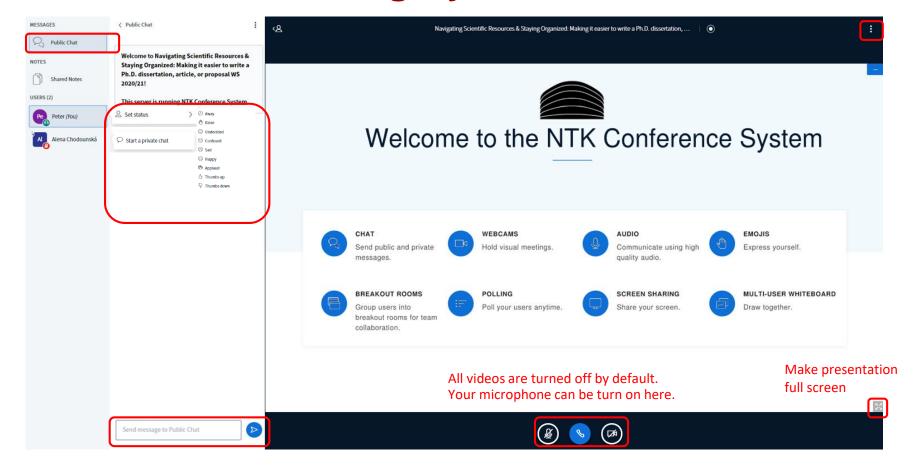


Academic Integrity & Online Presence

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November 2021
National Library of Technology

Academic Integrity & Online Presence



Which institution are you from?

- A. Czech Technical University in Prague
- B. University of Chemistry and Technology Prague
- C. Czech University of Life Sciences Prague
- D. Charles University
- E. Other

Outline

- Ethics in science
- Guidelines
- Avoiding problems
- Specific issues
- Academic reputation & communicating research results
- Author identifiers

Why are ethics important in science?

Why are ethics important in science?

Science and scholarly communication: based on trust

- Building on (and depending on) the knowledge/information provided by others in order to move the frontier further
- Consequences of unethical behavior in science:
 - For author
 - For university/institution
 - For colleagues and other scientists
 - For credibility of science (public, funding)

On Being a Scientist

Academic Integrity

Can you think of some behaviors/practices which

are considered unethical in science?

Ethics in science: unethical behavior

Breaches of academic/scientific/research integrity, scientific/research misconduct:

- Falsification
- Fabrication
- Plagiarism

Questionable/detrimental research practices: violating other standards (e.g., conclusions without data, misleading/wrong statistics, misinterpretation, publishing issues)

More: <u>Purdue</u>, <u>National Center for Biotechnology Information</u>, <u>Questionable research practices in ecology and evolution</u>

Ethics in science

Ongoing discussion on many other issues

... the "borders" and possibility of charges are likely to develop through time

- Scientific dilemmas (article), responsibility of a researcher
- Misuse of scientific information, <u>pseudoscience</u>
- Evaluation of research: validity of metrics, funding (2017+)
- Publishing industry: publishers and subscription policies (<u>Project DEAL</u>), predatory journals, <u>copyright</u>, conflict of interest (author/reviewer,)
- Open access, open data, open science, sharing data, reproducibility
- <u>Peer review</u>: closed/double blind/open
- Collaboration: authorship, workplace relations (e.g., misusing seniority, favouritism, safety)

Ethics in science: guidelines

Academic and research integrity concepts

The European Code of Conduct for Research Integrity: principles

- **Reliability** in ensuring the quality of research, reflected in the design, the methodology, the analysis and the use of resources
- Honesty in developing, undertaking, reviewing, reporting and communicating research in a transparent, fair, full and unbiased way
- Respect for colleagues, research participants, society, ecosystems, cultural heritage and the environment
- Accountability for the research from idea to publication, for its management and organisation, for training, supervision and mentoring, and for its wider impacts

More: <u>STEMskiller - Academic ethics and integrity: concepts and definitions, The Office of Research Integrity, ICAI - The Fundamental Values of Academic Integrity, Scientific integrity</u>

Ethics: universities and other institutions

Universities

- CTU: <u>Code of Ethics</u>, <u>Ethics Comission</u>
- UCT: <u>Code of Ethics of UCT Prague</u> and <u>Ethics Comittee</u>
- UK: <u>Code of Ethics</u>, faculties: <u>Rules of Study</u>

Other institutions

- IOCB: Code of Ethics for Researchers of the Czech Academy of Science
- CEITEC: Code of Scientific Conduct and Research Integrity
- American Geophysical Union: <u>The Responsibilities and Rights of Scientists</u>
- National Institutes of Health: Grants & Funding: Policy & Compliance
- GAČR: Code of Ethics (<u>reviewers</u>, <u>investigators</u>)

