

College of Information and Computer Sciences
University of Massachusetts, Amherst
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Education

- PhD in Computer Science** 2006-2011
University of California at Berkeley
Thesis: *Algorithms and Representations for Visual Recognition*
Committee: Trevor Darrell, Bruno Olshausen, Jitendra Malik (chair)
Designated emphasis in *Communication, Computation, and Statistics*
- Bachelor of Technology** 2002-2006
Computer Science and Engineering Department
Indian Institute of Technology, Kanpur
CSE Department Topper

Employment and academic positions

- Assistant Professor** Sept 2014-current
College of Information and Computer Sciences
University of Massachusetts, Amherst
- Amazon AI Scholar** Sept 2018 - current
Amazon Web Services (*part time*)
- Consultant** 2016-2017
Google Research, Cambridge (*part time*)
- Research Assistant Professor** Jan 2012 - Aug 2014
Toyota Technological Institute at Chicago
- Visiting Researcher** Oct - Nov 2013
University of Oxford, Oxford, UK
Hosts: Prof. Andrew Zisserman and Prof. Andrea Vedaldi
- Senior Member** June - Aug 2012
Center of Language and Speech Processing, Johns Hopkins University
- Graduate Student Researcher** Sept 2006 - Dec 2011
University of California at Berkeley
- Graduate Intern** May - July 2008
Google, Mountain View, CA (Host: Chuck Rosenberg)
- Visiting Researcher** May - June 2010
Microsoft Research, India
- Undergraduate Intern** May - July 2005
LEAR group at INRIA, Grenoble, France (Host: Cordelia Schmidt)

Awards and fellowships

National Science Foundation CAREER Award, 2018

Best paper honorable mention, CVPR 2018 (SPLATNet)

Outstanding reviewer, BMVC 2017, ECCV 2016, CVPR 2015, CVPR 2014

Best poster runner-up, Scene Understanding Workshop (SUNw), CVPR 2015

Best paper award, WACV 2015

Best poster runner-up, Fine-Grained Visual Recognition Workshop, CVPR

Google Graduate Fellowship, 2009-2010

Honorable mention, PASCAL VOC Segmentation Challenge 2010

PAMI-TC student travel grant, ICCV 2009

Best Paper Award, International Conference on Information Fusion (ICIF)

General Proficiency Medal for graduating with the highest GPA in CSE Department, IIT Kanpur, 2006

Pratibha scholarship, Andhra Pradesh Govt., India, 2002-2006

Rajaraman scholarship for academic proficiency, IIT Kanpur, 2005

Academic excellence award, IIT Kanpur, 2002, 2003, 2004

Funding

- 3D Shape Understanding and Generation using Unstructured Point Clouds** Sept 2019 - Aug 2022
National Science Foundation #1908669
Award: **\$499,894** (PIs: Rui Wang, Subhransu Maji)
- CDS&E: Machine Learning for Star Cluster Classification** Nov 2018 - Oct 2020
National Science Foundation #1815267
Award: **\$251,741** (PIs: Daniela Calzetti, Subhransu Maji)
- CAREER: Towards Perceptual Agents That See and Reason Like Humans** June 2018 - May 2023
National Science Foundation #1749833
Award: **\$545,586** (PI: Subhransu Maji)
- ABI Innovation: Dark Ecology: Deep Learning and Massive Gaussian Processes to Uncover Biological Signals in Weather Radar** May 2017 - April 2020
National Science Foundation, #1661259
Amount: \$1,212,645, UMass portion: **\$903,339** (PIs: Dan Sheldon, Subhransu Maji)
- Rich Language-Based Understanding of Textures for Recognition & Synthesis** Sept 2016 - Aug 2020
National Science Foundation #1617917
Award: **\$450,000** (PI: Subhransu Maji)
- Faculty awards**, Adobe Research. Amount: **\$40,000** 2018 - 2019
- Faculty award**, Facebook AI Research. Amount: **\$50,000** 2016
- NVIDIA Academic Hardware Donation Program**. Amount: **\$5,000** 2013, 2015

Professional activities

Tutorials and workshops co-organizing

- *Workshop* on “Fine Grained Visual Classification (FGVC³-FGVC⁶)”, CVPR 2015-2018
- Co-founder and co-organizer of the “New England Vision Meeting”, 2015 (75+ attendees from various universities in the New England area: <http://people.cs.umass.edu/~smaji/nevm2015>)
- *Workshop* on “Computer Vision and Human Computation”, CVPR 2014
- *Workshop* at the CLSP center, Johns Hopkins university, *Towards a Detailed Understanding of Objects and Scenes in Natural Images*, June - August, 2012 (with Andrea Vedaldi, Esa Rahtu, Matthew Blaschko, Iasonas Kokkinos, and Ben Taskar)
- *Tutorial* on “Computational Visual Recognition” at ICVGIP 2012, IIT Bombay
- *Tutorial* on “Additive Kernels and Explicit Embeddings for Large-Scale Computer Vision Problems”, ECCV 2012, Florence, Italy

