

David F. Fouhey

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Affiliation

University of Michigan

Assistant Professor, Computer Science and Engineering

January 2019 – current

Affiliate Assistant Professor, Robotics Institute

January 2019 – current

Education

Carnegie Mellon University, The Robotics Institute, Pittsburgh, PA **September 2011 – August 2016**

Ph.D., Robotics

Advisors: Abhinav Gupta, Martial Hebert

Middlebury College, Middlebury, VT

September 2007 – May 2011

A.B., Computer Science, *Summa Cum Laude*

Highest Honors in Computer Science; minor in Mathematics

Academic Positions

INRIA Paris, Willow Laboratory

September 2018 – November 2018

Visiting Professor (Hosts: Josef Sivic, Ivan Laptev)

University of California, Berkeley

September 2016 – August 2018

Postdoc (Mentors: Alexei A. Efros, Jitendra Malik)

Oxford University

Summer 2015

Visitor (Host: Andrew Zisserman)

Microsoft Research

Summer 2013

Intern (Supervisor: Larry Zitnick)

CMU-National Robotics Engineering Center

Summer 2010, Spring 2011

Intern (Supervisor: Cristian Dima)

Middlebury College

2008–2011

Research Assistant (Supervisors: Daniel Scharstein, Amy Briggs)

Selected Awards and Honors

Outstanding Reviewer Award: CVPR 2018, NeurIPS 2019, ICCV 2019, ECCV 2020

ICCV 2015 Doctoral Consortium, Selected for Travel Grant

NDSEG Fellowship (2013 - 2016)

NSF Graduate Research Fellowship (2011 - 2013)

Elected to Phi Beta Kappa, awarded Phi Beta Kappa Prize at Middlebury College
(awarded to one student per year in a class of ≈ 625)

Timothy Huang Senior Award for Academic Excellence, CS Department, Middlebury College

Barry M. Goldwater Scholar (2010 - 2011)

Students / Mentorship

PhD Students:

Shengyi Qian, UM CSE PhD	(Sep 2019 –)
Nilesh Kulkarni, UM CSE PhD, <i>Co-supervised with Justin Johnson</i>	(Sep 2019 –)
Richard Higgins, UM CSE PhD	(May 2019 –)
Dandan Shan, UM CSE PhD	(May 2020 –)
Chris Rockwell, UM CSE PhD, <i>Co-supervised with Justin Johnson</i>	(May 2020 –)
Sarah Jabbour, UM CSE PhD, <i>Co-supervised with Jenna Wiens</i>	(May 2020 –)
Linyi Jin, UM CSE PhD	(May 2021 –)

Previous PhD Student Collaborators:

Elizabeth Olson, UM Robotics PhD Collaborator <i>Next Position: PhD Student, UM Robotics with Chad Jenkins</i>	(May 2019 – August 2020)
Mohamed El Banani, UM CSE PhD Collaborator <i>Next Position: PhD Student, UM CSE with Justin Johnson</i>	(May 2019 – Nov 2019)

MS Students/Visitors to My Group:

Yinwei Dai, UM CSE MS	(May 2020 –)
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MS Student Alumni:

Linyi Jin, UM Robotics MS <i>Next Position: PhD Student, UM CSE with me</i>	(May 2019 – May 2021)
Dandan Shan, UM ECE MS <i>Next Position: PhD Student, UM CSE with me</i>	(Jan 2019 – May 2020)
Christopher Rockwell, UM CSE MS <i>Next Position: PhD student, UM CSE with me, Justin Johnson</i>	(May 2019 – May 2020)
Michelle Shu, Visitor from JHU <i>Next Position: PhD student, Cornell CS</i>	(May 2019 – August 2019)

Zhaoheng Zheng, UM ECE MS <i>Next Position: PhD Student, USC CS</i>	(Jan 2019 – May 2019)
Vihang Agarwal, UM ECE MS, Independent Study <i>Next Position: Research Assistant, UM Medicine</i>	(Jan 2019 – Dec 2019)
Chockalingam Ravi Sundaram, UM ECE MS, Independent Study <i>Next Position: R&D Research Engineer, PlayStation</i>	(Jan 2019 – May 2019)

Undergraduate Students:

Mahlet Haile, Addis Ababa University Software Eng. BS	(May 2021 –)
Tibebu Wassie, Addis Ababa University Software Eng. BS	(May 2021 –)
Samir Agarwala, UM CSE BSE	(May 2021 –)
Ruiyu Li, UM CSE BSE	(May 2021 –)
Siyi Chen, UM CSE BSE	(May 2021 –)
Zhizhuo Zhou, UM CSE BSE <i>Next Position: MS Student, CMU Robotics</i>	(May 2020 –)
Gemmechu Mohammed, Addis Ababa University, BS <i>Next Position: PhD Student, University of Delaware</i>	(May 2020 –)
Dichang Zhang, UM Data Science BSE	(Jan 2020 –)

Undergraduate Student Alumni:

Alexander Raistrick, UM CSE BSE <i>Next Position: PhD Student, Princeton CS</i>	(May 2020 – May 2021)
Xiao Song, UM CSE BSE	(May 2020 – August 2020)
Justin Bi, UM CSE BSE	(May 2020 – July 2020)
Yige Kristina Liu, UM CSE BSE <i>Next Position: MS Student, Stanford CS</i>	(Sep 2019 – May 2020)
Sarah Jabbour, UM CSE BSE <i>Next Position: PhD Student, UM CSE with me, Jenna Wiens</i>	(June 2019 – May 2020)
Jiaqi Geng, UM CSE BSE / SURE Program <i>Next Position: MS Student, CMU Robotics</i>	(Feb 2019 – August 2020)
Max Hamilton, UM CSE BSE / SURE Program <i>Next Position: MS Student, UM CSE</i>	(May 2019 – May 2021)
Zhengyuan Dong, UM CSE BSE	(May 2019 – May 2020)
Qichen Fu, UM CSE BSE <i>Next Position: MS Student, CMU Robotics</i>	(May 2019 – June 2020)
Yue Wu, UM CSE BSE	(May 2019 – Dec 2019)

High School Students:

Adam Sun, Detroit Country Day School <i>Next Position: Undergrad at Stanford University</i>	(June 2020 – August 2020)
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PhD Thesis committee member and defense date:

Madan Ravi Ganesh, UM ECE, <i>Advisor: Jason Corso, Salimeh Yasaei Sekh</i>	TBD
Oana Ignat, UM CSE, <i>Advisor: Rada Mihalcea</i>	TBD
Shouchang Guo, UM ECE, <i>Advisor: Jeff Fessler</i>	TBD
Jiaxuan Wang, UM CSE, <i>Advisor: Jenna Wiens</i>	TBD
Manikandasriram S.R., UM Robotics, <i>Advisor: Matthew Johnson-Roberson</i>	TBD
Megan Shearer, UM CSE, <i>Advisor: Michael Wellman</i>	TBD
Ung Hee Lee, UM Mechanical Eng., <i>Advisor: Elliott Rouse</i>	TBD
Cameron Blocker, UM ECE, <i>Advisor: Jeff Fessler</i>	TBD
David Dang UM Aerospace Eng., <i>Advisor: Iain Boyd</i>	TBD
Brad Saund, UM Robotics, <i>Advisor: Dmitry Berenson</i>	July 2021
Zheming Zhou, UM Robotics, <i>Advisor: Odest Chadwicke Jenkins</i>	April 2021
Amy Nesky, UM CSE, <i>Advisor: Quentin Stout</i>	August 2020
Dawei Yang, UM CSE, <i>Advisor: Jia Deng</i>	June 2020
<i>Note: I was the advisor of record for administrative reasons, but my actual role was a committee member</i>	
Kibok Lee, UM CSE, <i>Advisor: Honglak Lee</i>	June 2020
Weifeng Chen, UM CSE, <i>Advisor: Jia Deng</i>	June 2020
<i>Note: I was the advisor of record for administrative reasons, but my actual role was a committee member</i>	
Chaowei Xiao, UM CSE, <i>Advisor: Mingyan Liu</i>	June 2020
Luowei Zhou, UM Robotics, <i>Advisor: Jason Corso</i>	March 2020
Dejiao Zhang, UM ECE, <i>Advisor: Laura Balzano</i>	May 2019

Past mentorship (student co-authors or equivalent effort):