Ethics: publishing, journals

Journals: Instructions for authors/reviewers (sometimes hard to find)

Examples of guidelines and policies (publishers):

- Elsevier: <u>Policies and Ethics for Authors</u>, <u>Publishing Ethics</u>
- Springer: <u>Publishing Ethics for Journals</u>, <u>Editorial Policies</u>
- Wiley: <u>Guidelines Publishing Ethics</u>

Specific journal: International Journal of Solids and Structures

Journal of Hydrology

Avoiding problems

Designing research

- Why: reasons for the research (benefits vs. possible misuse)
- What and how: possible ethical issues in planned research (e.g., environment protection, working with personal data / human participants / cells)
- Solid <u>research design</u> and <u>data management</u> plan (<u>Horizon Europe</u>): to avoid mistakes, archive information, enable data validation and replicability of results
- When preparing a grant application ethical issues should be thought through

European Commission: Funding & tender opportunities: <u>Ethics</u>, <u>How to complete your</u> <u>ethics self-assessment</u> (Horizon Europe, Digital Europe and European Defence Fund)

Throughout the research process

- Research and scientific method: being systematic and creative, involving scepticism a critical appraisal, double-checking, avoiding bias (e.g. cognitive, socio-cultural, expectations, <u>algorithmic</u>)
- Collaboration with colleagues: respect, safety, communication, and delegation of roles
- Proper recording, analyzing, and storing of data: aiming for replicability of research methods

Reporting research: writing and publishing

- Working carefully with references, avoiding **plagiarism**; self-citation
- Try to be accurate, clear, and transparent
- Avoid data fabrication and falsification
- Responsible reporting (<u>data protection</u>, <u>research involving humans or animals</u>)
- Authorship: proper acknowledgement of colleagues
- Choice of journal (predatory journals)
- Read and follow the journal guidelines (requirements e.g., format, referencing, preprint policy, data management, conflict of interest)
- Avoid <u>duplicate</u>/concurrent submission and publication, copyright infringement (<u>www.howcanishareit.com</u>)

Specific issues

Plagiarism

Definition taken from section 3.1 of: ALEEA – All European Academies. *The European code of conduct for research integrity: Revised Edition* [online]. 2017-03-24 [cit. 2017-12-01]. Available: https://www.allea.org/wp-content/uploads/2017/05/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017.pdf

"Plagiarism is using other people's work and ideas without giving proper credit to the original source, thus violating the rights of the original author(s) to their intellectual outputs."

- Several types of plagiarism
- Anti-plagiarism (text duplication) software: it is easily found (universities check their theses, journals articles); e.g., <u>Turnitin</u>, <u>Odevzdej.cz</u>, <u>Similarity</u>
 <u>Check</u>, <u>iThenticate</u>
- Both ethical and legal issue (intellectual dishonesty, copyright violation)
- How to avoid plagiarism:
 - Be meticulous when writing and working with citations (more)
 - · Before submitting text, run through text duplication/anti-plagiarism software

Falsification and fabrication

Definition taken from section 3.1 of: ALEEA – All European Academies. *The European code of conduct for research integrity: Revised Edition* [online]. 2017-03-24 [cit. 2017-12-01]. Available: https://www.allea.org/wp-content/uploads/2017/05/ALLEA-European-Code-of-Conduct-for-Research-Integrity-2017.pdf

"Falsification is manipulating research materials, equipment or processes or changing, omitting or suppressing data or results with justification."

"Fabrication is making up results and recording them as if they were real."

Video: <u>Data Fabrication and Falsification</u>

Image manipulation

- Inappropriate enhancement of the image: e.g., removing/moving/adding/obscuring specific features, duplication, rotation, plagiarism
- Small adjustments: might be acceptable (but always check the journal policies)
- ORI: <u>Tips for presenting Scientific Images with Integrity</u>, <u>Guidelines for Best practices</u> <u>in Image processing</u>, examining images techniques: <u>Forensic Droplets</u>
- The <u>Misleading graphics</u>

Falsification and fabrication

How to avoid

- Be meticulous when working with data, do not tamper with results
- Keep the (raw) data, have a documented research plan
- Double-check your work (by yourself and your colleagues): on discovering mistakes

Authorship

Definition taken from APS Guidelines for Professional Conduct [online]. 2019-10-04 [cit. 2021-10-20]. Available: https://www.aps.org/policy/statements/02_2.cfm

"Authorship should be limited to those who have made a significant contribution to the concept, design, execution or interpretation of the research study. All those who have made significant contributions should be offered the opportunity to be listed as authors. Other individuals who have contributed to the study should be acknowledged, but not identified as authors."

