

M U N I
F I

Introduction to PhD Study: Formal and Scientific Requirements

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DUVOD: Course Organization

- **Intro session (today)**
- Formal aspects of PhD study at FI MU

- **PhD retreat in Telč**
- Discussions and activities focused on practical aspects of research work
- Opportunity to get to know your colleagues
- Dates: **May 7th** – **May 9th** (preferred), June 2nd – June 4th 2025 (back-up)

- **Both parts are compulsory!**

THE WORLD OF SCIENTISTS

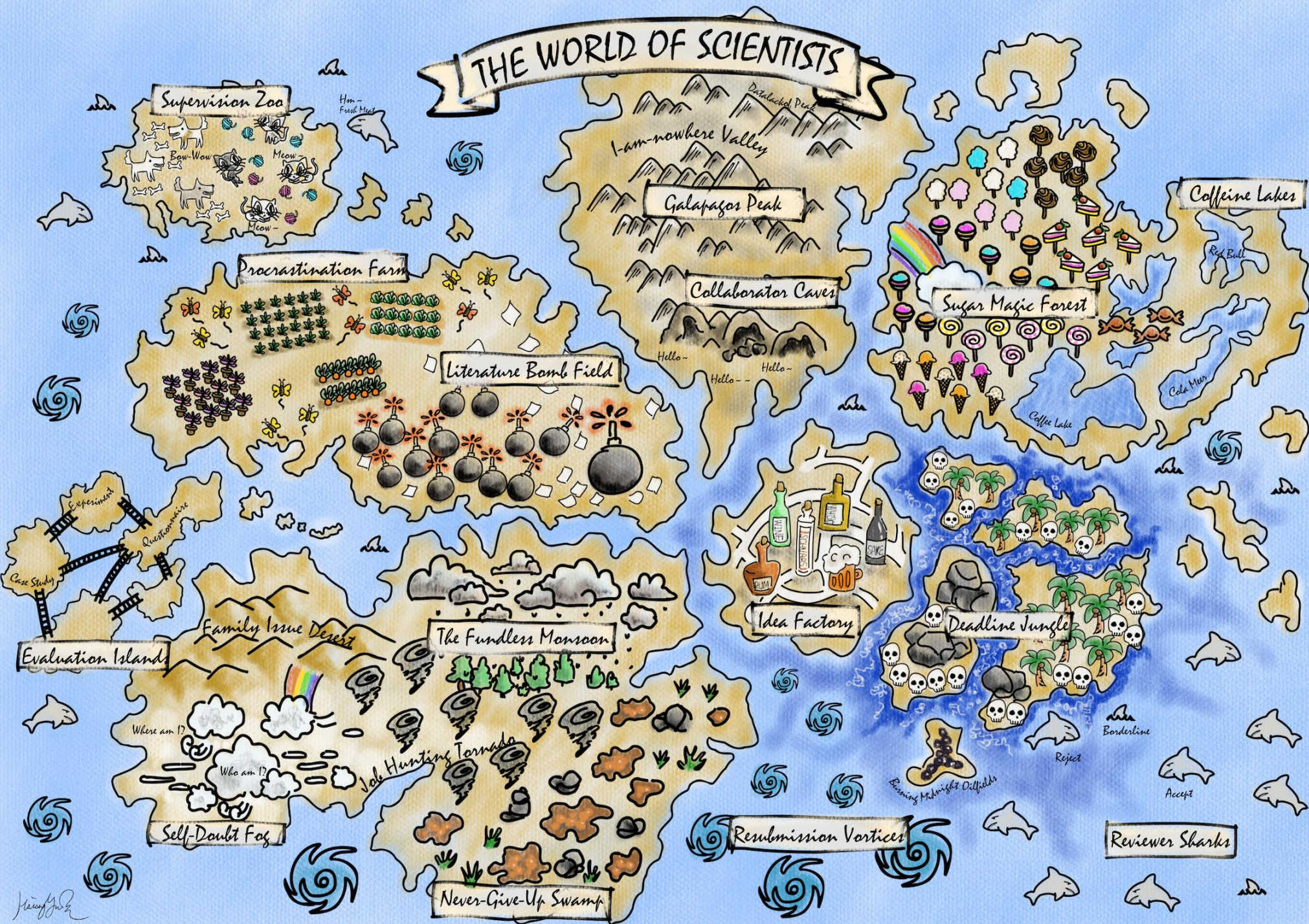


Image credit:
Hsiang-Yun Wu,
St. Pölten UAS
TU Wien

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Intro Session Today

- **Scientific requirements**
- Introduction to academic publishing

- **Lunch break**

- **Formal requirements and guidelines at FI**

Scientific Requirements

The Illustrated Guide to a PhD

Once you are at the boundary, you focus:

