

Deepak Pathak

CONTACT INFORMATION	Carnegie Mellon University Robotics Institute, School of Computer Science, Pittsburgh, PA	E-mail: dpathak@cs.cmu.edu Website: https://www.cs.cmu.edu/~dpathak/ Google Scholar
EDUCATION	University of California, Berkeley <i>PhD Candidate in Computer Science</i> Advised by Prof. Alexei A. Efros and Prof. Trevor Darrell (GPA: 4.0/4.0) Indian Institute of Technology, Kanpur <i>BTech. in Computer Science and Engineering</i> Gold Medal in Computer Science (GPA: 9.9/10)	Aug 2014 – Aug 2019 Aug 2010 – June 2014
APPOINTMENTS	Carnegie Mellon University Pittsburgh, PA <i>Raj Reddy Assistant Professor in Robotics</i> Facebook AI Research Menlo Park, CA <i>Researcher with Prof. Jitendra Malik</i> University of California, Berkeley Berkeley, CA <i>Visiting PostDoc with Prof. Pieter Abbeel</i>	Sept 2020 – Present Sept 2019 – Aug 2020 Sept 2019 – Aug 2020
INDUSTRY EXPERIENCE	Co-Founder of VisageMap Inc. <i>Later acquired by FaceFirst Inc., Los Angeles, CA</i>	Founded 2014
HONORS AND AWARDS	Awarded Raj Reddy Chair in Robotics at CMU Best Oral Paper Award Finalist (top 3) at IEEE-RAS Humanoids'23 Best Paper Award Finalist at WACV'23 Best Paper Award Winner (System) at CoRL'22 Best Paper Award Finalist (System) (top 4) at CoRL'22 Best Paper Award at CVPR'22 in Multimodal Learning Workshop Best Paper Award Finalist at RSS'22 in Scaling Robot Learning Workshop Okawa Research Award Young Alumnus Award from IIT Kanpur Selected as DARPA Riser Samsung GRO Award Best Paper Award Finalist in Cognitive Robotics at ICRA'21 Sony Research Award GoodAI Research Award Google Faculty Research Award Winner of Virtual Creatures Competition at GECCO'19 Facebook Graduate Fellowship Snapchat Research Fellowship Nvidia Graduate Fellowship ICCV Outstanding Reviewer Award Gold Medal for the highest academic performance in the department. Best Undergraduate Thesis Award , IIT Kanpur.	2024 2023 2023 2022 2022 2022 2022 2022 2022 2021-22 2021 2020-21 2020-21 2019-20 2019 2018-20 2018 2017-18 2017 2014 2014

TCS Best Software Award in the graduating year. 2014
Binay Kumar Sinha Award for best industrially applicable thesis in the graduating year. 2014
Academic Excellence Award, IIT Kanpur. 2011-14
CBSE Merit Scholarship for undergraduate studies. 2010-14

**MEDIA
COVERAGE**

Adaptive Mobile Manipulation In the Open World Spring 2024
New Scientist, Nature Briefings, IOT World Today, TechXplore

Extreme Parkour with Legged Robots Fall 2023
IEEE Spectrum, CMU News, Hacker News

Affordances from Videos as a Versatile Representation for Robotics Spring 2023
Live CBS TV, TechCrunch, Independent, CMU News

Legged Locomotion in Challenging Terrains using Egocentric Vision Fall 2022
MIT Tech Review, TechCrunch, IEEE Spectrum, Cosmos, Technology, Popular Science

Deep Whole-Body Control: Unified Policy for Manipulation & Locomotion Fall 2022
New Scientist, Popular Science

Human-to-Robot Imitation in the Wild Summer 2022
Vox, TechCrunch, Voice of America, ASME, TechXplore, La Presse, 01Net French

Robotic Telekinesis: Learning by Watching Humans on Youtube Spring 2022
TechXplore, The Voice of America, Weights & Biases, Two Minute Papers

