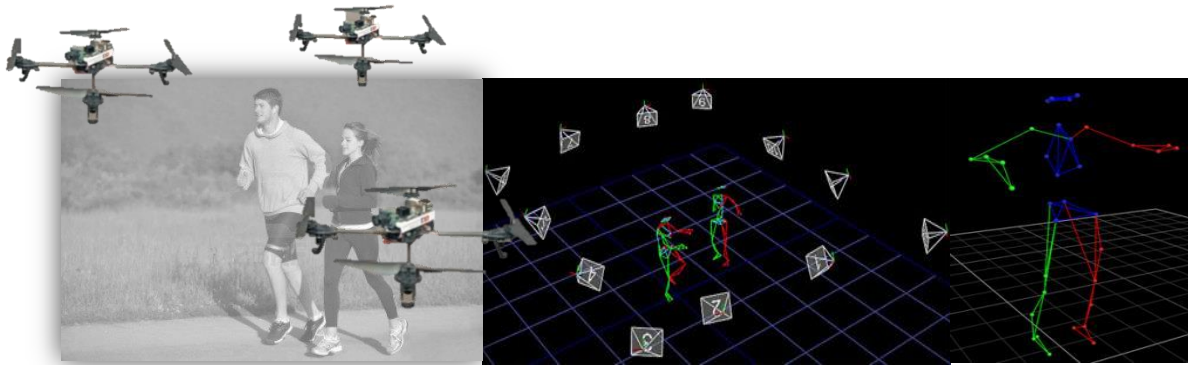


## SA/MA “Distributed Pose estimation algorithm for a flying VICON system”

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### Introduction

Motion capture is the process of recording the movement of objects or people. These motion capturing systems, also called VICON systems, are normally room fixed and therefore not very mobile. We propose a novel way of motion capturing by our flying VICON system project. Using this, we want to extend this room fixed limitations by using a swarm of quadrotors flying in a formation to have a flying motion capturing system. The formation should be able to fly and track the target.

### Thesis Description



To be able to recover the 3D pose of our target object, we need a robust estimation algorithm which uses the information of all cameras together. The goal of the thesis is first to use cameras only with IMU information to developpe such an algorithm. In a second step, the system should be attached to the swarm for evaluation

### Requirements

The ideal candidate has a solid background in Computer vision and in estimation as well as signal analysis. An interest in hands-on development and experimentation is also a requirement. Used programming language: C/C++ and Matlab Simulink.