



Robotics and Embedded Systems
www6.in.tum.de



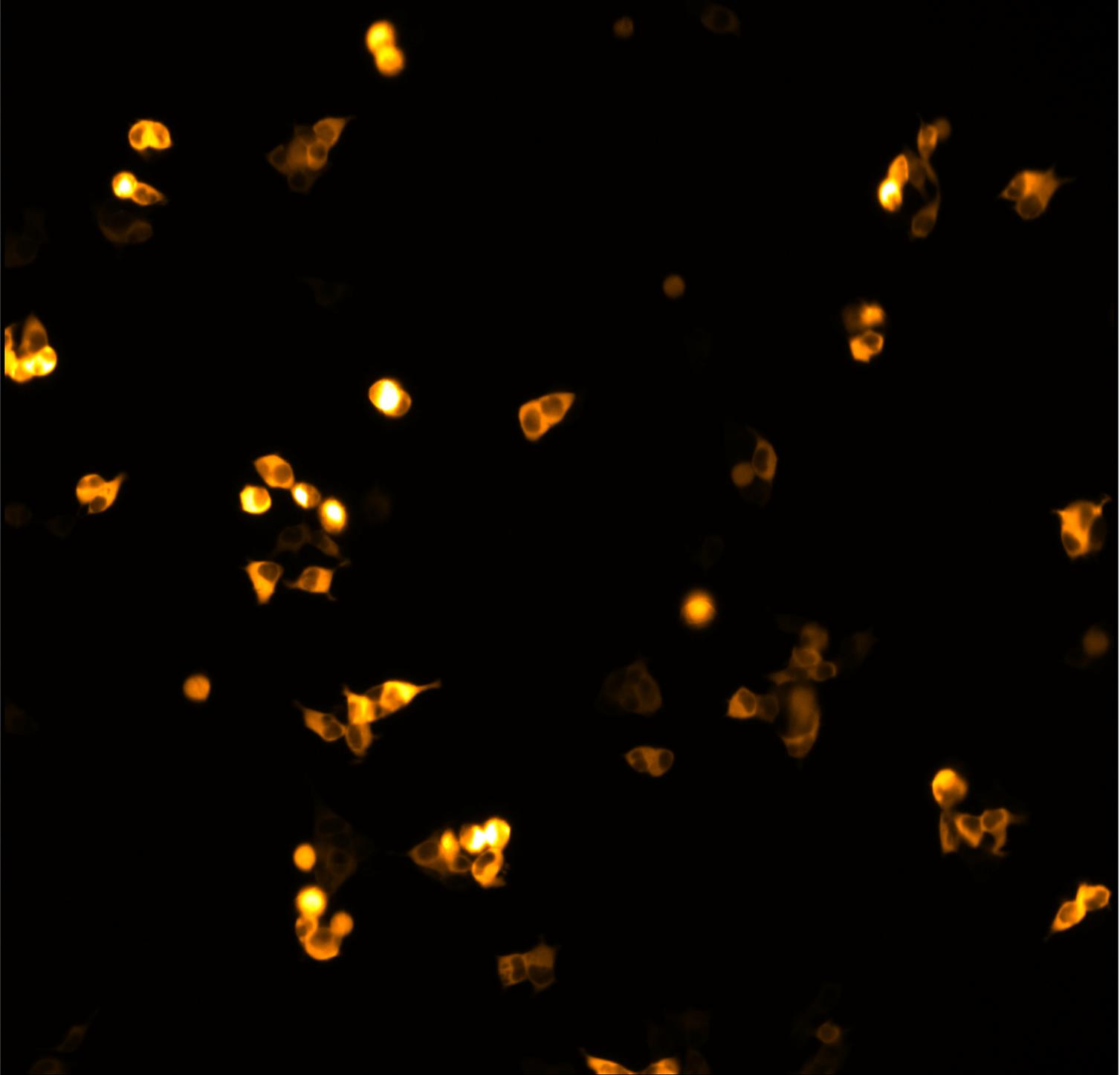
Thorsten Röder M.Sc.



Prof. Dr.-Ing. Alois Knoll

Diplomarbeit - Master Thesis

Precise Stitching of Sparse Images





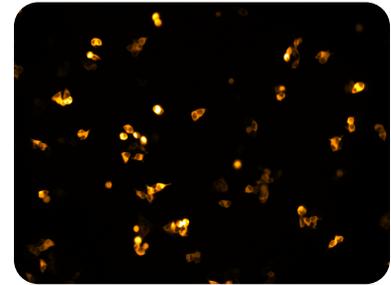
Precise Stitching of Sparse Images

Keywords

Registration, Computer Vision, Microscopy, Feature Extraction

Motivation

In order to increase the spatial resolution in microscopy applications several shifted images are asynchronously captured during biological experiments. These images need to be stitched together. Various algorithms exist for dense multi-color image registration, however for sparse images often additional information has to be taken into account for performing precise stitching.



Task Description

The work of this thesis can be subdivided in three major working phases:
a) Literature research, state-of-the-art comparison. b) Methodology selection, implementation and comparison. c) Writing the thesis and providing comprehensive experimental results.

Prerequisites

Along with concentrated passion for this topic this thesis will require consolidated knowledge in at least the following areas: C++ programming, computer vision, fundamental mathematics.

Contact

Thorsten Röder, M.Sc.

Room: MI 03.07.035
Phone: 089 289 18143
Email: roeder@in.tum.de
Web: www6.in.tum.de