- Different fields, different customs: sequence of authors (significance, alphabetical, last author)
- Journals: author contribution statement (Elsevier, Nature, Taylor and Francis, IEEE)
- Ghost/gift authorship is considered to be an ethical issue as well
- How to handle authorship disputes: a guide for new researchers (COPE)
- Acknowledgement section (minor contributions)

Predatory journals

- Beware of the spam emails (e.g., speedy publication offers): there are also predatory conferences and predatory publishers of books
- Characteristics of predatory journals (not always right)
- Check <u>Beall's list</u> (archive, 2016)
- Check "White lists": <u>WoS</u>, <u>Scopus</u>, <u>Publons</u>, <u>Directory of Open Access Journals</u>
 (DOAJ), including (temporarily) excluded journals: <u>WoS</u>, <u>Scopus</u>
- Check with your supervisor/librarian/colleague
- Tools and tips: https://thinkchecksubmit.org/, 8 Ways to Identify...
- Predatory journals: no definition, no defence

Articles: rejection and retraction

- Rejecting papers before publication (review, anti-plagiarism software)
- Retraction of already published papers
 - Reasons: both misconduct and honest mistakes
 - Different journals might use different ways to mark retracted articles, (not) provide reasons
 - COPE: <u>Retraction guidelines for</u> scholarly publishing



https://www.ncbi.nlm.nih.gov/pubmed/22088800

Retraction studies

An in-depth analysis of papers retracted in the Web of Science <u>Proceedings</u> of the 19th International Conference on Science and Technology Indicators (pp. 337-344)

Thed van Leeuwen, Marc Luwel (2014)

Web of Science (?-2014) - 2479 retracted articles

22.1% Fraud

21.2% Errors

12.4% Fraud by 1 author

11.5% Duplicated / concurrent publishing

8.0% Plagiarizing

6.2% No motivation given

5.3% No approval by competent authority for experiments

4.4% Classification errors in journal or WoS

4.4% Independent review

2.7% Incomplete consultation between authors/ listed a author without consent

1.8% Errors by editiors

Misconduct accounts for the majority of retracted scientific publication

Ferric C. Fang, R. Grant Steen, Arturo Casadevall (2012)

PubMed - 2047 retracted articles, English only

21.3% Error

43.4% Fraud, suspected fraud

14.2% Duplicate publication

9.8% Plagiarism

Retractions: the good, the bad, and the ugly

Sources: stay updated

- Retraction Watch: database
- Committee on Publication Ethics (COPE): Flowcharts
- The Office of Research Integrity
- Wikipedia: <u>List of scientific misconduct incidents</u>
- Věda a výzkum: <u>Akademická Integrita</u>, <u>komentáře</u>

Summary

- Ethics in science: the most common breaches of academic integrity are fabrication, falsification, and plagiarism
- Beside these, there are many other ethic issues one comes across when working in academia + the "borders" and possibility of charges are likely to develop through time
- Be aware of your institutional and journal/grant requirements
- The best way to avoid problems is to be meticulous when working with data and resources, to aim for replicability of research (dealing with data, reporting research), to stick to the rules of the scientific method, and to be respectful towards your colleagues, society, and the environment

Academic online presence

Academic online presence

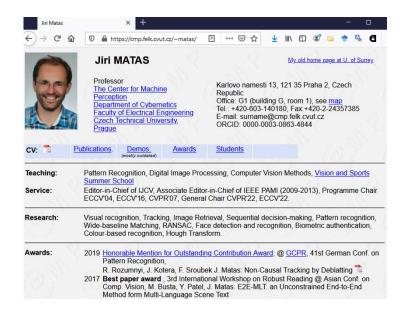
- Are you easy to find online? What happens when you Google your name?
- Do you have a webpage at your Faculty/Department that contains your brief biography?
- Do you have an up-to-date academic CV? Is it available online?
- Which online profiles do you have? (LinkedIn page, GoogleScholar profile, or a ResearchGate profile, other)
- Do you understand what an ORCID is and why it is important?