RMA: Rapid Motor Adaptation for Legged Robots Summer 2021
Live CBS TV, Washington Post, The Wall Street Journal, TechCrunch, Forbes, CNET, TechXplore, L'ADN (France), Digitech News (Italy), CNBeta (China), Observador (Portugal), Beratakini (Malaysia), 3DNews (Russia), 15Min (Lithuania), GeekTime (Israel)

Auto-Tuned Sim-to-Real Transfer Spring 2021
Synced Review

Planning to Explore via Self-Supervised World Models Fall 2020
VentureBeat, Synced Review

Large-Scale Curiosity-driven Learning Fall 2018
The Economist, The Verge, Quartz, Two Minute Papers

Investigating Human Priors for Playing Video Games Spring 2018
MIT Tech Review, Hitech News Daily, Two Minute Papers

Curiosity-driven Exploration using Self-Supervised Prediction Summer 2017
The Wall Street Journal, MIT Tech Review, New Scientist, Quanta Magazine, Wired, Engadget, NYPost, California Magazine, Digital Trends, Caixin, Publico, India Times, Two Minute Papers

A Comparison of Forecasting Methods: Predicting Oscar Awards Spring 2015
Daily Mail, Business Insider, Engadget, Huffington Post

**SERVICE AND
LEADERSHIP**

Organizing Committee (Demo Chair): Conference on Robot Learning (CoRL) 2023

Area Chair 2020 - Present
ECCV 2022, NeurIPS 2022/2021/2020, ICLR 2022/2021, CVPR 2021, ICML 2021, ICCV 2021

Session Chair 2020 - Present
NeurIPS 2020/2021, ICRA 2021, ICML 2021

CoRL Workshop Co-organizer Dec 2022
Sim-to-Real Robot Learning: Locomotion and Beyond

CogSci Workshop Co-organizer <i>The Origins of Commonsense in Humans and Machines</i>	July 2020
CVPR Workshop Co-organizer <i>Computer Vision After 5 Years</i>	June 2019
ICLR Workshop Co-organizer <i>Task Agnostic Reinforcement Learning</i>	May 2019
ECCV Workshop Co-organizer <i>11th POCV Workshop: Action, Perception and Organization</i>	Sept 2018
Reviewer <i>CVPR, NeurIPS, ICML, ICLR, CoRL, ECCV, ICCV, AAAI, IJCV, TPAMI, JMLR, RA-L/IROS</i>	2015-19
Member: CMU RI M.S. Admission Committee	2022
Guest Lecture: 6th Summer School on Artificial Intelligence, IIIT Hyderabad	2022
Guest Lecture: CMU AI4ALL Program	2021
Guest Lecture: AI for Social Good Symposium, Amrita University	2021
Guest Lecture: Faculty Development Program, Amity University	2021
Member: UC Berkeley Ph.D. Admission Committee	2015, 2018
BAIR Undergraduate Mentor	2018

INVITED TALKS

“A Full-Stack Approach to Robot Learning” NeurIPS 2023: Workshop on Robot Learning	Dec 2023
“Continually Improving Agents for Generalization in the Wild” DeepLearn 2023: Summer School on Deep Learning in Gran Canaria, Spain	Jul 2023
“Continually Improving Robots: adapting, watching & practicing” ICVSS 2023: Computer Vision Summer School in Sicily	Jul 2023
RSS 2023: Workshop on Environment Generation for Generalizable Robots	Jul 2023
“Rethinking the role of data in scaling robotic learning” RSS 2023: Workshop on Experiment-oriented Robotics	Jul 2023
“Rapid Adaptation in Robot Learning” RSS 2023: Workshop on Rapid and Robust Robotic Active Learning (R3AL)	Jul 2023
“What can robots learn from humans?” CVPR 2023: 3D Scene Understanding for Vision, Graphics and Robotics Workshop	Jun 2023
AAAI 2023: Workshop on Representation Learning for Responsible Human-Centered AI	Feb 2023
“Learning robot skills in the wild” Keynote Talk at CSL Student conference in UIUC	Feb 2023
“A Bottom Up Approach to Robot Learning” NeurIPS 2022: Workshop on Foundation Models in Decision Making	Dec 2022
“Keynote Talk and Fireside Chat” Conference on Cognitive Computational Neuroscience (CCN)	Aug 2022
“Robotic Generalization In The Wild Through Vision” Google Brain Vision Reading Group	July 2022
“Open-World Vision for Robot Learning in the Wild” CVPR 2022: Invited talk at Open World Vision Workshop	June 2022
“Generalizable Policy Learning in the Physical World” ICLR 2022: Panel Discussion at Workshop	April 2022

