

## **Professor Jitendra Malik**

Arthur J. Chick Professor, Department of EECS  
University of California at Berkeley, CA 94720  
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## **Field of Specialization**

Computer Vision, Computational Modeling of Human Vision, Machine Learning, Robotics

## **Education**

B.S. in Electrical Engineering, Indian Institute of Technology, Kanpur, 1980.  
Ph.D. in Computer Science, Stanford University, December 1985.

## **Experience**

Research Scientist Director, FAIR, Meta, 2020-continuing (part-time)  
Research Scientist Director & Site Lead, Facebook Artificial Intelligence Research, Menlo Park, 2018 & 2019  
Chair, Department of EECS, UC Berkeley, 2016-2017  
Visiting Research Scientist, Google, 2015-2016  
Member, Committee on Budget and Interdepartmental Relations, 2013-2014  
Associate Dean for New Academic Initiatives, College of Engineering, 2010-2012  
Professor, Bioengineering, UC Berkeley, since January 2009.  
Chair, Department of EECS, UC Berkeley, 2004–2006.  
Chair, Computer Science Division, EECS, UC Berkeley, 2002–2004.  
Scientific Director, Yahoo! Research Berkeley, Jan–June 2007 (visiting)  
Professor, EECS, UC Berkeley, since July 1996.  
Associate Professor, EECS, UC Berkeley, July 1991–June 1996.  
Assistant Professor, EECS, UC Berkeley, Jan 1986–June 1991.  
Member, Groups in Vision Science and Cognitive Science, UC Berkeley.

## **Honors and Awards**

110th Annual Martin Meyerson Berkeley Faculty Research Lecture, 2023  
Best system paper award, Conference on Robot Learning, 2022  
Computer Pioneer Award, IEEE Computer Society, 2019  
IJCAI Award for Research Excellence, 2018  
Best paper prize, IEEE CVPR 2018  
Helmholtz Prize for a Contribution That Has Stood the Test of Time, ICCV, 2003  
ACM-AAAI Allen Newell Award, 2016.  
National Academy of Sciences, 2015.  
Helmholtz Prize (1) for a Contribution That Has Stood the Test of Time, ICCV, 2001  
Helmholtz Prize (2) for a Contribution That Has Stood the Test of Time, ICCV, 2001  
Best student paper award, IEEE CVPR 2016 (adviser)  
King-Sun Fu Prize of the International Association of Pattern Recognition, 2014.  
IEEE PAMI-TC Distinguished Researcher in Computer Vision, 2013.  
American Academy of Arts and Sciences, 2013.  
National Academy of Engineering, 2011.  
Arthur J. Chick Endowed Professor of EECS, UC Berkeley, 2002-continuing.

ISI Highly Cited Researcher in Engineering.  
Fellow, ACM, 2008.  
Longuet-Higgins Prize for a Contribution That Has Stood the Test of Time, IEEE CVPR, 1998  
Distinguished Alumnus Award, IIT Kanpur, 2008.  
Longuet-Higgins Prize for a Contribution That Has Stood the Test of Time, IEEE CVPR, 1997  
Fellow, IEEE, 2005.  
Miller Research Professor, UC Berkeley, 2001.  
Diane S. McEntyre Award for Excellence in Teaching, CS Div., UC Berkeley, 2000.  
Honorable mention for Best Industry-Related Paper at ICPR, 1994.  
Rosenbaum Fellow, Newton Institute of Math. Sciences, Cambridge, 1993.  
Presidential Young Investigator Award 1989.  
IBM Faculty Development Award 1986-88.  
IBM Fellowship for Doctoral Study in Computer Science 1983-85.  
Best Graduating Student in Electrical Engineering, IIT Kanpur 1980.  
One of the top ten students in the Indian School Certificate Exam. 1974.

### **Synergistic Activities**

Member, Selection Jury, Infosys Prize in Engineering and Computer Science, 2019- 2022  
Chair, Section 34 (Computer and Information Sciences), National Academy of Sciences, 2019-2022  
Chair/Member Search Committee, Section 5 (Computer Science), NAE, 2016-2018  
Chair/Member, Peer Committee, Section 5 (Computer Science), NAE, 2013-2015  
Selection Committee, Sloan Research Fellowships in Computer Science, 2012-2018.  
Governing Body, International Institute of Information Technology, Bangalore, 2006-2016.  
Technical Advisory Board, Microsoft Research India, 2005-2011.  
General Chair, IEEE CVPR 2010.  
Board of Trustees, International Computer Science Institute 2002-2005  
Organizer, MSRI Program on Image Analysis, Jan–May 2005  
Editorial Board, Journal of Vision 2001-2004  
Editorial Board, International Journal of Computer Vision, 2002-continuing.  
Editorial Board, Foundations and Trends in Computer Graphics and Vision, 2005-continuing  
Editor, International Journal of Computer Vision, 2000-2002  
Program Chair, International Conf. Computer Vision 2003.  
General Chair, IEEE CVPR 2000.  
Associate Editor, IEEE Trans. on PAMI 1994-96.  
Program committees for major conferences in computer vision, graphics (various)

### **PhD Theses Supervised (with current positions)**

Paul Kube, *On Image Texture*, 1988.(UC San Diego, retired)  
Pietro Perona, *Finding Texture and Brightness Boundaries in Images*, 1990. (Caltech)  
Niklas Nordstrom, *Variational Edge Detection*, 1990. (Percipo, Inc.)  
Ziv Gigus, *Object Recognition from Line Drawings*, 1991.  
David G. Jones, *Computational Models of Binocular Vision*, 1991.(McMaster)  
Clark Olson, *Fast Object recognition by Selectively Examining Hypotheses*, 1994. (UW Bothell)  
Joseph Weber, *The Measurement and Use of Visual Motion*, 1994.(TiVo)  
Ruth Rosenholtz, *Local Shape from Texture*, 1994. (MIT)

Paul Debevec, *Modeling and Rendering Architecture from Photographs*, 1996.(USC ICT)

Jianbo Shi, *Perceptual Organization and Image Segmentation*, 1998.(U Penn)

Christoph Bregler, *Computational Models of Human Motion*, 1998. (Google)

Gregory J. Klein, *Deformable Models for Volume Feature Tracking*, 1999. (F.Hoffman-LaRoche)

Charles C. Carson, *Region-based Image Querying and Classification*, 1999.(deceased)

Yizhou Yu, *Modeling and Editing Real Scenes with Image-Based Techniques*, 2000. (Hong Kong)

Thomas K. Leung, *Visual Texture Analysis*, 2000.(Google)

Serge Belongie, *Image Segmentation and Shape Matching for Object Recognition*, 2000.(University of Copenhagen)

David Martin, *An empirical approach to Grouping and Segmentation*, 2002. (Google)

Alexei (Alyosha) Efros, *Data-driven Approaches for Texture and Motion*, 2003. (UC Berkeley)

Laura Walker Renninger, *Parts, Objects and Scenes: Computational Models and Psychophysics*, 2003. (Apple)

Gregory Mori, *Detecting and Localizing Human Figures*, 2004. (Simon Fraser University)

Andras Ferencz, *Finding Good Features for Object Recognition*, 2005. (Mobileye Vision Technologies)

Charless Fowlkes, *Measuring the Ecological Validity of Grouping and Figure-Ground Cues*, 2005. (UC Irvine)

Alexander Berg, *Shape Matching and Object Recognition*, 2005. (UC Irvine)

Xiaofeng Ren, *Probabilistic Models for Mid-Level Vision*, 2006. (Alibaba)

Hao Zhang, *Adapting Learning techniques for Visual Recognition*, 2007.(Two Sigma)

Andrea Frome, *Learning Distance Functions for Exemplar-Based Object Recognition*, 2007. (Cinder)

Michael Maire, *Contour Detection and Image Segmentation*, 2009. (U. Chicago)

Ashley Eden, *Finding Lost Children*, 2010. (Google)

Lubomir Bourdev, *Poselets and Their Applications in High-Level Computer Vision*, 2011. (WaveOne, Inc.)

Chetan Nandakumar, *Invariance in Human Visual Perception*, 2011 (Unifyre)

Subhransu Maji, *Algorithms and Representations for Visual Recognition*, 2011. (Univ. of Massachusetts, Amherst)

Chunhui Gu, *Recognition Using Regions*, 2012. (Google)

Jonathan Barron, *Shapes, Paint, and Light*, 2013. (Google)

Bharath Hariharan, *Beyond Bounding Boxes: Precise Localization of Objects in Images*, 2015, (Cornell)

Georgia Gkioxari, *Contextual Visual Recognition from Images and Videos*, 2016, (Caltech)

Abhishek Kar, *Learning to reconstruct 3D objects*, 2017, (Google)

Shubham Tulsiani, *Learning Single-view 3D Reconstruction of Objects and Scenes*, 2018, (Carnegie Mellon University)

Saurabh Gupta, *Representations for Visually Guided Actions*, 2018, (University of Illinois at Urbana-Champaign)

Pulkit Agrawal, *Computational Sensorimotor Learning*, 2018, (Massachusetts Institute of Technology)

Panna Felsen, *Learning to Predict Human Behavior from Video*, (startup)

Wei-Cheng Kuo, *Expert-Level Detection of Acute Intracranial Hemorrhage on Head Computed Tomography using Deep Learning*, (Google)

Ke Li, *Advances in Machine Learning: Nearest Neighbor Search, Learning to Optimize and Gen-*

*erative Modelling*, (Simon Fraser University)  
Zhe Cao, *Perceiving 3D Humans and Objects in Motion*, (Meta Reality Labs)  
Jasmine Collins, *Bridging the Gap between Humans and Machines in 3D Object Perception*  
Shubham Goel, *High-Fidelity 3D Mesh Reconstruction of Humans and Objects*(Avataar)  
Alexander (Sasha) Sax, *Pretrained Representations for Embodied AI*(FAIR, Meta)

