Writing!

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Help for writing reports and publications

1. Think about who is the reader!
   - imagine yourself as the intended reader
2. Specify the title of the TP, the names of the group members, affiliations, the name of the assistant, your group number and the date of the TP.
3. Write the report in a way that the reader is able to follow without the help of the description.
   - write also the questions and not only the answers
4. Write the report in passive form. Never write "I"!
   - Active: - The professor teaches the students.
   - Passive: - The students are taught by the professor.
5. Write what has been done in the past tense. Otherwise use present tense.
6. Justify the paragraphs. Symbols, especially variables in Italic. Use m-dash for minus.
7. Number the titles.
8. Tables have titles and their own numbering.
9. Figures (like pictures, diagrams) have subtitles and their own numbering.
10. Give the reference number of the picture at the end of the subtitle (e.g.: Figure 1: Configuration of the experiment [1]) and all references at the end of the report.

How to deal with figures?

- The figure needs to be useful for the report e.g. showing white noise is not useful
    - if you show it you need to explain why it is useful
    - If you show two graphs they need to give different information
    what is not useful: 1st figure: Hall-voltage vs. time 2nd degree calculated from the Hall-voltage vs. time
- Figure, coordinate system labels are the same font size as the text
- Use the horizontal and vertical grid (often useful)
- Give the units on the coordinate system e.g. Voltage [mV],...
- Do not use figure titles inside the figure itself

    → use the figure subtitle:

    - figure captions can be long (they do not need to be short)
    - describe what is seen in the figure and what is important in the figure e.g. The figure shows the motor current versus the motor torque

What to avoid!

- give values instead of saying
  - is small, is big → what is big? what is small? → depends on the context e.g. for an ant the world is big, and for an elephant the world is as well big - for the ant the elephant is big as well but for an elephant other elephants are just normal size
- looks noisy
  - what is noisy? give a proof → statistical methods for example
- do not use things like:
  - It could be done
  - would be helpful to do → do it or do not write such things
  - This can be done / this was done with a formula / function found in matlab / on the web
- the conclusion does not ask for your own opinion
  - state facts → what can be done with this report / what is the outcome
  - what is very important in this report? → e.g. it is necessary to filter the data for future processing, the motor has an unknown offset of…