“Generalization for Robot Learning In The Wild”	
UC Berkeley	Feb 2022
Covariant AI	May 2022
Toyota Research Institute	April 2022
Allen Institute for AI (AI2)	April 2022
“Planning to Explore via World Models”	
Dagstuhl Seminar on Recent Advancements in Tractable Probabilistic Inference	April 2022
“Continually Improving Robots: Unsupervised Exploration and Rapid Adaptation”	
Speaker, Intrinsically Motivated Open-ended Learning (IMOL)	April 2022
“Learning to Walk via Rapid Motor Adaptation”	
Re-Work Deep Learning Summit, San Francisco	Feb 2022
“Robots that Learn to Generalize via Rapid and Continual Adaptation”	
Distinguished Talk Series, South Korea	Dec 2021
“Robots that Rapidly Adapt to Diverse Tasks and Environments”	
NAVER Labs Seminar Series	Sept 2021
UCL: Centre for Artificial Intelligence	Aug 2021
UBC: CAIDA Seminar Series	July 2021
“Rapid Adaptation in Robot Learning”	
CMU: VASC Seminar	Sept 2021
MIT CSAIL: Embodied Intelligence Seminar	July 2021
“Unifying Perception and Control through Video”	
CVPR 2021: Invited talk at Unlabeled Video Workshop	June 2021
“Learning to Generalize beyond Training”	
Microsoft Research, New York City	Apr 2021
“Robots that Learn to Generalize Beyond Training”	
MonREAL/MILA Robot Learning Seminar	Mar 2021
“Ontogeny and Phylogeny of Embodied Robots”	
EPFL Neuro Symp: Surprise, Curiosity, Reward	Feb 2021
RTG Computational Cognition: DeepRL Workshop	Jan 2021
“Learning to Generalize beyond Training”	
CMU Robotics Institute Seminar	Nov 2020
“Compositional Control: Intelligence without a brain”	
GoodAI Workshop on Meta-Learning & Multi-Agent Learning	Aug 2020
“Self-Supervision & Modularity: Cornerstones for Generalization in Embodied Agents”	
ECCV 2020: Invited talk at Workshop on Self-Supervised Learning	Aug 2020
“Intelligence without a brain”	
CogSci 2020: Invited talk at Workshop on the Origins of Commonsense	July 2020
“Curious and Compositional Robots”	
Invited talk at Stanford	July 2020
“What does pretraining mean for robots?”	
CVPR 2020: Invited talk at Embodied-AI Workshop	June 2020
“Generalization via Self-Directed Learning”	
CMU	Mar 2019
MIT EECS	Mar 2019
MIT BCS	Mar 2019
USC	Feb 2019