### **Postdoctoral scholars supervised (with current positions)**

Roberto Manduchi (UC Santa Cruz)  
Dieter Koller (Hochschule Landshut)  
Quang-Tuan Luong (Nature Photographer)  
David Beymer (IBM)  
Camillo J. Taylor (Univ. of Pennsylvania)  
Phil McLauchlan  
Jana Kosecka (George Mason University)  
Jan Puzicha (LeanIX)  
Yair Weiss (Hebrew University)  
ZuWhan Kim  
Stella Yu (U. Michigan Ann Arbor)  
Erik Learned-Miller (U Mass, Amherst)  
Eran Borenstein  
Bjorn Ommer (LMU, Munich)  
Pablo Arbelaez (Universidad de los Andes, Colombia)  
Thomas Brox (Freiburg)  
Cees Snoek (Amsterdam)  
Ross Girshick (FAIR, Meta)  
Joao Carreira (DeepMind)  
Katerina Fragkiadaki (CMU)  
Christian Haene (Google)  
David Fouhey (U. Michigan, Ann Arbor)  
Angjoo Kanazawa (UC Berkeley)  
Amir Roshan Zamir (EPFL)  
Andrea Bajcsy (CMU)  
Shiry Ginosar  
Georgios Pavlakos (UT Austin, forthcoming)  
Antonio Loquercio (U Penn, forthcoming)

### **Publications**

#### **Journals**

1. J. Malik, "Interpreting line drawings of curved objects", *International Journal of Computer Vision*, **1**(1) 1987, pp. 73-103.
2. J. Malik and D. Maydan, "Recovering three dimensional shape from a single image of curved objects," *IEEE Trans. on Pattern Analysis and Machine Intelligence* **11** (6), pp. 555-566, June 1989. Also in *Shape from Shading*, B.K.P. Horn and M.J.Brooks (eds.) MIT Press, 1989.

3. Z. Gigus and J. Malik, "Computing the aspect graph for line drawings of polyhedral objects," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **12** (2), February 1990, pp. 113-122. Also in *Computer Vision: Advances and Applications* R. Kasturi and R.C. Jain (eds.) IEEE Computer Society Press, 1991.
4. J. Malik and P. Perona, "Preattentive texture discrimination with early vision mechanisms," *Journal of Optical Society of America A*, **7** (2), May 1990, pp. 923-932. Also in *Computer Vision: Advances and Applications* R. Kasturi and R.C. Jain (eds.) IEEE Computer Society Press, 1991.
5. P. Perona and J. Malik, "Scale space and edge detection using anisotropic diffusion," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **12** (7), July 1990, pp. 629-639.
6. D. Jones and J. Malik, "Computational framework for determining stereo correspondence from a set of linear spatial filters," *Image and Vision Computing* **10**(10), December 1992, pp. 699-708.
7. J. Weber and J. Malik, "Robust computation of optical flow in a multi-scale differential framework," *International Journal of Computer Vision*, **14**(1), Jan 1995, pp. 67-81.
8. J. Weber and J. Malik, "Rigid Body Segmentation and Shape Description from dense optical flow under weak perspective," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, February 1997, pp. 139-143.
9. J. Malik and R. Rosenholtz, "Computing local surface orientation and shape from texture for curved surfaces," *International Journal of Computer Vision*, **23**(2), June 1997, pp. 149-168.
10. D. Forsyth, J. Malik and R. Wilensky, "Searching for Digital Pictures," *Scientific American*, **276**(6), June 1997, pp. 88-93.
11. R. Rosenholtz and J. Malik, "Surface Orientation from texture: Isotropy or Homogeneity (Or Both)?," *Vision Research*, **37**(16), Aug 1997, pp. 2283-2293.
12. B. Coifman, D. Beymer, P. McLauchlan and J. Malik, "A Real-time Computer Vision System for vehicle tracking and traffic surveillance," *Transportation Research C* **6C** (4), Aug 1998, 271-288.
13. Camillo J. Taylor, Jana Kosecka, Robert Blasi and Jitendra Malik, "A Comparative Study of Vision-Based Lateral Control Strategies for Autonomous Highway Driving," *IJRR*, **18**(5), May 1999, pp. 442-453.
14. J. Malik, B.L. Anderson and C.E. Charowhas, "Stereoscopic occlusion junctions," *Nature Neuroscience*, **2**(9), Sept. 1999, pp.840-843
15. Joachim M. Buhmann, Jitendra Malik, and Pietro Perona, "Image recognition: Visual grouping, recognition, and learning," *PNAS* **1999**;96 14203-14204
16. J. Shi and J. Malik, "Normalized Cuts and Image Segmentation," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, **22**(8), August 2000, pp. 888-905

17. J. Malik, S. Belongie, T. Leung, J. Shi, "Contour and Texture Analysis for Segmentation," *International Journal of Computer Vision*, 43(1), 7-27, June 2001.
18. T. Leung and J. Malik, "Representing and Recognizing the Visual Appearance of Materials using Three-dimensional Textons," *International Journal of Computer Vision*, 43(1), 29-44, June 2001.
19. Y. Yu, A. Ferencz and J. Malik, "Extracting Objects from Range and Radiance Images," *IEEE Trans. on Visualization and Computer Graphics*, 7(4), 351-364, 2001.
20. S. Belongie, J. Malik and J. Puzicha, "Shape Matching and Object Recognition using Shape Contexts," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 24(4), April 2002, pp. 509-522.
21. C. Carson, S. Belongie, H. Greenspan, J. Malik, "Blobworld: Image Segmentation Using Expectation-Maximization and its Application to Image Querying," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 24(8), Aug. 2002, pp.1026 - 1038.
22. C. Fowlkes, S. Belongie, F. Chung, J. Malik, "Spectral Grouping Using The Nyström Method," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 26(2), Feb. 2004, pp.214-225.
23. C. Bregler, J. Malik and K. Pullen. "Twist-based Acquisition and Tracking of Animal and Human Kinematics," *International Journal of Computer Vision*, 56(3), 179-194, Feb/March 2004.
24. D. Martin, C. Fowlkes, J. Malik. "Learning to Detect Natural Image Boundaries Using Local Brightness, Color and Texture Cues", *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 26(5), May 2004, pp. 530-549.
25. L. Walker Renninger and J. Malik, "When is scene recognition just texture recognition?", *Vision Research*, 44, 2004, pp. 2301-2311.
26. G. Mori, S. Belongie and J. Malik, "Efficient Shape Matching Using Shape Contexts," *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 27(11), Nov. 2005, pp.1832-1837.
27. G. Mori and J. Malik, "Recovering 3D human body configurations using shape contexts", *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 28(7), July 2006, pp. 1052 - 1062.
28. C. Luengo-Hendriks, S. Keränen, C. Fowlkes, L. Simirenko, G. Weber, C. Henriquez, D. Kaszuba, B. Hamann, M. Eisen, J. Malik, D. Sudar, M. Biggin D. Knowles, "3D Morphology and Gene Expression in the Drosophila Blastoderm at Cellular Resolution I: Data Acquisition Pipeline", *Genome Biology*, 7:R123, 2006.
29. S. Keränen, C. Fowlkes, C. Luengo Hendriks, D. Sudar, D. Knowles, J. Malik, M. Biggin, "3D Morphology and Gene Expression in the Drosophila Blastoderm at Cellular Resolution II: Dynamics", *Genome Biology*, 7:R124, 2006.
30. C.C. Fowlkes, D.R. Martin, J. Malik, "Local Figure/Ground Cues are Valid for Natural Images", *Journal of Vision*, 7(8):2, 1-9, <http://journalofvision.org/7/8/2/>, 2007.

31. A. Ferencz, E.G. Learned-Miller and J. Malik, “Learning to Locate Informative Features for Visual Identification”, *International Journal of Computer Vision*,77:3-24, 2008
32. X. Ren, C.C. Fowlkes and J. Malik, “Learning Probabilistic Models for Contour Completion in Natural Images”, *International Journal of Computer Vision*,77:47-63, 2008
33. Charless C. Fowlkes, Cris L. Luengo Hendriks, Soile V.E. Keränen, Gunther H. Weber, Oliver Rubel, Min-Yu Huang, Sohail Chatoor, Angela H. DePace, Lisa Simirenko, Clara Henriquez, Amy Beaton, Richard Weiszmann, Susan Celniker, Bernd Hamann, David W. Knowles, Mark D. Biggin, Michael B. Eisen, and Jitendra Malik, “A Quantitative Spatiotemporal Atlas of Gene Expression in the *Drosophila* Blastoderm”, *Cell*, Vol 133, 364-374, 18 April 2008
34. G. Weber, O. Rubel, M. Huang, A. DePace, C.Fowlkes, S. Keranen, C. Luengo Hendriks, H. Hagen, D. Knowles, J. Malik, M.D. Biggin and B. Hamann, “Visual Exploration of Three-dimensional Gene Expression Using Physical Views and Linked Abstract Views”, *IEEE/ACM Trans. on Computational Biology and Bioinformatics*, vol. 6, no. 2, pp. 296-309, April-June, 2009.
35. C. Nandakumar and J. Malik, “Understanding rapid category detection via multiply degraded images”, *Journal of Vision*, 9(6):19, 1-8, <http://journalofvision.org/9/6/19/>, doi:10.1167/9.6.19, 2009.
36. O. Rubel, G. Weber, M. Huang, E. Bethel, M. Biggin, C.Fowlkes, C. Luengo Hendriks, S. Keranen, M. Eisen, D. Knowles, J. Malik, H. Hagen and B. Hamann, “Integrating Data Clustering and Visualization for the Analysis of 3D Gene Expression Data”, *IEEE/ACM Trans. on Computational Biology and Bioinformatics*. 7(1), 2010, pp 64-79. doi:10.1109/TCBB.2008.49 .
37. Maxim Shatsky, Richard J. Hall, Eva Nogales, Jitendra Malik and Steven Brenner, “Automated multi-model reconstruction from single-particle electron microscopy data”, *Journal of Structural Biology*, 170(1), April 2010, pp 98-108. doi:10.1016/j.jsb.2010.01.007
38. T. Brox and J. Malik, “Large Displacement Optical Flow: Descriptor Matching in Variational Motion Estimation,” *IEEE Trans. on PAMI*, 33(3), March 2011, pp. 500-513.
39. P. Arbelaez, M. Maire, C. Fowlkes and J.Malik, “Contour Detection and Hierarchical Image Segmentation,” *IEEE Trans. on PAMI*, 33(5), May 2011, pp. 898-916.
40. C. Nandakumar, A. Torralba and J.Malik, “How little do we need for 3-D shape perception,” *Perception*, 40, 2011, pp. 257-271.
41. P. Arbelaez, B.G. Han, D. Typke, J. Lim, R.M. Glaeser and J. Malik, “Experimental evaluation of support vector machine based and correlation based approaches to automatic particle selection,” *Journal of Structural Biology*, 175(3), September 2011, pp. 319-328.
42. S. Maji, A. Berg and J. Malik, “Efficient Classification for Additive Kernel SVMs”, *IEEE Trans. on PAMI*, 35(1), 2013, pp.66-77.
43. M. Tao, J. Malik and R. Ramamoorthi, “Sharpening Out of Focus Images using High-Frequency Transfer”, *Comput. Graph. Forum* 32(2), 2013, pp. 489-498.