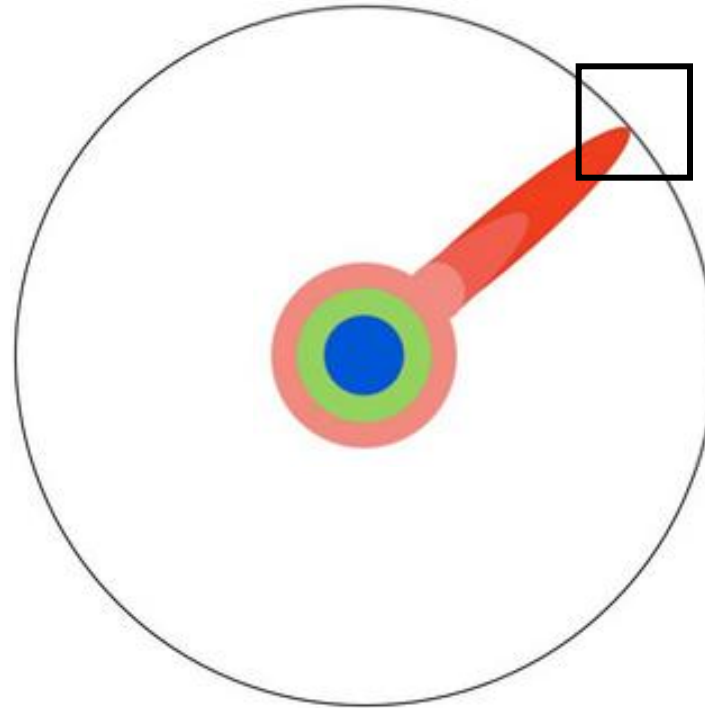


Image credit: Matt Might, University of Utah, <http://matt.might.net/>
<http://matt.might.net/articles/phd-school-in-pictures/>

The Illustrated Guide to a PhD

And, that dent you have made is called a PhD.:

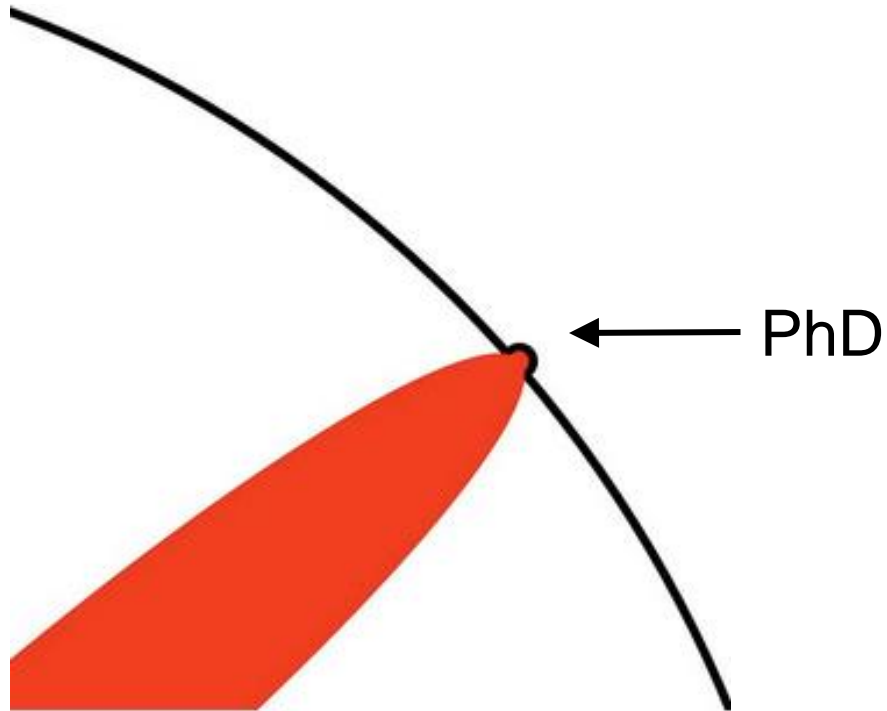


Image credit: Matt Might, University of Utah, <http://matt.might.net/>
<http://matt.might.net/articles/phd-school-in-pictures/>

The Illustrated Guide to a PhD

So, do not forget the bigger picture:

