

# CURRICULUM VITAE

Hyun Soo Park

## IDENTIFYING INFORMATION

### Academic Rank

Assistant Professor in the Department of Computer Science and Engineering, University of Minnesota  
Graduate Faculty, Computer Science and Engineering (Twin Cities)

### Education

Degree	Institution	Date Granted
B.S.	POSTECH, South Korea Mechanical Engineering	2007
M.S.	Carnegie Mellon University, PA Mechanical Engineering	2009
Ph.D.	Carnegie Mellon University, PA Mechanical Engineering	2014

### Academic Employment

University of Minnesota, Twin Cities (2016–Present) <a href="#">Assistant Professor</a>	<a href="#">2016–Present</a>
University of Pennsylvania, Department of Computer Science and Information Postdoctoral Fellow	2014–2016
Carnegie Mellon University, Department of Mechanical Engineering Research Assistant	2009–2014
Carnegie Mellon University, Department of Mechanical Engineering Research Assistant	2007–2009

## RESEARCH, SUPPORT, AND SCHOLARSHIP

### Publications

Note: Publications are available online at <http://www-users.cs.umn.edu/~hspark/>.  
My Ph.D., M.S., and undergraduate students are underlined.

### Refereed Journal Publications

This section includes the journal special issue proceedings from IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), International Journal of Computer Vision (IJCV), ACM Transactions on Graphics (SIGGRAPH), and International Journal of Robotics Research (IJRR). IJCV is one of the top two computer vision journals. SIGGRAPH (top graphics journal) utilizes double-blind journal peer review procedures. IJRR is one of the top two robotics journals.

- J1 H. S. Park and J. Shi, "Force from Motion: Decoding Control Force of Activity in a First Person Video", IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), Under review, 2017
- J2 H. S. Park, T. Shiratori, I. Matthews, and Y. Sheikh, "3D Trajectory Reconstruction under Perspective Projection", International Journal of Computer Vision (IJCV), 2014
- J3 \*I. Arev, \*H. S. Park, Y. Sheikh, J. Hodgins, and A. Shamir, "Automatic Editing of Footage from Multiple Social Cameras", ACM Transactions on Graphics (SIGGRAPH) (\* indicates joint first authors), 25.1% acceptance rate, 2014
- J4 T. Shiratori, H. S. Park, L. Sigal, Y. Sheikh, and J. Hodgins, "Motion Capture from Body-Mounted Cameras", ACM Transactions on Graphics (SIGGRAPH), 19.0% acceptance rate, 2011
- J5 H. S. Park, S. Floyd, and M. Sitti, "Roll and Pitch Motion Analysis of a Biologically Inspired Quadruped Water Runner Robot", International Journal of Robotics Research (IJRR), 2010

### Refereed Conference Proceedings in Computer Vision, Machine Learning, and Robotics

Computer Vision and Pattern Recognition (CVPR), International Conference on Computer Vision (ICCV), European Conference on Computer Vision (ECCV), Advances in Neural Information Processing Systems (NIPS), and Robotics Science and Systems (RSS) are top publication venues in computer vision, machine learning, and robotics. The poster acceptance rate is about 20%, the spotlight presentation acceptance rate is less than 9%, and the oral presentation acceptance rate is less than 5%.

- C1 J. Yoon, Z. Li, and H. S. Park, "3D Semantic Trajectory Reconstruction from 3D Pixel Continuum", Conference on Computer Vision and Pattern Recognition (CVPR), Under review, 2018
- C2 K. E. Kim and H. S. Park, "Imitation Learning via Kernel Mean Embedding", AAAI Conference on Artificial Intelligence (AAAI), Oral presentation, 2017
- C3 G. Bertasius, H. S. Park, S. X. Yu, and J. Shi, "Unsupervised Learning of Important Objects from First-Person Videos", International Conference on Computer Vision (ICCV), 24.26% acceptance rate, 2017
- C4 G. Bertasius, S. X. Yu, H. S. Park and J. Shi, "Am I a Baller? Basketball Performance Assessment using First-Person Cameras", International Conference on Computer Vision (ICCV), 24.26% acceptance rate, 2017
- C5 G. Bertasius, H. S. Park, S. Yu, and J. Shi, "First Person Action-Object Detection with EgoNet", Robotics: Science and Systems (RSS), 39.7% acceptance rate, 2017
- C6 S. Su, J. Hong, J. Shi, and H. S. Park, "Social Behavior Prediction from First Person Videos", Conference on Computer Vision and Pattern Recognition (CVPR), 8% acceptance rate, Spotlight presentation, 2017

