
Wissenschaftliches
Schreiben & Publizieren
(avoiding a bad review)

10 ways to get your paper rejected

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In Darmstadt...

- Research coach FhG IGD
 - FhG Institut für Graphische Datenverarbeitung (www.igd.fraunhofer.de)
- Privat Dozent TU Darmstadt
 - FB Informatik, FG Graphisch Interaktive Systeme (GRIS)
- My job is...
 - to help employees @ IGD (& GRIS) to get their ideas materialized and published,
 - supervise / coach them along the PhD track,
 - supervise Bachelor & Master theses,
 -
- That is ...

Make sure they write a decent PhD thesis

FOKKE & SOKKE

LESEN DIE DOKTORARBEIT VON ZU GUTTENBERG

"...DES FÖDERALEN
GERICHTS ÜBERNOMMEN
WORDEN. KLICK HIER..."

"...UND LERNE
FRAGEN AUS DEINER
NÄHE KENNEN"



http://de.wikipedia.org/wiki/Fokke_%26_Sokke

Contents / What I promised:

■ Part I

- What should I write down?
- What is important to mention?
- How can I write down my work in such a way that I reach my intended audience?
- 10 reasons

■ Part II

- Which language?
- Which conferences/journals are important?
- Which conferences/journals makes sense?
- Should I write a journal or a conference paper?

Useful links

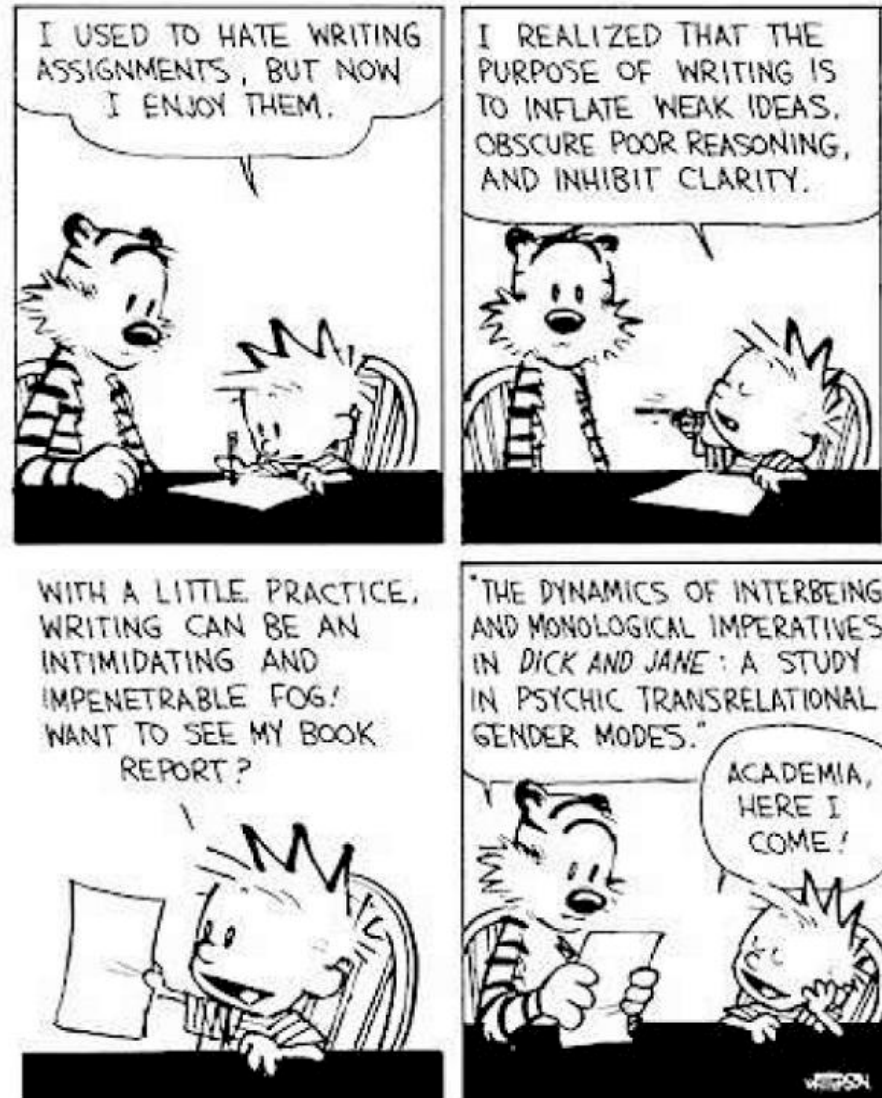
- <http://www.gris.tu-darmstadt.de/~akuijper/coaching.html>
 - Contains all kinds of info regarding writing papers and theses, publishing, conferences, literature.