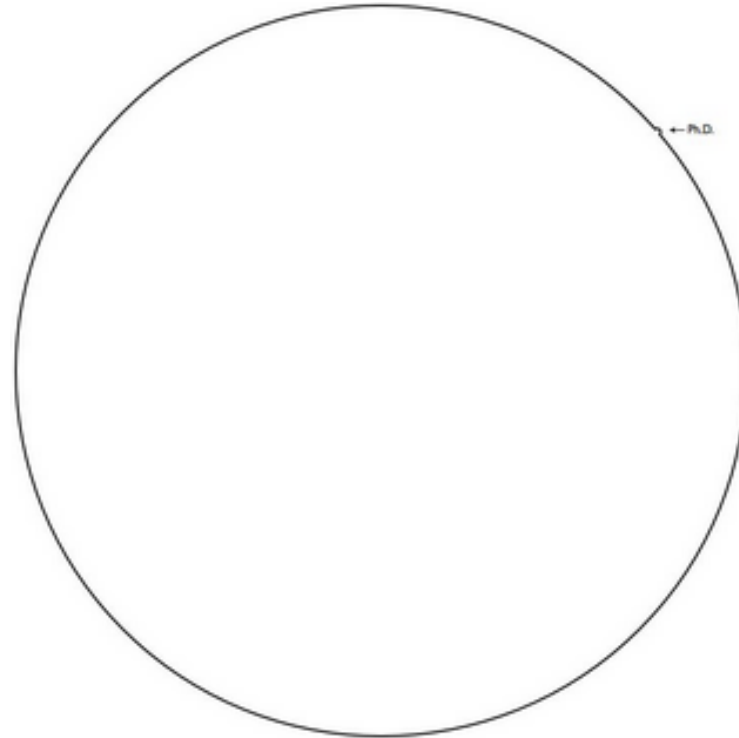


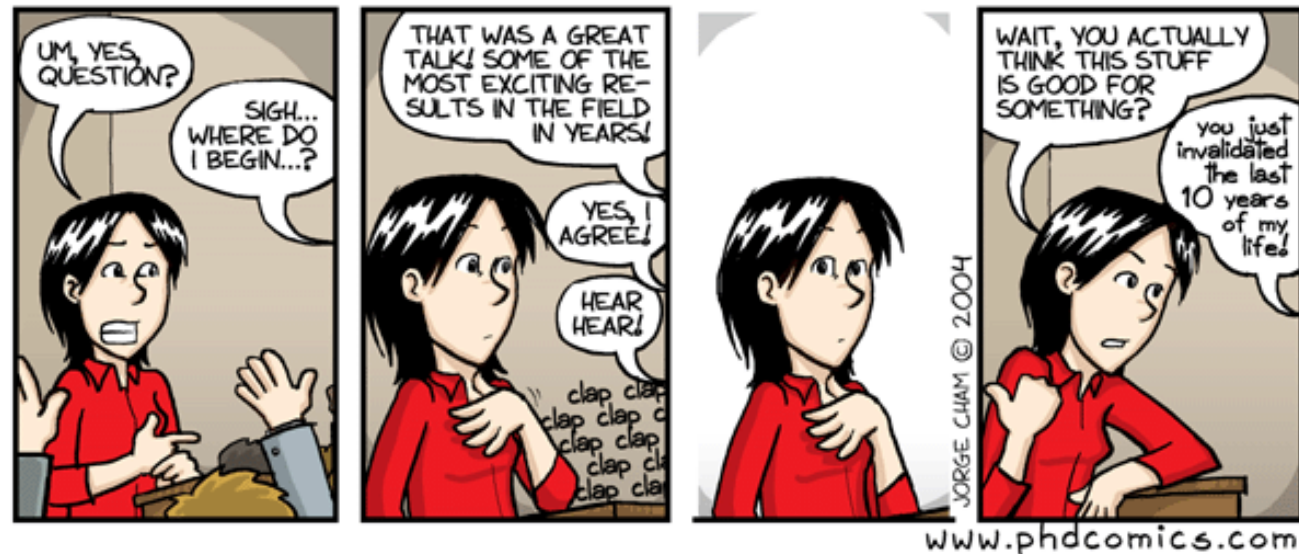
Image credit: Matt Might, University of Utah, <http://matt.might.net/>
<http://matt.might.net/articles/phd-school-in-pictures/>

Publications

- At least **two peer-reviewed publications** at international fora
- The most important aspect of your research work
- Several types of publication media available:
 - **Conferences**
 - **Journals**
 - Books, book chapters (typically on invitation)
 - Patents
- The purpose of each medium varies across scientific fields
- The term 'a good publication' therefore varies as well

Conferences

- Rapid dissemination of currently examined ideas, reporting "smaller" results
- People networking
- Single or double-round review process with a binary decision
- Results published in 'Proceedings' or associated journals



Journals

- Longer validity of results expected
- Reporting "finalized/almost finalized" results
- Automatic distribution to subscribers
- Multi-round review process with a possible revision



WWW.PHDCOMICS.COM

Publishing Models

- **Open Access**

- Authors submit
- Publisher gets the work evaluated (revision process)
- If accepted, **authors pay** a (steep) publishing fee and publishers 'prints' the work
- Everyone reads for free
- MU has some vouchers and discount agreements with some publishers:
<https://openscience.muni.cz/...>

- **Closed Access**

- Authors submit
- Publisher gets the work evaluated (revision process)
- If accepted, publisher 'prints' the work
- **Readers pay** to get access to the published work

Publication Quality

- Often judged by the quality of publication media

Research Publications • At the international level, the thesis lists two journal papers and three conference publications. Both journal papers are in the Service Science journal, a fast-track online journal with an interdisciplinary editorial board currently managed by the Institute for Operations Research and the Management Sciences. The journal exists for five years and is not (yet) included in JCR or SCOPUS.

Of the three conference publications, two are from the Naples Forum on Service, a biannual meeting for discussing service topics from business and systems perspectives, with 2009 abstract acceptance rate reported at about 50%. The third publication is from the International Conference on Security and Management, one of a series of mass conferences long suspected of fraudulent practices associated with Hamid Arabnia, and is not related to the thesis.

The official research domain of the thesis is computer science, however, the publication record does not appear to target typical computer science publication venues. Instead, it aims for the more interdisciplinary domain of service science.

How To Choose Publication Media?