44. P. Ochs, J. Malik and T. Brox, "Segmentation of Moving Objects by Long Term Video Analysis", IEEE Trans. on PAMI, 36(6), 2014, pp.1187-1200.
45. M. Shatsky, P. Arbelaez, B.G. Han, D. Typke, S. Brenner, J. Malik and R. Glaeser. "Automated particle correspondence and accurate tilt-axis detection in tilted-image pairs". Journal of Structural Biology, 187, 2014, pp.66-75.
46. S. Gupta, P. Arbelaez, R. Girshick and J. Malik, "Indoor Scene Understanding with RGB-D Images: Bottom-up Segmentation, Object Detection and Semantic Segmentation," International Journal of Computer Vision, 112(2):133-149, 2015.
47. J. T. Barron and J. Malik, "Shape, Illumination and Reflectance from Shading", IEEE Trans. on PAMI, 37(8), 2015, pp.1670-1687.
48. Ross B. Girshick, Jeff Donahue, Trevor Darrell, Jitendra Malik, "Region-Based Convolutional Networks for Accurate Object Detection and Segmentation". IEEE Trans. Pattern Anal. Mach. Intell. 38(1): 142-158 (2016)
49. J. T. Barron and J. Malik, "Intrinsic Scene Properties from a Single RGB-D Image", IEEE Trans. Pattern Anal. Mach. Intell. 38(4): 690-703 (2016)
50. Michael W. Tao, Jong-Chyi Su, Ting-Chun Wang, Jitendra Malik, Ravi Ramamoorthi: Depth Estimation and Specular Removal for Glossy Surfaces Using Point and Line Consistency with Light-Field Cameras. IEEE Trans. Pattern Anal. Mach. Intell. 38(6): 1155-1169 (2016)
51. J. Malik, P. Arbelaez, J. Carreira, K. Fragkiadaki, R.B. Girshick, G. Gkioxari, S. Gupta, B. Hariharan, A. Kar, S. Tulsiani: The three R's of computer vision: Recognition, reconstruction and reorganization. Pattern Recognition Letters 72: 4-14 (2016)
52. J. Pont-Tuset, P. Arbelaez, J. Barron, F. Marques, J. Malik: Multiscale Combinatorial Grouping for Image Segmentation and Object Proposal Generation, IEEE Trans. Pattern Anal. Mach. Intell. 39(1):128-140, 2017.
53. M. Tao, P.P. Srinivasan, S. Hadap, S. Rusinkiewicz, J. Malik, R. Ramamoorthi: Shape Estimation from Shading, Defocus, and Correspondence Using Light-Field Angular Coherence , IEEE Trans. Pattern Anal. Mach. Intell.39(3):546-560, 2017.
54. S. Tulsiani\*, A.Kar\*, J. Carreira, J. Malik: Learning Category-Specific Deformable 3D Models for Object Reconstruction, IEEE Trans. Pattern Anal. Mach. Intell. 39(4):627-639., 2017.
55. B. Hariharan, P. Arbelaez, R. Girshick, J. Malik: Object Instance Segmentation and Fine-Grained Localization Using Hypercolumns, IEEE Trans. Pattern Anal. Mach. Intell. 39(4): 719-731, 2017.
56. J. Malik: Technical Perspective: What led computer vision to deep learning? Commun. ACM 60(6): 82-83, 2017.
57. Roberto Calandra, Andrew Owens, Dinesh Jayaraman, Justin Lin, Wenzhen Yuan, Jitendra Malik, Edward H. Adelson, Sergey Levine: More Than a Feeling: Learning to



- Grasp and Regrasp Using Vision and Touch. *IEEE Robotics and Automation Letters* 3(4): 3300-3307, 2018.
58. Xue Bin Peng, Angjoo Kanazawa, Jitendra Malik, Pieter Abbeel, Sergey Levine. SFV: reinforcement learning of physical skills from videos. *ACM Trans. Graph.* 37(6): 178:1-178:14 , 2018
  59. Weicheng Kuo, Christian Hane, Pratik Mukherjee, Jitendra Malik, Esther L. Yuh. Expert-level detection of acute intracranial hemorrhage on head computed tomography using deep learning. *Proceedings of the National Academy of Sciences*, 116(45), 22737-22745. November 5, 2019
  60. Christian Haene, Shubham Tulsiani, Jitendra Malik. Hierarchical Surface Prediction. *IEEE Trans. Pattern Anal. Mach. Intell.* 42(6): 1348-1361, June 2020.
  61. Li, K., Peng, S., Zhang, T. , Malik, J. Multimodal Image Synthesis with Conditional Implicit Maximum Likelihood Estimation. *Int J Comput Vis* 128(10): 2607-2628 (2020).
  62. Saurabh Gupta, Varun Tolani, James Davidson, Sergey Levine, Rahul Sukthankar, Jitendra Malik. Cognitive Mapping and Planning for Visual Navigation. *International Journal of Computer Vision* 128(5): 1311-1330 , 2020.
  63. Stephen Bates, Anastasios Angelopoulos, Lihua Lei, Jitendra Malik, Michael I. Jordan: Distribution-free, Risk-controlling Prediction Sets. *J. ACM* 68(6): 43:1-43:34 (2021).
  64. Shubham Tulsiani, Tinghui Zhou, Alexei A. Efros, Jitendra Malik: Multi-View Supervision for Single-View Reconstruction via Differentiable Ray Consistency. *IEEE Trans. Pattern Anal. Mach. Intell.* 44(12): 8754-8765 (2022).
  65. Theophile Gervet, Soumith Chintala, Dhruv Batra, Jitendra Malik, Devendra Singh Chaplot: Navigating to objects in the real world. *Science Robotics* 8, eadf6991(2023), 28 June 2023

## Book Chapters

1. J. Malik and P. Perona, “Finding Boundaries in Images,” in *Neural Networks for Perception*, Human and Machine Perception, Vol. 1, H. Wechsler (ed.), Academic Press, 1992, pp. 315-344
2. J. Malik and R. Rosenholtz, “A Computational Model of Shape from Texture”, Higher Order Processing in the Visual System, CIBA Foundation Symposium 184, pp. 272-283.
3. P. Perona, T. Shiota, and J. Malik, “ Anisotropic Diffusion,” in *Geometry-Driven Diffusion in Computer Vision*, Bart M. ter Haar Romeny (Ed.), Kluwer Academic Publishers, 1994, pp. 73-92.
4. D. Weinshall and J. Malik, “ Review of Computational Models of Stereopsis,” in *Early Vision and Beyond*, Thomas V. Papathomas (Ed.), MIT Press, 1994, pp. 33-42.
5. J. Malik, J. Shi, S. Belongie, and T. Leung, “Grouping in the normalized cut framework”, in *Shape, contour and grouping in computer vision* Forsyth, D.A.; Mundy, J.L.; di Gesu, V.; Cipolla, R.(eds.) Springer-Verlag, 1999. p. 155-64

6. J. Malik, S. Belongie, T. Leung, J. Shi, "Contour and image analysis for segmentation," "Perceptual Organization for Artificial Vision Systems," Kim L. Boyer and Sudeep Sarkar (eds.), Kluwer Academic Publishers, Boston, 2000, pp. 139-172.
7. D. Jacobs, J. Malik, R. Nevatia, "Breakout session report: Principles and methods," in "Perceptual Organization for Artificial Vision Systems," Kim L. Boyer and Sudeep Sarkar (eds.), Kluwer Academic Publishers, Boston, 2000, pp. 17-28.
8. S. Belongie, G. Mori and J. Malik, "Matching with Shape Contexts," in "Statistics and Analysis of Shapes," Hamid Krim and Anthony Yezzi (eds.) Birkhauser, 2006, pp.81-105.
9. A. Frome and J. Malik, "Object Recognition using Locality Sensitive Hashing of Shape Contexts," in "Nearest-Neighbor Methods in Learning and Vision: Theory and Practice," G. Shakhnarovich, T. Darrell and P. Indyk (eds.), 2006, pp. 221-248.
10. A.C. Berg and J. Malik, "Shape Matching and Object Recognition," in "Toward Category-Level Object Recognition," J. Ponce et.al.(eds), 2006, Springer LNCS 4170, pp.483-507,2006.

