

INL Research Ethics Committee
CODE OF RESEARCH ETHICS

(approved by the INL Research Ethics Committee on 24 February 2023)

Preamble

The International Iberian Nanotechnology Laboratory ('INL') is an intergovernmental organisation created to promote interdisciplinary research on nanotechnology and nanoscience. Aiming to become a vital part of Europe's scientific area, INL provides a high-tech research environment addressing major challenges in nanomedicine, nanotechnology applied to environmental and food control nanoelectronics, and nanomachines and molecular manipulation at nanoscale.

Its core activity is research and innovation, which is defined as the creative and systematic work undertaken to increase the stock of knowledge and the creation of value for the society. It involves the collection, organization and analysis of information to increase understanding of a topic or issue. In other words, it is the pursuit of knowledge and searching for truth.

That pursuit is what confers research meaning and legitimacy. Research is the defining characteristic of the work developed at INL: to create, develop, communicate and critically evaluate knowledge; to equip researchers with the knowledge and skills necessary to advance professionally; to spread a responsible research culture; and to communicate and transfer knowledge in the interest of society.

Accordingly, in its research projects INL should seek to establish the personal, material and institutional conditions necessary to ensure the attainment of INL's purpose – that of a high standard - and help to consolidate an ethical culture in all aspects of research practice.

A basic responsibility of the Research Ethics Committee ('REC') is to designate the values and ethical principles of research, based on the European standards; to define the criteria for an appropriate research behaviour; and to adjust response mechanisms to threats or violations of research integrity and summarize it in a document to be disseminated throughout INL's scientific community.

The INL Code of Research Ethics provides researchers with a guide to responsible research practice, as encapsulated by the values, principles and virtues of research integrity, in accordance with the European Code of Conduct for Research Integrity, where it is stated that 'Good research practices are based on fundamental principles of research integrity. They guide researchers in their work as well as in their engagement with the practical, ethical and intellectual challenges inherent in research'.

To promote responsible research practices and to identify and deal with breaches of the standards outlined in this Code as well as the European Code of Conduct for Research Integrity, INL promotes research integrity and created methods to foster research integrity through the present Code and specific policies based in it.

Therefore, the INL Code of Research Ethics is an essential reference tool to support researchers in conducting research to the highest quality standards, along with the Guidelines for good research practices and the Recommended Checklist for Researchers that develop and supplement it.

I. THE PRINCIPLES

1. Common good

Researchers should work for the benefit of society and the common good, rather than their own personal interests.

Guaranteeing the common good goes beyond individual responsibility insofar as it requires researchers to contribute to the improvement of society. Research should aim to minimise harm and maximise public benefit, promoting individual attitudes and institutional practices that improve the well-being of society as a whole.

2. Excellence

Researchers should strive for excellence when conducting research and aim to produce and disseminate work of the highest quality. This Code, its principles and its standards are intended to support these goals.

3. Professionalism

Researchers should perform their activity in a professional manner, i.e., using their ability to work responsibly, diligently and to a high standard in order to achieve their goals and objectives.

Professionalism combines technical competence (knowledge and skills in a particular area or discipline) and ethical competence (ability to use knowledge and skills to achieve the goals of the research activity without undermining other aspects).

Professionalism should lead to excellence in one's chosen field: having the ambition to improve and refusing to settle for mediocrity.

4. Freedom

Freedom is the ability a researcher has to act according to one's own volition and decision (positive liberty), and independence from or the absence of undue personal, institutional, economic, social or political pressure (negative liberty).

Freedom of thought, research, expression, communication and conscience enables researchers to critically assess the current situation and state of knowledge in their area of research, and protects them in that endeavour, allowing them to design their research, formulate hypotheses, define their methodology and objectives, select their research team, etc.

5. Accountability

Research freedom is not absolute but must comply with certain obligations, such as respect for the freedom of other people. Nor is it an arbitrary or indiscriminate freedom, but one which must be exercised responsibly by experts in their field of research.