Google Brain	May 2019
Nvidia Research	July 2019
Meetup on State of AI and ML by ValleyML.ai	Aug 2019
“Curiosity-driven Exploration in Artificial Agents and Robots”	
Workshop on Curiosity, Explanation, & Exploration at Princeton University	June 2019
“Self-Supervised Exploration via Disagreement”	
International Conference on Machine Learning (ICML)	June 2019
“Large Scale Study of Curiosity-Driven Learning”	
NeurIPS 2018: Deep Reinforcement Learning Workshop	Dec 2018
“Building Generalizable Agents via Curiosity and Self-supervision”	
GRASP Seminar: University of Pennsylvania	Sept 2018
Microsoft Research, NYC	Sept 2018
VASC Seminar: Robotics Institute, CMU	May 2018
“Learning Instance Segmentation by Interaction”	
Deep Robotics Vision Workshop (CVPR)	June 2018
“Zero-Shot Visual Imitation”	
International Conference on Representation Learning (ICLR)	Apr 2018
“Lifelong Learning via Curiosity and Self-supervision”	
Vision Seminar: CSAIL, MIT	Mar 2018
Research Meeting: Google Brain	Mar 2018
Invited Talk: Redwood Center for Theoretical Neuroscience, Berkeley	Sept 2017
Invited talk: Uber AI Labs	Sept 2017
“Learning to Perceive and Act via Self-supervision”	
Invited talk: Frontiers of Video Technology Workshop, Adobe	July 2017
“Learning Features by Watching Objects Move”	
CVPR 2017: Large-Scale Video Understanding Workshop	June 2017
“Curiosity-driven Exploration using Self-Supervised Prediction”	
International Conference on Machine Learning (ICML)	May 2017
Invited talk: OpenAI, San Francisco	June 2017
“Exploring Four Axes of Self-Supervision”	
Talk at Berkeley AI Research Seminar	Apr 2017
“Unsupervised Learning of Visual Representations”	
Mysore Park Workshop on Vision, Language and AI	Dec 2016

PEER REVIEWED
PUBLICATIONS

Google Scholar (link), 17293 citations, h-index 38, i10-index 64

- [1] Extreme Parkour with Legged Robots
Conference on Robot Learning (CoRL) 2024
Xuxin Cheng, Kexin Shi, Ananye Agarwal, Deepak Pathak
- [2] Open X-Embodiment: Robotic Learning Datasets and RT-X Models
International Conference on Robotics and Automation (ICRA) 2024
Open X-Embodiment Collaboration et. al.
- [3] Meta-Evolve: Continuous Robot Evolution for One-to-many Policy Transfer
International Conference on Representation Learning (ICLR) 2024
Xingyu Liu, Deepak Pathak, Ding Zhao
- [4] Diffusion-TTA: Test-time Adaptation of Discriminative Models via Generative Feedback
Neural Information Processing Systems (NeurIPS) 2023

