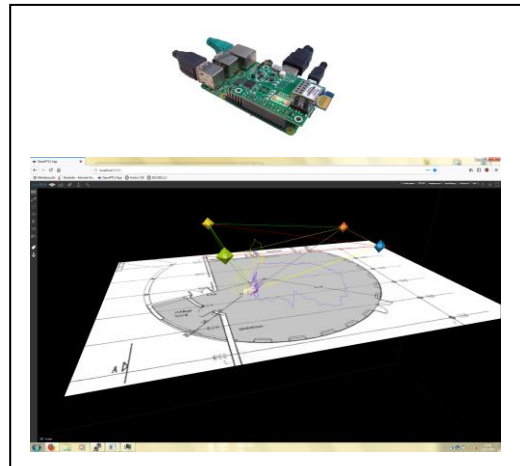


Master Thesis

## Data Fusion for Multimodal Indoor Localization

### Abstract

Indoor Localization is an important topic in economy, because logistics cause until 25 % of costs of a product. So, we intend to develop a new prototype of such a localization system by combining different physical principles. We'll apply ultrasound, Bluetooth, GHz Ultra Wide Band, optical image analysis and RFID, at the same time. A new type of data fusion is required, regarding the physical systems and the behavior of closed control loops. The system should become more stable against threats, more precisely in case of disturbance and more efficient.



### Workpackages

- You study state-of-the-art localization systems and compare against literature
- You study model-based behavior of close control loops
- You participate in optimizing parameters and programming the data fusion procedure
- You participate in testing and validation of demonstrators
- You participate at research in resilience engineering

### Requirements

- Studies in Micro Systems Technology, Embedded Systems Engineering, Electrical Engineering, Physics or similar
- You are familiar with or interested to get deeper into lab work (LabView, SimuLink...), measurement techniques (Oscilloscope, Microphone, Image Analysis...)
- Your software skills cover: LabView, MathLab, SimuLink or COMSOL
- You are open minded, fascinated about the new and eager to learn.

### For further information please contact:

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