Longtan Wang

Busan, Korea
+82-010-3062-8451
longtan7379@pusan.ac.kr

Education Background

M.S. in Electronics Engineering 09 / 2014 - 08 / 2016

Department of Electronics, Pusan National University, Busan, Korea

Overall GPA: 4.31/4.5

B.S. in Electronics & Information Engineering 09 / 2010 - 06 / 2014

School of Electronics and Information, Zhongyuan University of Technology, Henan Province, China

Overall GPA: 86/100

Research Experience

Image Registration and 3D Reconstruction for Robot Surgery (V-SLAM)

--Shenzhen Mars Medical Robot Co.Ltd Project

- Dense 3D reconstruction and non-rigid registration of soft tissue
- Stereo endoscopic Image guided navigational tracking of endoscope using ORB-SLAM
- Small baseline stereo endoscope calibration

2D Tilting Lidar Odometry and 3D Mapping Aided by IMU

- Indoor mapping and Localization in low frequency
- Rotation and translation estimation using IMU in high frequency

RGB-D Vision System For Sorting Moving Objects In Partial Occlusion

- Texture-less and textured objects recognition in partial occlusion using RGB-D camera
- Real-time locating and 6D pose estimation of moving conveyor products using ICP

Low-Cost Pedestrian Dead-Reckoning System Using GPS/INS

--Samsung Thalex (Hanwha Systems) Project

- Gait Analysis based on waist-worn IMU sensor
- Pedestrian Navigation based on IMU and GPS fusion using EKF and fuzzy algorithm
- Algorithm implementation in embedded system

3D Segmentation and Mapping of Plant Leaves Using a RGB-D Camera

- 3D segmentation of individual plant leaves from occlusions in natural scene
- 3D measurement and mapping of individual leaves

Honors and Awards

Best Presentation Award (ICCAS2015)

Outstanding Graduate (2014 Bachelar's Graduate)

First Class Scholarship (2013)

National Encouragement scholarship (2012)

National Encouragement scholarship (2011)

Publications

Master's Thesis

Concurrent Recognition and Grasping of Objects on a Moving Conveyor Belt

Journal(SCI)

Xia C, **Wang L**, Chung B K, et al. In Situ 3D Segmentation of Individual Plant Leaves Using a RGB-D Camera for Agricultural Automation[J]. Sensors, 2015, 15(8):20463-20479.

Conferences

WANG L, LIANG W, ZHANG K, et al. Performance of Stereovision-based Soft Tissue 3D Reconstruction in Laparoscopy[J]. DEStech Transactions on Computer Science and Engineering, 2017 (aita).

WANG Z, **WANG L**, LEE J. Overview on Force Sensing Techniques in Robot-assisted Minimally Invasive Laparoscopic Surgery[J]. DEStech Transactions on Computer Science and Engineering, 2017 (aita).

Hwang Y S, **Wang L**, Lee D H, et al. Vision Based Machine for Pick-and-Place Operation[J]. DEStech Transactions on Materials Science and Engineering, 2016 (icimm).

Wang L, Wang Z, Yu H Y, et al. Vision based robot for recognizing and grasping fast moving conveyor products[C]// International Conference on Control, Automation and Systems. IEEE, 2015:1211-1215.

Wang L, Kim S W, Ha H W, et al. Visual-servo Control of 4-DOF Robot Manipulator for Sorting Moving objects[C] The 2016 International Conference on Artificial Life and Robotics, 2015 (ICAROB)

Skills

OpenCV

Matlab

ROS

C/C++

Embedded system

Arm contex / Arduino / Raspberry pi

Python