Olivia Wiles, University of Oxford	Jan 2019 – May 2019
Dimitri Zhukov, INRIA	Sep 2018 – Nov 2018
Ashish Kumar, UC Berkeley	Nov 2017 – May 2018
Weicheng Kuo, UC Berkeley	Jan 2017 – Nov 2017
Xiaolong Wang, CMU	Sep 2014 – May 2015
Rohit Girdhar, CMU	Sep 2014 – May 2016
Adrien Matricon, Visitor to CMU before joining ENSTA PhD	May 2014 – Nov 2014

Funding

Personal share of external funding: \$2,334,901.00

NIH National Heart, Lung and Blood Institute <i>Human-AI Collaborations to Improve Accuracy and Mitigate Bias in Acute Dyspnea Diagnosis</i> (co-I; PIs: Jenna Wiens, Michael Sjoding). Total Awarded: \$2,758,838	September 2021 - August 2025
Procter & Gamble Company <i>EPIC-Kitchens-100 Instance Segmentation Project</i> (Donation to U. Bristol w/UM, U.Toronto Partnership): \$50,000	2021
National Science Foundation <i>RI: Small: Understanding Hand Interaction In The Jumble of Internet Videos</i> (PI: Fouhey) My/Total Awarded: \$436,971.	October 2020 - October 2023

Toyota Research Institute April 2021 - March 2024
Low-Cost 3D Perception for Mobile Manipulation in Unstructured Human Environments
 (co-PI; PI: Brent Griffin) My portion budgeted: \$422,891. Total budgeted: \$1,851,143.

NASA January 2020 - December 2021
Solar Storms and Terrestrial Impacts Center (SOLSTICE)
 (co-I; PI: Tamas Gombosi). My portion budgeted: \$61,374. Total budgeted: \$1,302,162.

Michigan Institute for Data Science: Propelling Original Data Science January 2020 - December 2020
Fusing Physics and Deep Learning for Solar Dynamics Forecasting
 (PI: Fouhey). My/Total Awarded: \$90,000 (minus \$5,000 cost share).

Michigan Precision Health Investigators Awards January 2020 - December 2021
Precision diagnosis in patients with acute dyspnea by linking imaging and clinical data
 (co-PI; PI: Michael Sjoding). Total Awarded: \$299,095.

Lockheed Martin Advanced Technology Center (Prime Sponsor: NASA) September 2019 – 2021
Implementation of Phase E for the Atmospheric Imaging Assembly (AIA) Investigation on the SDO Mission
 (PI: Fouhey) My/Total awarded: \$24,906.

DARPA MCS Program July 2019 – July 2022
MESS: Model-Building, Exploratory, Social System
 (co-PI; PI: Alexei Efros). My portion awarded: \$760,000; Total awarded: \$9,477,951.

Nokia 2019
(Donation) Fine-Grained Human Hands In Contact
 (PI: Fouhey) My/Total awarded: \$38,273.

Procter & Gamble Company Jan 2019 – Dec 2020
Analyzing the Relation between Product Features and Consumer Preferences
 (co-PI; PI: Danai Koutra). My portion awarded: \$137,206; Total awarded: \$569,957.

Toyota Research Institute Jan 2019 – Dec 2020
Building and Reasoning about Fully 3D Representations
 (PI: Fouhey) My/Total portion awarded: \$453,280.

Community Service

Conference Area Chair/Senior Program Committee:

CVPR 2019, CVPR 2020, NeurIPS 2020, ICLR 2021, CVPR 2021, NeurIPS 2021, BMVC 2021, CVPR 2022

Conference Organizing Participation:

Reviewer for ICCV 2021 Workshops

Workshops and Tutorials:

Organizer, [Bridges to 3D Workshop](#), CVPR 2018

Organizer, [Bridges to 3D Workshop](#), CVPR 2017

Organizer, [Tutorial on 3D Scene Understanding](#), ECCV 2014

Program Committee:

Workshop on 3D Reconstruction in the Wild, ECCV 2018
 Workshop on Anticipating Human Behavior, ECCV 2018
 Workshop on Affordances in Vision for Cognitive Robotics, RSS 2014
 Workshop on Visual Perception of Object and Scene Affordances, ECCV 2014

Reviewer (Selected):

ECCV 2014–, CVPR 2015–, ICCV 2015–, NeurIPS 2018–, IJCV, TPAMI, The Astrophysical Journal, BMVC 2017–2018, 3DV 2017, CVIU, TIP.

