

Research Master

Student Group

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Research Master

Before Programme Start

Elective Lectures

I strongly recommend, to clarify with your supervisor (= normally that's me) which elective lectures you want to attend during the Research Master.

There is a list of elective lectures be found at the Documents part of the [MMR website](#). The course language is also given, to avoid that you additionally have to learn German.

The total subjects have to be:

- specialized subjects (total of 5 ECTS, 'Vertiefungsfächer') as well as
- elective subjects (total of 20 ECTS in 2 semesters, 'Wahlfächer').

Details of the courses can be found in the related modulhandbuch's of the masters courses. Please provide first suggestion for suitable subjects, approx 2 weeks ahead of the start of the courses. Be aware, that there might be an iteration of the list to be done.

The modules shall focus mainly on the research topic to support you in that. This shall reduce the trouble in the research lab work and lectures, in order to have a smooth study.

You do not need to already select the summer semester modules at the start of the winter semester. But it is good to have a look what is available (and also what's not) to avoid limited decisions afterwards.

Late Arrival

If you eligibly arrive late (e.g. due to visa process), you shall ask/inform each professor of the courses individually about your situation.

During Programme

Funding

- An overview of the suitable funding can be found in the [HHN intranet](#). Fund are also listed on another [HHN intranet page](#). Beside typical funders, also local ones like Thomas Gessmann-Stiftung, and the Arnfried und Hannelore Meyer-Stiftung are shown there.
- The HHN has a [Funding Program for Innovative Special Projects](#). Every professor and tenured research associates with doctoral degrees can send one proposal for every call. Topics should be either BlueSky or the defined key research areas of the HHN. The calls are:
 1. Round: Letter of Intent: 15.07 → Proposal Outline: 15.09 → Feedback: 01.12 → Start: 01.01
 2. Round: Letter of Intent: 15.01 → Proposal Outline: 15.03 → Feedback: 01.06 → Start: 01.07
- For smaller things which are directly related to education of student groups (e.g. MEXLE or lab equipment), there is a [quality assurance funding](#) from the AStA available. Depending on the timing in the year and the educational topic, that is the easiest way to get support for material.

Publications

Within the Research Master programme in the TE faculty you should write and publish at least one scientific paper.

Publishing is an essential part of scientific work. The following sections provide some guidance on good scientific practice, literature research, writing, citation management and the selection of a suitable publication venue.

Good Scientific Practice

A scientific publication must be **traceable, reproducible and honest**. The authors are responsible for the scientific content of the paper, independent of which tools were used during literature search, data analysis or writing.

In particular:

- **Use original sources whenever possible.** Do not cite a paper only because another paper or an AI tool refers to it. Read and verify the original source yourself.
- **Clearly distinguish previous work, your own results and your interpretation.** Statements and results taken from other work must be cited appropriately.
- **Never fabricate, manipulate or selectively omit data** in order to obtain a desired result. Unexpected or negative results can also be scientifically valuable.
- **Document your work.** Keep raw data, analysis scripts, relevant software versions, experimental parameters and intermediate results in a way that allows the work to be understood and, where possible, reproduced.
- **Discuss authorship early.** Authorship must be based on a genuine scientific contribution. Contributions that do not justify authorship can be acknowledged instead.
- **Avoid duplicate or fragmented publication.** The same scientific contribution should not be published repeatedly or unnecessarily split into multiple papers.
- **Disclose relevant conflicts of interest and funding** according to the rules of the selected journal or conference.
- **Before submission, all authors must read and approve the complete manuscript** and agree with the submission.
- If you are uncertain whether a practice is acceptable, discuss it with your supervisor **before submission**.

For further information, see the [DFG Guidelines for Safeguarding Good Research Practice](#).

Use of AI Tools

AI-based tools can be useful for literature discovery, language improvement, brainstorming or supporting data analysis. However, they **do not replace scientific judgement**.