Mihir Prabhudesai, Tsung-Wei Ke, Alex Li, Deepak Pathak, Katerina Fragkiadaki

- [5] A Framework for Designing Anthropomorphic Soft Hands through Interaction
IEEE-RAS Humanoids Conference 2023 **(Oral)**
Best Paper Award Finalist (top 3)
Pragna Mannam, Kenneth Shaw, Dominik Bauer, Jean Oh, Deepak Pathak, Nancy Pollard
- [6] Dexterous Functional Grasping
Conference on Robot Learning (CoRL) 2023
Ananye Agarwal, Shagun Uppal, Kenneth Shaw, Deepak Pathak
- [7] Playfusion: Skill acquisition via diffusion from language-annotated play
Conference on Robot Learning (CoRL) 2023
Lili Chen, Shikhar Bahl, Deepak Pathak
- [8] DEFT: Dexterous Fine-Tuning for Real-World Hand Policies
Conference on Robot Learning (CoRL) 2023
Aditya Kannan, Kenneth Shaw, Shikhar Bahl, Pragna Mannam, Deepak Pathak
- [9] Your diffusion model is secretly a zero-shot classifier
International Conference on Computer Vision (ICCV) 2023
Alexander C. Li, Mihir Prabhudesai, Shivam Duggal, Ellis Brown, Deepak Pathak
- [10] Internet explorer: Targeted representation learning on the open web
International Conference on Machine Learning (ICML) 2023
Alexander C. Li, Ellis Langham Brown, Alexei A Efros, Deepak Pathak
- [11] Efficient RL via Disentangled Environment and Agent Representations
International Conference on Machine Learning (ICML) 2023 **(Oral)**
Kevin Gmelin, Shikhar Bahl, Russell Mendonca, Deepak Pathak
- [12] Test-time adaptation with slot-centric models
International Conference on Machine Learning (ICML) 2023
Mihir Prabhudesai et. al.
- [13] LEAP Hand: Low-Cost, Efficient, and Anthropomorphic Hand for Robot Learning
Robotics: Science and Systems (RSS) 2023
Kenneth Shaw, Ananye Agarwal, Deepak Pathak
- [14] Structured World Models from Human Videos
Robotics: Science and Systems (RSS) 2023
Russell Mendonca*, Shikhar Bahl*, Deepak Pathak
- [15] Affordances from Human Videos as a Versatile Representation for Robotics
Computer Vision and Pattern Recognition (CVPR) 2023
Shikhar Bahl*, Russell Mendonca*, Lili Chen, Unnat Jain, Deepak Pathak
- [16] Multimodality Helps Unimodality:
Cross-Modal Few-Shot Learning with Multimodal Models
Computer Vision and Pattern Recognition (CVPR) 2023
Zhiqiu Lin, Samuel Yu, Zhiyi Kuang, Deepak Pathak, Deva Ramanan
- [17] Legs as Manipulator: Pushing Quadrupedal Agility Beyond Locomotion
International Conference on Robotics and Automation (ICRA) 2023
Xuxin Cheng, Ashish Kumar, Deepak Pathak
- [18] ALAN : Autonomously Exploring Robotic Agents in the Real World
International Conference on Robotics and Automation (ICRA) 2023
Russell Mendonca, Shikhar Bahl, Deepak Pathak
- [19] FLAVR: Flow-Agnostic Video Representations for Fast Frame Interpolation
Winter Conference on Applications of Computer Vision (WACV) 2023 **(Oral)**
Best Paper Award Finalist
Tarun Kalluri, Deepak Pathak, Manmohan Chandraker, Du Tran

- [20] Legged Locomotion in Challenging Terrains using Egocentric Vision
Conference on Robot Learning (CoRL) 2022 **(Oral)**
Best System Paper Award
Ananye Agarwal*, Ashish Kumar*, Jitendra Malik, Deepak Pathak
- [21] Deep Whole-Body Control: Learning a Unified Policy for Manipulation and Locomotion
Conference on Robot Learning (CoRL) 2022 **(Oral)**
Best System Paper Award Finalist
Zipeng Fu*, Xuxin Cheng*, Deepak Pathak
- [22] VideoDex: Learning Dexterity from Internet Videos
Conference on Robot Learning (CoRL) 2022
Kenneth Shaw*, Shikhar Bahl*, Deepak Pathak
- [23] HERD: Continuous Human-to-Robot Evolution for Learning from Human Demonstration
Conference on Robot Learning (CoRL) 2022
Xingyu Liu, Deepak Pathak, Kris M. Kitani
- [24] Continual Learning with Evolving Class Ontologies
Neural Information Processing Systems (NeurIPS) 2022
Zhiqiu Lin, Deepak Pathak, Yu-Xiong Wang, Deva Ramanan, Shu Kong
- [25] Understanding Collapse in Non-Contrastive Siamese Representation Learning
European Conference on Computer Vision (ECCV) 2022
Alexander Cong Li, Alexei A. Efros, Deepak Pathak
- [26] Adapting Rapid Motor Adaptation for Bipedal Robots
International Conference on Intelligent Robots and Systems (IROS) 2022
Ashish Kumar, Zhongyu Li, Jun Zeng, Deepak Pathak, Koushil Sreenath, Jitendra Malik
- [27] Human-to-Robot Imitation in the Wild
Robotics: Science and Systems (RSS) 2022
Shikhar Bahl, Abhinav Gupta, Deepak Pathak
- [28] Robotic Telekinesis: Learning a Robotic Hand Imitator by Watching Humans on Youtube
Robotics: Science and Systems (RSS) 2022
Best Paper Award Finalist in Scaling Robot Learning Workshop
Aravind Sivakumar, Kenneth Shaw, Deepak Pathak
- [29] Topologically-Aware Deformation Fields for Single-View 3D Reconstruction
Computer Vision and Pattern Recognition (CVPR) 2022
Shivam Duggal, Deepak Pathak
- [30] Coupling Vision and Proprioception for Navigation of Legged Robots
Computer Vision and Pattern Recognition (CVPR) 2022
Best Paper Award in Multimodal Learning Workshop
Zipeng Fu*, Ashish Kumar*, Ananye Agarwal, Haozhi Qi, Jitendra Malik, Deepak Pathak
- [31] Language Models as Zero-Shot Planners: Extracting Actionable Knowledge for Embodied Agents
International Conference on Machine Learning (ICML) 2022
Wenlong Huang, Pieter Abbeel, Deepak Pathak*, Igor Mordatch*
- [32] REvolveR: Continuous Evolutionary Models for Robot-to-Robot Policy Transfer
International Conference on Machine Learning (ICML) 2022 **(Long Oral)**
Xingyu Liu, Deepak Pathak, Kris M. Kitani
- [33] Zero-Shot Reward Specification via Grounded Natural Language
International Conference on Machine Learning (ICML) 2022
Parsa Mahmoudieh, Deepak Pathak, Trevor Darrell
- [34] Discovering and Achieving Goals via World Models
Neural Information Processing Systems (NeurIPS) 2021
Russell Mendonca*, Oleh Rybkin*, Kostas Daniilidis, Danijar Hafner, Deepak Pathak