### Conference Proceedings

1. J. Malik and S.K.Jain, "An Editor for Micro-78", *Proc. of Computer Society of India*, 1980.
2. J. Malik and T.O.Binford, "Representation of time and sequences of events", *Proc. of the ARPA Image Understanding Workshop*, September 1982, pp. 112-114.
3. H.H. Baker, T.O. Binford, J. Malik and J.F.Meller, "Progress in stereo mapping", *Proc. of the ARPA Image Understanding Workshop*, June 1983, pp. 327-335.
4. J. Malik and T.O.Binford, "Reasoning in time and space", *Proc. of the Eighth International Joint Conference on AI*, Karlsruhe, August 1983, pp. 343-345.
5. J. Malik and T.O.Binford, "A theory of line drawing interpretation", *Proc. of the ARPA Image Understanding Workshop*, October 1984, pp. 188-194.
6. J. Malik, "Labelling line drawings of curved objects", *Proc. of the ARPA Image Understanding Workshop*, December 1985, pp. 209-218.
7. J. Malik, "Recovering three dimensional shape from a single image of curved objects", *Proc. of the Tenth International Joint Conference on AI*, Milan, August 1987, pp 734-737.
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148. Abhishek Kar, Shubham Tulsiani, Joao Carreira, Jitendra Malik, Amodal Completion and Size Constancy in Natural Scenes. ICCV 2015: 127-135.
149. Georgia Gkioxari, Ross Girshick, Jitendra Malik, Contextual Action Recognition with R\*CNN. ICCV 2015: 1080-1088.
150. Georgia Gkioxari, Ross Girshick, Jitendra Malik, Actions and Attributes from Wholes and Parts. ICCV 2015: 2470-2478.
151. Weicheng Kuo, Bharath Hariharan, Jitendra Malik, DeepBox: Learning Objectness with Convolutional Networks. ICCV 2015: 2479-2487.
152. Katerina Fragkiadaki, Sergey Levine, Panna Felsen, Jitendra Malik, Recurrent Network Models for Human Dynamics. ICCV 2015: 4346-4354.
153. Saurabh Gupta, Judy Hoffman, Jitendra Malik, Cross Modal Distillation for Supervision Transfer. CVPR 2016: 2827-2836
154. Ke Li, Bharath Hariharan, Jitendra Malik, Iterative Instance Segmentation. CVPR 2016: 3659-3667
155. Joao Carreira, Pulkit Agrawal, Katerina Fragkiadaki, Jitendra Malik, Human Pose Estimation with Iterative Error Feedback. CVPR 2016: 4733-4742
156. Ke Li, Jitendra Malik, Fast  $k$ -Nearest Neighbor Search via Dynamic Continuous Indexing, ICML 2016:671-679
157. Ke Li, Jitendra Malik: Amodal Instance Segmentation. ECCV (2) 2016: 677-693
158. Amir R. Zamir, Tilman Wekel, Pulkit Agrawal, Colin Wei, Jitendra Malik, Silvio Savarese: Generic 3D Representation via Pose Estimation and Matching. ECCV (3) 2016: 535-553

159. Tinghui Zhou, Shubham Tulsiani, Weilun Sun, Jitendra Malik, Alexei A. Efros: View Synthesis by Appearance Flow. ECCV (4) 2016: 286-301
160. Pulkit Agrawal, Ashvin Nair, Pieter Abbeel, Jitendra Malik, Sergey Levine. Learning to Poke by Poking: Experiential Learning of Intuitive Physics. NIPS 2016
161. Ashvin Nair, Dian Chen, Pulkit Agrawal, Phillip Isola, Pieter Abbeel, Jitendra Malik, Sergey Levine: Combining self-supervised learning and imitation for vision-based rope manipulation. ICRA 2017: 2146-2153
162. Amir R. Zamir, Te-Lin Wu, Lin Sun, William B. Shen, Bertram E. Shi, Jitendra Malik, Silvio Savarese: Feedback Networks. CVPR 2017: 1308-1317
163. Saurabh Gupta, James Davidson, Sergey Levine, Rahul Sukthankar, Jitendra Malik: Cognitive Mapping and Planning for Visual Navigation. CVPR 2017: 2616-2625
164. Shubham Tulsiani, Tinghui Zhou, Alexei A. Efros, Jitendra Malik: Multi-View Supervision for Single-View Reconstruction via Differentiable Ray Consistency. CVPR 2017, 2626-2634
165. Shubham Tulsiani, Hao Su, Leonidas J. Guibas, Alexei A. Efros, Jitendra Malik: Learning Shape Abstractions by Assembling Volumetric Primitives. CVPR 2017, 2635-2643
166. Ke Li, Jitendra Malik, Fast  $k$ -Nearest Neighbor Search via Prioritized DCI, ICML 2017:2081-2090
167. Panna Felsen, Pulkit Agrawal, Jitendra Malik: What will Happen Next? Forecasting Player Moves in Sports Videos. ICCV 2017:3342-3351
168. Christian Hane, Shubham Tulsiani, Jitendra Malik: Hierarchical Surface Prediction for 3D Object Reconstruction, Proc. Int. Conf. on 3D Vision (3DV), 2017:412-420
169. Abhishek Kar, Christian Hane, Jitendra Malik. Learning a Multi-View Stereo Machine. NIPS 2017:364-375
170. Deepak Pathak, Parsa Mahmoudieh, Guanghao Luo, Pulkit Agrawal, Dian Chen, Yide Shentu, Evan Shelhamer, Jitendra Malik, Alexei A. Efros, Trevor Darrell. Zero-Shot Visual Imitation, ICLR 2018
171. Shubham Tulsiani, Saurabh Gupta, David F. Fouhey, Alexei A. Efros, Jitendra Malik. Factoring Shape, Pose, and Layout From the 2D Image of a 3D Scene, CVPR 2018:302-310
172. Shubham Tulsiani, Alexei A. Efros, Jitendra Malik. Multi-View Consistency as Supervisory Signal for Learning Shape and Pose Prediction, CVPR 2018: 2897-2905
173. Amir R. Zamir, Alexander Sax, William Shen, Leonidas J. Guibas, Jitendra Malik, Silvio Savarese. Taskonomy: Disentangling Task Transfer Learning, CVPR 2018: 3712-3722
174. David F. Fouhey, Wei-cheng Kuo, Alexei A. Efros, Jitendra Malik. From Lifestyle Vlogs to Everyday Interactions, CVPR 2018: 4991-5000

175. Chunhui Gu, Chen Sun, David A. Ross, Carl Vondrick, Caroline Pantofaru, Yeqing Li, Sudheendra Vijayanarasimhan, George Toderici, Susanna Ricco, Rahul Sukthankar, Cordelia Schmid, Jitendra Malik. AVA: A Video Dataset of Spatio-Temporally Localized Atomic Visual Actions, CVPR 2018: 6047-6056
176. Angjoo Kanazawa, Michael J. Black, David W. Jacobs, Jitendra Malik. End-to-End Recovery of Human Shape and Pose, CVPR 2018: 7122-7131
177. Fei Xia, Amir R. Zamir, Zhiyang He, Alexander Sax, Jitendra Malik, Silvio Savarese. Gibson Env: Real-World Perception for Embodied Agents, CVPR 2018: 9068-9079
178. Angjoo Kanazawa, Shubham Tulsiani, Alexei A. Efros, Jitendra Malik. Learning Category-Specific Mesh Reconstruction from Image Collections. ECCV (15) 2018: 386-402
179. Weicheng Kuo, Christian Hane, Ester L. Yuh, Pratik Mukherjee, Jitendra Malik. Cost-Sensitive Active Learning for Intracranial Hemorrhage Detection. MICCAI (3) 2018: 715-723
180. Ashish Kumar, Saurabh Gupta, David F. Fouhey, Sergey Levine, Jitendra Malik. Visual Memory for Robust Path Following. NeurIPS 2018:773-782
181. Shiry Ginosar; Amir Bar; Gefen Kohavi; Caroline Chan; Andrew Owens; Jitendra Malik. Learning Individual Styles of Conversational Gesture, CVPR 2019: 3497-3506.
182. Zhe Cao; Abhishek Kar; Christian Hane; Jitendra Malik. Learning Independent Object Motion From Unlabelled Stereoscopic Videos, CVPR 2019: 5594-5603
183. Angjoo Kanazawa; Jason Y. Zhang; Panna Felsen; Jitendra Malik. Learning 3D Human Dynamics From Video. CVPR 2019: 5614-5623
184. Yedid Hoshen; Ke Li; Jitendra Malik. Non-Adversarial Image Synthesis With Generative Latent Nearest Neighbors, CVPR 2019: 5811-5819.
185. Ke Li, Tianhao Zhang, Jitendra Malik. Diverse Image Synthesis From Semantic Layouts via Conditional IMLE. The IEEE International Conference on Computer Vision (ICCV), 2019, pp. 4220-4229
186. Iro Armeni, Zhi-Yang He, JunYoung Gwak, Amir R. Zamir, Martin Fischer, Jitendra Malik, Silvio Savarese. 3D Scene Graph: A Structure for Unified Semantics, 3D Space, and Camera. The IEEE International Conference on Computer Vision (ICCV), 2019, pp. 5664-5673
187. Christoph Feichtenhofer, Haoqi Fan, Jitendra Malik, Kaiming He. SlowFast Networks for Video Recognition. The IEEE International Conference on Computer Vision (ICCV), 2019, pp. 6202-6211
188. Jason Y. Zhang, Panna Felsen, Angjoo Kanazawa, Jitendra Malik. Predicting 3D Human Dynamics From Video. The IEEE International Conference on Computer Vision (ICCV), 2019, pp. 7114-7123

