

# Writing Scientific Reports: Guidelines

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# *Form*

# FORM I

- ▶ **Word processor:**
  - ▶ LaTeX
  - ▶ Word
  - ▶ Anything similarly applicable is Ok, of course
- ▶ Simple, clear layout
  - ▶ The content is important
  - ▶ Layout should support understanding it
- ▶ Clear structure
  - ▶ Use sections, subsections, and so on

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# FORM II

- ▶ Consistent layout of text elements
  - ▶ For example, same style for definitions throughout
  - ▶ No unmotivated switching of style or fonts
- ▶ Support understandability
  - ▶ Keep sentences short (this is not a writing contest in general)
  - ▶ Be clear, avoid ambiguous or vague descriptions
  - ▶ Avoid unstructured, long paragraphs
  - ▶ Do not make too many words if other means are available
  - ▶ Use examples
  - ▶ Use figures (likely re-used from presentation)
  - ▶ Avoid typos

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# *Structure*

# STRUCTURE I

- ▶ *Title page*

- ▶ Title
- ▶ Name of the author
- ▶ Name of seminar
- ▶ Appropriate date and time

- ▶ *Introduction*

- ▶ Motivate the contents (“Why”)
- ▶ Outline related work that matters: the scientific foundation of the “Why”
- ▶ Tell what will be discussed in the following (“What”)
- ▶ Brief description of sections in the following (optional)

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# STRUCTURE II

- ▶ *Problem definition*

- ▶ Provide a clear, formal description of the problem you address in the following
- ▶ The formal summary of the “What”

- ▶ *Methods*

- ▶ Provide all theory in sufficient formal detail
- ▶ Provide all algorithms in sufficient formal detail
- ▶ Mention anything else methodical that matters in practice
- ▶ Reproducibility is key

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# STRUCTURE III

- ▶ *Evaluation*
  - ▶ Describe the data
  - ▶ Describe the (likely computational) experiments that were run
  - ▶ Refer back to Methods wherever needed
  - ▶ Again, reproducibility is important
- ▶ *Discussion / Summary / Outlook*
  - ▶ Discuss the results achieved in a larger context
  - ▶ Summarize achievements
  - ▶ Mention open problems that remain
  - ▶ Outline possible future research that may help to overcome remaining issues
- ▶ *Literature*
  - ▶ Cite everything from which you draw in the text
  - ▶ List all cited work at the end of the report

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# *Content*

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- ▶ Logical coherence
  - ▶ Content provided optimally builds on contents previously provided (but not on contents to be provided later)
  - ▶ Mention things that matter as closely as possible to where they are needed
  - ▶ Again: Introduction, Contents, Summary
- ▶ Work out and stress a main message
  - ▶ Provide main message in the Introduction
  - ▶ Keep particular focus on it in all that follows
- ▶ Keep things consistent and as simple as possible
  - ▶ Write only what you understand
  - ▶ “Lying” or “hiding” no longer allowed though; all necessary details to be provided

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*Thank you for listening!*