- AI-generated statements, references, calculations and summaries must always be verified.
- AI tools are **not scientific sources**. Always identify, read and cite the original publication.
- Be especially careful with automatically generated references. AI systems may generate references that do not exist or contain incorrect bibliographic information.
- The use of generative AI should be disclosed if required by the journal, conference, university or research institution.
- Do not upload confidential, unpublished, personal or otherwise sensitive information to external AI services unless this is explicitly permitted.

- The authors remain responsible for **all content** of the publication, including content created or modified with the support of AI tools.

Literature Search and Discovery

Literature research should normally combine classical scientific databases with discovery tools.

Important: Discovery and AI-based tools can help to **find** relevant literature, but they are not a substitute for reading and evaluating the original publications.

Scientific Search Engines and Databases

- [Google Scholar](#)
- [Semantic Scholar](#)
- [IEEE Xplore](#)
- [ACM Digital Library](#)

Depending on your research field, additional databases such as Scopus or Web of Science may be useful.

Literature Discovery Tools

The following tools can help to discover papers, related publications or citation networks:

- [Elicit](#)
- [ResearchRabbit](#)
- [Connected Papers](#)
- [Litmaps](#)
- [Consensus](#)
- [Researcher.Life](#)
- [SciSpace](#)
- [Perplexity](#)

When using these services, always verify the information against the **original publication**.

Citation and Literature Management

Use a reference management system from the beginning of your project. This avoids unnecessary work when preparing the manuscript and helps to keep bibliographic information consistent.

Recommended tools include:

- [Zotero](#) – general-purpose reference management with browser, Word, LibreOffice and Google Docs integration
- [JabRef](#) – particularly useful when working with LaTeX and BibTeX

Additional services can help with finding or formatting references, but should not replace a proper reference management system:

- [Paper Digest](#)
- [Sourcely](#)
- [Citation Machine](#)

Always check automatically generated bibliographic entries. Author names, titles, publication

years, page numbers and DOIs can be incorrect.

Writing Assistance

Tools that can support scientific writing and language improvement include:

- [Paperpal](#)
- [QuillBot](#)

Such tools can help to improve language and readability, but you remain responsible for the scientific meaning of the resulting text.

In particular, make sure that language tools do not:

- change the scientific meaning of a statement,
- introduce unsupported claims,
- remove important limitations,
- or create references that have not been verified.

Selecting a Journal or Conference

The goal is not simply to publish in the journal with the highest numerical ranking. The publication venue should be **appropriate for your research topic and scientific community**.

Consider in particular:

- Does the scope of the journal or conference match your research?
- Are similar and relevant papers published there?
- Is the journal or conference recognized in the respective research community?
- Is the peer-review process clearly described?
- Is the publication indexed in relevant scientific databases?
- Are publication fees clearly stated?
- Are previous publications of reasonable scientific quality?
- Does your supervisor consider the venue appropriate for the research topic?

Bibliometric indicators can provide additional information, for example:

- [Google Scholar Metrics / h5-index](#)
- [Conference Ranks](#)

However, such rankings and metrics should **not be used as the only criterion** for selecting a publication venue.

To assess whether a journal or publisher is trustworthy, the [Think. Check. Submit.](#) checklist is recommended.

Before Submission

Before submitting a paper, check at least the following points:

- The journal or conference is suitable for the research topic.
- The current author guidelines and required template have been followed.
- All authors and their affiliations are correct.
- All authors have read and approved the final manuscript.

- Authorship and author order have been discussed and agreed upon.
- All figures and tables are understandable and properly referenced.
- Figures, data and text from other sources have the necessary citations and permissions.
- Every reference in the bibliography has been checked against the original source.
- Every cited publication is actually used and discussed appropriately in the manuscript.
- Raw data, source code and analysis scripts are documented and stored appropriately.
- Funding information and conflicts of interest have been declared where necessary.
- The requirements regarding the use and disclosure of AI tools have been checked.
- The manuscript has been proofread for scientific consistency, language and formatting.

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