Panels:

NSF (3x 2020), (1x 2021, 1 ad-hoc 2021)

Department Service

University of Michigan

Instructor, Intro to Grad Studies CSE NSF Fellowship Coach Faculty Advisor, Computer Science & Engineering Graduate Students	AY2021–2022
CSE Diversity Committee CSE NSF Fellowship Coach Organized purchase of 160 GPU cluster worth \$~800K by 8 UM Faculty + University	AY2020–2021
CSE Hosting Committee CSE NSF Fellowship Coach (Annual CSE NSFGRF win rate increased 2.67 → 7)	AY2019–2020
CSE Graduate Admissions Committee	AY2018–2019

Past Service:

UC Berkeley: Ph.D. Admissions Committee	2017
CMU: Ph.D. Admissions Committee 2014, 2015; Master's Thesis Committee Member: Maheen Rashid, Zhizhong Li, Meng Song, Aaron Walsman, Rohit Girdhar, Mengtian Li, Lerrel Pinto; Ph.D. Research Qualifier Committee Member: Jacob Walker, Allison Del Giorno.	

Miscellaneous Activities

Michigan Innocence Clinic Examined surveillance footage in relation to a possible wrongful conviction	Fall 2019
Nokia Bell Labs, Sunnyvale Consultant, Computer Vision and Machine Learning	Summer 2018 – May 2020

Outreach & DEI Activities

University of Michigan Departmental DEI Work:

Instructor of Record for Intro to CSE Graduate Studies	Fall 2020, 2021
Faculty Coordinator for (1) Lab Culture Committee; (2) Overwork Committee	May – Sep 2020

Miscellaneous Outreach:

AI4All Curriculum Advisory Board, 2021

Panelist for webinar on AI for high schoolers via AI4All (December 2019, June 2020)

Participant, NextProf Pathfinder Workshop networking session (September 2019)

Director, AI4ALL UMich

July 2019 –

Two week residential summer program to give an entry point to artificial intelligence, computer science and engineering to (25) high schoolers, with a particular focus on encouraging participation from groups that have been underrepresented historically.

AI Mentor, NASA Frontier Development Lab

May 2018 – January 2019

Mentored researchers with a background in physics on deep learning for solar weather analysis. Resulted in 2 journal papers lead by mentees.

Teaching Experience

University of Michigan

I have included end-of-term evaluation scores for: Q1: Overall, this was an excellent course; Q2: Overall, the instructor was an excellent teacher.

EECS 442: Computer Vision *co-taught with Justin Johnson* Winter 2021
329 students; Q1: 4.8, Q2: 4.8

EECS 542: Advanced Topics in Computer Vision Fall 2020
50 students; Q1: 4.9, Q2: 5.0

EECS 598-007: The Ecological Approach to Visual Perception Winter 2020
31 students; Q1: 4.9, Q2: 5.0

EECS 442: Computer Vision Fall 2019
155 students; Q1: 4.8, Q2: 4.8

EECS 442: Computer Vision Winter 2019
152 students; Q1: 4.6, Q2: 4.7

Past teaching

Co-Instructor: Visual Object and Activity Recognition, UC Berkeley, CS 294-43, Spring 2017, Fall 2017, Spring 2018. Visual Learning and Recognition, Carnegie Mellon University 16-824, Spring 2016.

Guest Lecturer: Image Manipulation & Computational Photography, UC Berkeley CS194-26, Fall 2016; Visual Learning and Recognition CMU 16-824, Spring 2015; Visual Recognition, U. Pittsburgh 3710, Spring 2015; Computational Photography, CMU 15-463, Fall 2014.

TA: Computer Vision, Carnegie Mellon University 16-720, Fall 2012.

Publications

Computer vision and machine learning conferences are rigorously blind peer reviewed and typically have an acceptance rate of $\sim 20 - 30\%$. Oral/spotlight presentations typically have low-single digit acceptance rates (e.g., 3 – 4%). I have made an effort to indicate work that is not as thoroughly peer reviewed (e.g., an extended abstract or workshop paper). I have also provided context (e.g., impact factors, acceptance rates,

author orders) for venues that are not vision or learning venues.

Key: * indicates equal contributions; *Blue and Italics* indicate a student (of mine); *Red and italics* indicates an undergraduate (defined loosely) student (of mine).

