# Yan Lu

Texas A&M University
Dept. of Computer Sci.& Engr.
College Station, TX 77840

Email: sinoluyan@gmail.com
Homepage: http://students.cs.tamu.edu/ylu

## Education

Ph.D. Computer Science & Engineering, Texas A&M University, College Station, Texas, USA 2015.

M.Phil. Mechanical & Automation Engineering, Chinese University of Hong Kong, Hong Kong, 2010.

B.S. Electrical Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi China, 2008.

## Research Interests

Robotics, Computer Vision, Artificial Intelligence, Pattern Recognition

## Employment

October 2015 - : Scientist, Honda Research Institute, Mountain View, USA

May 2014 - Aug. 2014: Research intern, Honda Research Institute, Mountain View, USA

## Publications

### *Journal Articles*

1. Yan Lu and Dezhen Song "Visual Navigation Using Heterogeneous Landmarks and Unsupervised Geometric Constraints", IEEE Transactions on Robotics (T-RO), Vol. 31, No. 3, pp. 736-749, 2015.
2. Jingyu Yan, Yan Lu, Jia Liu, Xinyu Wu, and Yangsheng Xu. "Self-adaptive Model-based ECG Denoising Using Features Extracted by Mean Shift Algorithm," Biomedical Signal Processing and Control,Vol.5, No.2, pp. 103-113, 2010.
3. Jingyu Yan, Yan Lu, Jia Liu, Xinyu Wu, and Yangsheng Xu, "Intelligent Diagnosis of Cardiovascular Diseases Utilizing ECG Signals", International Journal of Information Acquisition, Vol.7, No.2, pp. 81-97, 2010.

### *Conference Papers*

1. Yan Lu and Dezhen Song. "Robust RGB-D Odometry Using Point and Line Features", IEEE International Conference on Computer Vision (ICCV), Santiago, Chile, 2015. (Accepted)
2. Yan Lu and Dezhen Song. "Robustness to Lighting Variations: An RGB-D Indoor Visual Odometry Using Line Segments", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Hamburg, Germany, 2015. (Accepted)
3. Joseph Lee, Yan Lu and Dezhen Song. "Planar Building Facade Segmentation and Mapping Using Appearance and Geometric Constraints", IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), Chicago, USA, 2014.

4. 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), Hong Kong, China, May 31-Jun 7, 2014.

5. 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), Madison, WI, Aug 17-21, 2013, pp. 162-167.

6. 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), Madison, WI, Aug 17-21, 2013, pp. 1059-1064.

7. 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), St. Paul, MN, May 14-18, 2012, pp. 3580-3587.

8. Yan Lu, Josh Lam, and Yeung Yam. "Preliminary Study on Vision-based Pen-and-Ink Drawing by a Robotic Manipulator," in Proc. IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), Singapore, July 14-17, 2009, pp. 578-583.

9. Yan Lu, Jingyu Yan, and Yeung Yam. "A Generalized ECG Dynamic Model with Asymmetric Gaussians and its Application in Model-based ECG Denoising," IEEE International Conference on Biomedical Engineering and Informatics (BMEI), Tianjin, China, Oct 17-19, 2009, pp. 1-5.

10. Yan Lu, Jingyu Yan, and Yeung Yam. "Model-based ECG Denoising Using Empirical Mode Decomposition," in Proc. IEEE International Conference on Bioinformatics and Biomedicine (BIBM), Washington DC, USA, Nov. 1-4, 2009, pp. 191-196.

11. Jingyu Yan, Yan Lu, Jia Liu, Xinyu Wu, and Yangsheng Xu, "Model-based Feature Extraction of Electrocardiogram Using Mean Shift," International Conference of the IEEE Engineering in Medicine and Biology Society (EMBC), Minneapolis, Minnesota, USA, Sep. 2-6, 2009, pp. 1339-1342.

## Professional Activities and Services

### *Invited Talks*

1. "Robustness to Lighting Variations: An RGB-D Indoor Visual Odometry Using Line Segments", Parasol Seminar, Texas A&M University, September 18, 2015.

### *Editorial*

Reviewer Editor, Robotic Control Systems, Frontiers in Robotics and AI, July 2015 – present

### *Technical Reviews*

IEEE/RSJ International Conference on Intelligent Robots and Systems (IROS), 2012, 2015

IEEE International Conference on Automation Science and Engineering (CASE), 2013

IEEE/ASME International Conference on Advanced Intelligent Mechatronics (AIM), 2014, 2015

IEEE International Conference on Robotics and Automation (ICRA), 2014, 2015

ASME Journal of Dynamic Systems, Measurement and Control, 2015

IEEE Robotics and Automation Letters (RA-L), 2015

IEEE Transactions on Automation Science and Engineering (T-ASE), 2015

### *Professional Membership*

Student member, Institute of Electrical and Electronics Engineers (IEEE)

Student member, IEEE Robotics and Automation Society (IEEE RAS)

Member, Upsilon Pi Epsilon (UPE)

## Teaching Assistance

### *The Chinese University of Hong Kong*

MAE2040 - Basic Electronics, Spring 2009

MAE3050 - Introduction to Control Systems, Fall 2008, Fall 2009

### *Texas A&M University*

CSCE121 - Introduction to Program Design and Concepts (C++), Spring 2011, Spring 2012, Summer 2012

ENGR111 - Introduction to Electrical and Computer Engineering, Fall 2011

CSCE112 - Foundations of Engineering II (C++), Fall 2012

CSCE221 - Data Structures and Algorithms (in C++), Spring 2013

CSCE629 - Analysis of Algorithms, Fall 2013

## Honors and Awards

Postgraduate Studentship, Chinese University of Hong Kong, 2008 – 2010

Shaanxi Provincial Outstanding Graduates Award, 2008

Xi'an Jiaotong University Outstanding Graduates Award, 2008

National Scholarship, China, 2007

The BMW China Song Ching Ling Foundation Scholarship for Outstanding University Students, 2006