

Andrew Owens

CONTACT INFORMATION	Website: http://andrewowens.com Email: owens@berkeley.edu	307 Cory Hall UC Berkeley
EDUCATION	Massachusetts Institute of Technology , Cambridge, MA Ph.D., Electrical Engineering and Computer Science Advisors: William Freeman and Antonio Torralba Thesis: <i>Learning Visual Models from Paired Audio-Visual Examples</i>	2016
	Massachusetts Institute of Technology , Cambridge, MA M.S., Electrical Engineering and Computer Science Advisors: William Freeman and Antonio Torralba	2013
	Cornell University , Ithaca, NY B.A., Computer Science Advisor: Daniel Huttenlocher	2010
EXPERIENCE	UC Berkeley , Berkeley, CA <i>Postdoctoral Researcher</i> Advisors: Alexei Efros and Jitendra Malik	9/16 – present
	Microsoft Research , Redmond, WA <i>Research Intern</i> Advisor: Rick Szeliski	6/14 – 9/14
	Google , Seattle, WA <i>Software Engineering Research Intern</i> Advisor: Sameer Agarwal	5/11 – 8/11
HONORS	Best Paper Award, Honorable Mention. CVPR 2011 RA-L Best Paper Award Finalist, 2018 Microsoft Research Fellowship, 2015 - 2016. NDSEG Fellowship, 2011 - 2014 Best Reviewer Award, ICLR 2018. NSF Graduate Research Fellowship, 2012 (declined) Finalist – CRA Outstanding Undergraduate Researcher Award, 2010	

PUBLICATIONS

- [1] Sheng-Yu Wang, Oliver Wang, **Andrew Owens**, Richard Zhang, Alexei A. Efros. Detecting Photoshopped Faces by Scripting Photoshop. *International Conference on Computer Vision (ICCV)*, 2019.
- [2] Shiry Ginosar, Amir Bar, Gefen Kohavi, Caroline Chan, **Andrew Owens**, Jitendra Malik. Learning Individual Styles of Conversational Gesture. *Computer Vision and Pattern Recognition (CVPR)*, 2019.
- [3] **Andrew Owens**, Alexei A. Efros. Audio-Visual Scene Analysis with Self-Supervised Multisensory Features. *European Conference on Computer Vision (ECCV)*, 2018. (Oral presentation).
- [4] Minyoung Huh, Andrew Liu, **Andrew Owens**, Alexei A. Efros. Fighting Fake News: Image Splice Detection via Learned Self-Consistency. *European Conference on Computer Vision (ECCV)*, 2018.
- [5] 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. *Robotics and Automation Letters (RA-L)*, 2018.
- [6] Xiuming Zhang, Tali Dekel, Tianfan Xue, **Andrew Owens**, Qiurui He, Jiajun Wu, Stefanie Mueller, William T. Freeman. MoSculp: Interactive Visualization of Shape and Time. *User Interface Software and Technology (UIST)*, 2018.
- [7] **Andrew Owens**, Jiajun Wu, Josh McDermott, William T. Freeman, Antonio Torralba. Learning Sight From Sound: Ambient Sound Provides Supervision for Visual Learning. *International Journal of Computer Vision (IJCV)*, 2018.
- [8] Roberto Calandra, **Andrew Owens**, Manu Upadhyaya, Wenzhen Yuan, Justin Lin, Edward H. Adelson, Sergey Levine. The Feeling of Success: Does Touch Sensing Help Predict Grasp Outcomes?. *Conference on Robot Learning (CoRL)*, 2017.
- [9] Wenzhen Yuan, Chenzhuo Zhu, **Andrew Owens**, Mandayam Srinivasan, Edward H. Adelson. Shape-independent Hardness Estimation Using Deep Learning and a GelSight Tactile Sensor. *International Conference on Robotics and Automation (ICRA)*, 2017.
- [10] **Andrew Owens**, Jiajun Wu, Josh McDermott, William T. Freeman, Antonio Torralba. Ambient Sound Provides Supervision for Visual Learning. *European Conference on Computer Vision (ECCV)*, 2016. (Oral presentation).
- [11] **Andrew Owens**, Phillip Isola, Josh McDermott, Antonio Torralba, Edward H. Adelson, William T. Freeman. Visually Indicated Sounds. *Computer Vision and Pattern Recognition (CVPR)*, 2016. (Oral presentation).

