Nam-Gyu Cho

Curriculum Vitae

Department of Brain and Cognitive Engineering
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Degrees

2017 **Ph.D. in Department of Brain and Cognitive Engineering**, *Korea University, Seoul, Korea*.
Thesis title: A Novel Linelet-based Representation for Line Segment Detection.
Advisor: Prof. Seong-Whan Lee and Prof. Alan Yuille

2011 **M.S. in Department of Computer and Radio Communications Engineering**, *Korea University, Seoul, Korea*.
Thesis title: Adaptive Self-Occlusion Reasoning for 3D Human Pose Tracking from a Monocular Image Sequence
Advisor: Prof. Seong-Whan Lee

2008 **B.S. in Information and telecommunication Engineering**, *Incheon National University, Incheon, Korea*.

Research Experience

2009–now **Graduate Research Assistant**, *Korea University, Seoul, Korea*.
Member of the Pattern Recognition group (pr.korea.ac.kr). Participated in national research projects in the areas of computer vision.

Project:

Remote sensing image understanding: geo-localization and change detection (Agency for Defense Development (ADD) and Defense Acquisition Program Administration (DAPA), Korea, 2016–now).

Individual action and group activity recognition under perception sensor network (Ministry of Knowledge and Economy, Korea, 2012–now).

Parsing scenes using a hierarchy of context (Ministry of Education, Science and Technology, Korea, 2012–2016).

Multi-modal human behavior understanding (Ministry of Knowledge and Economy, Korea, 2009–2012)

2013–2014 **Visiting Researcher**, *University of California, Los Angeles, CA, US*.
Member of the Center for Cognition, Vision, and Learning (CCVL), working with Prof. Alan Yuille. Research in computer vision.

Project:

Visual Cortex On Silicon: developing geometry estimation and perceptual organization methods for assisting visually impaired people.

PASCAL-Part and PASCAL-Context Datasets: constructing PASCAL-based datasets to provide hierarchical labels of object instances with their semantic parts.

Summer 2011 **Visiting Researcher**, *University of California, Los Angeles, CA, US*.
Member of the Center for Cognition, Vision, and Learning (CCVL), working with Prof. Alan Yuille. Research in computer vision.

Project:

Parsing human baseball players: developing a method to parse the hierarchy of baseball players in images.

Research Interests

3D scene understanding, remote sensing image understanding, human behavior understanding, and machine learning.

Professional Activities

Journal Peer Reviewing Pattern Recognition (2015–now) and Computer Vision and Image Understanding (2016–now).

Computer Skills

Programming, C/C++, Matlab. Working knowledge of Python.

Teaching Experience

2011–now **Group Seminar**, Korea University.
Organized Prof. Seong-Whan Lee's group weekly computer vision seminar. Led discussion on several of the presented papers.

2012–now **Student Mentoring**, Korea University.
Helped in supervising the research of M.S. students in Prof. Seong-Whan Lee's group. Co-authored several papers with students.

2011–2012 **Graduate Teaching Assistant**, Korea University.
Introduction to Machine Learning Class, Instructor: Prof. Alan Yuille

Scientific Publications

N.-G. Cho, Y.-J. Kim, U. Park, J.-S. Park, and S.-W. Lee, "Group activity recognition with group interaction zone based on relative distance between human objects," *International Journal of Pattern Recognition and Artificial Intelligence*, vol. 29, no. 05, p. 1555007, 2015.

R. Mottaghi, X. Chen, X. Liu, N.-G. Cho, S.-W. Lee, S. Fidler, R. Urtasun, and A. Yuille, "The role of context for object detection and semantic segmentation in the wild," in *IEEE Conference on Computer Vision and Pattern Recognition*, pp. 891–898, June 2014.

Y.-J. Kim, N.-G. Cho, and S.-W. Lee, "Group activity recognition with group interaction zone," in *22nd International Conference on Pattern Recognition*, pp. 3517–3521, Aug 2014.

N.-G. Cho, A. Yuille, and S.-W. Lee, "Adaptive occlusion state estimation for human pose tracking under self-occlusions," *Pattern Recognition*, vol. 46, no. 3, pp. 649–661, 2013.

N.-G. Cho, A. Yuille, and S.-W. Lee, "Self-occlusion robust 3d human pose tracking from monocular image sequence," in *Proceedings of IEEE International Conference on Systems, Man and Cybernetics*, pp. 254–257, 2012.

N.-G. Cho, A. Yuille, and S.-W. Lee, "Nonflat observation model and adaptive depth order estimation for 3d human pose tracking," in *Proceedings of IEEE First Asian Conference on Pattern Recognition*, pp. 382–386, 2011.