Reviewing and program committees

- **Area chair**, IEEE Computer Vision and Pattern Recognition (CVPR), 2016, 2018, 2019, 2020
- **Area chair**, European Conference on Computer Vision (ECCV), 2020
- **Associate editor**, International Journal for Computer Vision (IJCV), 2019-
- **Panelist**, National Science Foundation, 2016 (2×), 2017, 2019
- **Senior program committee**, International Joint Conference on Artificial Intelligence (IJCAI), 2019
- **Area chair**, International Conference on Computer Vision, Graphics and Image Processing, 2014, 2016, 2018
- **Tutorial chair**, International Conference on Computer Vision, Graphics and Image Processing, 2016
- **Reviewer** for the following conferences:
 - IEEE Conference on Computer Vision and Pattern Recognition (CVPR) 2009 – 2017
 - European Conference on Computer Vision (ECCV) 2010 – 2019
 - International Conference on Computer Vision (ICCV) 2009 – 2019
 - Conference on Neural Information Processing Systems (NIPS) 2010 – 2017 (several years)
 - Association for the Advancement of Artificial Intelligence (AAAI) 2012
 - International Conference on Machine Learning (ICML) 2012, 2013
 - Asian Conference on Computer Vision (ACCV) 2018
- **Reviewer** for the following journals: IEEE Transactions on Pattern Analysis and Machine Intelligence (PAMI), International Journal of Computer Vision (IJCV), Computer Vision and Image Understanding (CVIU), and IEEE Transactions on Image Processing (IP)
- I have also been in the **program committee member** for various workshops organized at conferences including ECCV, CVPR and ICCV.

Publications

My papers have been cited 8573 times (h-index 32; i10-index 50) according to Google scholar as of November 2019 : <https://scholar.google.com/citations?user=l7Qx0zAAAAAJ&hl=en>

Journals

1. **MistNet: Measuring historical bird migration in the US using archived weather radar data and convolutional neural networks**, *Tsung-Yu Lin, Kevin Winner, Garrett Bernstein, Abhay Mittal, Adriaan M. Dokter, Kyle G. Horton, Cecilia Nilsson, Benjamin M. Van Doren, Andrew Farnsworth, Frank A. La Sorte, Subhransu Maji, and Daniel Sheldon*, *Methods in Ecology and Evolution*, 2019
2. **High Dimensional Inference with Random Maximum A-Posteriori Perturbations**, *Tamir Hazan, Francesco Orabona, Anand D. Sarwate, Subhransu Maji, Tommi Jaakkola*, *IEEE Transactions on Information Theory* 65: to appear 2019.
3. **Bilinear CNNs for Fine-grained Visual Recognition** *Tsung-Yu Lin, Aruni RoyChowdhury, Subhransu Maji*, *IEEE Transactions of Pattern Analysis and Machine Intelligence*, Volume:40, Issue:6, June 2018
4. **Deep Filter Banks for Texture Recognition, Description, and Segmentation**, *Mircea Cimpoi, Subhransu Maji, Iasonas Kokkinos, Andrea Vedaldi*, *International Journal of Computer Vision*, Volume 118, Issue 1, pp 65-94, May 2016
5. **Part and Attribute Discovery from Relative Annotations**, *Subhransu Maji, Gregory Shakhnarovich*, *International Journal of Computer Vision*, May 2014, Volume 108, Issue 1-2, pp 82-96
6. **Efficient Classification for Additive Kernel SVMs** *Subhransu Maji, Alexander C. Berg, Jitendra Malik*, *IEEE Transactions of Pattern Analysis and Machine Intelligence (PAMI)*, Volume 35 Issue 1, Jan 2013
7. **Poselets: A Distributed Representation for Visual Recognition** *Lubomir Bourdev, Subhransu Maji, Jitendra Malik*, *Journal of Vision*, September, 23, 2011, vol. 11 no. 11 article 891

