

# Research Integrity



## Code of Conduct for Research Integrity

The leading document on research integrity in the Netherlands

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# About this toolkit

This toolkit has been developed for employees at the NWO institutes who are involved in scientific research, in whichever capacity. It has an overview of the main documents and specific cases that can be used to gain insight into research integrity (RI) and its grey areas. The toolkit also explains how you can raise any concerns you may have. In addition, the toolkit offers pointers on how to discuss research integrity within an institute and where you can learn more about research integrity.

## About research integrity

All researchers of NWO institutes must comply with the Netherlands Code of Conduct for Research Integrity. While this code is intended as a guide containing information about the standards, values and principles associated with conducting sound research, it may prove difficult to determine the precise limits of research integrity. Research integrity and everything involved in conducting sound research is subject to the many developments that science is constantly undergoing. New insights regularly emerge in areas such as statistical or non-statistical methods, publication models, institutions' duties of care and preferred relationships between parties.

Additionally, developments such as knowledge security and the use of generative artificial intelligence (AI), as well as awareness of social safety in science, have a significant impact on the interpretation of the Code of Conduct for Research Integrity at the time of writing this introduction (2025). NWO-I aims to regularly update this toolkit.

### *Questions and comments*

If there are any further questions or if there are important topics missing in the research integrity toolkit, please send an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl).



# Code of Conduct for Research Integrity

The [Netherlands Code of Conduct for Research Integrity](#) is the leading Dutch basic document on research integrity. It offers frameworks and tools on how to ensure research integrity during the performance of research. The Code of Conduct has been signed by all major research organisations or umbrella organisations in the Netherlands and is thus a joint vision on research integrity for and by scientists. The Code of Conduct is also used to assess any scientific misconduct that has been reported. It is important to realise that there are also research organisations that have not signed the code, such as companies. Researchers affiliated to a knowledge institute must at all times comply with the code.

## *What are the benefits?*

The Code of Conduct serves as a reference for researchers and institutes on what is meant when discussing research integrity. The Netherlands Code of Conduct for Research Integrity defines five principles. Principles can be seen as characteristics that enable a good researcher to make the right decisions in different circumstances, such as during the stages of design, implementation, reporting, assessment and peer review, and communications. The Netherlands Code of Conduct furthermore formulates a few duties of care for knowledge institutes which may serve as a tool for safeguarding research integrity.

## *How do you use this?*

You use the Code of Conduct as a reference and basic document on research integrity. Institutes could, for example, give the Code of Conduct to new colleagues.

## *Other comments*

NWO-I emphasises that the Code of Conduct serves as basic information. It is imperative to keep the conversation about research integrity going. In 2024, the Code of Conduct was re-assessed and a start was made, and work on drafting a revised version began in 2025. The revised Code of Conduct is expected to be published in the fall of 2025, which means that this toolkit will be adjusted in due course.

## Where can I turn to?

- Your institute's RI ambassadors. If your institute does not have one or if you are unsure as to who they are, please send an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)
- The NWO-I office's Communications team, or by sending an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# Online training courses and communities

In the academic world, there are all kinds of initiatives centred on research integrity in the form of training courses, communities and websites for and by researchers.

## Free online training courses

- [Research integrity and Open Science](#) provided by Open Science Framework: free self-paced course
- [Course provided by University College Cork on Open Research](#)

## Networks in the Netherlands:

- The [Netherlands Reproducibility Network](#) focuses on knowledge about the reproducibility of research.
- The [Netherlands Research Integrity Network](#) regularly organises interesting online and offline meetings to discuss research integrity.

## International networks:

- [Framework for Open and Reproducible Research Training \(FORRT\)](#). FORRT is committed to the transparency and reproducibility of research. This network, aimed at teaching staff in higher education, supports lecturers in incorporating open and reproducible research into their teaching. FORRT offers [lesson plans](#), a [database of reproduction studies](#) and a [glossary](#), amongst others.
- [Embassy of good science](#): an online platform that provides support for dilemmas encountered by scientists in their daily practice. The platform offers training courses, examples, news and a community, among other things. It also offers a database with questionable research practices.