189. Weicheng Kuo, Anelia Angelova, Jitendra Malik, Tsung-Yi Lin. ShapeMask: Learning to Segment Novel Objects by Refining Shape Priors. The IEEE International Conference on Computer Vision (ICCV), 2019, pp. 9207-9216
190. Manolis Savva, Abhishek Kadian, Oleksandr Maksymets, Yili Zhao, Erik Wijmans, Bhavana Jain, Julian Straub, Jia Liu, Vladlen Koltun, Jitendra Malik, Devi Parikh, Dhruv Batra. Habitat: A Platform for Embodied AI Research. The IEEE International Conference on Computer Vision (ICCV), 2019, pp. 9339-9347
191. Georgia Gkioxari, Jitendra Malik, Justin Johnson. Mesh R-CNN. The IEEE International Conference on Computer Vision (ICCV), 2019, pp. 9785-9795
192. Somil Bansal, Varun Tolani, Saurabh Gupta, Jitendra Malik, Claire Tomlin: Combining Optimal Control and Learning for Visual Navigation in Novel Environments. CoRL 2019: 420-429
193. Ashish Kumar, Saurabh Gupta, Jitendra Malik: Learning Navigation Subroutines from Egocentric Videos. CoRL 2019: 617-626
194. Alexander Sax, Jeffrey O. Zhang, Bradley Emi, Amir Roshan Zamir, Silvio Savarese, Leonidas J. Guibas, Jitendra Malik: Learning to Navigate Using Mid-Level Visual Priors. CoRL 2019: 791-812
195. Ke Li, Tianhao Zhang, Jitendra Malik: Approximate Feature Collisions in Neural Nets. NeurIPS 2019:15816-15824.
196. Amir R. Zamir, Alexander Sax, Nikhil Cheerla, Rohan Suri, Zhangjie Cao, Jitendra Malik, Leonidas J. Guibas: Robust Learning Through Cross-Task Consistency. CVPR 2020 : 11194-11203.
197. Trevor Standley, Amir R. Zamir, Dawn Chen, Leonidas Guibas, Jitendra Malik, Silvio Savarese: Which Tasks Should Be Learned Together in Multi-task Learning? ICML 2020: 9120-9132
198. Haozhi Qi, Chong You, Xiaolong Wang, Yi Ma, Jitendra Malik: Deep Isometric Learning for Visual Recognition. ICML 2020: 7824-7835
199. Karttikeya Mangalam, Harshayu Girase, Shreyas Agarwal, Kuan-Hui Lee, Ehsan Adeli, Jitendra Malik, Adrien Gaidon: It Is Not the Journey but the Destination: Endpoint Conditioned Trajectory Prediction. ECCV (2) 2020:759-776.
200. Ning Yu, Ke Li, Peng Zhou, Jitendra Malik, Larry Davis, Mario Fritz: Inclusive GAN: Improving Data and Minority Coverage in Generative Models. ECCV (22) 2020: 377-393.
201. Jeffrey O. Zhang, Alexander Sax, Amir R. Zamir, Leonidas Guibas, Jitendra Malik: Side-Tuning: A Baseline for Network Adaptation via Additive Side Networks. ECCV (3) 2020: 698-714
202. Zhe Cao, Hang Gao, Karttikeya Mangalam, Qi-Zhi Cai, Minh Vo, Jitendra Malik: Long-term Human Motion Prediction with Scene Context. ECCV (1) 2020: 387-404

203. Shubham Goel, Angjoo Kanazawa, Jitendra Malik: Shape and Viewpoint without Keypoints. ECCV (15) 2020: 88-104.
204. Jason Y. Zhang, Sam Pepose, Hanbyul Joo, Deva Ramanan, Jitendra Malik, Angjoo Kanazawa: Perceiving 3D Human-Object Spatial Arrangements from a Single Image in the Wild. ECCV (12)2020: 34-51.
205. Bryan Chen, Alexander Sax, Francis Lewis, Iro Armeni, Silvio Savarese, Amir Zamir, Jitendra Malik, Lerrel Pinto: Robust Policies via Mid-Level Visual Representations: An Experimental Study in Manipulation and Navigation, CoRL 2020.
206. Edward J. Smith, Roberto Calandra, Adriana Romero, Georgia Gkioxari, David Meger, Jitendra Malik, Michal Drozdal: 3D Shape Reconstruction from Vision and Touch. NeurIPS 2020.
207. Haozhi Qi, Xiaolong Wang, Deepak Pathak, Yi Ma, Jitendra Malik: Learning Long-term Visual Dynamics with Region Proposal Interaction Networks, ICLR, May 2021.
208. Anastasios Angelopoulos\*, Stephen Bates\*, Jitendra Malik, and Michael I. Jordan: Uncertainty Sets for Image Classifiers using Conformal Prediction, ICLR, May 2021.
209. Devendra Singh Chaplot, Deepak Pathak, Jitendra Malik: Differentiable Spatial Planning using Transformers, ICML July 2021: 1484-1495.
210. Ashish Kumar, Zipeng Fu, Deepak Pathak, Jitendra Malik. RMA: Rapid Motor Adaptation for Legged Robots. Robotics: Science and Systems 2021.
211. Ilija Radosavovic, Xiaolong Wang, Lerrel Pinto, Jitendra Malik. State-Only Imitation Learning for Dexterous Manipulation. IEEE/RSJ Intl. Conf. on Intelligent Robots and Systems (IROS) 2021: 7865-7871.
212. Haoqi Fan, Bo Xiong, Karttikeya Mangalam, Yanghao Li, Zhicheng Yan, Jitendra Malik, Christoph Feichtenhofer. Multiscale Vision Transformers, ICCV 2021: 6804-6815.
213. Ainaz Eftekhari, Alexander Sax, Jitendra Malik, Amir Zamir. Omnidata: A Scalable Pipeline for Making Multi-Task Mid-Level Vision Datasets From 3D Scans, ICCV 2021: 10766-10776.
214. Zhe Cao, Ilija Radosavovic, Angjoo Kanazawa, Jitendra Malik. Reconstructing Hand-Object Interactions in the Wild, ICCV 2021: 12397-12406.
215. Karttikeya Mangalam, Yang An, Harshayu Girase, Jitendra Malik. From Goals, Waypoints & Paths to Long Term Human Trajectory Forecasting, ICCV 2021: 15213-15222.
216. Zipeng Fu, Ashish Kumar, Jitendra Malik, Deepak Pathak: Minimizing Energy Consumption Leads to the Emergence of Gaits in Legged Robots. CoRL 2021: 928-937.
217. Haoqi Fan, Tullie Murrell, Heng Wang, Kalyan Vasudev Alwala, Yanghao Li, Yilei Li, Bo Xiong, Nikhila Ravi, Meng Li, Haichuan Yang, Jitendra Malik, Ross B. Girshick, Matt Feiszli, Aaron Adcock, Wan-Yen Lo, Christoph Feichtenhofer: PyTorchVideo: A Deep Learning Library for Video Understanding. ACM Multimedia 2021: 3783-3786.



218. Andrew Szot, Alexander Clegg, Eric Undersander, Erik Wijmans, Yili Zhao, John Turner, Noah Maestre, Mustafa Mukadam, Devendra Singh Chaplot, Oleksandr Maksymets, Aaron Gokaslan, Vladimir Vondrus, Sameer Dharur, Franziska Meier, Wojciech Galuba, Angel X. Chang, Zsolt Kira, Vladlen Koltun, Jitendra Malik, Manolis Savva, Dhruv Batra: Habitat 2.0: Training Home Assistants to Rearrange their Habitat. NeurIPS 2021: 251-266.
219. Devendra Singh Chaplot, Murtaza Dalal, Saurabh Gupta, Jitendra Malik, Ruslan Salakhutdinov: SEAL: Self-supervised Embodied Active Learning using Exploration and 3D Consistency. NeurIPS 2021: 13086-13098.
220. Edward J. Smith, David Meger, Luis Pineda, Roberto Calandra, Jitendra Malik, Adriana Romero-Soriano, Michal Drozdal: Active 3D Shape Reconstruction from Vision and Touch. NeurIPS 2021: 16064-16078.
221. Jathushan Rajasegaran, Georgios Pavlakos, Angjoo Kanazawa, Jitendra Malik: Tracking People with 3D Representations. NeurIPS 2021: 23703-23713.
222. Anastasios N. Angelopoulos, Amit Pal Singh Kohli, Stephen Bates, Michael I. Jordan, Jitendra Malik, Thayer Alshaabi, Srigoikul Upadhyayula, Yaniv Romano: Image-to-Image Regression with Distribution-Free Uncertainty Quantification and Applications in Imaging. ICML 2022: 717-730.
223. Georgios Pavlakos, Jitendra Malik, Angjoo Kanazawa: Human Mesh Recovery From Multiple Shots. CVPR 2022: 1475-1485
224. Jathushan Rajasegaran, Georgios Pavlakos, Angjoo Kanazawa, Jitendra Malik: Tracking People by Predicting 3D Appearance, Location and Pose. CVPR 2022: 2730-2739
225. Open-World Instance Segmentation: Exploiting Pseudo Ground Truth From Learned Pairwise Affinity: Weiyao Wang, Matt Feiszli, Heng Wang, Jitendra Malik, Du Tran. CVPR 2022: 4412-4422
226. Yanghao Li, Chao-Yuan Wu, Haoqi Fan, Karttikeya Mangalam, Bo Xiong, Jitendra Malik, Christoph Feichtenhofer: MViTv2: Improved Multiscale Vision Transformers for Classification and Detection. CVPR 2022: 4794-4804
227. Shubham Goel, Georgia Gkioxari, Jitendra Malik: Differentiable Stereopsis: Meshes From Multiple Views Using Differentiable Rendering. CVPR 2022: 8625-8634
228. Karttikeya Mangalam, Haoqi Fan, Yanghao Li, Chao-Yuan Wu, Bo Xiong, Christoph Feichtenhofer, Jitendra Malik: Reversible Vision Transformers. CVPR 2022: 10820-10830
229. Chao-Yuan Wu, Yanghao Li, Karttikeya Mangalam, Haoqi Fan, Bo Xiong, Jitendra Malik, Christoph Feichtenhofer: MeMViT: Memory-Augmented Multiscale Vision Transformer for Efficient Long-Term Video Recognition. CVPR 2022: 13577-13587
230. Zipeng Fu, Ashish Kumar, Ananye Agarwal, Haozhi Qi, Jitendra Malik, Deepak Pathak: Coupling Vision and Proprioception for Navigation of Legged Robots. CVPR 2022: 17252-17262

