

Jia Deng

Updated on Jan 16, 2023

CONTACT INFORMATION	Department of Computer Science 35 Olden St Rm 423 Princeton, NJ 08540, USA	Tel: (609)-258-1203 E-mail: jiadeng@princeton.edu Web: https://www.cs.princeton.edu/~jiadeng
EMPLOYMENT	Associate Professor, Department of Computer Science, Princeton University Assistant Professor, Department of Computer Science, Princeton University Assistant Professor, Computer Science and Engineering, University of Michigan Postdoc (consulting), Google, Mountain View Postdoctoral Scholar, Stanford University Research Intern, Microsoft Research Silicon Valley Software Engineering Intern, Google, Mountain View	1/2023-Present 9/2018-1/2023 9/2014-8/2018 10/2013-8/2014 7/2012-10/2013 6/2010-9/2010 6/2007-9/2007
EDUCATION	Princeton University Ph.D. in Computer Science - Dissertation: <i>"Large-Scale Visual Recognition"</i> - Advisor: Fei-Fei Li and Kai Li M.A. in Computer Science Tsinghua University B.Eng. in Computer Science	Princeton, NJ 2012 2008 Beijing, China 2006
HONORS AND AWARDS	Best Student Paper Award, International Conference on 3D Vision (3DV) Best Paper Award, European Conference on Computer Vision (ECCV) E. Lawrence Keyes, Jr./Emerson Electric Co. Faculty Advancement Award ONR Young Investigator Award NSF CAREER Award PAMI Longuet-Higgins Prize Alfred P. Sloan Research Fellowship Google Faculty Research Award Amazon Research Award ZF TRW Automotive Endowed Research Award PAMI Mark Everingham Prize Google Faculty Research Award Yahoo ACE (Academic Career Enhancement) Award Best Paper Award, European Conference on Computer Vision (ECCV) Marr Prize (Best Paper Award), International Conference on Computer Vision (ICCV) Outstanding Graduate, Tsinghua University IBM Scholarship for Outstanding Students in China OOCL Scholarship, Tsinghua University Lenovo Scholarship, Tsinghua University	2021 2020 2020 2020 2020 2019 2018 2017 2017 2017 2016 2015 2014 2014 2013 2006 2005 2004 2003

1. Kaiyu Yang, **Jia Deng**, Danqi Chen. Generating Natural Language Proofs with Verifier-Guided Search. *Conference on Empirical Methods in Natural Language Processing (EMNLP)*, 2022
2. Ankit Goyal, Alexey Bochkovskiy, **Jia Deng**, Vladlen Koltun. Non-deep Networks. *Neural Information Processing Systems (NeurIPS)*, 2022
3. Zeyu Ma, Zachary Teed, **Jia Deng**. Multiview Stereo with Cascaded Epipolar RAFT. *European Conference on Computer Vision (ECCV)*, 2022
4. Kaiyu Yang, Jacqueline Yau, Li Fei-Fei, **Jia Deng**, Olga Russakovsky. A Study of Face Obfuscation in ImageNet. *International Conference on Machine Learning (ICML)*, 2022
5. Ankit Goyal, Arsalan Mousavian, Chris Paxton, Yu-Wei Chao, Brian Okorn, **Jia Deng**, Dieter Fox. IFOR: Iterative Flow Minimization for Robotic Object Rearrangement *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022
6. Lahav Lipson, Zachary Teed, Ankit Goyal, **Jia Deng**. Coupled Iterative Refinement for 6D Multi-Object Pose Estimation *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022
7. Lahav Lipson, Zachary Teed, **Jia Deng**. RAFT-Stereo: Multilevel Recurrent Field Transforms for Stereo Matching. International Conference on 3D Vision (3DV), 2021. **Best Student Paper Award**
8. Zachary Teed, **Jia Deng**. DROID-SLAM: Deep Visual SLAM for Monocular, Stereo, and RGB-D Cameras. *Neural Information Processing Systems (NeurIPS)*, 2021
9. Ankit Goyal, Hei Law, Bowei Liu, Alejandro Newell, **Jia Deng**. Revisiting Point Cloud Shape Classification with a Simple and Effective Baseline. *International Conference on Machine Learning (ICML)*, 2021
10. Zachary Teed, **Jia Deng**. Tangent Space Backpropagation for 3D Transformation Groups. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021
11. Zachary Teed, **Jia Deng**. RAFT-3D: Scene Flow using Rigid-Motion Embeddings. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2021
12. Lanlan Liu, Yuting Zhang, **Jia Deng**, Stefano Soatto. Dynamically Grown Generative Adversarial Networks. *AAAI Conference on Artificial Intelligence (AAAI)*, 2021
13. Yu-Wei Chao, Jimei Yang, Weifeng Chen, **Jia Deng**. Learning to Sit: Synthesizing Human-Chair Interactions via Hierarchical Control. *AAAI Conference on Artificial Intelligence (AAAI)*, 2021
14. Mingzhe Wang, **Jia Deng**. Learning to Prove Theorems by Learning to Generate Theorems. *Neural Information Processing Systems (NeurIPS)*, 2020
15. Ankit Goyal, Kaiyu Yang, Dawei Yang, **Jia Deng**. Rel3D: A Minimally Contrastive Benchmark for Grounding Spatial Relations in 3D. *Neural Information Processing Systems (NeurIPS)*, 2020
16. Kaiyu Yang, **Jia Deng**. Strongly Incremental Constituency Parsing with Graph Neural Networks *Neural Information Processing Systems (NeurIPS)*, 2020
17. Hei Law, Yun Teng, Olga Russakovsky, **Jia Deng**. CornerNet-Lite: Efficient Keypoint Based Object Detection. *British Machine Vision Conference (BMVC)*, 2020
18. Zachary Teed, **Jia Deng**. RAFT: Recurrent All-Pairs Field Transforms for Optical Flow. *European Conference on Computer Vision (ECCV)*, 2020. **Best Paper Award**.
19. Lanlan Liu, Mingzhe Wang, **Jia Deng**. A Unified Framework of Surrogate Loss by Refactoring and Interpolation. *European Conference on Computer Vision (ECCV)*, 2020.