- [35] Functional Regularization for Reinforcement Learning via Learned Fourier Features
Neural Information Processing Systems (NeurIPS) 2021
Alexander C. Li, Deepak Pathak
- [36] Interesting Object, Curious Agent: Learning Task-Agnostic Exploration
Neural Information Processing Systems (NeurIPS) 2021 **(Oral)**
Simone Parisi, Victoria Dean, Deepak Pathak, Abhinav Gupta
- [37] Accelerating Robotic Reinforcement Learning via Parameterized Action Primitives
Neural Information Processing Systems (NeurIPS) 2021
Murtaza Dalal, Deepak Pathak*, Ruslan Salakhutdinov*
- [38] The CLEAR Benchmark: Continual LEARNING on Real-World Imagery
Neural Information Processing Systems Datasets and Benchmark Track (NeurIPS) 2021
Zhiqiu Lin, Jia Shi, Deepak Pathak, Deva Ramanan
- [39] RB2: Robotic Manipulation Benchmarking with a Twist
Neural Information Processing Systems Datasets and Benchmark Track (NeurIPS) 2021
Sudeep Dasari, et.al.
- [40] Minimizing Energy Consumption Leads to the Emergence of Gaits in Legged Robots
Conference on Robot Learning (CoRL) 2021
Zipeng Fu, Ashish Kumar, Jitendra Malik, Deepak Pathak
- [41] Worksheet: Wrapping the World in a 3D Sheet for View Synthesis from a Single Image
International Conference on Computer Vision (ICCV) 2021 **(Oral)**
Ronghang Hu, Nikhila Ravi, Alex Berg, Deepak Pathak
- [42] Hierarchical Neural Dynamic Policies
Robotics: Science and Systems (RSS) 2021
Shikhar Bahl, Abhinav Gupta, Deepak Pathak
- [43] RMA: Rapid Motor Adaptation for Legged Robots
Robotics: Science and Systems (RSS) 2021
Ashish Kumar, Zipeng Fu, Deepak Pathak, Jitendra Malik
- [44] Unsupervised Learning of Visual 3D Keypoints for Control
International Conference on Machine Learning (ICML) 2021
Boyuan Chen, Pieter Abbeel, Deepak Pathak
- [45] Differentiable Spatial Planning using Transformers
International Conference on Machine Learning (ICML) 2021
Devendra Chaplot, Deepak Pathak, Jitendra Malik
- [46] Auto-Tuned Sim-to-Real Transfer
International Conference on Robotics and Automation (ICRA) 2021
Best Cognitive Robotics Paper Award Finalist
Yuqing Du, Olivia Watkins, Trevor Darrell, Pieter Abbeel, Deepak Pathak
- [47] Planning in Learned Latent Action Spaces for Generalizable Legged Locomotion
IEEE Robotics and Automation Letters (RA-L) 2021
Tianyu Li, Roberto Calandra, Deepak Pathak, Yuandong Tian, Franziska Meier, Akshara Rai
- [48] Learning Long-term Visual Dynamics with Region Proposal Interaction Networks
International Conference on Representation Learning (ICLR) 2021
Haozhi Qi, Xiaolong Wang, Deepak Pathak, Yi Ma, Jitendra Malik
- [49] Neural Dynamic Policies for End-to-End Sensorimotor Learning
Neural Information Processing Systems (NeurIPS) 2020 **(Spotlight)**
Shikhar Bahl, Mustafa Mukadam, Abhinav Gupta, Deepak Pathak
- [50] Sparse Graphical Memory for Robust Planning
Neural Information Processing Systems (NeurIPS) 2020
Michael Laskin, Scott Emmons, Ajay Jain, Thanard Kurutach, Pieter Abbeel, Deepak Pathak

