

## Carl Vondrick

Assistant Professor  
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## Appointments

- |                        |                     |                     |
|------------------------|---------------------|---------------------|
| 1. Columbia University | Assistant Professor | Jul 2018 - Present  |
| 2. Google Research     | Research Scientist  | Jul 2017 - Jul 2018 |

## Education

- |  |                           |                     |
|--|---------------------------|---------------------|
| 1. Massachusetts Institute of Technology | Ph.D. in Computer Science | Sep 2013 - Jun 2017 |
| 2. Massachusetts Institute of Technology | M.S. in Computer Science  | Sep 2011 - Jun 2013 |
| 3. University of California, Irvine      | B.S. in Computer Science  | Sep 2008 - Jun 2011 |

## Journal Publications (peer reviewed)

1. Moments in Time Dataset: one million videos for event understanding  
Mathew Monfort, et al.  
Transactions on Pattern Analysis and Machine Intelligence (PAMI). 2019.
2. Cross-Modal Scene Networks.  
Yusuf Aytar, Lluís Castrejon, Carl Vondrick, Hamed Pirsiavash, Antonio Torralba.  
Transactions on Pattern Analysis and Machine Intelligence (PAMI). 2017.
3. Visualizing Object Detection Features.  
Carl Vondrick, Aditya Khosla, Hamed Pirsiavash, Tomasz Malisiewicz, Antonio Torralba.  
International Journal of Computer Vision (IJCV). 2016.
4. Do we need more training data?  
Xiangxin Zhu, Carl Vondrick, Charless Fowlkes, Deva Ramanan.  
International Journal of Computer Vision (IJCV). 2015.
5. Efficiently Scaling Up Crowdsourced Video Annotation.  
Carl Vondrick, Donald Patterson, Deva Ramanan.  
International Journal of Computer Vision (IJCV). 2012.

## Conference Publications (peer reviewed)

1. Relational Action Forecasting  
Chen Sun, Abhinav Shrivastava, Carl Vondrick, Rahul Sukthankar, Kevin Murphy, Cordelia Schmid.  
Computer Vision and Pattern Recognition (CVPR). 2019.
2. Multi-level Multimodal Common Semantic Space for Image-Phrase Grounding.  
Hassan Akbari, Svebor Karaman, Surabhi Bhargava, Brian Chen, Carl Vondrick, Shih-Fu Chang.  
Computer Vision and Pattern Recognition (CVPR) 2019.

3. Tracking Emerges by Colorizing Videos.  
Carl Vondrick, Abhinav Shrivastava, Alireza Fathi, Sergio Guadarrama, Kevin Murphy.  
European Conference on Computer Vision (ECCV). 2018.
4. The Sound of Pixels.  
Hang Zhao, Chuang Gan, Andrew Rouditchenko, Carl Vondrick, Josh McDermott, Antonio Torralba.  
European Conference on Computer Vision (ECCV). 2018.
5. Actor-centric Relation Network.  
Chen Sun, Abhinav Shrivastava, Carl Vondrick, Kevin Murphy, Rahul Sukthankar, Cordelia Schmid.  
European Conference on Computer Vision (ECCV). 2018.
6. AVA: A Video Dataset of Spatio-temporally Localized Atomic Visual Actions.  
Chunhui Gu, et al.  
Computer Vision and Pattern Recognition (CVPR). 2018.
7. Following Gaze in Video.  
Adria Recasens, Carl Vondrick, Aditya Khosla, Antonio Torralba.  
International Conference on Computer Vision (ICCV). 2017.
8. Generating the Future with Adversarial Transformers.  
Carl Vondrick, Antonio Torralba.  
Computer Vision and Pattern Recognition (CVPR). 2017.
9. Generating Videos with Scene Dynamics.  
Carl Vondrick, Hamed Pirsiavash, Antonio Torralba.  
Neural Information Processing Systems (NIPS). 2016.
10. SoundNet: Learning Sound Representations from Unlabeled Video.  
Carl Vondrick, Yusuf Aytar, Antonio Torralba.  
Neural Information Processing Systems (NIPS). 2016.
11. Anticipating Visual Representations with Unlabeled Video.  
Carl Vondrick, Hamed Pirsiavash, Antonio Torralba.  
Computer Vision and Pattern Recognition (CVPR). 2016.
12. Predicting Motivations Behind Actions by Leveraging Text.  
Carl Vondrick, Deniz Oktay, Hamed Pirsiavash, Antonio Torralba.  
Computer Vision and Pattern Recognition (CVPR). 2016.
13. Learning Aligned Cross-Modal Representations from Weakly Aligned Data.  
Lluís Castrejon, Yusuf Aytar, Carl Vondrick, Hamed Pirsiavash, Antonio Torralba.  
Computer Vision and Pattern Recognition (CVPR). 2016.
14. Learning Visual Biases from Human Imagination.  
Carl Vondrick, Hamed Pirsiavash, Aude Oliva, Antonio Torralba.  
Neural Information Processing Systems (NIPS). 2015.

15. Where are they looking?  
Adria Recasens, Aditya Khosla, Carl Vondrick, Antonio Torralba.  
Neural Information Processing Systems (NIPS). 2015.
16. Assessing the Quality of Actions.  
Hamed Pirsiavash, Carl Vondrick, Antonio Torralba.  
European Conference on Computer Vision (ECCV). 2014.
17. HOGgles: Visualizing Object Detection Features.  
Carl Vondrick, Aditya Khosla, Tomasz Malisiewicz, Antonio Torralba.  
International Conference on Computer Vision (ICCV). 2013.
18. Do We Need More Training Data or Better Models for Object Detection?  
Xiangxin Zhu, Carl Vondrick, Deva Ramanan, Charless Fowlkes.  
British Machine Vision Conference (BMVC). 2012.
19. Video Annotation and Tracking with Active Learning.  
Carl Vondrick and Deva Ramanan.  
Neural Information Processing Systems (NIPS). 2011.
20. A Large-scale Benchmark Dataset for Event Recognition in Surveillance Video.  
Sangmin Oh, et al.  
Computer Vision and Pattern Recognition (CVPR). 2011.
21. Efficiently Scaling Up Video Annotation with Crowdsourced Marketplaces.  
Carl Vondrick, Deva Ramanan, Donald Patterson.  
European Conference on Computer Vision (ECCV). 2010.