20. Ankit Goyal, **Jia Deng**. PackIt: A Virtual Environment for Geometric Planning. *International Conference on Machine Learning (ICML)*, 2020
21. Alejandro Newell, **Jia Deng**. How Useful is Self-Supervised Pretraining for Visual Tasks? *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
22. Weifeng Chen, Shengyi Qian, David Fan, Noriyuki Kojima, Max Hamilton, **Jia Deng**. OASIS: A Large-Scale Dataset for Single Image 3D in the Wild. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
23. Dawei Yang, **Jia Deng**. Learning to Generate Synthetic 3D Training Data through Hybrid Gradient. *Conference on Computer Vision and Pattern Recognition (CVPR)*, 2020.
24. Zachary Teed, **Jia Deng**. DeepV2D: Video to Depth with Differentiable Structure from Motion. *International Conference on Learning Representations (ICLR)*, 2020.
25. Jonathan C. Stroud, David A. Ross, Chen Sun, **Jia Deng**, Rahul Sukthankar. D3D: Distilled 3D Networks for Video Action Recognition. *Winter Conference on Applications of Computer Vision (WACV)*, 2020.
26. Kaiyu Yang, Olga Russakovsky, **Jia Deng**. SpatialSense: An Adversarially Crowdsourced Benchmark For Spatial Relation Recognition. *International Conference on Computer Vision (ICCV)*, 2019.
27. Lanlan Liu, Michael Muelly, **Jia Deng**, Tomas Pfister, Li-Jia Li. Generative Modeling for Small-Data Object Detection. *International Conference on Computer Vision (ICCV)*, 2019.
28. Kaiyu Yang, **Jia Deng**. Learning to Prove Theorems via Interacting with Proof Assistants. *International Conference on Machine Learning (ICML)*, 2019.
29. Oana Ignat, Laura Burdick, **Jia Deng**, Rada Mihalcea. Identifying Visible Actions in Lifestyle Vlogs, *Annual Meeting of the Association for Computational Linguistics (ACL)*, 2019.
30. Weifeng Chen, Shengyi Qian, **Jia Deng**. Learning Single-Image Depth from Videos using Quality Assessment Networks. *IEEE-CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019.
31. Dawei Yang*, Chaowei Xiao*, Bo Li, **Jia Deng**, Mingyan Liu. MeshAdv: Adversarial Meshes for Visual Recognition. *IEEE-CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2019. (*equal contribution)
32. Hei Law, **Jia Deng**. CornerNet: Detecting Objects as Paired Keypoints. *European Conference on Computer Vision (ECCV)*, 2018
33. Ankit Goyal, **Jia Deng**. Think Visually: Question Answering through Virtual Imagery. *Annual Meeting of the Association for Computational Linguistics (ACL)*, 2018
34. Dawei Yang, **Jia Deng**. Shape from Shading through Shape Evolution. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018
35. Lei Huang, Dawei Yang, Bo Lang, **Jia Deng**. Decorrelated Batch Normalization. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018
36. Yu-Wei Chao, Sudheendra Vijayanarasimhan, Bryan Seybold, David Ross, **Jia Deng**, Rahul Sukthankar. Rethinking the Faster R-CNN Architecture for Temporal Action Localization. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2018
37. Mahmoud Azab, Mingzhe Wang, Max Smith, Noriyuki Kojima, **Jia Deng**, Rada Mihalcea. Speaker Naming in Movies. *Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL)*, 2018
38. Lanlan Liu, **Jia Deng**. Dynamic Deep Neural Networks: Optimizing Accuracy-Efficiency Trade-offs by Selective Execution. *AAAI Conference on Artificial Intelligence (AAAI)*, 2018
39. Yu-Wei Chao, Yunfan Liu, Xieyang Liu, Huayi Zeng, **Jia Deng**. Learning to Detect Human-Object Interactions. *IEEE Winter Conference on Applications of Computer Vision (WACV)*, 2018

