Overview:
Based on an already existing Matlab application of a Particle Swarm Optimization (PSO) approach for path planning, you should extend the algorithm in terms of functionality and performance and optionally compare it against different approaches. The application includes already an interface to our existing ROS framework for conducting indoor flights in the ICG’s droneSpace to keep overhead of interface implementation low.

Objectives:
• Objective 1: Get comfortable with the planning application and the according interface
• Objective 2: Extend capabilities and improve performance (Objective can be refined)
• Objective 3: Evaluate performance and optionally compare against different approach

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