- [51] One Policy to Control Them All:
Shared Modular Policies for Agent-Agnostic Control
International Conference on Machine Learning (ICML) 2020
Wenlong Huang, Igor Mordatch, Deepak Pathak
- [52] Planning to Explore via Self-Supervised World Models
International Conference on Machine Learning (ICML) 2020
Ramanan Sekar, Oleh Rybkin, Kostas Daniilidis, Pieter Abbeel, Danijar Hafner, Deepak Pathak
- [53] Locally Masked Convolution for Autoregressive Models
Uncertainty in Artificial Intelligence (UAI) 2020
Ajay Jain, Pieter Abbeel, Deepak Pathak
- [54] Compositional GAN: Learning Conditional Image Composition
International Journal of Computer Vision (IJCV) 2020
Samaneh Azadi, Deepak Pathak, Sayna Ebrahimi, Trevor Darrell
- [55] Learning to Control Self-assembling Morphologies: A Study of
Generalization via Modularity
Neural Information Processing Systems (NeurIPS) 2019 (**Spotlight**)
Deepak Pathak*, Chris Lu*, Trevor Darrell, Phillip Isola, Alexei A. Efros
Winner of Virtual Creatures Competition 2019
- [56] Third-Person Visual Imitation Learning via Decoupled Hierarchical Control
Neural Information Processing Systems (NeurIPS) 2019
Pratyusha Sharma, Deepak Pathak, Abhinav Gupta
- [57] Self-Supervised Exploration via Disagreement
International Conference on Machine Learning (ICML) 2019
Deepak Pathak*, Dhiraj Gandhi*, Abhinav Gupta
- [58] Large-Scale Study of Curiosity-Driven Learning
International Conference on Representation Learning (ICLR) 2019
Yuri Burda*, Harri Edwards*, Deepak Pathak*, Amos Storkey, Trevor Darrell, Alexei A. Efros
Also at Deep RL Workshop, NeurIPS 2018 (**Oral**)
- [59] Zero-Shot Visual Imitation
International Conference on Representation Learning (ICLR) 2018 (**Oral**)
Deepak Pathak*, Parsa Mahmoudieh*, Guanghao Luo*, Pulkit Agrawal*, Dian Chen, Fred Shentu, Evan Shelhamer, Jitendra Malik, Alexei A. Efros, Trevor Darrell
- [60] Investigating Human Priors for Playing Video Games
International Conference on Machine Learning (ICML) 2018 (**Long Oral**)
Rachit Dubey, Pulkit Agarwal, Deepak Pathak, Thomas L. Griffiths, Alexei A. Efros
- [61] Learning Instance Segmentation by Interaction
Deep Learning in Robotics Vision Workshop (CVPR) 2018 (**Oral**)
Deepak Pathak*, Yide Shentu*, Dian Chen*, Pulkit Agrawal*, Trevor Darrell, Sergey Levine, Jitendra Malik
- [62] Curiosity-driven Exploration using Self-Supervised Prediction
International Conference on Machine Learning (ICML) 2017
Deepak Pathak, Pulkit Agrawal, Alexei A. Efros, Trevor Darrell
- [63] Learning Features by Watching Objects Move
Computer Vision and Pattern Recognition (CVPR) 2017
Deepak Pathak, Ross Girshick, Piotr Dollár, Trevor Darrell, Bharath Hariharan
Also at Large-Scale Video Understanding Workshop (CVPR) 2017 (**Oral**)
- [64] Toward Multimodal Image-to-Image Translation
Neural Information Processing Systems (NIPS) 2017
Jun-Yan Zhu, Richard Zhang, Deepak Pathak, T. Darrell, A. A. Efros, O. Wang, Eli Shechtman