### Technical Reports

1. See, Hear, and Read: Deep Aligned Representations  
Yusuf Aytar, Carl Vondrick, Antonio Torralba.  
arXiv. 2017.

### Selected Awards and Honors

- |  |             |
|--|-------------|
| 2. Google Ph.D Fellowship in Machine Perception      | 2015 - 2017 |
| 3. National Science Foundation Graduate Fellowship   | 2011 - 2014 |
| 4. Outstanding Reviewer Award for ECCV, CVPR         | 2015 - 2016 |
| 5. UCI Chancellor's Award for Undergraduate Research | 2011        |

### Selected Press Coverage

#### *Television and Radio*

- |                    |   |
|--------------------|---|
| 1. NPR             | Algorithms Identify Audio through Video Footage           |
| 2. NPR             | Computer Binge-Watched TV And Learned To Predict          |
| 3. CNN             | New AI Can Predict When Two People Will Kiss              |
| 4. CBC             | Teaching Software to Predict Handshakes, Hugs, and Kisses |
| 5. Stephen Colbert | Television clip on human action prediction                |

### *Newspaper and Magazine*

6. Associated Press      How Do You Teach Human Interaction to a Robot? Lots of TV
7. NBC      Deep Learning: Teaching Computers to Predict the Future
8. Newsweek      Artificial Intelligence Algorithms Predicts the Future
9. Forbes      MIT Computers Binge-Watch To Learn About Hugs
10. ABC News      New AI Can Predict When Two People Will Kiss
11. Fox News      New Artificial Intelligence Can Predict When You Will Kiss
12. Wired      This AI learned to predict the future by watching loads of TV
13. Popular Science      Algorithm Binge Watches TV to Predict Human Behavior
14. Scientific American      Artificial Intelligence Can Predict How Scenes Will Play Out
15. New Scientist      Binge-watching videos teaches computers to recognise sounds
16. New Scientist      AI learns to predict the future by watching 2 million videos
17. Vice Magazine      This Algorithm Taught Itself to Animate a Still Photo
18. The Verge      Machine Learning's Next Trick is Generating Videos from Photos
19. The Week Junior      A machine that learns by listening (children's magazine)
20. Technology Review      Image Experiment Reveals The Building Blocks of Imagination

### **Invited Talks**

#### *Learning from Unlabeled Video*

1. Butterfly Network      Nov 2018
2. International Computer Vision Summer School      Jul 2018
3. CVPR Tutorial      Jun 2018

#### *Predictive Vision*

4. University of Maryland, College Park      Mar 2018
5. University of Pennsylvania      Nov 2017
6. Snapchat Research      Nov 2017
7. University of Southern California      Nov 2017
8. Workshop on Video Frontiers      Nov 2017
9. Rework Summit      May 2017
10. University of California, San Deigo      Apr 2017
11. Cornell University      Apr 2017
12. University of Texas, Austin      Mar 2017
13. Columbia University      Mar 2017
14. Google Research      Mar 2017
15. Adobe Research      Mar 2017
16. OpenAI      Mar 2017
17. Brown University      Feb 2017
18. University of California, Los Angeles      Feb 2017
19. NVidia      Feb 2017
20. Rework Summit      Nov 2016
21. Twitter      Oct 2016
22. TTI Chicago      Sep 2016

- 23. Massachusetts Institute of Technology Sep 2016
- 24. Apple Aug 2016
- 25. University of California, Berkeley Aug 2016
- 26. Stanford University Aug 2016
- 27. Boston University Mar 2016
- 28. University of Massachusetts, Boston Mar 2016

*Visualizing Object Detection Features*

- 29. University of Massachusetts, Boston Mar 2016
- 30. Massachusetts Institute of Technology Sep 2015
- 31. Brown University Nov 2013

*Efficient Video Annotation*

- 32. CVPR Workshop Jun 2013
- 33. CVPR Workshop Jun 2011

**Teaching**

- 1. E6998 Advanced Computer Vision, Columbia Engineering Spring 2019
- 2. W4731 Computer Vision, Columbia Engineering Fall 2018

**Professional Service**

- 1. Senior Program Committee (Area Chair), NeurIPS 2019
- 2. Senior Program Committee (Area Chair), CVPR 2019
- 3. Senior Program Committee (Area Chair), ICML 2019
- 4. Senior Program Committee (Area Chair), CVPR 2018
- 5. Organizer, Workshop on Self-supervised Learning, ICML 2019
- 6. Organizer, Workshop on Learning from Unlabeled Video, CVPR 2019
- 7. Organizer, Tutorial on Unsupervised Visual Learning, CVPR 2018
- 8. Program Committee, Action and Anticipation Workshop, CVPR 2016
- 9. Program Committee, Action and Anticipation Workshop, CVPR 2017
- 10. Program Committee, Action and Anticipation Workshop, CVPR 2018
- 11. Program Committee, Workshop on Human Computation for Image Analysis, CVPR 2016
- 12. Reviewer for CVPR, ICCV, ECCV, NIPS, ICML, IJCV, PAMI, 2011 to 2019

**Departmental Service**

- 1. Admissions Committee 2019
- 2. Distinguished Lectures Committee 2018