Yu Li

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Education

2011–2015 **Ph.D. in Computer Science**.
National University of Singapore, Singapore
Thesis: Separating Layers in Images and Its Applications Advisor: Michael S. Brown

2007–2011 **B.Eng in Information Engineering**.
Beijing University of Posts and Telecommunications, Beijing

Research Interests

- **Computational photography**: low-level image restoration/enhancement, super resolution, color processing, digital panoramas, high-dynamic-range images, light field cameras, depth sensing
- **Computer vision**: optical flow, stereo, segmentation, facial analysis, image classification
- **Machine learning**: probability graphical model, deep learning
- **Optimization**: convex/non convex optimization, discrete optimization

Experience

Work Experience

2015–Present **Senior Research Engineer**, *Advanced Digital Sciences Center (ADSC)*, Singapore.
ADSC is a research center, which was jointly founded by the University of Illinois at Urbana-Champaign (UIUC) and the Agency for Science, Technology and Research (A*STAR), Singapore. I am working on the *Visual Modeling and Analytics of Dynamic Environments for the Mass* project, as part of the Data Analytics sub-program. This project aims to address emerging challenges to visual data analytic by developing fundamental technical tools needed to bring structure into ever-growing visual data captured from various sources.

Internship

2014–2015 **Research Intern**, *Advanced Digital Sciences Center*, Singapore.
Worked on project for estimating dense correspondence (stereo/optical flow) between images with Dr. Jiangbo Lu and Dr. Dongbo Min.

2014–2015 **Undergrad Intern**, *BUPT Pattern Recognition and Intelligent System Lab*, Beijing.
worked on research projects for facial landmark locating, object recognition and segmentation with Prof. Weihong Deng.

Publications (Google Scholar)

ICCV 2015 **Nighttime Haze Removal with Glow and Multiple Light Colors**.
Yu Li, Robby T. Tan, Michael S. Brown.
IEEE International Conference on Computer Vision 2015

ICCV 2015 **SPM-BP: Sped-up PatchMatch Belief Propagation for Continuous MRFs**.
Yu Li, Dongbo Min, Michael S. Brown, Mihn N. Do, Jiangbo Lu.
IEEE International Conference on Computer Vision 2015
[Oral Presentation]

ECCV 2014 **A Contrast Enhancement Framework with JPEG Artifacts Suppression**.
Yu Li, Fangfang Guo, Robby T. Tan, Michael S. Brown.
European Conference on Computer Vision 2014

CVPR 2014 **Single Image Layer Separation using Relative Smoothness**.
Yu Li, Michael S. Brown.
IEEE Conference on Computer Vision and Pattern Recognition 2014
[Oral Presentation]

ICCV 2013 **Exploiting Reflection Change for Automatic Reflection Removal**.
Yu Li, Michael S. Brown.
IEEE International Conference on Computer Vision 2013

MM-W 2013 **An Evaluation of Wearable Activity Monitoring Devices**.
Fangfang Guo, **Yu Li**, Mohan Kankanhalli, Michael S. Brown.
ACM Multimedia Workshop on Personal Data Meets Distributed Multimedia 2013

EG 2013 **Seam-Driven Image Stitching**.
Junhong Gao, **Yu Li**, Tat-Jun Chin, Michael S. Brown.
Eurographics 2013

ICNIDC 2013 **Locating Facial Features by Robust Active Shape Model**.
Jiani Hu, **Yu Li**, Weihong Deng, Jun Guo, Weiran Xu.
IEEE International Conference on Network Infrastructure and Digital Content 2010

Academic Activities

Journal Reviewer
- IEEE Pattern Analysis and Machine Intelligence (TPAMI)
- IEEE Signal Processing Letter
- Computer Graphics Forum
- Computers & Graphics

Conference Reviewer
- Eurographics 2016
- ACM Siggraph 2015
- Pacific Graphics (PG) 2015
- Pacific Graphics (PG) 2014
- ACM Siggraph Asia 2014

Teaching

2014 Fall Teaching Assistant of CS5340 Uncertainty Modelling in AI

Awards

2011–2015 NUS Research Scholarship

2008–2010 BUPT Scholarship for Academic Excellence (for top 5%)

2008 Outstanding Student Award of BUPT

Talks

Dec 2015 **SPM-BP: Sped-up PatchMatch Belief Propagation for Continuous MRFs**
IEEE International Conference on Computer Vision, Santiago, Chile

Sep 2014 **Automatic Layer Separation in Images**
A*STAR Bioinformatics Institute, Singapore

Jun 2014 **Single Image Layer Separation using Relative Smoothness**
IEEE Conference on Computer Vision and Pattern Recognition, Columbus, USA

Technical Strengths

Programming C/C++, Python, Matlab

Language Chinese (native), English (fluent)

References

Advisor **Michael S. Brown**
Associate Professor in School of Computing, National University of Singapore
✉ brown@comp.nus.edu.sg

Collaborator **Robby T. Tan**
Assistant Professor in Yale-NUS College
✉ robby.tan@yale-nus.edu.sg

Collaborator **Jiangbo Lu**
Senior Research Scientist in Advanced Digital Sciences Center
✉ jiangbo.lu@adsc.com.sg