- [12] **Andrew Owens**, Connelly Barnes, Alex Flint, Hanumant Singh, William T. Freeman. Camouflaging an Object from Many Viewpoints. *Computer Vision and Pattern Recognition (CVPR)*, 2014. (Oral presentation).
- [13] David Crandall, **Andrew Owens**, Noah Snavely, Dan Huttenlocher. SfM with MRFs: Discrete-Continuous Optimization for Large-Scale Structure from Motion. *Transactions on Pattern Analysis and Machine Intelligence (PAMI)*, 2013.
- [14] **Andrew Owens**, Jianxiong Xiao, Antonio Torralba, William T. Freeman. Shape Anchors for Data-Driven Multi-view Reconstruction. *International Conference on Computer Vision (ICCV)*, 2013.
- [15] Jianxiong Xiao, **Andrew Owens**, Antonio Torralba. SUN3D: A Database of Big Spaces Reconstructed using SfM and Object Labels. *International Conference on Computer Vision (ICCV)*, 2013.
- [16] David Crandall, **Andrew Owens**, Noah Snavely, Dan Huttenlocher. Discrete-Continuous Optimization for Large-Scale Structure from Motion. *Computer Vision and Pattern Recognition (CVPR)*, 2011. (Oral presentation. **Best Paper Award Honorable Mention**).

THESES:

- [1] Andrew Owens. Learning Visual Models from Paired Audio-Visual Examples. *Ph.D. Thesis, Massachusetts Institute of Technology*, 2016.
- [2] Andrew Owens. Combining Recognition and Geometry for Data-Driven 3D Reconstruction. *M.S. Thesis, Massachusetts Institute of Technology*, 2013.

INVITED TALKS

- “Learning Sight from Sound”
Facebook AI Video Summit — June 2019
Multimodal Learning and Applications Workshop — June 2019
- “Learning Sight from Sound”
Google Machine Perception Workshop — October 2018
- “Self-Supervising Sight, Sound, and Image Forensics”
University of Southern California — October 2018
- “Audio-Visual Scene Analysis with Self-Supervised Multisensory Features”
Oral presentation, ECCV 2018. **Video** — September 2018
- “Learning Sight from Sound”
RSS Workshop on Multi-Modal Perception and Control — May 2018
- “Self-Supervising Sight, Sound, and Image Forensics”
CVPR Workshop, Beyond Supervised Learning — May 2018
- “Learning Sight from Sound”

Toyota Technological Institute Chicago — March 2018

“Visually Indicated Sounds”

Oral presentation, CVPR 2016. [Video](#) — June 2016

“Ambient Sound Provides Supervision for Visual Learning”

Oral presentation, ECCV 2016. [Video](#) — October 2016

“Sound Provides Supervision for Visual Learning”

CMU Robotics Institute — April 2016

“Camouflaging an Object From Many Viewpoints”

Oral presentation, CVPR 2014. [Video](#) — June 2014

Guest Lecture, CS194-26, UC Berkeley — October 2017

Guest Lecture, CS194-26, UC Berkeley — October 2016

PROFESSIONAL
ACTIVITIES

Organizer, *Sight and Sound* workshop at CVPR 2018, 2019. [Workshop webpage](#)

Reviewer: CVPR (2015-2019), ICCV (2015, 2017, 2019), ECCV (2016, 2018), ICLR (2018, 2019), ICRA (2019), ICML (2017), NeurIPS (2017), CHI (2018), UIST (2019)

STUDENTS
SUPERVISED

Qiurui He. Visiting student, MIT.

Shape-Time Action Summaries.

Hansa Srinivasan. Undergraduate Researcher (UROP), MIT.

Visually Indicated Touch.

Minyoung Huh. UROP, UC Berkeley / CMU PhD.

Image Splice Detection via Learned Self-Consistency

Andrew Liu. UROP, UC Berkeley.

Image Splice Detection via Learned Self-Consistency

Phillip Kuznetsov. UROP, UC Berkeley.

Modeling Human Music-Video Pairing Preferences

Justin Lin. UROP, UC Berkeley (with Roberto Calandra).

Learning to Grasp and Regrasp using Vision and Touch

Alex Krentsel. UROP, UC Berkeley.

Modeling Human Music-Video Pairing Preferences

Sheng-Yu Wang (with Richard Zhang). UROP, UC Berkeley.

Detecting Face Manipulations

PRESS
COVERAGE

MIT Develops a Novel Camouflaging Algorithm That Hides Eyesores. *Wired*, 2014.

MIT researchers built an AI that predicts what the world sounds like. *Quartz*, 2016.

This computer is selecting sound effects for silent videos that seem so real humans can't tell they're fake. *Washington Post*, 2016.

Creating 3D sculptures from 2D video and other news. *BBC*, 2018.

New algorithm can help spot faked photos before they go viral. *New Scientist*, 2018.

REFERENCES

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Alexei A. Efros
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Antonio Torralba
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Andrew Zisserman
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Jitendra Malik
malik@eecs.berkeley.edu