

# How to write a report / review

Tim Willemse

Department of Computer Science, TU Eindhoven  
The Netherlands

email: [t.a.c.willemse@tue.nl](mailto:t.a.c.willemse@tue.nl)

Thanks to Bhaskaran Raman, Hans Zantema

Seminar FSA, December 10, 2018

# How to write a report?

# How to write a report?

## *Purpose of a report: writing to be read*

A key thing to keep in mind right through your report writing process is that a report is written to be read, by someone else  
This is the central goal of report-writing

# How to write a report?

*Purpose of a report: writing to be read*

A key thing to keep in mind right through your report writing process is that a report is written to be read, by someone else

This is the central goal of report-writing

Before you start writing your report, you need to have in mind the *intended audience*

# How to write a report?

*Purpose of a report: writing to be read*

A key thing to keep in mind right through your report writing process is that a report is written to be read, by someone else

This is the central goal of report-writing

Before you start writing your report, you need to have in mind the *intended audience*

In the narrowest of possibilities, your report is meant for reading by yourself, and by your advisor/instructor, and perhaps by your evaluation committee

# How to write a report?

*Purpose of a report: writing to be read*

A key thing to keep in mind right through your report writing process is that a report is written to be read, by someone else

This is the central goal of report-writing

Before you start writing your report, you need to have in mind the *intended audience*

In the narrowest of possibilities, your report is meant for reading by yourself, and by your advisor/instructor, and perhaps by your evaluation committee

This has value, but only short-term

# How to write a report?

*Purpose of a report: writing to be read*

A key thing to keep in mind right through your report writing process is that a report is written to be read, by someone else

This is the central goal of report-writing

Before you start writing your report, you need to have in mind the *intended audience*

In the narrowest of possibilities, your report is meant for reading by yourself, and by your advisor/instructor, and perhaps by your evaluation committee

This has value, but only short-term

The next broader possibility is that your report is readable by others that may continue on your work and improve it, or learn from your work

# Possible overall approach: top-down



# Possible overall approach: top-down

- First write the section-level outline incorporating the flow of ideas

# Possible overall approach: top-down

- First write the section-level outline incorporating the flow of ideas
- Then the subsection-level outline

# Possible overall approach: top-down

- First write the section-level outline incorporating the flow of ideas
- Then the subsection-level outline
- Then a paragraph-level outline  
The paragraph-level outline would more-or-less be like a presentation with bulleted points

# Possible overall approach: top-down

- First write the section-level outline incorporating the flow of ideas
- Then the subsection-level outline
- Then a paragraph-level outline  
The paragraph-level outline would more-or-less be like a presentation with bulleted points

Another thing to nail-down while doing the paragraph-level outline is the terminology you will be using

# Possible overall approach: top-down

- First write the section-level outline incorporating the flow of ideas
- Then the subsection-level outline
- Then a paragraph-level outline  
The paragraph-level outline would more-or-less be like a presentation with bulleted points

Another thing to nail-down while doing the paragraph-level outline is the terminology you will be using

For instance, names of various protocols/algorithms/steps in your solution or names/symbols for mathematical notation

# Possible overall approach: bottom-up

# Possible overall approach: bottom-up

- Start by writing technical ingredients that should be in your report anyway: syntax of input language, basic algorithm that should be adjusted, basic theory, ...

# Possible overall approach: bottom-up

- Start by writing technical ingredients that should be in your report anyway: syntax of input language, basic algorithm that should be adjusted, basic theory, . . .
- Continue by writing about the technical extension proposed by yourself



# Possible overall approach: bottom-up

- Start by writing technical ingredients that should be in your report anyway: syntax of input language, basic algorithm that should be adjusted, basic theory, . . .
- Continue by writing about the technical extension proposed by yourself
- Write text to connect and motivate these technical ingredients; choose and work out examples

# Possible overall approach: bottom-up

- Start by writing technical ingredients that should be in your report anyway: syntax of input language, basic algorithm that should be adjusted, basic theory, . . .
- Continue by writing about the technical extension proposed by yourself
- Write text to connect and motivate these technical ingredients; choose and work out examples
- Finally: write abstract, introduction and conclusion

# Some detailed remarks

*Never* point to yourself personally, so never use 'I', 'me', 'mine', ...

*Never* point to yourself personally, so never use 'I', 'me', 'mine', ...  
Instead use 'we' = the author plus the reader: 'we see that ...'

*Never* point to yourself personally, so never use 'I', 'me', 'mine', ...

Instead use 'we' = the author plus the reader: 'we see that ...'

Don't overdo the 'we'

*Never* point to yourself personally, so never use 'I', 'me', 'mine', ...

Instead use 'we' = the author plus the reader: 'we see that ...'

Don't overdo the 'we'

*Never* start a sentence by a mathematical symbol

*Never* point to yourself personally, so never use 'I', 'me', 'mine', ...

Instead use 'we' = the author plus the reader: 'we see that ...'