Availability

- **Ask colleagues** where they publish
- Check **publication lists of cooperating/competing groups**, established authorities in the field
- Check your **favorite papers** and the references in there
- Check **citation databases and search engines**:
 - Web of Science - <https://mjl.clarivate.com/>
 - Scopus - <http://scopus.com>
 - DBLP - <http://dblp.uni-trier.de>
 - Google Scholar - <http://scholar.google.com>
- Check **field-specific lists of conferences and journals** (e.g., <http://imagescience.org>)
- Check **publisher/society calendars** (e.g., <https://dl.acm.org/conferences/upcoming>)

How To Choose Publication Media?

Eligibility at FI MU (Conferences)

- Standard session of a CS conference with the **CORE or FI-rank B** or higher.
 - At least 4 pages, published in the main conference proceedings
 - Belongs directly to the ranked conference (i.e., it is not an associated workshop or another co-located conference)
 - Underwent a standard review process
 - Read also: <https://www.fi.muni.cz/files/ozs-int/definition-high-quality-publication.pdf>
- CORE / FI-rank:
 - CORE (at least B): <http://portal.core.edu.au/conf-ranks>
 - GGS (at least B): <http://gii-grin-scie-rating.scie.es/ratingSearch.jsf>
 - Google Scholar (h5-index at least 10): <https://scholar.google.com/citations...>

How To Choose Publication Media?

Eligibility at FI MU (Journals)

- Journal with impact factor that is included in one of the following editions of **Web of Science: SCIE, SSCI, or AHCI**
- List of journals:
 - <https://jcr.clarivate.com/jcr/browse-journals>
- **Impact factor:**
 - The number of citations to the articles published in the previous two years divided by the number of articles published in those years
 - Essentially the average number of recent citations per article

JCR YEAR
2022

IEEE TRANSACTIONS ON VISUALIZATION AND COMPUTER GRAPHICS

ISSN
1077-2626

EISSN
1941-0506

JCR ABBREVIATION
IEEE T VIS COMPUT GR

ISO ABBREVIATION
IEEE Trans. Vis. Comput. Graph.

Journal information

EDITION	Science Citation Index Expanded (SCIE)
CATEGORY	COMPUTER SCIENCE, SOFTWARE ENGINEERING - SCIE

LANGUAGES

English

REGION

USA

1ST ELECTRONIC JCR YEAR

1997

Publisher information

PUBLISHER

IEEE COMPUTER SOC

ADDRESS

10662 LOS VAQUEROS CIRCLE,
PO BOX 3014, LOS ALAMITOS,
CA 90720-1314

PUBLICATION FREQUENCY

12 issues/year

Predatory Publishers

Hello Furmanova Katarina,

On behalf of our Organizing Committee, we are pleased to announce the “**International E-Conference on Metabolism, Obesity Health and Diseases (ICMOH-2022)**”, which will be held on March 14-15, 2022.

We went through your research article entitled with .

We are so glad to welcome you to deliver a valuable talk in our oral sessions at our conference ICMOH-2022.

