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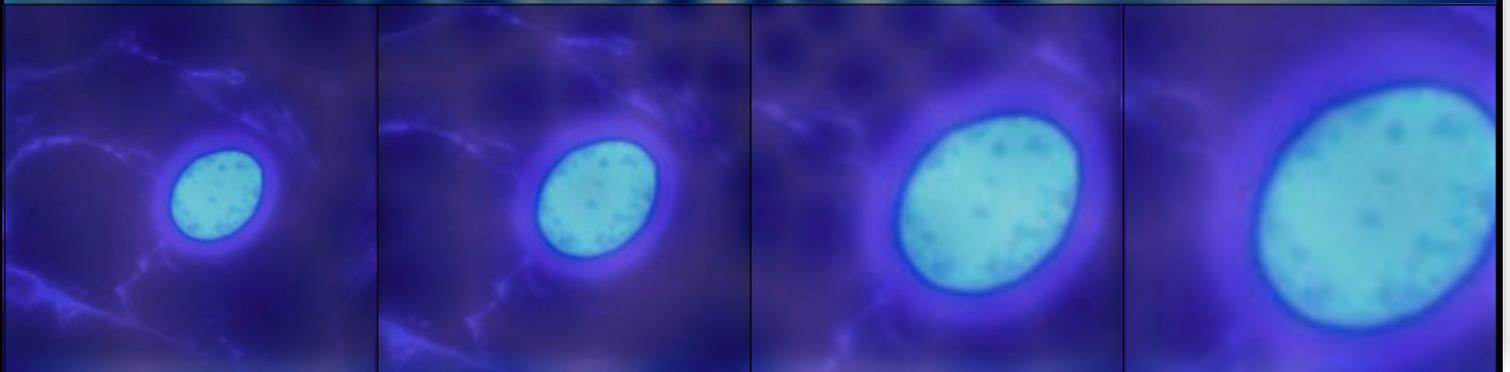
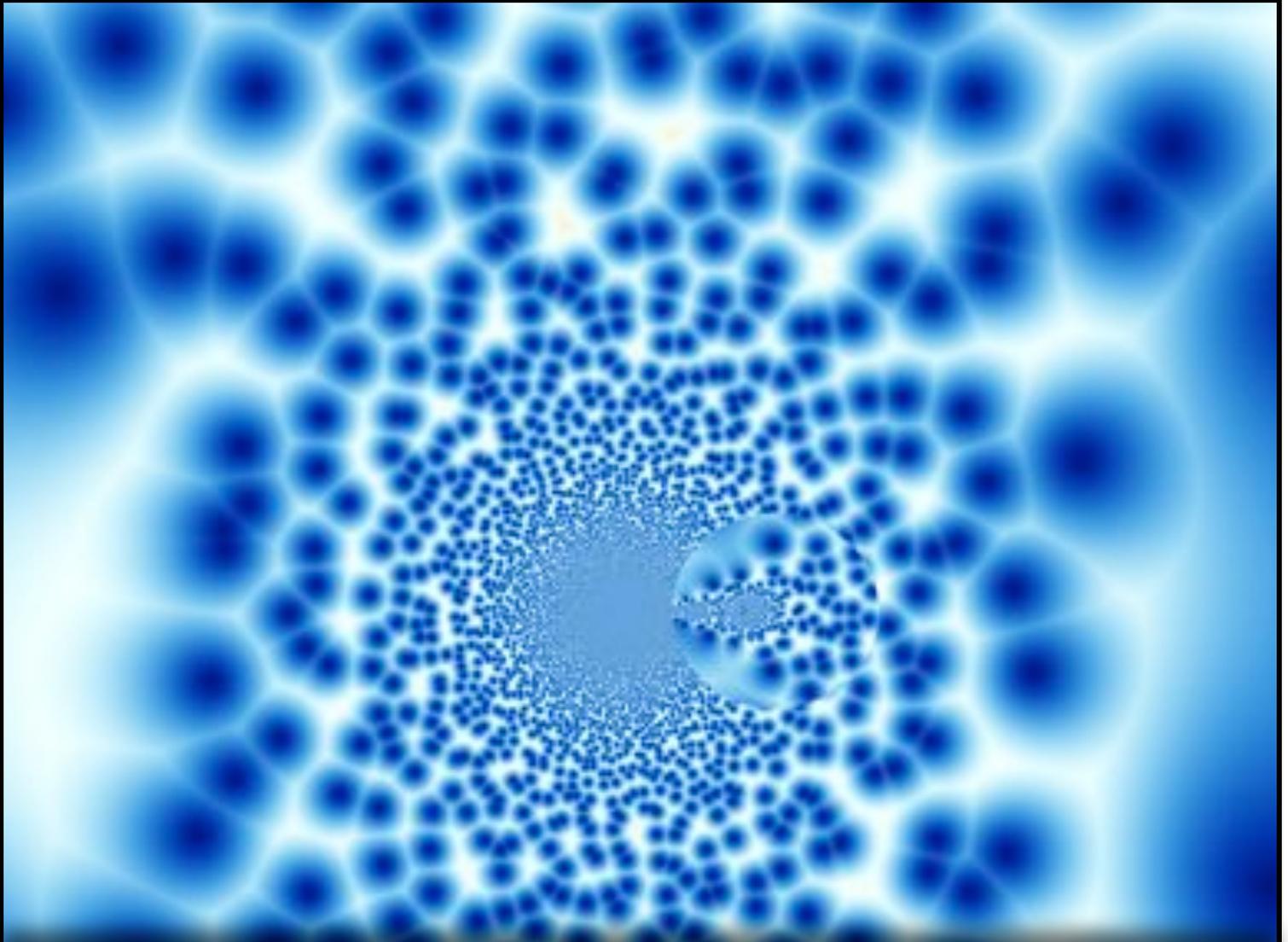
Thorsten Röder M.Sc.



Prof. Dr.-Ing. Alois Knoll

Diplomarbeit - Master Thesis

Autofocus for Microscopy Applications

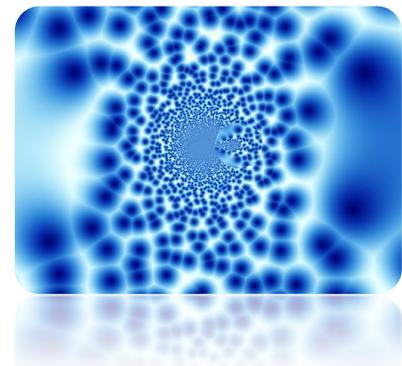




Autofocus for Microscopy Applications

Keywords

Optical Microscopy, Fluorescence Microscopy, Mathematics, Automated Image Analysis, Visual Feature Extraction



Motivation

Automatic camera focus adaption plays an important role for biological microscopy applications in order to precisely estimate miscellaneous visual properties. Therefore existing techniques for autofocus realization shall be evaluated and compared amongst each other in order to propose an improved algorithm for robust and fast automatic focus estimation.

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 evaluation of the own approach compared to alternative approaches. 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