2021:

*Dandan Shan**, *Richard E.L. Higgins**, **David F. Fouhey**.
COHESIV: Contrastive Object and Hand Embedding Segmentation In Video.
 At 35th Conference on Neural Information Processing Systems (NeurIPS 2021).

Linyi Jin, *Shengyi Qian*, Andrew Owens, **David F. Fouhey**.
Planar Surface Reconstruction from Sparse Views.
 At the 17th International Conference on Computer Vision (ICCV 2020).
(Oral: 3.3% acceptance rate)

Chris Rockwell, **David F. Fouhey**, Justin C. Johnson.
PixelSynth: Generating a 3D-Consistent Experience from a Single Image
 At the 17th International Conference on Computer Vision (ICCV 2020).

Zhizhuo Zhou, *Gemmechu Hassena*, Brian C. Weeks, **David F. Fouhey**.
Quantifying Bird Skeletons
 CV4 Animals Workshop at 34th Conference on Computer vision and Pattern Recognition
 (Note: lightly peer reviewed)

Richard E.L. Higgins, **David F. Fouhey**, *Dichang Zhang*, Spiro K. Antiochos, Graham Barnes, Todd Hoeksema, KD Leka, Yang Liu, Peter W Schuck, Tamas I. Gombosi.
Fast and Accurate Emulation of the SDO/HMI Stokes Inversion with Uncertainty Quantification.
 Accepted in The Astrophysical Journal (Impact Factor: 5.746), 2021.
 (Note: Author order does not follow standard CV/ML conventions)

2020:

*Shengyi Qian**, *Linyi Jin**, **David F. Fouhey**.
Associative3D: Volumetric Reconstruction from Sparse Views.
 At the 16th European Conference on Computer Vision (ECCV 2020).

Christopher Rockwell, **David F. Fouhey**.
Full-Body Awareness from Partial Observations.
 At the 16th European Conference on Computer Vision (ECCV 2020).

Sarah Jabbour, **David F. Fouhey**, Ella Kazerooni, Michael Sjoding, Jenna Wiens.
Deep Learning Applied to Chest X-Rays: Exploiting and Preventing Shortcuts.
 Machine Learning for Healthcare (MLHC), 2020.

Ung Hee Lee, Justin Bi, Rishi Patel, **David F. Fouhey**, Elliot Rouse.
Image Transformation and CNNs: A Strategy for Encoding Human Locomotor Intent for Autonomous Wearable Robot.
 IEEE Robotics and Automation Letters and IROS, 2020.

Dandan Shan, *Jiaqi Geng**, *Michelle Shu**, **David F. Fouhey**.
Understanding Human Hands in Contact at Internet Scale.
 At the 33rd Conference on Computer Vision and Pattern Recognition, (CVPR 2020).
(Oral: 6.6% acceptance rate)

Mohamed El Banani, Jason Corso, **David F. Fouhey**.

Novel Object Viewpoint Estimation through Reconstruction Alignment.

At the 33rd Conference on Computer Vision and Pattern Recognition, (CVPR 2020).

Nilesh Kulkarni, Abhinav Gupta, **David F. Fouhey**, Shubham Tulsiani.

Articulation-aware Canonical Surface Mapping.

At the 33rd Conference on Computer Vision and Pattern Recognition, (CVPR 2020).

Jean Young Song, John Joon Young Chung, **David F. Fouhey**, Walter S. Lasecki

C-Reference: Improving 2D to 3D Object Pose Estimation Accuracy via Crowdsourced Joint Object Estimation

At Computer-supported Cooperative Work, (CSCW 2020).

2019:

A. Szenicer*, **D.F. Fouhey***, A. Muñoz-Jaramillo, P. Wright, R. Thomas, R. Galvez, M. Jin, M.C.M. Cheung.

A Deep Learning Virtual Instrument for Monitoring Extreme UV Solar Spectral Irradiance.

Science Advances (Impact factor: 12.8), Volume 5, Number 10, 2019.

(Note: Author order does not follow standard CV/ML conventions)

D. Zhukov, J.-B. Alayrac, R. G. Cinbis, **D.F. Fouhey**, I. Laptev, J. Sivic.

Cross-task weakly-supervised learning from instructional videos.

At the 32nd Conference on Computer Vision and Pattern Recognition (CVPR 2019).

