YAN LU

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EDUCATION

Texas A&M University, College Station, Texas, Aug. 2010 – Present
Ph.D. student, Robotics & Computer Vision, Computer Science & Engineering, Overall GPA: 3.89/4.0

Chinese University of Hong Kong, Hong Kong, Aug. 2008 – Jun. 2010
M.Phil. in Mechanical & Automation Engineering, Overall GPA: 3.67/4.0

Xi'an Jiaotong University, Xi'an, China, Aug. 2004 – Jun. 2008
B.S. in Electrical Engineering, Ranking: 1/380, Overall GPA: 3.73/4.0

PROGRAMMING LANGUAGE

C++, Matlab, Java, Python

RESEARCH EXPERIENCE

Visual Navigation for Robots Aug. 2010 – Present
- Designed a data structure consisting of heterogeneous features and geometric constraints for visual navigation.
- Applied the data structure to EKF-based and bundle adjustment-based visual odometry, respectively.
- Implemented in C++ (based on OpenCV).
- Published 3 conference papers.

Robust Recognition of Mirrored Walls   Aug. 2010 – Aug. 2011
- Designed a two-view based vision algorithm for detecting and estimating mirrored walls.
- Implemented in Matlab.
- Published 1 conference paper.

ECG Signal based Cardiac Condition Diagnosis   May 2009 – Jun. 2010
- Proposed novel approaches for Electrocardiogram (ECG) signal de-noising, feature extraction, and classification.
- Implemented in Matlab.
- Published 3 conference papers and 2 journal papers

Robotic Artworks Drawing Aug. 2008– Apr. 2009
- Developed an automatic method for a robotic manipulator to draw an artwork in pen-and-ink style based on an input digital image.
- Implemented in Matlab and C++.
- Published 1 conference paper.

PUBLICATIONS

- **Yan Lu**, Dezhen Song, and Jingang Yi. "High Level Landmark-Based Visual Navigation Using Unsupervised Geometric Constraints in Local Bundle Adjustment", IEEE International Conference on Robotics and Automation (ICRA), 2014
- **Yan Lu**, Dezhen Song, Yiliang Xu, A. G. Amitha Perera and Sang Min Oh. "Automatic Building Exterior Mapping Using Multilayer Feature Graphs", IEEE International Conference on Automation Science and Engineering (CASE), 2013
- **Yan Lu**, Dezhen Song, Haifeng Li and Jingtai Liu. "Automatic Recognition of Spurious Surface in Building Exterior Survey", IEEE International Conference on Automation Science and Engineering (CASE), 2013
- Haifeng Li, Dezhen Song, **Yan Lu,** and Jingtai Liu. "A Two-View based Multilayer Feature Graph for Robot Navigation", IEEE International Conference on Robotics and Automation (ICRA), 2012
- **Yan Lu**, Josh Lam, and Yeung Yam. "Preliminary Study on Vision-based Pen-and-Ink Drawing by a Robotic Manipulator", IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), 2009
- **Yan Lu**, Jingyu Yan, and Yeung Yam. "Model-based ECG Denoising Using Empirical Mode Decomposition", IEEE International Conference on Bioinformatics and Biomedicine (BIBM), 2009

COURSEWORK

Computer Vision	Analysis of Algorithm	Applied Random Process	Multivariate Analysis
Pattern Analysis	Data Mining	Linear Control Systems	Convex Optimization