Overview:
Based on previous work (Optitrack & RGBD Sensor Based Indoor Mapping) you should be able to select a ROS-based mapping framework of your choice (e.g. RTAB-Map) and integrate it on a small sized Micro Aerial Vehicle (MAV). As a result an indoor lab environment should then be mapped online during flight (only flight preparations necessary, flight will be supervised!) and mapping quality should be evaluated.

Objectives:
• Objective 1: Select mapping framework of your choice or use existing work as a starting point
• Objective 2: Test framework on single board computer (e.g. Odroid XU or Tegra K1 platform)
• Objective 3: Evaluate mapping performance in a final testrun (reconstruct indoor environment)

Qualifications:
• ROS Framework (Advanced Knowledge)
• C++ and OOP (Advanced Knowledge)
• Matlab (Basic Knowledge)

Contact Information:
Alexander Isop
isop@icg.tugraz.at

Schedule:
Start: Summer Term 2017
End: Winter Term 2017/2018