- This talk is based on
 - <http://www.gris.tu-darmstadt.de/~akuijper/researchcoaching/wissenschaftliches-arbeiten.pdf>
 - Slides by [Helmut Grabner, TU-Graz & ETH-Zurich](#).
 - <http://www.gris.tu-darmstadt.de/~akuijper/researchcoaching/writing-a-paper-slides.pdf>
 - Slides by [Simon Peyton Jones, Microsoft Research](#)

Writing

Fallacy

we write papers and
give talks mainly to
impress others,
gain recognition,
and get promoted



Papers communicate ideas

Your goal:

to infect the mind of your reader with **your idea**, like a virus

Papers are far more durable than programs (think Mozart)

The greatest ideas are (literally) worthless
if you keep them to yourself

The purpose of your paper is...

to convey your idea

...from your head to your reader's head

Everything serves this single goal

Conveying the idea

- Here is a problem
- It's an interesting problem
- It's an unsolved problem
- **Here is my idea**
- My idea works (details, data)
- Here's how my idea compares to other people's approaches

Structure

- Abstract (4 sentences)
- Introduction (1 page)
- The problem (1 page)
- My idea (2 pages)
- The details (5 pages)
- Related work (1-2 pages)
- Conclusions and further work (0.5 pages)

**„Tell them what you are going to tell them,
tell them, then tell them what you told them.“**

Abstract

- I usually write the abstract last
- Used by program committee members to decide if papers are relevant and interesting
- Gives reviewers a first impression of your paper
- Four sentences [Kent Beck]
 1. State the problem
 2. Say why it's an interesting problem
 3. Say what your solution achieves
 4. Say what follows from your solution

Example

1. Many papers are badly written and hard to understand
2. This is a pity, because their good ideas may go unappreciated
3. Following simple guidelines can dramatically improve the quality of your papers
4. Your work will be used more, and the feedback you get from others will in turn improve your research

Introduction

1. Describe the problem

- Use an example to introduce the problem

2. State your contributions

- Write the list of contributions first
- **The list of contributions drives the entire paper:
the paper substantiates the claims you have made**
- Reader thinks “gosh, if they can really deliver this,
that’s be exciting; I’d better read on”
- Do not leave the reader to guess what your
contributions are!

Core content

- Concentrate single-mindedly on a narrative that
 - **describes the problem**, and why it is interesting,
 - **describes your idea**,
 - **defends your idea**, showing how it solves the problem, and filling out the details
- On the way, cite relevant work in passing, but defer discussion to the end
- In a paper you **MUST** provide the details, but **FIRST** convey the idea
- Use examples!

Conveying the idea

- Explain it as if you were speaking to someone using a whiteboard
- Conveying the **intuition** is primary, not secondary
- Once your reader has the intuition, she can follow the details (but not vice versa)
- Even if she skips the details, she still takes away something valuable

- Your introduction makes claims
- The body of the paper provides **evidence to support each claim**
- Check each claim in the introduction, identify the evidence, and forward-reference it from the claim
- Evidence can be: analysis and comparison, theorems, measurements, case studies

Related work

- Fallacy: To make my work look good, I have to make other people's work look bad

- Giving credit to others does not diminish the credit you get from your paper

- Failing to give credit to others can kill your paper
 - If you imply that an idea is yours, and the referee knows it is not, then either
 - You don't know that it's an old idea (bad)
 - You do know, but are pretending it's yours (very bad)

- Use google, citation indices, references, ... -> librarians!

Conclusions, Discussion, Future Work

1. Describe the problem
2. State how you solved it with your contributions
 - Copy the list of contributions first
 - The list of contributions drove the entire paper: the paper substantiated the claims you have made
 - Each contribution must have evidence in the body of the paper
 - Reader now thinks “gosh, they really delivered this, that’s exciting; glad I read on”
 - Do not leave the reader to guess what your contributions were!
3. Discuss some limitations and potential ways to solve them

The process

- **Start early.** Very early.
 - Hastily-written papers get rejected.
 - Papers are like wine: they need time to mature
- Get your paper read by as many friendly **guinea pigs** as possible
 - Experts are good
 - Non-experts are also very good
 - Each reader can only read your paper for the first time once!
So use them carefully
- Listen to your reviewers
 - **The reviewer is always right**

Basic stuff

- Submit by the deadline
- Keep to the length restrictions
 - Do not narrow the margins
 - Do not use 6pt font
 - On occasion, supply supporting evidence (e.g. experimental data, or a written-out proof) in an appendix
- Always use a spell checker
- Give strong visual structure to your paper using
 - sections and sub-sections
 - bullets
 - *italics*
 - laid-out code
- Find out how to draw pictures, and use them

10 reasons

1. No contribution
2. Unclear abstract
3. Contributions not stated in the intro
4. Conclusions vague
5. Intro and conclusions don't fit
6. No state of the art
7. Old references
8. No experiments (quantitative results: tables, graphs)
9. No comparison with state of the art
10. Bad figures

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Darmstadt Classification of publications

Four classes for publications based on *scientific impact* environment

- peer reviewed & clear review process
 - open access???
- Internationally acknowledged
 - English
- minimum of 4 pages
 - You can't present something new in less pages
- reputation of publisher (i.e. "citeability")
 - IEEE, Springer, Eurographics, ACM, Elsevier, ...
- Journals based on impact factor (IF)
- Conferences based on acceptance rates (AR)

Procedure

1. “Peer-reviewed presentation of scientific work at **low** impact environment”
 $IF < 0.1$, $AR > 90\%$, non-English, ...
2. “Peer-reviewed presentation of scientific work at **average** impact environment”
 $0.1 < IF < 1$, $50\% < AR < 90\%$, ...
3. “Peer-reviewed presentation of scientific work at **good** impact environment”
 $1 < IF < 1.5$, $25\% < AR < 50\%$, ...
4. “Peer-reviewed presentation of scientific work at **excellent** impact environment”
 $1.5 < IF$, $AR < 25\%$, ...

-> Which papers do you cite, where are they published, and why do you think they are good?

Summary

- If you remember nothing else:

- Identify your key *idea*
- Make your contributions explicit
- Use examples
- Check my website

<http://www.gris.tu-darmstadt.de/~akuijper/coaching.html>