DE-AN HUANG

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RESEARCH INTERESTS

Computer Vision, Robotics, and Machine Learning.

EDUCATION

Stanford University, Stanford, USA *Sep. 2015 - present*
Ph.D. in Computer Science

Carnegie Mellon University, Pittsburgh, USA *Aug. 2013 - Dec. 2014*
M.Sc. in Robotics
GPA: 4.11

National Taiwan University, Taipei, Taiwan *June 2012*
B.S. in Electrical Engineering, minor in Mathematics
Overall GPA: 3.76/4.0, Major GPA: 3.93/4.0

PUBLICATIONS

Journal Paper

1. **D.-A. Huang**, L.-W. Kang, Y.-C. F. Wang, and C.-W. Lin. "Self-Learning Based Image Decomposition with Applications to Single-Image Denoising." *IEEE Transactions on Multimedia*, volume 16, number 1, pages 83-93, 2014.

Conference Papers

2. **D.-A. Huang**, L. Fei-Fei, and J. C. Niebles. "Connectionist Temporal Modeling for Weakly Supervised Action Labeling." *European Conference on Computer Vision (ECCV)*, 2016.

3. **D.-A. Huang**, M. Ma*, W.-C. Ma*, and K. M. Kitani. "How Do We Use Our Hands? Discovering a Diverse Set of Common Grasps." To appear in *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015 **(* indicates equal contribution)**.

4. **D.-A. Huang**, A. M. Farahmand, K. M. Kitani, and J. A. Bagnell. "Approximate MaxEnt Inverse Optimal Control and its Application for Mental Simulation of Human Interactions." *Twenty-Ninth AAAI Conference on Artificial Intelligence (AAAI)*, 2015.

5. **D.-A. Huang** and K. M. Kitani. "Action-Reaction: Forecasting the Dynamics of Human Interaction." *European Conference on Computer Vision (ECCV)*, 2014.

6. **D.-A. Huang** and Y.-C. F. Wang. "Coupled Dictionary and Feature Space Learning with Applications to Cross-Domain Image Synthesis and Recognition." *IEEE International Conference on Computer Vision (ICCV)*, 2013.

7. **D.-A. Huang** and Y.-C. F. Wang. "With One Look: Robust Face Recognition Using Single Sample Per Person." *ACM Multimedia (ACM-MM)*, short paper, Oct. 2013.

8. R.-Y. Huang, **D.-A. Huang**, H.-J. K. Chiang, J.-H. R. Jiang, and F. Fages. "Species Minimization in Computation with Biochemical Reactions." *International Workshop on Bio-Design Automation (IWBDA)*, 2013.

9. C.-Y. Tsai, **D.-A. Huang**, M.-C. Yang, L.-W. Kang, and Y.-C. F. Wang. "Context-Aware Single Image Super-Resolution Using Locality-Constrained Group Sparse Representation." *Visual Communications and Image Processing (VCIP)*, 2012 **(invited paper for oral presentation)**.

10. **D.-A. Huang**, J.-H. R. Jiang, R.-Y. Huang, and C.-Y. Cheng. "Compiling Program Control Flows into Biochemical Reactions." *IEEE/ACM International Conference on Computer-Aided Design (ICCAD)*, 2012.

11. **D.-A. Huang**, L.-W. Kang, C.-Y. Tsai, M.-C. Yang, C.-W. Lin, and Y.-C. F. Wang. "Context-Aware Single Image Rain Removal." *IEEE International Conference on Multimedia & Expo (ICME)*, 2012 **(selected as Top 13% paper for oral presentation)**.

12. M.-C. Yang*, **D.-A. Huang***, C.-Y. Tsai, and Y.-C. F. Wang. "Self-Learning of Edge-Preserving Single Image Super-Resolution via Contourlet Transform." *IEEE International Conference on Multimedia & Expo (ICME)*, 2012 **(* indicates equal contribution)**.

RESEARCH EXPERIENCE

Computer Vision Lab, Stanford University *Stanford, USA*
Graduate Research Assistant with Prof. Fei-Fei Li and Dr. Juan Carlos Niebles Sep. 2015 - present

- Weakly Supervised Actions Labeling in Videos
- Unsupervised Learning in Instructional Videos

Computational Vision and Geometry Lab , Stanford University *Stanford, USA*
Graduate Research Assistant with Prof. Silvio Savarese March 2016 - June 2016

- End-to-end Multi-object Tracking

Microsoft Research *Redmond, USA*
Research Intern with Dr. Zicheng Liu May 2015 - August 2015

- Kinect-based People Tracking and Recognition

Disney Research *Pittsburgh, USA*
Research Intern with Dr. Leonid Sigal February 2015 - May 2015

- Semi-supervised Actor Labeling in TV Series
- Large-Scale Zero-Shot Learning

The Robotics Institute, Carnegie Mellon University *Pittsburgh, USA*
Graduate Research Assistant with Dr. Kris M. Kitani October 2013 - December 2014

- Prehensile Analysis using First-Person Vision
- Approximate Maximum Entropy Inverse Optimal Control
- Human Interaction Forecasting

Multimedia and Machine Learning Lab, Academia Sinica *Taipei, Taiwan*
Research Assistant with Dr. Yu-Chiang Frank Wang August 2012 – June 2013
Undergraduate Research Assistant February 2011 – July 2012

- Cross-Domain Image Synthesis and Recognition
- Single-Sample Per Person Face Recognition
- Single Image Denoising, Super-Resolution, and Rain Streak Removal

Applied Logic and Computation Lab, National Taiwan University *Taipei, Taiwan*
Undergraduate Student with Prof. Jie-Hong Roland Jiang July 2011 - July 2012

- Compiling Program Control Flows into Biochemical Reactions

TEACHING EXPERIENCE

Teaching Assistant at Carnegie Mellon University for:

- 16-385 Computer Vision, Spring 2014, Instructor: Kris M. Kitani
- 15-463 Computational Photography, Fall 2014, Instructor: Kris M. Kitani

AWARDS AND HONORS

Lam Research Thesis Award, Lam Research Corporation, Taiwan, 2012.

PROFESSIONAL ACTIVITY

Reviewer for

- IEEE Transactions on Pattern Analysis and Machine Intelligence
- IEEE Transactions on Multimedia
- IEEE Transactions on Circuits and Systems for Video Technology
- IEEE Transactions on Computational Imaging
- Neurocomputing
- AAAI 2016, 2017

SKILLS

Languages	Chinese (native), English(fluent)
Programming Languages	Python, C/C++, JAVA, MATLAB, R