Geneviève Patterson

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CURRENT POSITION

Microsoft Research New England, Cambridge, Massachusetts, USA

Post-Doctoral Researcher

July 2016 - current

EDUCATION

Brown University, Providence, Rhode Island, USA

PhD Computer Science

September 2010 - May 2016

- Advisor: Associate Professor James Hays, Georgia Tech College of Computing
- Dissertation: Collective Intelligence, Crowd-Driven Image Understanding

The University of Tokyo, Hongo, Bunkyo-ku, Tokyo

Master of Electrical Engineering

 ${\bf October~2007-September~2009}$

- Advisor: Associate Professor Takafumi Koseki, Dept. of Electrical Eng. and Information Systems
- Dissertation: Fundamental Modeling for Optimal Design of Transverse Flux Motors

The University of Arizona, Tucson, Arizona, USA

BS Mathematics, BS Electrical Engineering (Hons)

August 2003 – May 2007

Publications

Patterson, G., J. Hays, "COCO Attributes: Attributes for People, Animals, and Objects," European Conference for Computer Vision (ECCV 2016). Amsterdam, The Netherlands. October 2016.

Lam, D., G. Patterson, "Kaizen: The Crowd Pathologist," *HCOMP 2016*, *GroupSight workshop*. Austin, TX USA. 2016.

Patterson, G., G. Van Horn, J. Hays, S. Belongie, P. Perona, "Tropel: Crowdsourcing detectors with minimal training," *Human Computation and Crowdsourcing (HCOMP 2015)*. San Diego, USA. November 2015. *Best Paper Award Runner Up*.

Patterson, G., C. Xu, H. Su, J. Hays, "The SUN Attribute Database: Beyond Categories for Deeper Scene Understanding," *International Journal of Computer Vision*. May 2014, Volume 108, Issue 1-2, pp 59-81.

Patterson, G., G. Van Horn, S. Belongie, P. Perona, J. Hays, "Bootstrapping Fine-Grained Classiers: Active Learning with a Crowd in the Loop," *NIPS 2013, Crowd workshop*. Lake Tahoe, NV USA. Dec 5-10, 2013.

Patterson, G. T. Lin, J. Hays, "Using Humans to Build Mid-Level Features," CVPR 2013, Scene Understanding Workshop. Portland, OR USA. June 25-27, 2013.

Xiao, J., J. Hays, B. Russell, G. Patterson, K. Ehinger, A. Torralba, A. Oliva, "Basic level scene understanding: categories, attributes and structures," Frontiers in Psychology. August 2013.

Patterson, G., J. Hays, "SUN attribute database: Discovering, annotating, and recognizing scene attributes," CVPR 2012. Providence, RI USA. June 16-21, 2012.

Patterson, G., J. Hays, "Building a Taxonomy of Attributes for Fine-Grained Scene Understanding," CVPR 2011, Fine Grained Computer Vision Workshop. Colorado Springs, USA. June 20-25, 2011.

Patterson, G., T. Koseki, Y. Aoyama, K. Sako, "Simple Modeling and Prototype Experiments for a New High-Thrust, Low-Speed Permanent Magnet Disk Motor," *Proc.* 12th International Conference on Electrical Machines and Systems, Tokyo, Japan. Nov 2009.

Patterson, G., T. Koseki, "Fundamental Modeling for Optimal Design of Transverse Flux Motors," The 2009 Annual Meeting of the IEE Japan, Vol. 5, pp.17-18, Sapporo, Japan, March 2009.

Koseki, T., G. Patterson, T. Suzuki, "Visual State Feedback Digital Control of a Linear Synchronous Motor using Generic Video-Camera Signal," Proc. 11th International Conference on Electrical Machines and Systems, Wuhan, China. Oct 2008.

Lee K. S., Kim C. S., Kim R. K., Patterson G., Kolesik M., Moloney J. V., Peyghambarian N., "Dual-wavelength external cavity laser with a sampled grating formed in a silica PLC waveguide for terahertz beat signal generation," Applied Physics B, Lasers and Optics, Vol. 87 No. 2. April 2007.

Воокѕ Visual Attributes, Editors: Rogerio Schmidt Ferris, Christoph Lampert, Devi Parikh, Chapter 12.

Patterson, G., D. Merck, J. Hays, "CVD2: Computer Vision Detection for Cerebrovascular Disease," Grants Brown University BIBS/NPNI Research Award. June 2015.

Teaching EXPERIENCE Instructor, Deep Learning for Computer Vision, Tufts University, COMP-150DL, Spring 2017. http://comp150dl.github.io.

Instructor, Data-driven Computer Vision, Brown University, CSCI 2951T, Spring 2016. http://cs.brown.edu/courses/csci2951-t/.

Industry Experience Clarifai, New York, New York, USA

Internship December 2013 - February 2014

Member of research and development team for new computer vision products.

IBM Corporation, Tucson, Arizona, USA

Software Developer, Internship

 $May\ 2005-September\ 2007$

Developed graphical user interface and network statistics graphing software for IBM enterprise class servers.

Honours and AWARDS

HCOMP 2015 Best Paper Award Runner Up

Finalist - Facebook Graduate Research Fellowship 2013

National Defense Science and Engineering Graduate Fellowship 2010-2013

ICEMS 2009 Conference Award for Outstanding Paper and Technical Excellence

Japanese Ministry of Education Monbukagakusho Scholarship 2007 - 2009

University of Arizona President's Award for Excellence 2003-2007

University of Arizona Provost Scholarship 2003 - 2007

Community ACTIVITIES

GroupSight Second Workshop on Human Computation for Image and Video Analysis HCOMP 2017, workshop co-organizer

GroupSight Workshop on Human Computation for Image and Video Analysis HCOMP 2016, workshop co-organizer

MS COCO Challenge ICCV 2017, workshop co-organizer

MS COCO Challenge ECCV 2016, workshop co-organizer

MS COCO Challenge ICCV 2015, workshop co-organizer

IgniteCS Instructor Sping 2015 (Middle School introduction to programming course)

Ivy Labs Instructor - Computer Science History 2014, 2015 (Summer program for international HS students at Brown University)

Faculty Graduate Liaison, Department of Computer Science, Brown University Jan 2014-Jan 2015

LDV Vision Summit 2014, 2015 Challenge Coordinator

GirlsGetMath 2014 (Brown University High school summer program) Instructor

Summer@Brown 2012 (Brown University High school summer program) Guest Lecturer

Brown University Artemis Program 2012, 2014 Guest Lecturer

MIT Splash Program 2010 Instructor, Topic: Trains in Japan

References Available on request from:

- Professor James Hays (Georgia Tech)
- Professor Serge Belongie (Cornell Tech)
- Professor Pietro Perona (Caltech)
- Dr. Adam Kalai (MSR)

Languages English (native), Spanish (fluent), Japanese (intermediate).