• • •

* Registration will apply for the conference

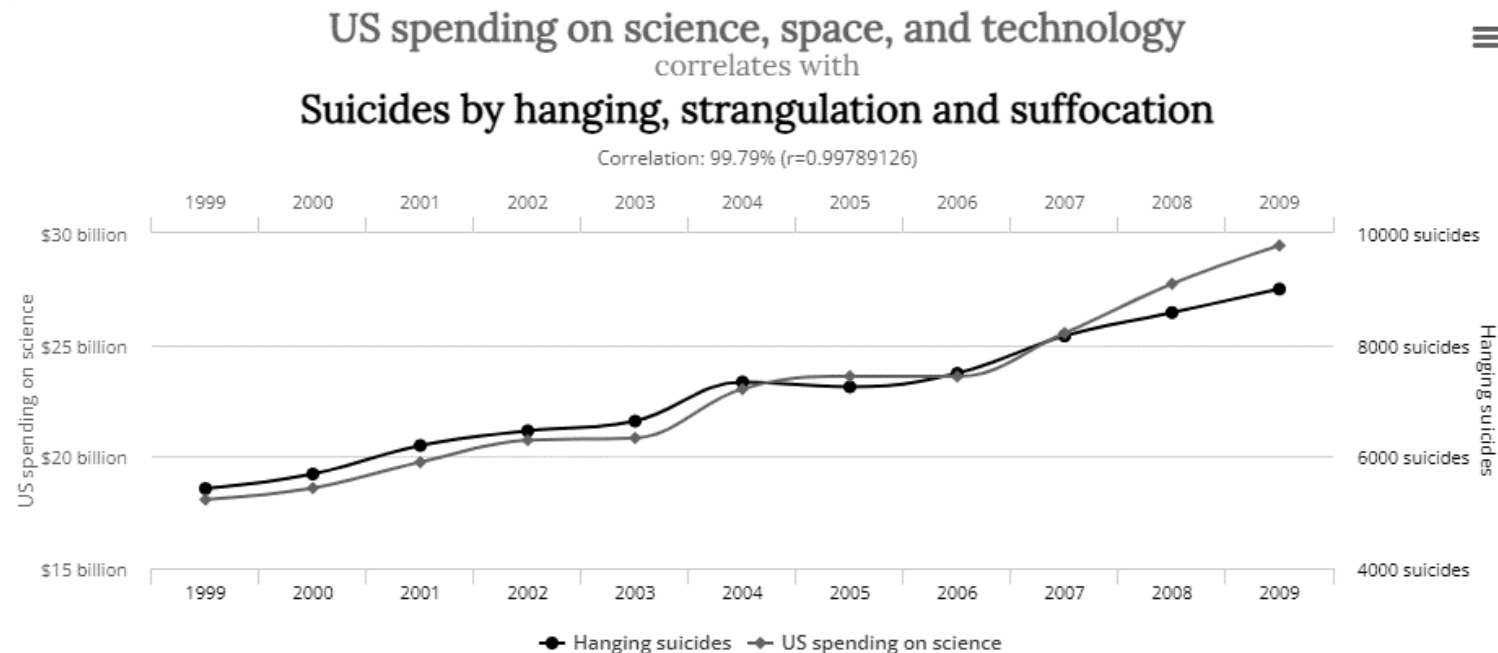
Predatory Publishers and Conferences

- Check (and silently ignore) those desperately inviting you to publish:
<http://beallslist.net/>
- Beware of **MDPI** ([official MU statement](#)) and **Hindawi**
- Typical signs of predatory publishers/conferences:
 - Conferences: exotic venues (e.g., Hawaii or a cruise ship)
 - Journals: open-access model (not a bad thing by itself)
 - Short deadlines for notifications of acceptance
 - Wide scope of accepted topics
 - Suspicious committee members (look for known members of the research community)
 - <http://www.rtcse.org/>

Publication Ethics

Bad Practices

- Publishing for the sake of publishing (e.g., in predatory journals)
- Data dredging, cherry-picking, p-hacking



Publication Ethics

Bad Practices

- Publishing for the sake of publishing (e.g., in predatory journals)
- Data dredging, cherry-picking, p-hacking
- Publishing unreliable/non-replicable results
 - Many publishers promote sharing data & source-code to avoid this
- Plagiarism, dual publishing (self-plagiarism)
 - Respect intellectual property
- Funding misuse

Research Ethics

Legal and Ethical Aspect of Research

- Confidentiality (reviewed papers, grants, ...)
- Sensitive data handling, research on human or animal subjects
 - In IT mostly user studies, collecting information on user practices
 - Consent, anonymization, data storing
- Research Ethics Committee
 - Approval often required by publishers or funding agencies
 - <https://www.muni.cz/en/about-us/organizational-structure/boards-and-committees/research-ethics-committee/ethics-at-mu>

Research Ethics

General Guidelines

- Carefulness, honesty, objectivity, openness about your research
- Confidentiality, respectfulness towards colleagues, competitors, participants
- MU Academic Code of Ethics, misconducts handled by Ethics board of MU

Reporting Your Publications

- Make sure you add your publications to IS (some stipends depend on them)
- Transfer the publication records to RIV
 - RIV = Rejstřík informací o výsledcích – National registry of research outcomes
 - Publications affiliated with MU – important for evaluation of the faculty/university
 - Instructions (only in Czech): <https://is.muni.cz/auth/do/fi/RIV/riv.html>

A new publication record is being created.

Display detailed instructions Disable bubble help

Display only the items required for RIV

Display only the items necessary for publication/outcome identification

Basic information on the record:

Form type (outcome type for RIV):

transfer the publication/outcome record to the RIV database

Perform the WOS check of the record

all the authors are allowed to edit the record

The publication has been made public on Elportál.

Do not make public

Formal Requirements and Guidelines

Study Program at FI

- One study program: **InformatICS**
- Standard length: **4 years**
- Up to 8 years by the Law

- Two specializations:
- **Fundamentals of Computer Science** (theory-oriented)
- **Computing Technology and Methodology** (application-oriented)

Read more: <https://www.fi.muni.cz/admission/doctoral/fields.html.en>

Important People

- **Supervisor/Advisor**
- Each specialization coordinated by one **Doctoral Committee**
- The entire study program coordinated by the **Doctoral Board**
- Additionally, if you have any **problems or questions**:
- Office for Doctoral and International Studies: **Ada Nazarejová**
- Ombudsmans for doctoral students: **Katarína Furmanová, Petr Novotný**
- Vice-dean for research and doctoral studies FI MU: **Barbora Kozlíková**



Stages of PhD Study



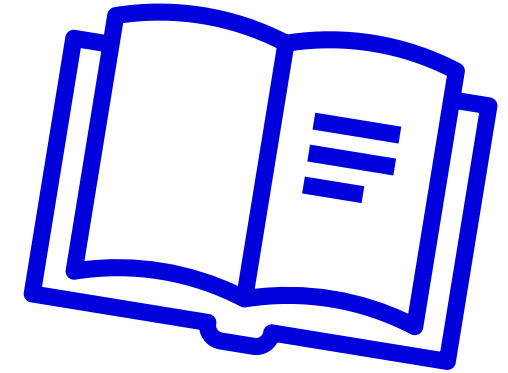
- Year 1 • Orientation in the field, deepening of the knowledge
- Year 2 • First results, publications, failures (not necessarily in this order)
- Year 2+ • **Thesis Proposal and State Doctoral Exam (3rd and 4th semester)**
- Year 4 (ideally) • More results, publications, failures (not necessarily in this order)
- Thesis writing and defense (perhaps the most stressful stage)
- Semestral schedule: <https://www.fi.muni.cz/studies/doctoral/schedule.html.en>