- [65] Context Encoders: Feature Learning by Inpainting
Computer Vision and Pattern Recognition (CVPR) 2016
Deepak Pathak, Philipp Krähenbühl, Jeff Donahue, Trevor Darrell, Alexei A. Efros
- [66] Large Scale Visual Recognition through Adaptation using Joint Representation and Multiple Instance Learning
Journal of Machine Learning Research (JMLR) 2016
Judy Hoffman, Deepak Pathak, Eric Tzeng, J. Long, S. Guadarrama, T. Darrell, Kate Saenko
- [67] Constrained Convolutional Neural Networks for Weakly Supervised Segmentation
International Conference on Computer Vision (ICCV) 2015
Deepak Pathak, Philipp Krähenbühl, Trevor Darrell
- [68] Fully Convolutional Multi-Class Multiple Instance Learning
Workshop Track in International Conference on Representation Learning (ICLR) 2015
Deepak Pathak, Evan Shelhamer, Jonathon Long, Trevor Darrell
- [69] Detector Discovery in the Wild: Joint Multiple Instance and Representation Learning
Computer Vision and Pattern Recognition (CVPR) 2015
Judy Hoffman, Deepak Pathak, Trevor Darrell, Kate Saenko
- [70] A Comparison of Forecasting Methods: fundamentals, polling, prediction markets, and experts
Journal of Prediction Markets (JPM) 2015
Deepak Pathak, David Rothschild, Miro Dudík
- [71] Anomaly Localization in Topic-based Analysis of Surveillance Videos
Winter Conference on Applications of Computer Vision (WACV) 2015
Deepak Pathak, Abhijit Sharang, Amitabha Mukerjee
- [72] Where is my Friend? - Person identification in Social Networks
Automatic Face and Gesture Recognition (FG) 2015
Deepak Pathak, Sai Nitish Satyavolu, Vinay P. Nambodiri

OTHER
PUBLICATIONS

- [73] Generalization in Dexterous Manipulation via Geometry-Aware Multi-Task Learning
arXiv 2021
Wenlong Huang, Igor Mordatch, Pieter Abbeel, Deepak Pathak
- [74] Constrained Structured Regression with Convolutional Neural Networks
arXiv 2015
Deepak Pathak, Philipp Krähenbühl, Stella X. Yu, Trevor Darrell

TEACHING
EXPERIENCE

Instructor, 16-824: Visual Learning and Recognition <i>Carnegie Mellon University</i>	Spring 2021-2023
Instructor, 16-884: Deep Learning for Robotics <i>Carnegie Mellon University</i>	Fall 2021-2022
CS 280: Computer Vision <i>University of California, Berkeley</i> Graduate Student Instructor with Prof. Alexei A. Efros and Prof. Trevor Darrell	Spring 2016
CS 189/289: Introduction to Machine Learning <i>University of California, Berkeley</i> Graduate Student Instructor with Prof. Alexei A. Efros and Dr. Isabelle Guyon	Fall 2015
Guest Lectures: Berkeley Learn2Launch Series at UC Berkeley	Spring 2019