- C7 H. S. Park, J.-J. Hwang, and J. Shi, "Force from Motion: Decoding Physical Sensation in a First Person Video", Conference on Computer Vision and Pattern Recognition (CVPR), 3.9% acceptance rate, Oral presentation, 2016
- C8 H. S. Park, J.-J. Hwang, Y. Niu, and J. Shi, "Egocentric Future Localization", Conference on Computer Vision and Pattern Recognition (CVPR), 3.9% acceptance rate, Oral presentation, 2016
- C9 H. S. Park and J. Shi, "Social Saliency Prediction", Conference on Computer Vision and Pattern Recognition (CVPR), 3.4% acceptance rate, Oral presentation, 2015
- C10 H. Joo, H. S. Park, and Y. Sheikh, "MAP Visibility Estimation for Large-Scale Dynamic 3D Reconstruction", IEEE Conference on Computer Vision and Pattern Recognition (CVPR), 5.8% acceptance rate, Oral presentation, 2014
- C11 H. S. Park, E. Jain, and Y. Sheikh, "Predicting Primary Gaze Behavior using Social Saliency Fields", International Conference on Computer Vision (ICCV), 27.9% acceptance rate, 2013
- C12 H. S. Park, E. Jain, and Y. Sheikh, "3D Social Saliency from Head-mounted Cameras", Advances in Neural Information Processing Systems (NIPS), 25.0% acceptance rate, 2012
- C13 H. S. Park and Y. Sheikh, "3D Reconstruction of a Smooth Articulated Trajectory from a Monocular Image Sequence", International Conference on Computer Vision (ICCV), 23.7% acceptance rate, 2011
- C14 H. S. Park, T. Shiratori, I. Matthews, and Y. Sheikh, "3D Reconstruction of a Moving Point from a Series of 2D Projections", European Conference on Computer Vision (ECCV), 3.3% acceptance rate, 2010
- C15 H. S. Park and M. Sitti, "Compliant Footpad Design Analysis for a Bio-Inspired Quadruped Amphibious Robot", IEEE/RSJ International Conference on Intelligent Robots and System (IROS), 2009
- C16 H. S. Park, S. Floyd, and M. Sitti, "Dynamic Modeling and Analysis of Pitch Motion of a Basilisk Lizard Inspired Quadruped Robot Running on Water", International Conference on Robotics and Automation (ICRA), 2009
- C17 H. S. Park, S. Floyd, and M. Sitti, "Dynamic Modeling of a Basilisk Lizard Inspired Quadruped Robot Running on Water", IEEE/RSJ International Conference on Intelligent Robots and System (IROS), 2008

### Refereed Workshop Proceedings

- W1 \*H. S. Park, \*Y. Wang, E. Nurvitadhi, J. C. Hoe, Y. Sheikh, and M. Chen, "3D Point Cloud Reduction using Mixed-integer Quadratic Programming", Second International Workshop on Visual Analysis and Geo-Localization of Large-Scale Imagery in conjunction with CVPR (\* indicates equal contribution), 2013
- W2 H. S. Park, S. Floyd, and M. Sitti, "3-D Simulation of Bio-inspired Water Running Robot", International Symposium on Adaptive Motion of Animals and Machines (AMAM), Oral presentation, 2008

### Refereed Chapters in Books

- B1 \*H. S. Park, \*Y. Wang, E. Nurvitadhi, J. C. Hoe, Y. Sheikh, and M. Chen, "3D Point Cloud Reduction using Mixed-integer Quadratic Programming", in "Large-Scale Visual Geo-Localization", Springer.
- B2 \*H. S. Park, A. A. Salah, Y. J. Lee, L.-P. Morency, Y. Sheikh, and R. Cucchiara (Eds.), "Human Behavior Understanding", Lecture Notes in Computer Science, Springer

### arXiv Papers

- A1 S. Su, J. Shi, and H. S. Park, "Customizing First Person Image Through Desired Actions", arXiv:1704.00098