## How do you use this?

Decide for yourself what you need: are you looking for good/bad practices, or rather a training course with basic information, or an exchange with other scientists via meetings or webinars, for example? Some sites are very elaborate and can also be used as reference. The aforementioned organisations are a useful way to stay informed, either by following them or joining them.

## Where can I turn to?

These building blocks will help you find basic information or more in-depth knowledge about research integrity. For advice or background information, please contact team Governance Support & Strategy of bureau NWO-I at [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# Case studies

The website of the [American Physics Society](#) has a large number of realistic case studies which can serve as inspiration. The case studies provide a useful conversation starter to get things going, for example during training sessions or peer review meetings. It is also nice to have actual examples when in doubt about what is considered to be research misconduct. The website describes realistic situations that researchers may face, for example in relation to data collection, authorship, confidentiality, and bias. The site is clearly organised by theme.

## *How do you use this?*

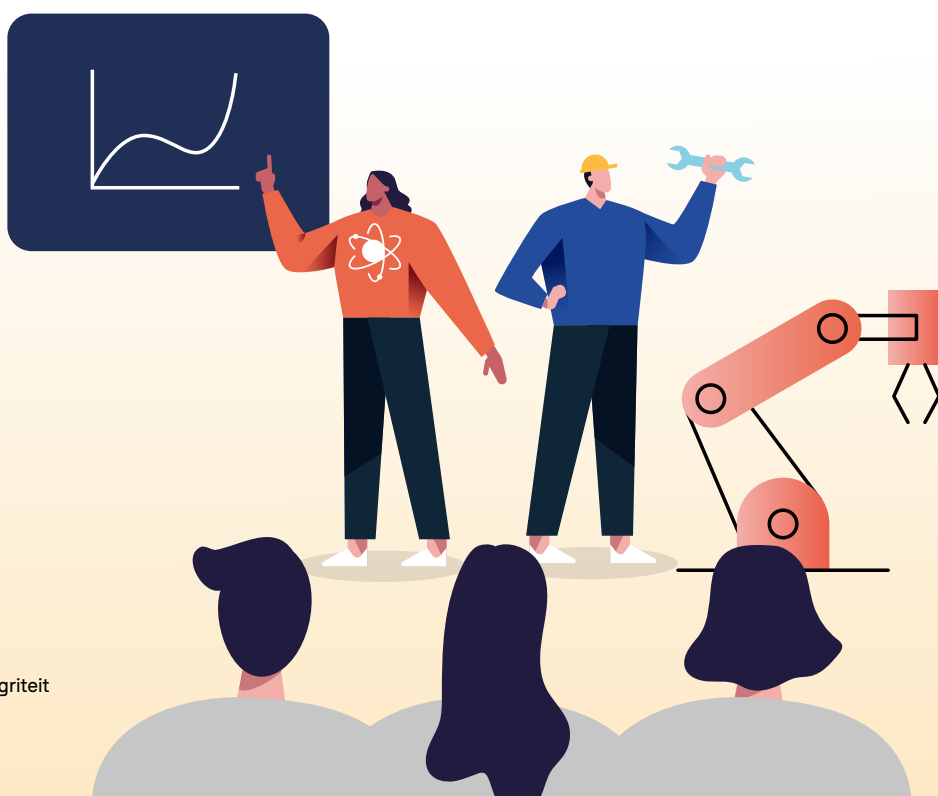
As inspiration for bringing up dilemmas in the field of research integrity.

## *Other comments*

The examples are based on the American education and research system. You might have to slightly adjust some examples to fit the Dutch situation.

## Where can I turn to?

- Your institute's RI ambassadors. If your institute does not have one or if you are unsure as to whom they are, please send an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)
- The NWO-I office's Communications team, or by sending an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# NWO-I's support

There are different ways in which NWO-I can offer support with regard to the theme of research integrity.

