

# Master's Thesis

November 16, 2010

**Title: Implementation of Contracting Curve Density Algorithm  
for Applications in Personal Robotics**

Abstract:

Objective of the thesis is to implement a Contracting Curve Density (CCD) algorithm, a method for fitting parametric curve models to boundaries of image regions, in the ecosystem of Robot Operating System (ROS, <http://www.ros.org>). After the implementation phase the algorithm is to be tested for the following applications:

- objects of daily use detection using CAD models objects,
- tracking of objects of daily use,
- robust camera to laser calibration using 2D to 3D curve correspondences.