## Invited Talks

- T1 “Embedding Social Affordance into Space” at UMN Spatial Forum, Nov, 2017
- T2 “First Person Perception for Robotics” at UMN Center for Cognitive Science, Sept, 2017
- T3 “Learning from First Person Demonstrations”, JD.com Research, Sept, 2017
- T4 “Learning from First Person Demonstrations”, nVidia Research, Sept, 2017
- T5 “Learning from First Person Demonstrations”, Egocentric Vision: From Science to Real-World Applications, June, 2017
- T6 “Behind the Scene: Decoding Intent from First Person Vision”, Georgia Institute of Technology, Robotics and Intelligent Machine Seminar, Feb, 2017
- T7 “Behind the Scene: Decoding Intent from First Person Vision”, University of Michigan Ann Arbor, Artificial Intelligence Seminar Series, Jan, 2017
- T8 “Behind the Scene: Decoding Intent from First Person Vision”, Honeywell, Perception Group, Jan, 2017
- T9 “Decoding First Person Video”, University of Minnesota, Colloquium, Computer Science and Engineering, Sep, 2016
- T10 “Decoding First Person Video”, Carnegie Mellon University, VASC Seminar, Aug, 2016
- T11 “Decoding First Person Video”, Oculus/Facebook Pittsburgh, Aug, 2016
- T12 “Computational Personal and Social Vision from Wearable Cameras”, University of Texas at Austin, Computer Science, Mar, 2016
- T13 “Computational Personal and Social Vision from Wearable Cameras”, Rice University, Electrical and Computer Engineering, Mar, 2016
- T14 “Computational Personal and Social Vision from Wearable Cameras”, University of Minnesota, Computer Science and Engineering, Mar, 2016
- T15 “Computational Personal and Social Vision from Wearable Cameras”, Texas A&M University, Computer Science, Mar, 2016
- T16 “Computational Personal and Social Vision from Wearable Cameras”, POSTECH, Creative IT Engineering, Feb, 2016
- T17 “Social Intelligence”, University of California at Los Angeles, Computer Science, Aug, 2015
- T18 “Social Intelligence”, University of Southern California, Computer Science, Aug, 2015
- T19 “Social Intelligence”, KAIST, Computer Science, Feb, 2015
- T20 “Computational Joint Attention”, INRIA, 2014
- T21 “Predicting Gaze Behavior using Gaze Fields”, Mid Atlantic Computer Vision Workshop, 2014
- T22 “Social Scene Understanding from Social Cameras”, Stanford University, Computer Science, 2014
- T23 “Social Scene Understanding from Social Cameras”, University of Pennsylvania, Computer Science and Information, 2014
- T24 “Social Scene Understanding from Social Cameras”, Disney Research Pittsburgh, 2014
- T25 “Social Scene Understanding from Social Cameras”, ETHZurich, Computer Science, 2013

- T26 "Computational Sport Scene Understanding from Body-worn Cameras", ICCV Workshop on Vision-based Sports Analytics, Sydney, Australia, Dec 2013.
- T27 "Social Scene Understanding from Social Cameras", Stanford University, Computer Science, 2013
- T28 "Social Scene Understanding from Social Cameras", University of Washington, Computer Science, 2013
- T29 "Social Scene Understanding from Social Cameras", University of Illinois at Urbana-Champaign, Computer Science, 2013
- T30 "Social Scene Understanding from Social Cameras", Toyota Technological Institute at Chicago, Computer Science, 2013
- T31 "Social Scene Understanding from Social Cameras", University of California Irvine, Computer Science, 2013
- T32 "Social Scene Understanding from Social Cameras", Carnegie Mellon University, VASC Seminar, 2013
- T33 "Social Scene Understanding", Seoul National University, Computer Science, 2012
- T34 "Social Scene Understanding", Korea University, Electrical Engineering, 2012
- T35 "Social Scene Understanding", POSTECH, Computer Science and Engineering, 2012
- T36 "The Ins and Outs of Human Motion Reconstruction from Videos", New York University, Courant Institute of Mathematical Sciences, 2011
- T37 "3D Reconstruction of a Smooth Articulated Trajectory from a Monocular Image Sequence", Carnegie Mellon University, VASC Seminar, 2011
- T38 "3D Reconstruction of a Moving Point from a Series of 2D Projections", Carnegie Mellon University, VASC Seminar, 2010

## TEACHING AND CURRICULUM DEVELOPMENT

### Courses Taught

CSci 5980 (S2018) Multiview 3D Geometry in Computer Vision  
CSci 2033 (F2017) Elementary Computational Linear Algebra  
CSci 5980 (S2017) Multiview 3D Geometry in Computer Vision

