

# *Signals, Instruments & Systems*

## Course project reports and presentation

### General

The **intermediate report** is due on *Monday, 6 May at noon*. It should be sent to your supervisor by email.

The **final report** is due on *Sunday, 2 June at 23:59*. It should be sent to your supervisor by email. The final report with all figures and references must not exceed **6 pages**. Note that this is a hard limit, and larger reports will be penalized.

**Presentations** will take place on *Wednesday, 5 June*. The exact schedule will be finalized soon. Your presentation should last **10 minutes** (we will be strict on the timing), and will be followed by a 10 minutes Q&A session.

### Intermediate report guidelines

You are expected to show a clear understanding of the project topic and its related literature, a concrete implementation plan, familiarization with the needed tools, and preliminary implementation results. This will allow your project supervisor to give you feedback in terms of implementation progress, problem and tool understanding, and time planning. The concepts learned during the course will help you to find solutions to the tasks required for achieving the project goals.

You are required to provide a plan that covers the following aspects:

- List of project goals
- Task breakdown and role of each member of the team
- Time plan for the project and milestones
- System schematics: different components of your system and their relations. You can consider them as blocks with a number of input/outputs and connections to other components of the system.
- Plan for the experiments: what scenarios are you going to test? What will be the setting? How will you evaluate the performance of your algorithm? Metric definition?
- System requirements: what sensor modalities are you using? What limitations and constraints are you expecting? What are the sources of noise in your system? What methods are you planning to use? What kind of controller are you planning to have? etc.
- Progress to date: showing preliminary implementation results.

**Do not** do any of the following:

- Copy pasting code from the project materials
- Copy pasting text from the project description or the reference paper
- Including screen-shots of Webots worlds with no significant meaning

Finally, you should follow guidelines specific to your project communicated to you by your supervisor.

## Final report guidelines

Please use one of the following templates:

<http://ras.papercept.net/conferences/support/tex.php> (ieeeconf.zip, for Latex)

<http://ras.papercept.net/conferences/support/word.php> (ieeeconf\_A4.dot, for MS Word)

and hand in the report in **PDF format**. These are the templates for IEEE publications.

Your final report should be in 2-column format and include the following sections:

- *Abstract*: short, but concise description of your project and results.
- *Introduction*: brief description of your project and why it is interesting and how it is connected with the state of the art of your project's topic.
- *Methods*: what methods are used and what choices are made and why (for controller design, data processing, etc.). What are the sources of noise, limitations and constraints in your work and how do you deal with them? What is your strategy for making your approach robust to changes in the environment and noise? You should describe your algorithms with appropriate abstractions (e.g., flowchart, pseudocode) and avoid using code in your report. Make use of appropriate visual aids (e.g., drawing) to explain your ideas in a precise and concise way.
- *Experiments*: How did you test your system (your setup, test scenarios, etc.).
- *Results*: what you discovered through repeated experiments with statistically significant meaning. You should include tables or plots here. Make sure that the tables, plots, etc., are readable e.g., not too cluttered, and contain all the relevant information such as the correct labels, units, etc.
- *Conclusion*: summary and implications of your findings.
- *References*: relevant past work and sources that you used.

## Final report review

Each team of students will also be asked to serve as a reviewer for another student project and invited to ask questions during the defense session (we are expecting at least one question for each reviewer). You will receive the project report to review by *Monday, June 3*.

## Final presentations

The **slides in PPT, PPTX or PDF format** should be uploaded to Moodle the day before the presentation. We will bring a laptop with the slides of all groups to the presentations. If you want to show movies (e.g., of your simulations), bring a USB key with you on the presentation day but please **verify ahead of time that the movie format you are using is playable on the laptop we will make available for the defense day**. You can send inquiries directly to Alicja, [alicja.wasik@epfl.ch](mailto:alicja.wasik@epfl.ch), with "SIS course project presentations" in the subject line. You can also bring your own laptop for the presentation, but the slides should still be uploaded to Moodle the day before.

Note that you can reuse the figures, plots, etc., that you include in your report in your presentation slides. Therefore, investing time for preparing a high quality report that follows the given guidelines (e.g., use of flowchart/pseudocode instead of code, proper axis labels, etc.), will be beneficial for your presentation as well. Keep in mind, while the same guidelines are valid for

your slides, necessary changes should be made to make sure all the content is displayed appropriately e.g., choosing the right font size, enlarging labels, including the meaning of symbols used in the figures, etc.

We highly encourage all group members to be fully involved in all parts of the project and have equal contribution in the presentation, answering the questions of the reviewers and the audience, and posing questions as reviewers. Additionally, live demos of your work are always welcome.

## Grading

The final grade for your course project will be based on the following criteria:

Initiative, commitment, autonomy, rigorousness, team work	25 %
Actual work performed and achievement of goals	25 %
Final report	25 %
Final presentation	25 %