Control Mechanisms

- Guideline for the student, supervisor, committee, and board
- **Individual study plan: Overall plan**
 - The general direction of the study, plan for internship
 - At the beginning of study, changes need to be approved by doctoral board
- **Individual study plan: Semestral plans**
 - Specification of the tangible results
 - Every semester – summary of previous semester, plan for the next
- **Thesis Proposal**
 - Shows the student knows what to do and has realistic plan
 - 4th semester at latest



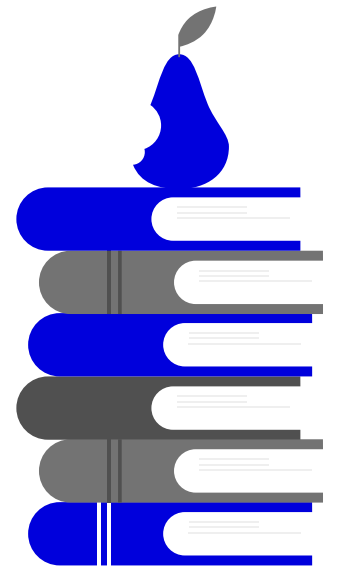
Thesis Proposal vs. Rigorous Thesis



- If you want to get RNDr. together with the thesis proposal:
- You need one peer reviewed publication
 - This publication then cannot be used as the one of the 2 key publications in your doctoral thesis
- Prepare rigorous thesis (intro, state of the art, results, ...)
- Attach parts required by thesis proposal (thesis plan and time estimates, some additional results not tied to the “rigo” paper)

Mandatory Courses

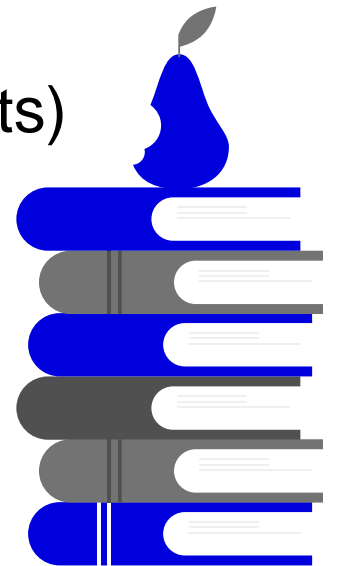
- **DUVOD** Introduction to PhD Study (2 credits)
- **DACSE** Academic Communication Skills in English (2 credits)
- **DTEDI** Thesis Proposal (7 credits): **≤4th semester**
- **DZAST** Internship Abroad (12-36 credits)
 - At least 30 days in total, 2 credits/5 days
 - Can be split into smaller stays of at least 10 consecutive days
 - https://is.muni.cz/do/fi/formulare/PhD_studium/35653494/
- **DINDIV** Individual Research Plan (≥ 215 credits)
 - 15-40 credits/semester
- In total you need **≥ 240 credits**
- <https://is.muni.cz/auth/do/fi/phd/predmety/>



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Voluntary Courses

- **DINKOL** Informatics Colloquium (1 credit/semester)
 - Invited lectures on various research topics
 - Every Tuesday at 14:00
 - <https://www.fi.muni.cz/research/colloquium/index.html>
- **DUCIT** Teaching Lab (3 credits)
- **VV075** Support for Computer Science Instruction in English (2 credits)
- **VV043** Academic Writing in English (5 credits)
- CERPEK Workshops, e.g., on supervising Bc./Mgr. theses
- <https://cerpek.muni.cz/aktualne/kalendar-akci/vedeni-2024-09-25>



Service to Faculty

- **10 hours per semester:** Supervision of examinations and tests
 - <https://is.muni.cz/auth/do/fi/phd/28933687/>
- Not required in combined study modes

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Evidence výpomoci fakultě

Jméno a příjmení:

Školitel:

Typ činnosti	Datum	Počet hodin	Podpis vyučujícího

Formal Requirements Summary

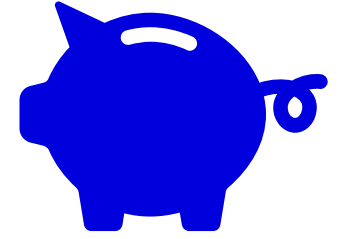
- **≥240 credits + ≥30-day foreign internship + Thesis Proposal + State Doctoral Exam + Thesis**
- **≥215 credits for DINDIV Individual Research Plan**
- **Service to Faculty**
 - Exam supervision
- **At least two peer-reviewed publications** at international fora

Teaching

- Not compulsory
- Paid from separate teaching contract
- Might be expected by supervisor
- Recommended, if you plan to stay in academia