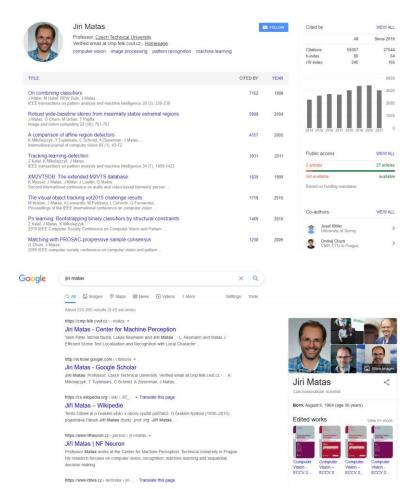
Academic online presence - tools

- Author identifiers (<u>ORCID</u>, <u>ResercherID</u> (<u>Publons</u>), <u>Scopus ID</u>)
- Academic profiles (<u>Google Scholar</u>, <u>Publons</u>)
- Academic websites
- Academic CV (examples of academic career materials)
- Academic social media (<u>ResearchGate</u>, <u>Academia.edu</u>)
- LinkedIn
- Other social media
- Searching results

Academic profile example: Prof. Jiri Matas, FEE CTU

- Google Scholar Profile & Google results
- Academic webpage
- ResearchGate





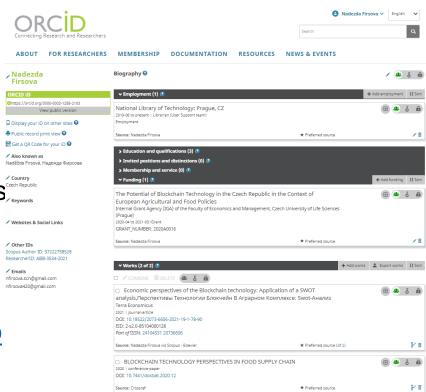
Author identifiers

Features	ResearcherID (<u>Publons</u>)	Scopus Author Identifier	ORCID (Open Researcher & Contributor ID)
How to get author identifier?	Author identifier (ResearcherID) will be created automatically with your first publication in WoS. You can then claim the profile with Publons and manage it similarly to ORCID.	Author identifier will be generated automatically if you have at least one publication in Scopus. You can edit author profiles (Edit profile tool) or using Author Feedback Wizard or Support. Merging profiles is possible on the results page.	Create your profile at orcid.org. You can join all your author IDs in ORCID.
How to link your publication with your ID?	Manage via Publons: You can import your citations from Web of Science, ORCID, via DOI or add them manually.	Imported automatically from Scopus, add manually in Edit profile.	You can import from many platforms (WoS, Scopus, arXiv) or add manually.
Supporting platforms	Web of Science	Scopus	Open non-profit initiative

- Link all papers published under different variants of your name
- Distinguish
 papers written by
 other authors
 with the same
 name
- Create your author profiles

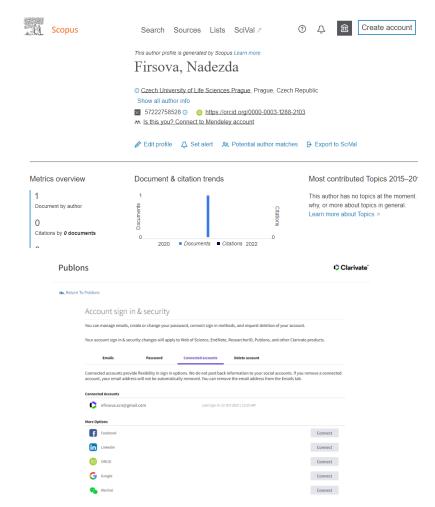
ORCID

- ORCID (Open Researcher and Contributor ID)
- Features: ORCID identifier
 registration, profile administration,
 and searching for other researchers
- Free of charge
- <u>Link your ORCID profile</u> to your institutional or social media profiles and use several options to <u>sign into</u> ORCID



ORCID

- Add your <u>other identifiers to your</u> ORCID record
- Add your papers via Search & link wizards, DOI, or manually
- Use "<u>trusted organizations</u>" to do so
- Be aware of the <u>ORCID Trust</u> <u>program</u>:
 - Individual Control
 - Reliability
 - Accountability
 - Integrity



Academic online presence: tips & tricks

- Put effort into setting up a proper ORCID profile (it can help you with visibility and maintaining an up-to-date publication list)
- Create your academic CV and keep it up-to-date
- Choose relevant online profiles or social media and take care about them (up-to-date, be thoughtful about nicknames and content you share)
- Keep in mind that <u>a social networking site is not an open access</u> repository
- Be aware about results of your name searching via Google, Google Scholar, and Bing (or other search engines)
- Cross-link and check consistency with profile pictures and variations of your name

Get Assistance

Schedule a remote consultation:

- Please don't be shy; our team includes doctoral students who know the issues you face
- We also provide consultations about creating a comprehensive search strategy and organizing yourself as you begin a specific writing project

Useful links:

- STEMskiller comprehensive skills set map for early career researchers
- LaTeX support
- Bibliometric services
- Subject guides







































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Thank you

Questions?