R. Galvez*, **D.F. Fouhey***, M. Jin, A. Szenicer, A. Muñoz-Jaramillo, M.C.M. Cheung, P.J. Wright, M.G. Bobra, Y. Liu, J. Mason, R. Thomas.

A Machine Learning Dataset Prepared From the NASA Solar Dynamics Observatory Mission.

The Astrophysical Journal Supplement Series (Impact factor: 8.5), 242:7 2019.

(Note: Author order does not follow standard CV/ML conventions)

Earlier:

A. Kumar, S. Gupta, **D.F. Fouhey**, S. Levine, J. Malik.

Visual Memory for Robust Path Following.

NeurIPS 2018.

(Oral)

D.F. Fouhey, W. Kuo, A.A. Efros, J. Malik.

From Lifestyle Vlogs to Everyday Interactions.

At the 31st Conference on Computer Vision and Pattern Recognition (CVPR 2018).

S. Tulsiani, S. Gupta, **D.F. Fouhey**, A.A. Efros, J. Malik

Factoring Shape, Pose, and Layout from the 2D Image of a 3D Scene.

At the 31st Conference on Computer Vision and Pattern Recognition (CVPR 2018).

M. Lescroart, **D.F. Fouhey**, J. Malik

Convolutional neural networks represent shape dimensions – but not as accurately as humans

Abstract at VSS 2018

Note: an extended abstract, not full peer-reviewed paper

D.F. Fouhey, A. Gupta, A. Zisserman.

From Images to 3D Shape Attributes.

Transactions on Pattern Analysis and Machine Intelligence: Volume 41, Issue 1.

R. Girdhar, **D.F. Fouhey**, M. Rodriguez, A. Gupta.

Learning a Predictable and Generative Vector Representation for Objects.

At the *14th European Conference on Computer Vision (ECCV 2016)*.

(Spotlight: 2.9% Acceptance Rate)

D.F. Fouhey, A. Gupta, A. Zisserman.

3D Shape Attributes.

At the *29th Conference on Computer Vision and Pattern Recognition (CVPR 2016)*.

(Oral: 3.9% acceptance rate)

R. Girdhar, **D.F. Fouhey**, A. Gupta, K. Kitani, A. Gupta, M. Hebert.

Cutting through the Clutter: Task-Relevant Features for Image Matching.

At the *Winter Conference on Applications of Computer Vision (WACV) 2016*

D.F. Fouhey, W. Hussain, A. Gupta, M. Hebert.

Single Image 3D Without a Single 3D Image.

At the *15th International Conference on Computer Vision (ICCV 2015)*.

X. Wang, **D.F. Fouhey**, A. Gupta.

Designing Deep Networks for Surface Normal Estimation.

At the *28th Conference on Computer Vision and Pattern Recognition (CVPR 2015)*.

D.F. Fouhey, A. Gupta, M. Hebert.

Unfolding an Indoor Origami World.

At the *13th European Conference on Computer Vision (ECCV 2014)*.

(Oral: 2.6% acceptance rate)

D.F. Fouhey, C. L. Zitnick.

Predicting Object Dynamics in Scenes.

At the *27th Conference on Computer Vision and Pattern Recognition (CVPR 2014)*.

D.F. Fouhey, V. Delaitre, A. Gupta, A. Efros, I. Laptev, and J. Sivic.

People Watching: Human Actions as a Cue for Single View Geometry.

In *International Journal of Computer Vision (IJCV)*, Volume 110, Issue 3, pp 259-274, December 2014.

D.F. Fouhey, A. Gupta, M. Hebert.

Data-Driven 3D Primitives for Single-View Scene Understanding.

At *14th International Conference on Computer Vision (ICCV 2013)*.

D.F. Fouhey, V. Delaitre, A. Gupta, A. Efros, I. Laptev, and J. Sivic.

People Watching: Human Actions as a Cue for Single View Geometry.

At the *12th European Conference on Computer Vision (ECCV 2012)*.

(Oral: 2.8% acceptance rate – Invited to IJCV special issue on ECCV 2012)

V. Delaitre, **D.F. Fouhey**, I. Laptev, J. Sivic, A. Gupta, and A.A. Efros.

Scene semantics from long-term observation of people.

At the *12th European Conference on Computer Vision (ECCV 2012)*.

D.F. Fouhey, A. Collet, M. Hebert, and S. Srinivasa.