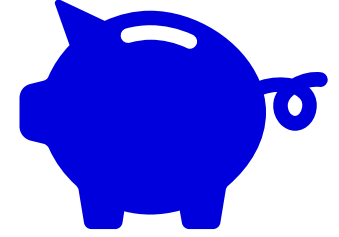


Financing



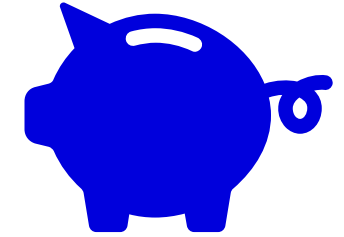
- Basic scholarship: 16 000 CZK
- ‘Active students’ scholarship: <https://www.fi.muni.cz/~xsmerk/firank/phd2024P.html>
 - 50% (CZK 7000) during first three semesters to every full-time student
 - 100% (CZK 14000) if you had at least one quality publication in the past 2 years that is within MU fully affiliated with FI, or multiple publications that add up to 100% FI affiliation, e.g., publications shared between FI and ICS (ÚVT) or other faculties
 - Evaluated every semester
 - Deadline for publications in IS - <https://www.fi.muni.cz/studies/doctoral/schedule.html.cs>
(if you get publication between the deadline and board meeting, contact them)

Financing

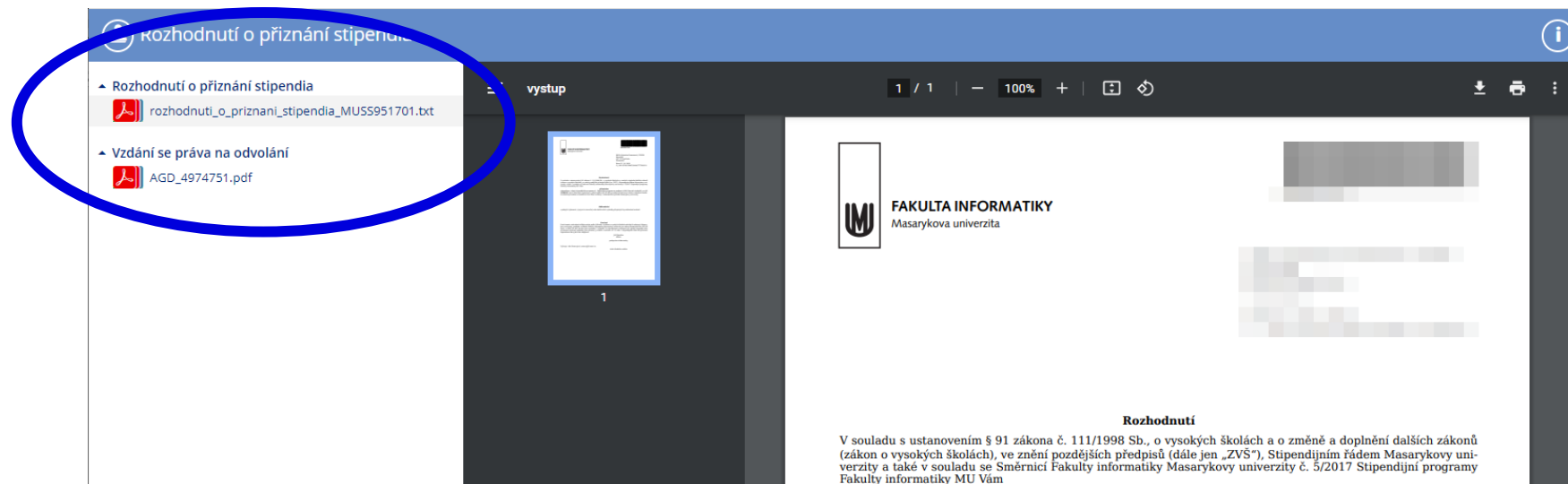


- Stipends from the Specific Research projects – nominated by supervisor
- Other resources:
 - Teaching
 - Project money (research grants, industry partners)
 - Brno Ph.D. talent
- Summary: <https://www.fi.muni.cz/admission/doctoral/finance.html.en>

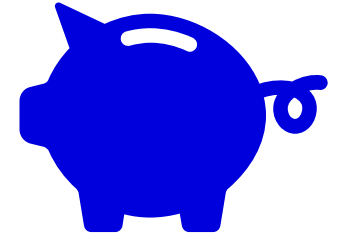
Financing



- When you are awarded a scholarship, you will get a notification that a document was delivered to you via IS. Please open the document and (unless you want to decline the money), please **click that you want to give up the right to appeal** the decision (“Vzdání se práva na odvolání”) and then please **confirm it**. Make sure to do it for **all** scholarships. You get the money sooner and save other people a lot of headache 😊.