40. Mingzhe Wang*, Yihe Tang*, Jian Wang, **Jia Deng**. Premise Selection for Theorem Proving by Deep Graph Embedding. *Neural Information Processing Systems (NeurIPS)*, 2017. (*equal contribution)
41. Alejandro Newell, **Jia Deng**. Pixels to Graphs by Associative Embedding. *Neural Information Processing Systems (NeurIPS)*, 2017.
42. Alejandro Newell, Zhiao Huang, **Jia Deng**. Associative Embedding: End-to-End Learning for Joint Detection and Grouping. *Neural Information Processing Systems (NeurIPS)*, 2017.
43. Weifeng Chen, Donglai Xiang, **Jia Deng**. Surface Normals in the Wild. *International Conference on Computer Vision (ICCV)*, 2017
44. Yu-Wei Chao, Jimei Yang, Brian Price, Scott Cohen, **Jia Deng**. Forecasting Human Dynamics from Static Images. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017
45. Zehuan Yuan, Jonathan Stroud, Tong Lu, **Jia Deng**. Temporal Action Localization by Structured Maximal Sums. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2017
46. Timnit Gebru, Jonathan Krause, **Jia Deng**, Li Fei-Fei. Scalable annotation of fine-grained categories without experts. *Conference on Human Factors in Computing Systems (CHI)*, 2017
47. Timnit Gebru, Jonathan Krause, Yilun Wang, Duyun Chen, **Jia Deng**, Erez Lieberman Aiden, Li Fei-Fei. Using deep learning and Google Street View to estimate the demographic makeup of neighborhoods across the United States. *Proceedings of the National Academy of Sciences (PNAS)*, 2017
48. Timnit Gebru, Jonathan Krause, Yilun Wang, Duyun Chen, **Jia Deng**, Li Fei-Fei. Fine-Grained Car Detection for Visual Census Estimation. *AAAI Conference on Artificial Intelligence (AAAI)*, 2017
49. Hei Law, Khurshid Ghani, **Jia Deng**. Surgeon Technical Skill Assessment using Computer Vision based Analysis. *Machine Learning for Healthcare (MLHC)*, 2017.
50. Weifeng Chen, Zhao Fu, Dawei Yang, **Jia Deng**. Single-Image Depth Perception in the Wild. *Neural Information Processing Systems (NeurIPS)*, 2016.
51. Mingzhe Wang, Mahmoud Azab, Noriyuki Kojima, Rada Mihalcea, **Jia Deng**. Structured Matching for Phrase Localization. *European Conference on Computer Vision (ECCV)*, 2016
52. Alejandro Newell, Kaiyu Yang, **Jia Deng**. Stacked Hourglass Networks for Human Pose Estimation. *European Conference on Computer Vision (ECCV)*, 2016.
53. Vicente Ordonez, Wei Liu, **Jia Deng**, Yejin Choi, Alexander C. Berg, Tamara L. Berg. *Learning to Name Objects. Communications of the ACM*, March 2016.
54. **Jia Deng**, Jonathan Krause, Michael Stark, Li Fei-Fei. Leveraging the Wisdom of the Crowd for Fine-Grained Recognition. *IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 2016.
55. Yu-Wei Chao, Zhan Wang, Yugeng He, Jiaxuan Wang, **Jia Deng**. HICO: A Benchmark for Recognizing Human-Object Interactions in Images. *International Conference on Computer Vision (ICCV)*, 2015.
56. Nan Ding, **Jia Deng**, Kevin Murphy, Hartmut Neven. Probabilistic Label Relation Graphs with Ising Models. *International Conference on Computer Vision (ICCV)*, 2015.
57. Vignesh Ramanathan, Congcong Li, **Jia Deng**, Wei Han, Zhen Li, Kunlong Gu, Yang Song, Samy Bengio, Charles Rosenberg, Li Fei-Fei. Learning semantic relationships for better action retrieval in images. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015.