231. Santhosh Kumar Ramakrishnan, Devendra Singh Chaplot, Ziad Al-Halah, Jitendra Malik, Kristen Grauman: PONI: Potential Functions for ObjectGoal Navigation With Interaction-Free Learning. CVPR 2022: 18868-18878
232. Kristen Grauman, Andrew Westbury, Eugene Byrne, Zachary Chavis, Antonino Furnari, Rohit Girdhar, Jackson Hamburger, Hao Jiang, Miao Liu, Xingyu Liu, Miguel Martin, Tushar Nagarajan, Ilija Radosavovic, Santhosh Kumar Ramakrishnan, Fiona Ryan, Jayant Sharma, Michael Wray, Mengmeng Xu, Eric Zhongcong Xu, Chen Zhao, Siddhant Bansal, Dhruv Batra, Vincent Cartillier, Sean Crane, Tien Do, Morrie Doulaty, Akshay Erapalli, Christoph Feichtenhofer, Adriano Fragomeni, Qichen Fu, Abrham Gebreselasie, Cristina González, James Hillis, Xuhua Huang, Yifei Huang, Wenqi Jia, Weslie Khoo, Jáchym Kolář, Satwik Kottur, Anurag Kumar, Federico Landini, Chao Li, Yanghao Li, Zhenqiang Li, Karttikeya Mangalam, Raghava Modhugu, Jonathan Munro, Tullie Murrell, Takumi Nishiyasu, Will Price, Paola Ruiz, Merey Ramazanova, Leda Sari, Kiran Somasundaram, Audrey Southerland, Yusuke Sugano, Ruijie Tao, Minh Vo, Yuchen Wang, Xindi Wu, Takuma Yagi, Ziwei Zhao, Yunyi Zhu, Pablo Arbeláez, David Crandall, Dima Damen, Giovanni Maria Farinella, Christian Fuegen, Bernard Ghanem, Vamsi Krishna Ithapu, C. V. Jawahar, Hanbyul Joo, Kris Kitani, Haizhou Li, Richard Newcombe, Aude Oliva, Hyun Soo Park, James M. Rehg, Yoichi Sato, Jianbo Shi, Mike Zheng Shou, Antonio Torralba, Lorenzo Torresani, Mingfei Yan, Jitendra Malik: Ego4D: Around the World in 3,000 Hours of Egocentric Video. CVPR 2022: 18973-18990
233. Jasmine Collins, Shubham Goel, Kenan Deng, Achleshwar Luthra, Leon Xu, Erhan Gundogdu, Xi Zhang, Tomas F. Yago Vicente, Thomas Dideriksen, Himanshu Arora, Matthieu Guillaumin, Jitendra Malik: ABO: Dataset and Benchmarks for Real-World 3D Object Understanding. CVPR 2022: 21094-21104
234. Ashish Kumar, Zhongyu Li, Jun Zeng, Deepak Pathak, Koushil Sreenath, Jitendra Malik: Adapting Rapid Motor Adaptation for Bipedal Robots, IROS 2022.
235. Sehoon Kim, Amir Gholami, Albert E. Shaw, Nicholas Lee, Karttikeya Mangalam, Jitendra Malik, Michael W. Mahoney, Kurt Keutzer: Squeezeformer: An Efficient Transformer for Automatic Speech Recognition. NeurIPS 2022.
236. Ananye Agarwal, Ashish Kumar, Jitendra Malik, Deepak Pathak: Legged Locomotion in Challenging Terrains using Egocentric Vision. CoRL 2022: 403-415
237. Haozhi Qi, Ashish Kumar, Roberto Calandra, Yi Ma, Jitendra Malik: In-Hand Object Rotation via Rapid Motor Adaptation. CoRL 2022: 1722-1732
238. Ilija Radosavovic, Tete Xiao, Stephen James, Pieter Abbeel, Jitendra Malik, Trevor Darrell: Real-World Robot Learning with Masked Visual Pre-training. CoRL 2022: 416-426
239. Jiayuan Gu, Devendra Singh Chaplot, Hao Su, Jitendra Malik: Multi-skill Mobile Manipulation for Object Rearrangement. ICLR 2023.
240. Dingqi Zhang, Antonio Loquercio, Xiangyu Wu, Ashish Kumar, Jitendra Malik, Mark Wilfried Mueller. Learning a Single Near-hover Position Controller for Vastly Different Quadcopters. ICRA 2023.

241. Antonio Loquercio, Ashish Kumar, Jitendra Malik. Learning Visual Locomotion with Cross-Modal Supervision. ICRA 2023.
242. Vickie Ye, Georgios Pavlakos, Jitendra Malik, Angjoo Kanazawa. Decoupling Human and Camera Motion from Videos in the Wild. CVPR 2023: 21222-21232.
243. Chao-Yuan Wu, Justin Johnson, Jitendra Malik, Christoph Feichtenhofer, Georgia Gkioxari. Multiview Compressive Coding for 3D Reconstruction. CVPR 2023: 9065-9075.
244. Jathushan Rajasegaran, Georgios Pavlakos, Angjoo Kanazawa, Christoph Feichtenhofer, Jitendra Malik. On the Benefits of 3D Pose and Tracking for Human Action Recognition. CVPR 2023: 640-649.
245. Hiera: A Hierarchical Vision Transformer without the Bells-and-Whistles. Chaitanya Ryali, Yuan-Ting Hu, Daniel Bolya, Chen Wei, Haoqi Fan, Po-Yao Huang, Vaibhav Aggarwal, Arkabandhu Chowdhury, Omid Poursaeed, Judy Hoffman, Jitendra Malik, Yanghao Li, Christoph Feichtenhofer, ICML 2023.
246. Shubham Goel, Georgios Pavlakos, Jathushan Rajasegaran, Angjoo Kanazawa, Jitendra Malik. Humans in 4D: Reconstructing and Tracking Humans with Transformers, ICCV 2023 (forthcoming).

## Invited talks

### 1988-1989

“Representing constraints for inferring 3-D scene structure from monocular cues,” Workshop on Vision and Three-dimensional representation, University of Minnesota, May 24-26, 1989.

### 1989-1990

“Finding Texture Boundaries by Nonlinear Spatial Filtering”, Indo-United States Workshop on Spectral Analysis in One or Two Dimensions, New Delhi, November 29, 1989.

“Finding Texture Boundaries Using Early Vision Mechanisms”, National Academy of Sciences/ National Research Council Committee on Vision Meeting, Irvine, Jan 19, 1990.

“Finding Image Boundaries”, Intelligence Artificielle: Quelle Realite, IA 90 Workshop, Rabat, Morocco, June 1, 1990.

### 1991-92

“Multi-channel filtering as a substrate for early visual processing”, ESPRIT INSIGHT conference, Nice, France, June 20, 1991.

“Detecting Curvilinear Structure in Images”, ETH Zurich, July 4, 1991.

“Stereopsis from Orientation and Spatial Frequency Disparity”, ETH Zurich, July 5, 1991.

“Stereopsis from Orientation and Spatial Frequency Disparity”, Harvard, Sept. 18, 1991.

“Stereopsis from Orientation and Spatial Frequency Disparity”, MIT, Sept. 23, 1991.

“Stereopsis from Orientation and Spatial Frequency Disparity”, U Mass, Amherst, Oct. 4, 1991.

“Stereopsis from Orientation and Spatial Frequency Disparity”, NYU, Oct 11, 1991.

“Stereopsis from Orientation and Spatial Frequency Disparity”, Yale, Oct 16, 1991.

“Multi-channel filtering as a first stage in visual processing”, CMU, Oct 20, 1992.

“Stereopsis from Orientation and Spatial Frequency Disparity”, CMU, Oct 21, 1991.

“Multi-channel filtering as a first stage in visual processing”, Opt. Soc. of Am. meeting, San Jose, November 6, 1992.

“Stereopsis from Orientation and Spatial Frequency Disparity”, Caltech, Feb 20, 1992.

### **1992-93**

“Processing of texture information”, Cold Spring Harbor Course on Computational Neuroscience, July 20, 1992.

“Stereopsis from orientation and spatial frequency disparity” , Sarnoff Research Center, July 23, 1992.

“Vision for Intelligent vehicles”, Asilomar VLSI Conference, Feb 8, 1993.

“On Image Texture,” Robotics Institute, CMU, March 5, 1993

“Computer Vision: Estimating 3-D scene Properties from 2-D images” , Neyman Seminar, Dept. of Statistics, April 7, 1993.

“Orientation and Spatial Frequency Disparities” NATO workshop on Binocular Stereopsis and Optical Flow, York University, June 25, 1993.

### **1993-94**

“The visual processing of texture,” Stockholm Workshop on computational Vision, Sweden, Aug 5, 1993.

Several presentations at the Newton Institute of Mathematical Sciences, Cambridge, during July-December 1993.

“A Computational Model for Shape from Texture,” CIBA Foundation symposium on higher order processing in the visual system, London, Oct 21, 1993.

“A Computational Model for Shape from Texture,” Smith Kettlewell Foundation, San Francisco, March 17, 1994.

“Towards recognition of textured objects,” Syracuse, April 9, 1994.

“Computational vision: Issues and Perspectives”, Interval Corporation, June 10, 1994

“On shape from texture”, Scuola Normale, Pisa, June 28, 1994.

### **1994-95**

Invited series of lectures on Computational Vision, Inst. Research in Cognitive Science, Univ. of Pennsylvania, Feb 6–10, 1995

### **1995-96**

“Smart Cars and Smart Roads” Plenary talk, British Machine Vision Conference, Sept 1995.

“Vision and Control” Panel presentation, NSF Workshop on Biology and Control, Nov 1995.

### **1997-1998**

“Finding objects in large collections of images”, SRI, Aug 21.

Interval seminar, Sept 17

“Finding objects in large collections of images” , Human Computer Interaction seminar, Stanford, Oct 3.