Object Recognition Robust to Imperfect Depth Data.

At the *2nd Workshop on Consumer Depth Cameras for Computer Vision* in conjunction with ECCV 2012.

Note: a lightly reviewed paper

M. Costanza-Robinson, B. Estabrook, and **D.F. Fouhey**.

Representative elementary volume estimation for porosity, moisture saturation, and air-water interfacial areas in

unsaturated porous media: Data quality implications.
 In *Water Resources Research* 2011, 47, W07513, doi:10.1029/2010WR009655.

D.F. Fouhey, D. Scharstein, and A. Briggs.
Multiple Plane Detection in Image Pairs Using J-linkage.
 At the *20th International Conference on Pattern Recognition (ICPR 2010)*.

Talks

Looking at a Few Images of Rooms and Many Interacting Hands
 MIT Computational Sensorimotor Learning Seminar, August 2021
 Princeton ImageX Seminar, April 2021

Building 3D Representations of Scenes from One Or Two Ordinary Images
 Google Research, December 2020
 Seminar on 3D Geometry and Vision, November 2020 [Watch here](#)

Fusing Computer Vision And Space Weather Modeling [or slight variants of this title]
 Michigan Institute for Data Science Symposium, November 2020
 Space Weather Modeling Framework Users Meeting, November 2020
 Stereo & SDO PI Meeting, August 2020

Looking at Hundreds of Millions of Hands in Interaction and Only a Few Images of Rooms
 UC Berkeley, January 2020

Building Fully 3D Representations
 Stanford/Toyota Research Workshop, January 2020

Boring Interactions and Exciting Sculptures
 UC Berkeley, June 2019

Understanding How To Go Places and Do Things
 GRASP Lab, University of Pennsylvania, March 2019
 Michigan State University, March 2019

AIA/HMI ML Data Set and AIA to EVE by Deep Learning
 Solar Dynamics Observatory Meeting: SDO in the Age of Deep Learning Mini-Workshop Session,
 November 2018

Understanding How to Go Places and Do Things
 Oxford University, November 2018
 Czech Technical University in Prague, October 2018

Recovering a Functional and Three Dimensional Understanding of Images
 Ecole des Ponts ParisTech, IMAGINE, October 2018
 INRIA Rhône-Alpes, September 2018
 INRIA Paris, September 2018
 University of Michigan, April 2018
 University of North Carolina, March 2018
 CMU, March 2018
 UC Irvine, February 2018
 Simon Fraser University, February 2018
 UC Berkeley BAIR Seminar, January 2018 [Watch here](#)

Predicting Voxel-based Reconstructions of Objects

3rd International Workshop on Recovering 6D Object Pose at ICCV 2017, October 2017

Adventures in 3D and Functional Understanding

UC Berkeley, September 2016

3D Shape Attributes

CVPR, June 2016 [Watch here](#)

Towards a Physical and Human-Centric Understanding of Images

MIT CSAIL, June 2016

UCLA, May 2016

USC CS Colloquium, March 2016

UT Austin UTCS Colloquium, March 2016

CMU VASC Seminar, March 2016

UC Berkeley, February 2016

Google, ML Seminar, February 2016

Intel Visual Computing Lab, February 2016

Revisiting Qualitative Shape via 3D Shape Attributes

Object Understanding for Interaction Workshop at ICCV 2015, December 2015

Cues and Constraints for 3D Scene Interpretation

University College London, July 2015

University of Edinburgh, IPAB Seminar, July 2015

University of Oxford, Robotics Seminar, July 2015

University of Surrey, CVSSP Seminar, June 2015

Unfolding an Indoor Origami World

ECCV, September 2014 [Watch here](#)

CMU VASC Seminar, September 2014

Data-Driven 3D

Tutorial on 3D Scene Understanding, ECCV 2014

Mid-level Likelihoods and Constraints for 3D Scene Interpretation

Robert Bosch Research and Technology Center, June 2014;

Microsoft Research Cambridge, May 2014

University of Oxford, Robotics Seminar, May 2014

Data-Driven 3D Primitives for Single Image Understanding.

CMU VASC Seminar, November 2013

People Watching: Human Actions as a Cue for Single View Geometry.

ECCV, October 2012. [Watch here](#)

CMU VASC Seminar, September 2012