58. Yu-Wei Chao, Zhan Wang, Rada Mihalcea, **Jia Deng**. Mining Semantic Affordances of Visual Object Categories. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2015.
59. Vicente Ordonez, Wei Liu, **Jia Deng**, Yejin Choi, Alexander C. Berg, Tamara L. Berg. Predicting Entry-Level Categories. *International Journal of Computer Vision (IJCV)*, 2015.
60. Olga Russakovsky*, **Jia Deng***, Hao Su, Jonathan Krause, Sanjeev Satheesh, Sean Ma, Zhiheng Huang, Andrej Karpathy, Aditya Khosla, Michael Bernstein, Alexander C. Berg, Li Fei-Fei. ImageNet Large Scale Visual Recognition Challenge. *International Journal of Computer Vision (IJCV)*, 2015. (*equal contribution).
61. **Jia Deng**, Nan Ding, Yangqing Jia, Andrea Frome, Kevin Murphy, Samy Bengio, Yuan Li, Hartmut Neven, Hartwig Adam. Large-Scale Object Classification Using Label Relation Graphs. *European Conference on Computer Vision (ECCV)*, 2014. **Best Paper Award**.
62. Jonathan Krause, Timit Gebbru, **Jia Deng**, Jia Li, Li Fei-Fei. Learning Features and Parts for Fine-Grained Recognition. *International Conference on Pattern Recognition (ICPR)*, 2014.
63. **Jia Deng**, Olga Russakovsky, Jonathan Krause, Michael Bernstein, Alexander C. Berg and Li Fei-Fei. Scalable Multi-Label Annotation. *ACM Conference on Human Factors in Computing Systems (CHI)*, 2014.
64. Jonathan Krause, Michael Stark, **Jia Deng**, Li Fei-Fei. 3D Object Representations for Fine-Grained Categorization. *ICCV '13 Workshop on 3D Representation and Recognition (3dRR-13)*, 2013.
65. Olga Russakovsky, **Jia Deng**, Zhiheng Huang, Alex Berg, Li Fei-Fei. Detecting avocados to zucchinis: what have we done, and where are we going? *International Conference on Computer Vision (ICCV)*, 2013.
66. Vicente Ordonez, **Jia Deng**, Yejin Choi, Alex Berg, Tamara Berg. From Large Scale Image Categorization to Entry-Level Categories. *International Conference on Computer Vision (ICCV)*, 2013. **Marr Prize (Best Paper Award)**.
67. **Jia Deng**, Jonathan Krause, and Li Fei-Fei. Fine-Grained Crowdsourcing for Fine-Grained Recognition. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2013.
68. Hao Su, **Jia Deng**, and Li Fei-Fei. Crowdsourcing Annotations for Visual Object Detection. *AAAI Human Computation Workshop*, 2012.
69. **Jia Deng**, Jonathan Krause, Alex Berg, and Li Fei-Fei. Hedging Your Bets: Optimizing Accuracy-Specificity Trade-offs in Large-Scale Visual Recognition. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2012.
70. **Jia Deng**, Sanjeev Satheesh, Alex Berg, and Li Fei-Fei. Fast and Balanced: Efficient Label Tree Learning for Large Scale Object Recognition. *Advances in Neural Information Processing Systems (NeurIPS)*, 2011.
71. **Jia Deng**, Alex Berg, and Li Fei-Fei. Hierarchical Semantic Indexing for Large Scale Image Retrieval. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2011.
72. **Jia Deng**, Alex Berg, Kai Li, and Li Fei-Fei. What does classifying more than 10,000 image categories tell us? *European Conference on Computer Vision (ECCV)*, 2010.
73. **Jia Deng**, Wei Dong, Richard Socher, Li-Jia Li, Kai Li and Li Fei-Fei. ImageNet: A Large-Scale Hierarchical Image Database. *IEEE Conference on Computer Vision and Pattern Recognition (CVPR)*, 2009.
74. Brandon Collins, **Jia Deng**, Kai Li, and Li Fei-Fei. Towards scalable dataset construction: An active learning approach. *European Conference on Computer Vision (ECCV)*, 2008.
75. Tim Weyrich, **Jia Deng**, Connelly Barnes, Szymon Rusinkiewicz, and Adam Finkelstein. Digital Bas-Relief From 3D Scenes. *ACM Transactions on Graphics (Proc. SIGGRAPH)*. 2007.