## ADVISING AND MENTORING

### Graduate Student Activities

#### Current Doctoral Students

Jae Shin Yoon (Computer Science, University of Minnesota)	2017-
Zhixuan Yu (Computer Science, University of Minnesota)	2017-
Yasamin Jafarian (Computer Science, University of Minnesota)	2017-
Zhijie Zhu (Mechanical Engineering, University of Minnesota, co-advising with Prof. McAlpine)	2017-
Shan Su (Computer Science and Information, University of Pennsylvania, co-advising with Prof. Shi)	2014-

#### Current Master Students

Shishir Pagad (directed research)	2017-
-----------------------------------	-------

#### Past Graduate Students

Jungpyo Hong (Ph.D. in Computer Science, KAIST, co-advising with Prof. Kim)	2016-2017
---	-----------

### Undergraduate Student Activities

#### Undergraduate Research Projects Supervised

Yifei Teng (directed research)	2016-
Yuan Yao (directed research)	2017-
Ziwei Li (directed research)	2017-
Luze Yang (directed research)	2017
Nathan Bittner (directed research)	2016-2017

#### Doctoral Defense Committees Served on

Chao Guo, Computer Science and Engineering (Advisor: Stergios Roumeliotis)	2016
--	------

#### Doctoral WPE Committees Served on

Wenbo Dong, Computer Science and Engineering (Advisor: Volkan Isler)	2017
Zhijie Zhu, Mechanical Engineering (Advisor: Michael McAlpine)	2017
Kouros Sartipi, Computer Science and Engineering (Advisor: Stergios Roumeliotis)	2017
Tong Ke, Computer Science and Engineering (Advisor: Stergios Roumeliotis)	2016
Ahmed Medhat, Computer Science and Engineering (Advisor: Stergios Roumeliotis)	2016
Ryan DuToit, Computer Science and Engineering (Advisor: Stergios Roumeliotis)	2016
Mrinal Paul, Computer Science and Engineering (Advisor: Stergios Roumeliotis)	2016

## SERVICE AND PUBLIC OUTREACH

### Service To The Discipline/Profession/Interdisciplinary Area(s)

#### Tutorial Organizer

H. Joo, T. Simon, S. Nobuhara, H. S. Park, and Y. Sheikh, DIY A Multiview Camera System: Panoptic Studio Teardown in conjunction with CVPR 2017

H. S. Park, First-person sensing: Theory, Models, and Applications in conjunction with CVPR 2016

H. S. Park and W. Choi, Group Behavior Analysis and Its Applications in conjunction with 2015 CVPR 2015

#### Workshop Organizer

H. S. Park, A. A. Salah, Y. J. Lee, L.-P. Morency, Y. Sheikh, and R. Cucchiara, 5th International Workshop on Human Behavior Understanding in conjunction with ECCV 2014

#### Editorships

Associate Editor, IEEE International Conference on Robotics and Automation (ICRA) 2016–Present

Editor, "Human Behavior Understanding", Lecture Notes in Computer Science, Springer 2014

### International Program Committees and Paper Reviewing

#### Program Committee Membership in Key Conferences

Conference	Years
CVPR	2016, 2017, 2018
ACM SIGGRAPH ASIA technical Briefs and Posters	2015

#### Additional International Program Committees for Other Conferences and Workshops

International Workshop on Wearable and Ego-vision Systems for Augmented Experience 2015

Workshop on Egocentric Vision in conjunction with CVPR 2014, 2016

#### Additional Regular Paper Reviewing for Journals and Conferences

IEEE Transactions on Pattern Analysis and Machine Intelligence 2013–Present

ACM SIGGRAPH 2015–Present

ACM SIGGRAPH Asia 2015–Present

Computer Vision and Pattern Recognition (CVPR) 2011–Present

International Conference on Computer Vision (ICCV) 2011–Present



European Conference on Computer Vision (ECCV)	2012–Present
Asian Conference on Computer Vision (ACCV)	2014–Present
Transactions on Visualization and Computer Graphics	2015–Present
IEEE International Conference on Robotics and Automation	2009–Present
IEEE/RSJ International Conference on Intelligent Robots and Systems	2010–Present
IET Computer Vision	2014

### **Proposal Review Panel**

National Science Foundation, IIS Small	2017
--	------

## **Service To The University/College/Department**

### **Departmental Committees**

PhD review committee	2016–2017
Graduate recruiting committee	2016–2017

### **Other Departmental Service**

Visual Computing and Artificial Intelligence seminar (VCAI)	2017–
MnDrive Workshop and Seminar Committee	2016–present