- Confidential advisors: [NWO-I has two external confidential advisors for research integrity](#). Also see the 'step-by-step plan' to find out what they can do for you.
- [NWO-I's Digital Competence Center](#): for training courses involving FAIR data and AI
- Contacts with national and international networks involving research integrity such as [Netherlands Research Integrity Network \(NRIN\)](#), [Netherlands Reproducibility Network \(NLRN\)](#)
- Support in organising events: via the Governance Support & Strategy team and the Communications team.
- Assistance in subsidies: if you want to reproduce previous research, or extra validations, consider, for example, grants from [OpenScienceNL](#). NWO-I would be happy to assist you.
- You can make use of NWO-I in different ways. Do not hesitate to contact us; we are here to help and our expertise is free of charge.

## *How do you use this?*

You can use NWO-I's expertise to establish contacts with experts, submit a question or problem, take a course, organise a meeting or navigate the path to grants.

## *Other comments*

The Governance Support & Strategy team and the Communications team of the NWO-I office also offer support when you want to organise a meeting within your own institute, including a toolkit for meetings.

## Where can I turn to?

- Your institute's RI ambassadors. If your institute does not have one or if you are unsure as to whom they are, please send an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)
- The NWO-I office's Communications team, or by sending an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# Facilitating the discussion about research integrity

A study from the European [SOP4RI project](#) has shown that regular discussions about research integrity are necessary to promote integrity. Furthermore, keeping the dialogue open is part of the duty of care as defined in the Netherlands Code of Conduct for Research Integrity of knowledge institutes. In addition to engaging in informal talks, there are several options for organising this:

- Via *The Dilemma Game*: an interactive activity
- Organising a lecture by an expert
- Organising a training course centred on research integrity at your institute

The following factsheets detail each of these possibilities. You can also choose to combine them for a theme day or a session.

## *How do you do this?*

A meeting, small or large-scale, is an effective means to keep the topic relevant. It is an effective means to convey a message to a group of colleagues. You can engage in conversation with each other, it promotes team spirit, and you can put the topic on the agenda within your institution.

## *How much time does it take?*

The time commitment depends on the type of meeting. The NWO-I office also offers support. This is further explained in the factsheets.

## *What preparation is required?*

First, decide what kind of event you want to organise. What is your objective, what is appropriate for your institute? In addition to deciding on a suitable form and content, it also requires some organisational skills.

## **Where can I turn to?**

- Your institute's RI ambassadors. If your institute does not have one or if you are unsure as to who they are, please send an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)
- The NWO-I office's Communications team, or by sending an email to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# Option 1: The Dilemma Game, a game about research integrity

Erasmus University Rotterdam (EUR) developed *The Dilemma Game*, a game about research integrity. The Dilemma Game confronts researchers with difficult dilemmas in the context of a critical dialogue and helps them to further develop their 'moral compass'. The game can be played as a card game or in an app. The Dilemma Game app allows researchers to play it anywhere and anytime, either individually or together with fellow students and colleagues. Playing The Dilemma Game facilitates the conversation in a relaxed, playful, safe manner. Participants can vote on realistic dilemmas, which can then be discussed together. You can also play the app individually, for example, by voting on the 'dilemma' of the month, and by comparing your response to those of fellow researchers.

## Advantages

- It promotes interaction and conversation in a relaxed, accessible manner.
- It can also be combined with/used as an activity during a longer session.
- It can be played both digitally, with an app, and analogously, as a card game.
- The game has the option of introducing custom themes.
- It can be played on an individual basis.

## Drawbacks

- It is relatively time-consuming or labour-intensive.
- It is useful to have a supervisor who has experience in playing the game.
- Not all cards of The Dilemma Game are appropriate for the research activities of the NWO institutes. It is recommended to make a selection in advance or to introduce custom dilemmas to avoid people not repeatedly drawing cards that are not relevant.

