

Visual Control of a Hexapod Robot

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	Abs	stract	
Some abstract.			

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Introduction

- 1.1 Motivation
- 1.2 Software
- 1.2.1 ROS
- 1.3 Hardware
- 1.3.1 Hexapod
- 1.3.2 RGB-D Sensor

Background

Requirements

Architecture

- 4.1 Nodes
- 4.2 Packages
- 4.3 Topics

Hardware Interaction

- 5.1 Servo Driver
- 5.1.1 Protocol
- 5.2 Limb Controller
- **5.3** Limb Calibration Tool
- **5.3.1** Usage

Locomotion

- 6.1 Tripod Gait Walker
- 6.2 Joystick Controller

Sensing

- 7.1 Camera Driver
- 7.2 Visual Odometry
- 7.3 Environment Mapping
- 7.3.1 Alternatives

Navigation

8.1 Path Planning

Usage & Visualisations

9.1 RViz

Evaluation

- 10.1 Experiments
- 10.2 Results

Further Work

- 11.1 Improved Hardware
- 11.2 Untethered Operation
- 11.3 Inverse IK
- 11.4 Additional Sensors
- 11.5 Facial Recognition

Conclusion

12.1 Summary

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