TECHNICAL REPORTS

1. Zachary Teed, Lahav Lipson, **Jia Deng**. Deep Patch Visual Odometry. *arXiv:2208.04726*, 2022.
Hei Law, **Jia Deng**. Label-Free Synthetic Pretraining of Object Detectors. *arXiv:2208.04268*, 2022.
Yiming Zuo, **Jia Deng**. View Synthesis with Sculpted Neural Points. *arXiv:2205.05869*, 2022.
2. Kaiyu Yang, **Jia Deng**. Learning Symbolic Rules for Reasoning in Quasi-Natural Language. *arXiv:2111.12038*, 2021.
3. Dhruv Batra, Angel X. Chang, Sonia Chernova, Andrew J. Davison, **Jia Deng**, Vladlen Koltun, Sergey Levine, Jitendra Malik, Igor Mordatch, Roozbeh Mottaghi, Manolis Savva, Hao Su. Rearrangement: A Challenge for Embodied AI. *arXiv:2011.01975*, 2020.
4. Alejandro Newell, Lu Jiang, Chong Wang, Li-Jia Li, **Jia Deng**. Feature Partitioning for Efficient Multi-Task Architectures. *arXiv:1908.04339*, 2019.
5. Noriyuki Kojima, **Jia Deng**. To Learn or Not to Learn: Analyzing the Role of Learning for Navigation in Virtual Environments. *arXiv:1907.11770*, 2019.

SERVICE

PROGRAM COMMITTEE

- **Area Chair**. International Conference on Machine Learning (ICML) 2021-2022
- **Area Chair**. Neural Information Processing Systems (NeurIPS) 2018-2022
- **Area Chair**. International Conference on Learning Representations (ICLR) 2021
- **Area Chair**. Computer Vision and Pattern Recognition (CVPR) 2016, 2018-2021, 2023
- **Area Chair**. European Conference on Computer Vision (ECCV) 2020
- **Program Co-chair**. BigVision Workshop 2012, 2014, 2015, 2016
- **Program Co-chair**. CVPR workshop on Computer Vision and Human Computation 2014
- **Co-Organizer**. Bay Area Vision Meeting 2012
- **Co-Organizer**. ImageNet Large Scale Visual Recognition Challenge 2010-2017

REVIEWER

- International Journal of Computer Vision (IJCV).
- Transactions on Pattern Recognition and Machine Intelligence (TPAMI)
- Journal of Machine Learning Research (JMLR)
- Transactions on Image Processing (TIP)
- Transactions on Multimedia (TMM)
- Computer Aided Design (CAD)
- Neural Information Processing Systems (NeurIPS) 2012-2017
- European Conference on Computer Vision (ECCV) 2012-2018
- International Conference on Computer Vision (ICCV) 2013-2017
- AAAI Conference on Artificial Intelligence (AAAI) 2014
- International Conference and Exhibition on Computer Graphics and Interactive Techniques (SIGGRAPH) 2013
- ACM Symposium on User Interface Software and Technology (UIST) 2014
- ACM International Joint Conference on Pervasive and Ubiquitous Computing (UbiComp) 2014

PANELIST

- National Science Foundation 2015, 2017, 2018-2020, 2022

TEACHING	Princeton COS 324: Introduction to Machine Learning	Spring 2022
	Princeton COS 529: Advanced Computer Vision	Spring 2019-2021, Fall 2021
	Princeton COS 429: Computer Vision	Fall 2018, 2020
	UMich EECS 542: Advanced Topics in Computer Vision	Fall 2014, Fall 2015, Fall 2017
	UMich EECS 442: Computer Vision	Winter 2015-2018
	UMich EECS 445: Introduction to Machine Learning	Fall 2016

VISITING POSITIONS	Visiting Assistant Professor	Ann Arbor, MI
	Computer Science and Engineering, University of Michigan	9/2013-8/2014

Visiting Scholar	Stanford, CA
Stanford University	10/2013-8/2014

Visiting Student	Stanford, CA
Stanford University	9/2009-6/2012