Neyman seminar, Statistics Dept., UC Berkeley, Oct 22

“Computational Mechanisms of Visual Grouping”, Psychology Dept., UC Berkeley, Nov. 7

“Computational Mechanisms of Visual Grouping”, Psychology Dept., Harvard Univ., Nov. 10

“Computational Mechanisms of Visual Grouping”, MIT LIDS colloquium, Nov. 25  
Finding objects in large collections of images, Digital Library meeting, Berkeley, Jan 6  
“Computational Mechanisms of Visual grouping”, NECI/NYU workshop, New York City, Feb 20  
Philips Multimedia Research Center, Feb 25  
“Recovering Geometric, Photometric, and Kinematic Properties from Images”, Image Based Rendering Workshop, Stanford, Mar 23  
“Computational Mechanisms of Visual Grouping”, AI Colloquium, Stanford, Apr 9  
“Graph partitioning and matching problems in computer vision”, DIMACS workshop on Large Scale Optimization, May 27  
“Computational Mechanisms of Visual Grouping”, International workshop on Shape, Contour and Grouping, Palermo, Italy, May 29  
“Learning to recognize objects in large image collections using color and texture” (keynote talk in Workshop on Learning in Computer Vision), Freiburg, Germany, June 6

### **1998-1999**

“Visual Grouping, Graph Partitioning, and Eigenvalue Problems”, MTNS, Padova, July 7  
“Computational mechanisms of visual grouping”, Weizmann Inst, Israel, July 14  
“Computational mechanisms of visual grouping”, Hebrew Univ, Jerusalem, Israel, July 15  
Video Analysis, Intel Corporation, Sept 24.  
“Finding Objects In Images”, ETH Zurich Symposium on Computer Vision and Mental Images, Nov 23  
“Computational Mechanisms of Visual Grouping”, DIMACS, New Jersey, March 21.  
“Computational Mechanisms of Visual Grouping”, Bodian Seminar, Johns Hopkins, April 12.  
“Computational Models of Visual Grouping”, 5th Annual German American Frontiers of Science Symposium, Potsdam, Germany, June 10-13  
“Recovering Photometric Properties Of Scenes From Images”, Workshop on Photometric Modeling, CVPR, June 22  
“Computational Mechanisms of Visual Grouping”, Gatsby CNS unit, London, June 29

### **1999-2000**

“Computational Mechanisms of Visual Grouping”, Cambridge, July 1, 1999  
“Computational Mechanisms of Visual Grouping”, Workshop on Computational Vision and speech recognition: Statistical foundations and applications, Anogia, Crete, July 4, 1999  
“Region Based Image Retrieval”, Keynote talk, DAGM-99 (German conference on AI and PR), Sept 16, 1999  
“Computational Mechanisms of Visual Grouping”, Max Planck Institute, Tuebingen, Sept 17, 1999  
“Cue Combination And Aggregation In Grouping”, ICCV Perceptual Organization workshop Sept 20, 1999  
“Recent Advances in Visual Grouping and Their Implications for Models of Object Recognition”, ICCV workshop on generic object recognition, Sept 26, 1999.  
“Visual Grouping and Recognition”, Dept Colloquium, Princeton University, Nov 17, 1999.  
“Computational Mechanisms of Visual Grouping”, Cognitive Science Colloquium, UC Berkeley, Dec 3, 1999.  
“Computational Vision”, National Academy of Sciences workshop on the Interface of Three Ar-

eas of Computer Science with the Mathematical Sciences, April 29, 2000.

#### **2000-2001**

“Ecological Statistics of Gestalt Grouping Factors” Natural Stimulus Statistics, Cold Spring Harbor Laboratory, Oct 25, 2000

“Convergence of Vision and Graphics” Information Society Technologies, IST 2000 Conference, Nice, Nov. 2000

“Visual Grouping and Recognition”, UCLA Jon Postel Distinguished Lecture, Nov. 9, 2000

“Visual Grouping and Recognition”, Georgia Tech GVU colloquium, Jan 25, 2001

#### **2001-2002**

“Ecological Statistics of grouping cues in natural images”, Invited Address, Scale Space '01 workshop, Vancouver, July 7, 2001.

“Lectures on biologically motivated approaches to computer vision,” DIKU, Copenhagen, Aug 6-10, 2001

“Shape Matching for Content Based Image Retrieval,” MMCBIR 2001, INRIA Rocquencourt, Sept. 24, 2001

“ Visual Grouping and Object Recognition,” Int. Conf. On Image Analysis and Processing 2001, Palermo, Italy, Sept 26, 2001

“Shape Matching and Recognition using shape contexts”, Workshop on Shape-based Retrieval and Analysis of 3D models, Princeton, Oct 29, 2001

“Visual Grouping and Recognition”, Columbia Lectures in Computer Science, Dec. 3, 2001

“Visual Grouping and Recognition”, Lecture Series in honor of Azriel Rosenfeld, Univ. of Maryland, Jan 30, 2002.

“Visual Grouping and Object Recognition”, Stanford Computer Forum Workshop on Computer Vision, March 2002

“Recognizing Objects and Actions in Images and Video”, Int. Symposium on Multimedia Mediation Systems, Tokyo, March 2002

“Recognizing Objects and Actions in Images and Video”, Natl. Academy of Sciences Workshop on Role of Mathematical Sciences in Homeland Defense, Washington, April 2002

#### **2002-2003**

“Recognizing Objects and Actions in Images and Video”, Distinguished Lecture, UC San Diego, February 10, 2003

“Recognizing Objects and Actions in Images and Video”, Mittag-Leffler Institute, Stockholm, March 2003

“Ecological Statistics and visual grouping”, Mittag-Leffler Institute, Stockholm, March 2003

#### **2003-2004**

“Recognizing Objects and Actions”, University of Arizona, Tucson, Oct 3, 2003

#### **2004-2005**

“Dense Feature Correspondences make recognition easy”, Sicily Object Recognition Workshop, Oct 11, 2004

“Computer Science Education at UC Berkeley”, Microsoft Research Asia Faculty Summit, Beijing, Nov. 8, 2004

Keynote talk, Workshop on “Computing in the 21st Century” Beijing China, Nov. 9, 2004.

“Recognition and Synthesis of human actions from Video”, Invited Talk, 9th Intl. Fall Workshop on Vision, Modeling and Visualization, Stanford, November 17, 2004

“Ecological Statistics of Perceptual Organization” Cognitive & Linguistic Sciences Colloquium, Brown University, Nov. 29, 2004

“Recognizing Objects and Actions in Images and Video”, Distinguished Colloquium, Univ. of Pennsylvania, Nov. 30, 2004

“Recognizing Objects and Actions”, EECS Department, MIT, Dec 1, 2004

“Recognizing Objects and Actions in Images and Video”, Evans & Sutherland Distinguished Lecture, University of Utah, Feb 23, 2005.

Lectures in the MSRI Program on Vision, Spring 2005 (various)

“Ecological Statistics of Perceptual Organization”, Computational Vision in Neural and Machine systems, Centre for Vision Research, York University, June 15, 2005

### **2005-2006**

Oxyopia, School of Optometry, UC Berkeley, Oct 28, 2005, “Perceptual Organization and Natural Image Statistics”

Computer Science Colloquium, ETH Zurich, Nov. 7, 2005, “Recognizing Objects and Actions in Images and Video”

Exxon-Mobil Pattern Recognition and Image Analysis Workshop, Dec. 2005

Computer Vision Distinguished Speaker Series, University of Central Florida, Jan 25, 2006, “Recognizing Objects and Actions in Images and Video”

IMA Workshop March 06 “Natural Image Statistics Enable us to Quantitatively Model Visual Grouping and Figure-Ground Cues”

NAE West Coast Regional meeting, April 20, 2006

IMA Workshop on Visual Recognition, May 06

### **2006-2007**

Learning in Cognitive Systems Summer School, Berlin, September 18-20 2006, various lectures. Center for Perceptual Systems, UT Austin, Colloquium, Nov 27, 2006, “Probabilistic Models of Perceptual Organization”

Techvista hosted MSR India Jan 23, 2007, Panel on “Making India a Powerhouse in Research”

ECE Colloquium, UC Santa Barbara, Apr 13, 2007, “Recognizing Objects and Actions in Images and Video”

Visual Science Society Symposium, May 11, 2007, “Ecological Statistics of Perceptual organization”

Invited talk, Scandinavian Conference on Image Analysis, 2007, June 10, 2007, “Recognizing objects and activities in images and video”

### **2007-2008**

CITRIS in London, July 2007, The Future of Image Search.

