of investigation in the various research fields. That is why, in many areas, internationally recognized subject-specific recommendations for ethical research exist that are required to be followed.

The following brief summary of these recommendations in general terms is meant to serve as a code of conduct for TWAS Members for maintaining trust and accountability in research while ensuring the welfare of participants, the integrity of outputs, and the reliability of outcomes.

Important values underlying this Code of Conduct are integrity, honesty, transparency, openness, rigorous and reliable methods, accountability, responsibility, fairness, equity and respect.

Researchers must report their methods, data, analysis, and outputs accurately, without fabrication, falsification, or misrepresentation. They should use appropriate methodologies, scientifically sound study designs, and reliable analytical techniques to ensure the research is as accurate and reproducible as possible. Mistakes or inconsistencies should be promptly acknowledged and corrected. Researchers are expected to engage in and value peer review processes.

Researchers should properly keep all records involved in their research and share their outputs and materials as openly as possible, allowing others to verify findings or replicate studies while respecting privacy and confidentiality. They should establish a strict safety and information security system, and effectively respect and protect basic rights, sensitive information and privacy of subjects as well as respect for the environment and the well-being of society.

Inclusivity and equity in research teams and participants must be promoted, avoiding discrimination on any grounds (race, gender, socioeconomic status, etc.). Appropriate credit to collaborators, assistants, and others who contribute to the research have to be given, and intellectual property rights respected. It must be ensured that all human subjects of a research activity provide informed consent and understand the purpose, risks, and benefits of their involvement.

Researchers are accountable for the dissemination of their research findings. They should strive to ensure clarity, context, and accuracy when communicating results to the public and scientific communities.

All financial, personal, or professional conflicts of interest must be disclosed.

3. Publishing of research outputs

"Publication" refers to any research output that is formally made available via data, code, software, documents, digital media, manuscripts or any other medium. This code applies to publications that are released in one's official capacity as an academic.

An author is an individual who has made a genuine, identifiable contribution to the content of a publication, though the precise interpretation of this varies across academic communities. No one should be included as an author of a publication without their knowledge and clear consent. All authors should agree on the final version of the work to be published. All partners in research collaborations should take responsibility for the integrity of the research and be adequately informed and consulted regarding submissions for publication.

In the process of authorship, due recognition should be made of contributions from technical staff, students, funding agencies and other support systems wherever relevant.

Authors must seek to ensure that, as far as possible, their contributions are identified by appropriate databases, publishers, infrastructure providers and/or internationally recognised identifiers, in such a way that they can be correctly cited by others. Inclusion of non-contributing persons as authors in exchange for favours is unethical. Equally, it is unethical for a publication to suppress an author's name in order to conceal a conflict of interest.

Plagiarism is the practice of taking the work or documented ideas of other persons and passing them off as one's own original contribution. It can involve unattributed lifting of textual material or actual research outputs, or incorporation of results of other researchers, without proper attribution, within one's own research publication. Though the degree of severity can vary, plagiarism always amounts to ethical misconduct. Plagiarism must be avoided not only in publications but also in grant proposals and policy documents. Reproducing one's own published material verbatim in another published work as if it is new is unacceptable and amounts to 'self-plagiarism'. Researchers must familiarise themselves with appropriate standards for the use of the research of others in their output.

Reviewers of manuscripts or research proposals must ensure they do not misuse their advance access to the information and ideas in these documents. Reviewing of manuscripts submitted for publication as well as project proposals submitted for financial support is expected to be carried out with the maximum possible objectivity.

Due account must be taken of the growing ethical challenges posed by the generation or modification of digital content by Artificial Intelligence systems.

4. Inclusivity and the workplace

Academic communities are enriched by the presence of people of different ethnicities, socioeconomic strata, genders, religions, castes, ages, affiliations, backgrounds, sexual orientations, and persons with disabilities. There must be no direct or indirect bias or discrimination against any individual based on these categories.

Harassment, bullying or unfair treatment of persons in the workplace due to their diversity or for any other extraneous reason is to be prevented.

5. Education, training and outreach

Attention must be given to the detection and prevention of ethical malpractice in the educational sphere, including in examinations, assessments and publications.

Recruitment, selection and assessment of students must involve a just and fair procedure that is explicitly spelled out in advance. Teachers should aim for quality in their course content and teaching methodology. Sensitive issues related to individual privacy, including records and communications, should be shared only out of academic necessity and only with the appropriate persons.

Institutional training of students in ethical practices is important. Principal investigators and mentors are expected to ensure that students and others working under their supervision receive appropriate training on ethical, safety and environmental issues.

6. Science administration and leadership

Science administrators and leaders are expected to promote fairness, equity, transparency and accountability at all levels. This is applicable in the management of scientific activities, in the recruitment of personnel, and in the assessment of researchers, students and others under their supervision.

Science leaders must also take pro-active steps to create environments where ethical issues can be discussed openly. They should encourage their institutions/departments/affiliated units to implement ethical systems, create awareness and monitor compliance with ethical codes. Sensitisation activities should be carried out regularly, such as the regular organisation of science and technology ethics seminars and discussions that bring together academicians, science and technology experts and scholars in the field of ethics.

Whenever a TWAS Member is involved in the assessment, evaluation or selection of a candidate for a position, award, grant or fellowship, the presence of any potential conflict of interest must be brought to the attention of the relevant Committee and/or its Chair. The ensuing action will normally be decided by the authority organising the given activity.

7. Procedure for handling ethics complaints

The procedure for TWAS to address complaints of ethical misconduct is described in a separate document, "Procedures to address complaints of ethical misconduct".

This document has drawn inspiration and wording from the guidelines of the Brazilian Academy of Sciences, the Chinese Academy of Sciences, the German Research Foundation, the Indian Academy of Sciences, Central Michigan University and similar documents, all of which are gratefully acknowledged.

This document should be reviewed regularly, and at least once in 3 years.

Approved by the TWAS Council on 22 October 2024.