Financing



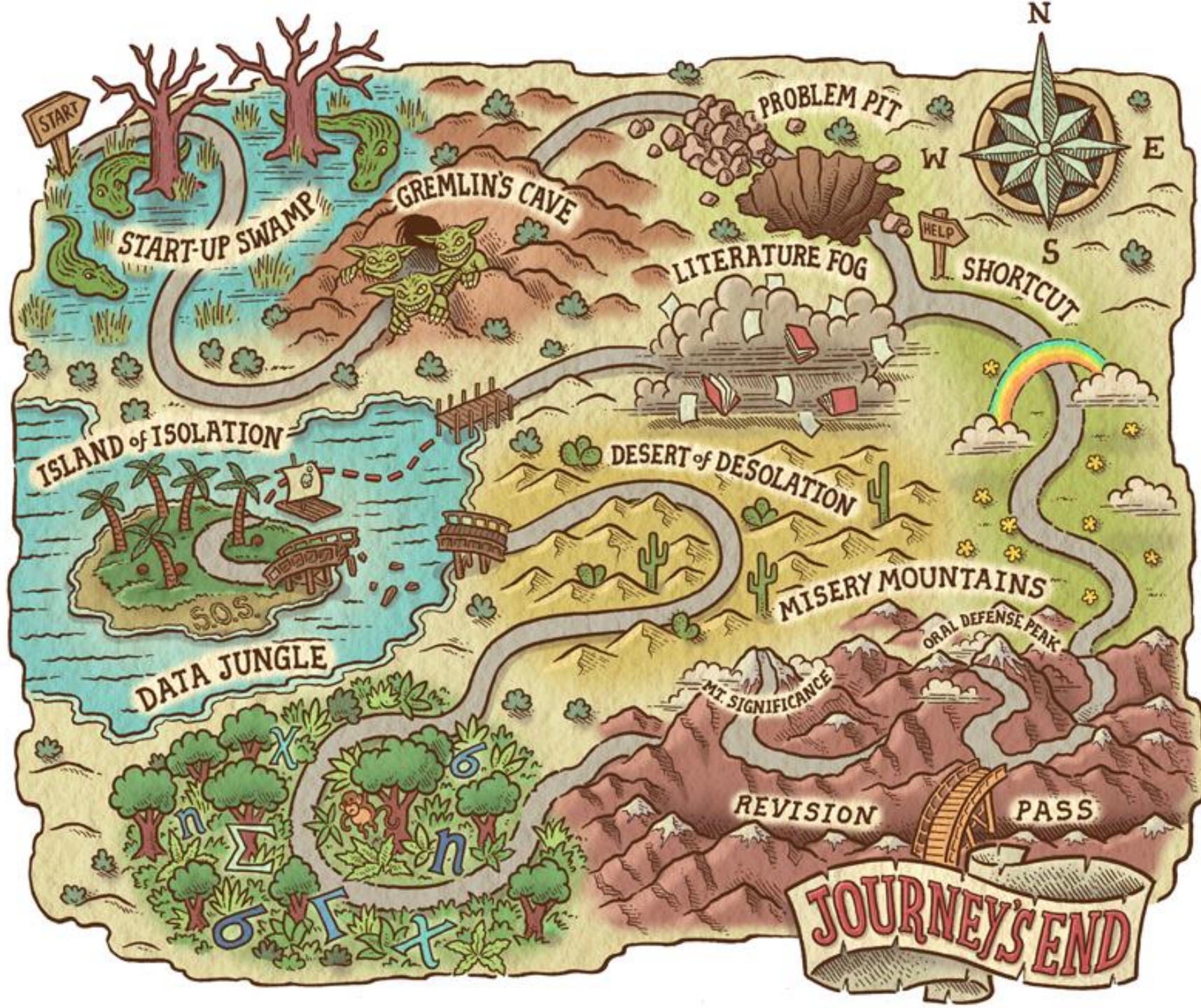
- **Internships, conference participation, and publications**
- Specific Research project of prof. Hliněný: <https://forms.gle/3Tt6GTKPNahQq1sM7>
 - Active participation at conferences ranked A or higher
 - Active participation at distinguished summer/winter schools
 - Research internships abroad
- Other Specific Research project – depends on available budget etc.
- Research grants awarded to your supervisor
- A limited budget of your department

What's next?

- **PhD retreat in Telč**
- Discussion and activities focused on practical aspects of research work
- Opportunity to get to know your colleagues better
- Dates: **May 7th** – **May 9th** (preferred), June 2nd – June 4th 2025 (back-up)



- [MUNI PhD Academia/FRESHERS](#)



The Journey Begins...

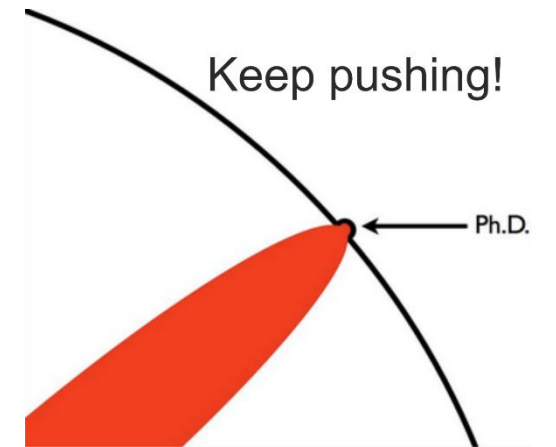


Image credit:
Mario Zucca Illustration

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