

# Progress report

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# Overview

1 About me

2 Project introduction

# About me

- 2014 • Master in ITET at ETHZ
- 2012-2013 • Civil service and work at IfB and CARD at Balgrist
- 2011-2012 • Exchange year at Shanghai JiaoTong University (SJTU)
- 2009-2013 • Bachelor in Electrical Engineering at FHO
- 2004-2008 • Apprenticeship as an electronic engineer

Previous semester project with AIT (D-INFK):  
“Robust object tracking in 3D by fusing ultrawideband and vision”

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# Map Fusion for Collaborative UAV SLAM

## The goal

To develop a pipeline to merge maps created by different Unmanned Aerial Vehicles (UAVs) operating in the same area

## Usage

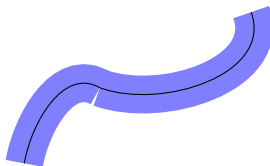
A common map is required for a team of UAVs to perform tasks, e.g. inspection, together.

# How does it work?

- A place recognition system detects overlaps between maps constructed by different UAVs

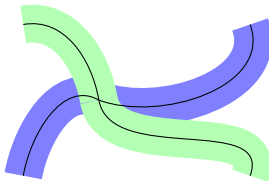
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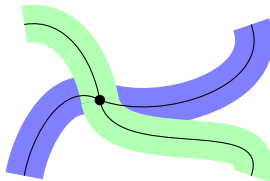
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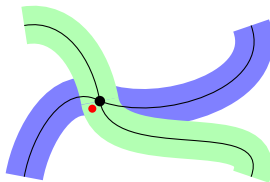
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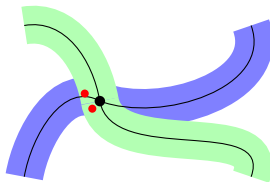
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- If enough overlaps are detected between two maps, these maps can be fused into one



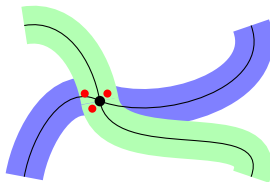
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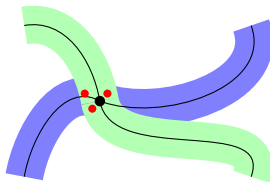
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- If enough overlaps are detected between two maps, these maps can be fused into one
- This fused map than can be used by multiple UAVs simultaneously



# Thank you for your attention