## Where can I turn to?

- Install the app and check the website of The Dilemma Game for background information, instruction videos and other information
- If you want to find out more, please contact the colleagues of NWO-I. You can contact them via [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)







## Option 2: organising a training course

There are training courses in the field of research integrity. You can take an [online course](#) at NWO-I, but you can also organise a course at your institute. Usually, a course on research integrity is taken at least once during the PhD programme. However, research integrity is constantly evolving and it would be good for all researchers to receive regular updates on research integrity. The benefit of an on-site training course is that it allows colleagues to engage in conversation with each other and that it minimises travel time.

### Advantages:

- Employees are well aware and informed about research integrity.
- There is time for in-depth discussion, background information, questions and interaction.
- Colleagues share the same level of knowledge and a common starting point.

### Drawbacks:

- Labour intensive, both for participants and the course leader
- High costs

### Where can I turn to?

The colleagues at NWO-I can help you in setting up such a training course. You can contact them via [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# Option 3: Plenary lecture about research integrity

Plenary lectures about research integrity at the institute are an easy way of bringing research integrity to the attention of a wide audience. Another option would be to organise lectures for specific groups of staff. Lectures can be given by one of the institute's own employees who, for example, shares experiences, by someone from another NWO institute, within the context of knowledge exchange, or by someone from the NWO-I office. Lectures can also be given by external experts, such as those affiliated with the NRIN or researchers from other knowledge institutes. The Governance Support & Strategy team of the NWO-I office would be happy to help.

## Advantages:

- You inform the whole institute in one go.
- It requires little effort from your colleagues and is easily accessible.

## Drawbacks:

- Passive learning
- It will likely need to be repeated, for new colleagues and to imbed the knowledge.
- It requires a good speaker.

## Where can I turn to?

The colleagues at NWO-I can help you in setting up such a lecture. You can contact them via [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# Expressing concerns about research integrity

Doubts about research integrity may arise during the research. It may sometimes be difficult to address this. Research integrity is not always deliberately violated; researchers are often genuinely unaware of possible misconduct. Raising concerns about research integrity is therefore very readily interpreted as an attack on the integrity of the recipient in question. It may also be very difficult to hear that someone may have concerns about the research integrity of a project you are personally involved in. This could potentially worsen relationships. This part of the toolkit explains the possible steps in raising concerns about research integrity and the parties you can turn to.

## *How do you use this?*

When in doubt about research misconduct, the [examples of the American Physics Society](#) mentioned in this toolkit may be of help.

Should these examples not fully cover the situation, this toolkit also has more explanations about questionable research practices and sloppy science. While questionable research practices or sloppy science may be subject to personal interpretation and may also occur unintentionally, they do come into play as concerns when it comes to research integrity.

Many concerns about research integrity can be solved by engaging in dialogue within the team. Still, this may not always be possible, or may not feel safe. This toolkit has a schematic overview of the possibilities and the possible follow-up steps.

It is important to realise that you can always make an anonymous report, however, there are not many options for officially following up on the complaint in that case, as there is no opportunity to hear both sides of the case. An issue relating to research integrity should always be about the contents and not affect mutual relationships. Should you, however, find yourself feeling unsafe or no longer safe to engage in conversation, this becomes a matter of social safety. In that case, contact your institute's confidential advisor or NWO-I's general confidential advisor. Also, see [the information page on work and behaviour on the website of NWO-I](#).



### *What if someone is expressing concerns about my research integrity?*

It may be difficult to hear when someone is questioning your integrity, especially if it feels like it just came out of the blue. Questionable research practices or sloppy science usually do not happen intentionally and today's pressure on the scientific system is leaving scientists with increasingly less time. Concerns about research integrity can also arise from an unclear allocation of duties or relationships within a team that may cause some checks and balances to be lost.

It is therefore important for the recipient to conduct the conversation in an open manner. A confidential advisor may be helpful also in these situations. It may also be possible to call in an external mediator to facilitate the discussion. The most important thing is that the discussion focuses on the content and the scientific process. If it appears that there is a disrupted working relationship underlying the concerns expressed, the involvement of, for example, HR and the institute's management team may also be required.

