Signals, Instruments and Systems 2015-16
Course Projects

1 General information

SIS will involve a 45h course project (this should include reading, implementation, reporting, oral defense of the project, and review of the report of another student team). Students will choose a project from a list of approved topics distributed during the first week of the semester. Projects will be carried out in groups of two students (an ad hoc arrangement will be found in case of an odd total number of students). Each member of the student team will have to defend part of the project in front of the audience. Every project will be supervised by one member of the support staff (Zeynab Talebpour, Faezeh Rahbar, Felix Schill and Alexander Bahr). Definitive assignment of course projects will be communicated by the end of the seventh week, based on the preferences expressed by the students. Students will be expected to contact their project supervisor as soon as possible to begin planning their work schedule. During the eight week, a common kick-off session for the implementation of the course project, which will be planned by each project supervisor.

Students will be required to submit a brief intermediate report on their project progress by the end of the tenth week, showing 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 their project supervisor to give them feedback in terms of implementation progress, problem and tool understanding, and time planning.

Each student will also be asked to serve as a reviewer for another student project and invited to ask questions during the defense session. Further details on the project report and presentation will be communicated in timely fashion.

2 Project assignments

1. Sound detection with the e-puck robot

Supervisor – Felix Schill (felix.schill@epfl.ch)
Group 1 - Matteo Guidicelli, Clarissa Wehrli, Giada Zünd
Group 2 - Gaël Germano, Sebastian Strobl, Steve Hottinger
Group 3 - Martin Praz, Loïc Steullet, Vincent De Staercke

2. Road sign recognition with the e-puck robot

Supervisor – Faezeh Rahbar (faezeh.rahbar@epfl.ch)
Group 1 - Pauline Andrey, Stéphanie Meyer, Kevin Bärenzung
Group 2 - Sylvain Vitali, Xavier Tendon, Romain Gitton-Rivière
Group 3 - Nabil El Berria, Hippolyte Bernard, Alex Mouradian
3. **Line following using a the e-puck’s camera**

Supervisor - Zeynab Talebpour (zeynab.talebpour@epfl.ch)
Group 1 - Samuel Etique, Guillaume Crosset-Perrotin, Mathieu Desmarescaux
Group 2 - Cyril Wendl, Caroline Ménard, Alexis Baron

4. **Localizing the maximum in an environmental field using a mobile sensor**

Supervisor – Alexander Bahr (alexander.bahr@epfl.ch)
Group 1 - Zhou Jiande, Yvan Chevalley, Kilian Vos
Group 2 - Jonas Jäggi, Nicolas Deschamps, Lukas Eglin
Group 3 - Rebecca Himsl, Melissa Pang, Félix Fouret