Don't overdo the 'we'

*Never* start a sentence by a mathematical symbol

It is always possible to restructure the sentence such that it starts by a word starting by a capital; this improves readability



# Structure of a report

# Structure of a report

*Guidelines*, not *rules*

Use your intelligence in working out the details of your specific writing

# Structure of a report

## *Guidelines, not rules*

Use your intelligence in working out the details of your specific writing

- Title and abstract
  - most-read parts: attract attention to your writing
  - should reflect what you have done

# Structure of a report

## *Guidelines, not rules*

Use your intelligence in working out the details of your specific writing

- Title and abstract  
most-read parts: attract attention to your writing  
should reflect what you have done
- Introduction

# Structure of a report

## *Guidelines, not rules*

Use your intelligence in working out the details of your specific writing

- Title and abstract  
most-read parts: attract attention to your writing  
should reflect what you have done
- Introduction
- Background / preliminaries

# Structure of a report

## *Guidelines, not rules*

Use your intelligence in working out the details of your specific writing

- Title and abstract  
most-read parts: attract attention to your writing  
should reflect what you have done
- Introduction
- Background / preliminaries
- Technical sections

# Structure of a report

## *Guidelines, not rules*

Use your intelligence in working out the details of your specific writing

- Title and abstract  
most-read parts: attract attention to your writing  
should reflect what you have done
- Introduction
- Background / preliminaries
- Technical sections
- Conclusions and future work

# Structure of a report

## *Guidelines, not rules*

Use your intelligence in working out the details of your specific writing

- Title and abstract  
most-read parts: attract attention to your writing  
should reflect what you have done
- Introduction
- Background / preliminaries
- Technical sections
- Conclusions and future work
- References



# The introduction

- Motivation

# The introduction

- Motivation
- Setting / background of the problem

# The introduction

- Motivation
- Setting / background of the problem
- Informal description of the problem

# The introduction

- Motivation
- Setting / background of the problem
- Informal description of the problem
- Main results, contribution and relevance, sketch of approach

# The introduction

- Motivation
- Setting / background of the problem
- Informal description of the problem
- Main results, contribution and relevance, sketch of approach
- Organization of the report

# The introduction

- Motivation
- Setting / background of the problem
- Informal description of the problem
- Main results, contribution and relevance, sketch of approach
- Organization of the report

Typically write the introduction section after writing the technical sections, same for abstract and conclusions

# How to write a review?



# How to write a review?

Reviewing is a crucial part in the process of scientific publication

# How to write a review?

Reviewing is a crucial part in the process of scientific publication

Typically, all papers in conferences and journals are reviewed by 3-4 people

# How to write a review?

Reviewing is a crucial part in the process of scientific publication

Typically, all papers in conferences and journals are reviewed by 3-4 people

A review consists of

# How to write a review?

Reviewing is a crucial part in the process of scientific publication

Typically, all papers in conferences and journals are reviewed by 3-4 people

A review consists of

- Summary and general impression of the paper

# How to write a review?

Reviewing is a crucial part in the process of scientific publication

Typically, all papers in conferences and journals are reviewed by 3-4 people

A review consists of

- Summary and general impression of the paper
- Consider checkpoints (next slide)

# How to write a review?

Reviewing is a crucial part in the process of scientific publication

Typically, all papers in conferences and journals are reviewed by 3-4 people

A review consists of

- Summary and general impression of the paper
- Consider checkpoints (next slide)
- Motivated recommendation accept/revise/reject  
(not for seminar)

# How to write a review?

Reviewing is a crucial part in the process of scientific publication

Typically, all papers in conferences and journals are reviewed by 3-4 people

A review consists of

- Summary and general impression of the paper
- Consider checkpoints (next slide)
- Motivated recommendation accept/revise/reject (not for seminar)
- List of detailed remarks / typos

# How to write a review?

Reviewing is a crucial part in the process of scientific publication

Typically, all papers in conferences and journals are reviewed by 3-4 people

A review consists of

- Summary and general impression of the paper
- Consider checkpoints (next slide)
- Motivated recommendation accept/revise/reject (not for seminar)
- List of detailed remarks / typos

Main issue: support improvement of the paper



# Checkpoints for a review

# Checkpoints for a review

- Check if the title/abstract make sense

# Checkpoints for a review

- Check if the title/abstract make sense
- Is the introduction appropriate?

# Checkpoints for a review

- Check if the title/abstract make sense
- Is the introduction appropriate?
- Is the overall structure meaningful?

# Checkpoints for a review

- Check if the title/abstract make sense
- Is the introduction appropriate?
- Is the overall structure meaningful?
- Is the difference from related/past work clear and meaningful?

# Checkpoints for a review

- Check if the title/abstract make sense
- Is the introduction appropriate?
- Is the overall structure meaningful?
- Is the difference from related/past work clear and meaningful?
- Are the technical sections understandable?  
Are the figures/tables explained properly?  
Is the terminology clear?  
Are the notions and symbols used defined appropriately?

# Checkpoints for a review

- Check if the title/abstract make sense
- Is the introduction appropriate?
- Is the overall structure meaningful?
- Is the difference from related/past work clear and meaningful?
- Are the technical sections understandable?  
Are the figures/tables explained properly?  
Is the terminology clear?  
Are the notions and symbols used defined appropriately?
- Are the results explained properly?  
Are there technical holes/flaws?  
Do the results show how the work presented is better/worse than the other cases of comparison?

# Conclusions



- We gave some general guidelines about structuring/writing a paper = report

# Conclusions

- We gave some general guidelines about structuring/writing a paper = report
- Always feel free to follow your own ideas if you have a good motivation

# Conclusions

- We gave some general guidelines about structuring/writing a paper = report
- Always feel free to follow your own ideas if you have a good motivation
- Reviewing: comment on a paper to support improvement

- We gave some general guidelines about structuring/writing a paper = report
- Always feel free to follow your own ideas if you have a good motivation
- Reviewing: comment on a paper to support improvement
- For adjusting your paper according to comments from a review: only follow the suggestions if you believe this will improve your paper

# Conclusions

- We gave some general guidelines about structuring/writing a paper = report
- Always feel free to follow your own ideas if you have a good motivation
- Reviewing: comment on a paper to support improvement
- For adjusting your paper according to comments from a review: only follow the suggestions if you believe this will improve your paper
- Good luck!