### *Other comments*

It is important to realise that you can always make an anonymous report, however, there are not many options for officially following up on the complaint in that case, as there is no opportunity to hear both sides of the case.

### Where can I turn to?

- Any questions or concerns that you would rather not discuss with your immediate colleagues can always be shared with the confidential advisor for research integrity. The confidential advisor can be contacted via [vertrouwenspersoonWI@nwo-i.nl](mailto:vertrouwenspersoonWI@nwo-i.nl)
- You can send any questions about NWO-I's approach to research integrity and its role to [strategy@nwo-i.nl](mailto:strategy@nwo-i.nl)





# The grey area of research integrity

## *Scientific misconduct and questionable research practices*

It is sometimes difficult to interpret whether an action constitutes an actual violation of research integrity and the extent to which this was a deliberate act. Gross violations of research integrity, such as fabricating data, deliberately withholding data, or plagiarism, are rare. Nevertheless, there are behaviours that do not comply with research integrity, but which are sometimes commonplace in science. These are referred to as questionable research practices.

Research has shown that a large number of researchers have participated in questionable research practices at least once<sup>1</sup>. Questionable research practices include, for example, adding authors who do not meet the criteria for authorship, citing articles that have not been read or selectively quoting articles to accommodate editors or reviewers. The *Embassy of Good Science* has a [definition](#) and [examples of questionable research practices](#).

## *Sloppy Science*

Another frequently-used term for questionable practices is sloppy science. This term implies that a researcher has been negligent in exercising the level of care expected of a scientist. This may involve the aforementioned 'failure to read cited articles', but it can also happen unconsciously, for example through the use of outdated statistical methods or a poorly thought-out experimental design (such as inadequate or incomplete control conditions).

## *Addressing questionable research practices and sloppy science*

It is important to recognise that questionable research practices and sloppy science are often the result of the high (publication) pressure many researchers face. Nevertheless, it is equally important to be able to address this within the institutes. Discussing research integrity ought to be able to be done in all openness, though with consideration for the circumstances of the person concerned. It is advisable to always assume a degree of unawareness or external pressure, although this may also complicate the conversation. The NWO-I confidential advisor for research integrity or the local confidential advisor could offer support or advice in such a situation.





# Questionable research practices: what are your options?

## Option 1:

### Share your concerns with the person or team in question

It does not always happen intentionally; the person involved may simply be unaware of the rules, particularly in cases of sloppy science or questionable research practices.

- Check the [Netherlands Code of Conduct for Research Integrity](#)
- Check the examples of [questionable research practices](#)

OR

## Option 2:

### Contact your institute director or institute manager

As the head of the institute, they are directly responsible for the research integrity of all research conducted within the institute.

- With your permission, they can engage in dialogue or call in an external committee

If you do not feel comfortable in sharing your concerns with your direct colleagues or if you have doubts as to whether this is a matter of integrity, please contact an external confidential advisor.

If you don't feel comfortable sharing concerns with (in)direct colleagues:

## Option 3:

### Contact a confidential advisor

- The confidential advisor for research integrity at your institute
- The [NWO-I confidential](#) advisor specialised in research integrity.

These confidential advisors can offer you advice directly or call in support from an independent committee for research integrity.

### What do confidential advisors do?

Confidential advisors offer you advice about the steps to be taken. They can also help with filing a formal complaint that can be used to initiate formal proceedings with an independent research integrity committee.

### Do you still feel that your concerns have not been heard?

Confidential advisors may seek the help of the National Board for Research Integrity (Landelijk Orgaan Wetenschappelijke Integriteit; LOWI).

**Nothing will be done without your consent.**

**It is possible to remain anonymous, although this does limit the number of measures that can be taken.** For instance, a formal hearing in which both sides are heard is not possible in that case.