Accountability in research means taking responsibility for one's decisions and actions, and answer to one's research group, one's research institution, other organisations and funding bodies involved in the research, the rest of the scientific community, society as a whole, and oneself, for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts.

Accountability also means ensuring that all resources are put to effective, efficient use, and considering the possible consequences of one's research, as well as includes reporting obligations.

6. Inventiveness

Research involves challenging what we already know in pursuit of new knowledge and understanding. Inventiveness is the researcher's ability and commitment to create new ideas, concepts, meanings and applications that challenge, revise or expand our existing knowledge, and, as such, requires skill, curiosity, imagination and courage.

7. Honesty

Honesty is the researcher's obligation to be truthful and sincere in all their research activities.

Researchers are expected and required to develop, undertake, review, report and communicate research in a transparent, fair, full and unbiased way and work objectively to formulate hypotheses and theories that challenge the status quo and create new, generalisable knowledge, and should protect the integrity of their work by declaring any conflicts of interest.

Honesty is directly related to openness, yet goes beyond transparency: it is not just a question of making research more visible or providing greater access.

8. Integrity

Researchers must comply with all legal and ethical requirements relevant to their field of study. They should declare any potential or actual conflicts of interest relating to research and, when necessary, take steps to resolve them.

9. Reliability

Science and research, like all cooperative endeavours, require trust, that is not an automatic consequence of social or professional status, but it must be earned and maintained by our decisions and actions. Therefore, researchers have to be worthy of trust by conducting themselves in an honest, professional and conscientious way.

10. Cooperation

Researchers should promote the open exchange of ideas, research methods, data and results and their discussion, scrutiny and debate, while paying due regard to confidentiality considerations.

11. Loyalty

Loyalty refers to researchers' awareness and recognition of the role of institutional support for their work.

Loyalty demands that researchers acknowledge the institutional framework in which the cooperative, teamwork activity of their research is carried out; this includes the INL, other sources of personnel and financial support, and the people involved in the project. It also demands the commitment of all those involved in the research process to work for the common good, and not just for personal or individual gain.

12. Respect

Respect means showing consideration for other people, objects and institutions involved in the research.

In the first place, research should respect people: research participants, fellow researchers and collaborators, members of the scientific community, and members of society, ecosystems, cultural heritage and the environment. Likewise, it should respect non-human living beings, such as animals used for experimentation purposes.

In view of the overarching importance of the principle of respect for human beings, researchers should be prepared to interrupt their research or modify the original research design, if necessary, in order to guarantee the safety and integrity of all those involved.

Respect also refers to the responsible administration of material resources: proportionate use of materials as necessary and appropriate; rejection of abusive or incorrect uses; and actions to ensure the conservation, improvement and sustainability of the natural and social environment in which the research is conducted.

Finally, researchers are expected to comply with the legal, ethical, professional and institutional norms and standards required by regulatory authorities, employers, funders and other stakeholders. Compliance should not, however, preclude researchers from raising reasonable concerns over research regulations, or proposing alternative interpretations or suggestions to improve them.

13. Fairness

Fairness is about giving each individual their due in research. As such, it requires not just respect, but a combination of equality, non-discrimination, and differential treatment of difference.

Fairness should be a guiding principle in all relationships between researchers and research participants, fellow researchers, research institutions, funding bodies, members of society, etc. and should be understood on at least two levels: as recognition of each person's contribution, and as the fair distribution of benefits and burdens, preferably based on merit.

14. Safety

Safety is a state of protection against possible risks or loss that provides researchers with the stability and peace of mind necessary to plan and develop their research.

Researchers should be guaranteed personal safety (elimination or reduction of risks during research), professional safety (availability of resources necessary to carry out research) and employment safety (stable working conditions, duration of contract, salary, etc.).

Final Note:

This document is based on "The European Code of Conduct for Research Integrity" developed in 2017 by All European Academies (ALLEA) and the European Science Foundation (ESF). It is a living document that will be revised as necessary to take account of evolving concerns, so that it can continue to serve the research community as a framework for good research practice.