Optical Society of America Fall Vision Meeting 2007, invited talk, Sept 17, 2007, “Modeling object recognition”

CASIS conference, Lawrence Livermore National Laboratory, Keynote talk, Nov 15, 2007, “Recognizing Objects and Actions in Images and Video”  
UCSB Bio-image informatics workshop 200, Panel “Benchmarking and Validation of Computer Vision Methods for Bioimage Analysis”  
SUNS 08, MIT, Feb 1, 2008, “Perceptual Organization in Images of Natural Scenes”  
Indo-Israeli Workshop on Computer Vision, Hyderabad, India, Invited talk, Feb 4, 2008, “Recognizing Objects and Actions in Images and Video”  
Google Tech Talk, Mar 6, 2008, “Looking At People”  
Neural Computation and Adaptive Perception Workshop, Redwood Center, Berkeley, May 7, 2008, “Perceptual Organization in Images of Natural Scenes”  
Object Recognition Workshop, Lake Como, May 18, 2008, “Perceptual Organization in Images of Natural Scenes”  
International Workshop on Computer Vision, Venice, May 28, 2008, “Perceptual Organization in Images of Natural Scenes”  
HP Imaging and Color Symposium, Berkeley, June 20, 2008, “Contours and Junctions in Natural Images”  
Workshop on Algorithms for Massive, Modern Data Sets, MMDS 2008, Stanford, June 27, 2008, “Classification using Intersection Kernel SVMs is Efficient”

#### **2008-2009**

Adobe Distinguished Lecture Series, Aug 5, 2008, “From Pixels to Perception: Computational Models of Visual Grouping”  
ACM SIGKDD, Las Vegas, Keynote Address, Aug 27, 2008 “The Future of Image Search”  
HHMI Janelia Farm Research Campus, Sept 15, 2008 “Visual Grouping: Finding Contours and Regions in Natural Images”  
UC Irvine, Distinguished Sepaker Series, Oct 17, 2008 “Parsing Images”  
USC Computer Science Colloquium, Oct 30, 2008 “Parsing Images”  
International Workshop on Video, Barcelona, May 26, 2009, “ Perceptual Organization and Optical Flow”  
International Workshop on Recent Trends in Computer Vision, Kyoto, June 8, 2009, “Recognition Using Regions”  
Visual Scene Understanding Workshop, CVPR, Miami, June 25, 2009, “The interaction of bottom-up and top-down processing in visual recognition”

#### **2009-2010**

Second International Workshop on Shape Perception in Human and Computer Vision, ECVP, Regensburg, Aug 29, 2009, “The interaction of bottom-up and top-down processing in visual recognition”  
2009 BIRS Workshop on Computer Vision and the Internet, Banff, Sept 3, 2009, “Detecting people and identifying their poses in images and video”  
2010 Winter School on Machine Learning and Computer Vision, Bangalore, Jan 13, 2010, various lectures.  
MIT Brain and Cognitive Science Department Colloquium, Feb 18, 2010, “ Visual Object Recognition”  
IIT Bombay, June 29, 2010, “Object Detection and Segmentation in Images”



## **2010-2011**

MSR India, July 8, 2010, “Object Recognition”

IIT Hyderabad, July 13, 2010, “Detecting and Segmenting People in Images”

ECCV workshop, Sept 11, 2010, “Detecting and Segmenting Objects Using Poselets”

CCPR Plenary lecture, Oct. 22, 2010, “Detecting and Segmenting Objects in Images”

HHMI Janelia Farm Research Campus, Nov. 15, 2010 “Detecting and Segmenting Objects in Images”

NIPS Deep Learning Workshop, Dec. 10, 2010, “Rich Representations for Learning Visual Recognition”

Colloquium, MPI Tuebingen, Germany, April 11, 2011, “Rich Representations for Learning Visual Recognition”

DAGM Workshop on Unsolved Problems in Pattern Recognition, Heidelberg, April 13, 2011, “Solved, Half-solved and Unsolved Problems in Visual Recognition”

Berkeley-INRIA-Stanford Workshop, May 24, 2011, “Recognizing Objects in Images”

Intel STC Webinar, June 6, 2011, “Parsing the Appearance of People in Images”

## **2011-2012**

ENS/INRIA Visual Recognition and Machine Learning Summer School, Paris, July 27, 2011, “Recent Progress on Visual Recognition”, and “The Future of Visual Recognition”

Intl. Conf. on Contemporary Computing, IIIT, India, Aug. 8, 2011, “Image and Video Understanding”

Frontiers in Computer Vision Workshop, MIT, Aug 21-24, 2011, “History of Computer Vision”, and “The Hilbert Problems of Computer Vision”

## **2012-2013**

International Computer Vision Summer School, Sicily, July 15-21, ”Object Recognition”, and ”Recognition, Reconstruction and Reorganization”

VisionNYC, Oct 22, 2012, “Shape Estimation, Lightness/ Color Constancy & Illumination from a Single Image of an Object”

University of Buffalo Distinguished Colloquium, March 7, 2013, “The Three R’s of Computer Vision: Recognition, Reconstruction and Reorganization”

Stony Brook, March 8, 2013, “The Three R’s of Computer Vision: Recognition, Reconstruction and Reorganization”

Stanford Center for Image Systems Engineering, May 7, 2013, “The Three R’s of Computer Vision: Recognition, Reconstruction and Reorganization”

ETH Zurich, May 13, 2013. “The Three R’s of Computer Vision: Recognition, Reconstruction and Reorganization”

Swiss Vision Day, Zurich, May 15, 2013 “Solved, half-solved and unsolved problems in visual recognition”

## **2013-2014**

INRIA Grenoble

ENS/INRIA Visual Recognition and Machine Learning Summer School, Paris, ”The Three R’s of Computer Vision : Recognition, Reconstruction and Reorganization”, July 24, 2013

German Conference on Pattern Recognition, Saarbrucken, Keynote Lecture, ‘The Three R’s of Computer Vision: Recognition, Reconstruction and Reorganization” , Sept 4 2013

Dertouzos Distinguished Lecture, MIT, October 10, 2013, “The Three R’s of Computer Vision: Recognition, Reconstruction and Reorganization”  
ICCV 2013 3DRR workshop lecture Dec. 8, 2013  
Kavli Futures Symposium Dec. 10, 2013  
Cornell Salton Lecture, 2014, “The Three R’s of Computer Vision: Recognition, Reconstruction and Reorganization”

#### **2014-2015**

K.S. Fu Lecture, ICPR 2014  
Allen Institute for AI, Seattle, Invited Lecture, Aug. 11, 2014  
A9/Amazon Vision Conference, April 21, 2015, Keynote Talk, “Scene Understanding in the Era of Deep Learning”  
CVPR workshops, “3D from a Single Image”, and “Scene Understanding Workshop”, Invited Talks, June 12, 2015

#### **2015-2016**

INNS Deep Learning Workshop Invited Talk, “Scene Understanding in the Era of Deep Learning”, Aug 8, 2015  
ICCV 2015 Imagenet/COCO Workshop Invited Talk, “The Hilbert Problems of Computer Vision”, Dec. 17, 2015  
Stanford AI colloquium, Deep Visual Understanding from Deep Learning, April 15, 2016  
Society for Information Display Annual Symposium, Invited Talk, Deep Visual Understanding from Deep Learning, May 25, 2016  
CVPR VQA Workshop Invited Talk, Embodied Cognition: Linking vision, motor control and language, June 26, 2016  
CVPR POCV Workshop Invited Talk, Feedback in Computer Vision, June 26, 2016  
CVPR LSUN Workshop Invited Talk, Scene Understanding in RGB-D and RGB images, June 26, 2016

#### **2016-2017**

JASON presentation on Future of AI, July 6, 2016  
The Hive, Palo Alto, Deep visual understanding from deep learning, Sept 15, 2016  
ECCV 2016 and ACM MM 2016 Amsterdam, “Deep Visual Understanding from Deep Learning” October 15, 2016  
ACCV 2016, Taipei, Keynote Deep Visual Understanding from Deep Learning, Nov. 21, 2016  
Instt of Information Science, Academia Sinica, Taiwan, Distinguished Lecture. Embodied cognition: Towards combining vision, motor control and language, Nov. 23, 2016  
Israeli Instt Advanced Studies, Jerusalem, Winter School, Invited talks, “Deep visual understanding from deep learning” and “Embodied cognition: Towards combining vision, motor control and language”, Jan 8, 2017  
KLA Tencor Engineering conference. Keynote talk, Computer vision: Past, Present and Future, May 1, 2017  
Embedded Vision Summit Deep Visual Understanding from Deep Learning, May 2, 2017

#### **2017-2018**

“Deep Visual Understanding from Deep Learning”, ShanghaiTech Symposium on Information Science and Technology, Distinguished Speaker, July 4, 2017

“Deep Visual Understanding from Deep Learning”, Distinguished Lecture, TTI Chicago, Oct. 11, 2017

“Recent advances in visual recognition using deep learning”, Royal Society meeting, Feb 19, 2018, London

“How to write a good paper”, CVPR 2018 workshop, June 30, 2018

### **2018-2019**

Acceptance Speech, 2018 IJCAI Award for Research Excellence, Stockholm, Sweden, Aug 13, 2018

“The sensorimotor road to artificial intelligence”, ONR Distinguished Lecture, Arlington VA, Sept 21, 2018

”Computer Vision and Embodied Cognition”, Keynote talk, Fundacion Copec-UC Conference on AI, Santiago, Chile, Nov. 22, 2018

“Deep Visual Understanding from Deep Learning”, Keynote at Spark+AI summit, San Francisco, Apr 25, 2019

“Generative and Discriminative Models of Images and Videos”, Math + X symposium on inverse problems and deep learning, Rice University, Jan 24, 2019

### **2019-2020**

“Deep Learning in Computer Vision”, National Academy of Sciences, Sackler Colloquium, Washington DC, Mar 13, 2019

“Deep Visual Understanding from Deep Visual Learning”, Neuhauser Lecture, Society for Pediatric Radiology, San Francisco, May 2, 2019

“Learning to see people and objects in 3D”, Machines Can See Workshop, June 8, 2020

“What’s next in Computer Vision”, CVPR 2020 workshop on Compositionality, June 15, 2020

“Turing’s Baby”, CVPR 2020 Workshop on Minds Vs. Machines, June 15, 2020

“Deep Visual Understanding from Deep Visual Learning”, Keynote, Samsung Tech Forum, Seoul, Korea, October 29, 2019

“3D objects and people”, CVPR 2020 Workshop of Deep Learning for Geometric Computing, June 16, 2020

### **2020-2021**

“Vision and Imitation for Robotics Tasks”, RSS SARL, July 10, 2020

“Computer Vision”, Interview with Lex Friedman, Podcast 110 , Youtube, posted July 21, 2020 (50 K views)

“Computer Vision: Where do we come from. What are we doing. Where are we going”. Colloquium, University of Michigan, Nov. 3, 2020

“Next Steps in Computer Vision”, Invited Talk, Qualcomm, Nov. 10, 2020

### **2021-2022**

“Learning to Walk with Rapid Motor Adaptation”, Fall 2021 LIDS Seminar, MIT, Nov. 10, 2021

“Learning to Walk with Vision and Proprioception”, Technical University of Munich AI lecture

series, Jan. 17, 2022