Refereed conferences

1. **Detecting and Tracking Communal Bird Roosts in Weather Radar Data**, *Ze Zhou Cheng, Saadia Gabriel, Pankaj Bhambhani, Daniel Sheldon, Subhransu Maji, Andrew Laughlin, David Winkler*, *Association for the Advancement of Artificial Intelligence (AAAI)*, 2020, AI for Social Impact Track
2. **Task2Vec: Task Embedding for Meta-Learning**, *Alessandro Achille, Michael Lam, Rahul Tewari, Avinash Ravichandran, Subhransu Maji, Charles Fowlkes, Stefano Soatto, Pietro Perona*, *International Conference on Computer Vision (ICCV)*, 2019
3. **Shape Reconstruction using Differentiable Projections and Deep Priors**, *Matheus Gadelha, Rui Wang, Subhransu Maji*, *International Conference on Computer Vision (ICCV)*, 2019
4. **Learning Point Embeddings from Shape Repositories for Few-Shot Segmentation**, *Gopal Sharma, Evangelos Kalogerakis, Subhransu Maji*, *International Conference on 3D Vision (3DV)*, 2019
5. **WINCE: Unobtrusive Sensing of Upper Facial Action Units with EOG-based Eyewear**, *Soha Rostaminia, Alexander Lamson, Subhransu Maji, Tauhidur Rahman, Deepak Ganesan*, *Proceedings of the ACM on*

- Interactive, Mobile, Wearable and Ubiquitous Technologies (UBICOMP), 2019
Publication date: September 9, 2019 (Acceptance rate 20-25%, 26 pages)
6. **DeepRoof: A Data-driven Approach For Solar Potential Estimation Using Rooftop Imagery**, *Stephen Lee, Srinivasan Iyengar, Menghong Feng, Prashant Shenoy, Subhransu Maji*, SIGKDD Conference on Knowledge Discovery and Data Mining (KDD), 2019, **oral presentation**
Publication date: August 3, 2019, (Acceptance rate 14.2%, 10 pages)
 7. **A Bayesian Perspective on the Deep Image Prior**, *Zezhou Cheng, Matheus Gadelha, Subhransu Maji, Daniel Sheldon*, Computer Vision and Pattern Recognition (CVPR), 2019
Publication date: June 16, 2019 (Acceptance rate 25.2%, 10 pages)
 8. **Meta-Learning with Differentiable Convex Optimization**, *Kwonjoon Lee, Subhransu Maji, Avinash Ravichandran, Stefano Soatto*, Computer Vision and Pattern Recognition (CVPR), 2019, **oral presentation**
Publication date: June 16, 2019 (Acceptance rate 25.2%, Oral rate: 5.6%, 10 pages)
 9. **Random Feature Maps for the Itemset Kernel**, *Kyohei Atarashi, Subhransu Maji, Satoshi Oyama*, Association for the Advancement of Artificial Intelligence (AAAI), 2019
Publication date: January 27, 2019 (Acceptance rate 16.2%, 10 pages)
 10. **Multiresolution Tree Networks for 3D Point Cloud Processing**, *Matheus Gadelha, Rui Wang, Subhransu Maji*, European Conference on Computer Vision (ECCV), 2018
 11. **Second-order Democratic Aggregation**, *Tsung-Yu Lin, Subhransu Maji, Piotr Koniusz*, European Conference on Computer Vision (ECCV), 2018
 12. **VisemeNet: Audio-Driven Animator-Centric Speech Animation**, *Yang Zhou, Zhan Xu, Chris Landreth, Evangelos Kalogerakis, Subhransu Maji, Karan Singh*, ACM Transactions on Graphics (also to be presented at SIGGRAPH 2018)
 13. **CSGNet: Neural Shape Parser for Constructive Solid Geometry**, *Gopal Sharma, Rishabh Goyal, Difan Liu, Evangelos Kalogerakis, Subhransu Maji*, Computer Vision and Pattern Recognition (CVPR), 2018
 14. **SPLATNet: Sparse Lattice Networks for Point Cloud Processing**, *Hang Su, Varun Jampani, Deqing Sun, Subhransu Maji, Evangelos Kalogerakis, Ming-Hsuan Yang, Jan Kautz*, Computer Vision and Pattern Recognition (CVPR), 2018, oral presentation, **best paper honorable mention**
 15. **Reasoning about Fine-grained Attribute Phrases using Reference Games**, *Jong-Chyi Su*, Chenyun Wu*, Huaizu Jiang, Subhransu Maji*, International Conference on Computer Vision (ICCV), 2017
 16. **3D Shape Reconstruction from Sketches via Multi-view Convolutional Networks**, *Zhaoliang Lun, Matheus Gadelha, Evangelos Kalogerakis, Subhransu Maji, Rui Wang*, International Conference on 3D Vision (3DV), 2017, **oral presentation**
 17. **3D Shape Induction from 2D Views of Multiple Objects**, *Matheus Gadelha, Subhransu Maji, Rui Wang*, International Conference on 3D Vision (3DV), 2017
 18. **3D Shape Generation using Spatially Ordered Point Clouds**, *Matheus Gadhela, Subhransu Maji, Rui Wang*, British Machine Vision Conference (BMVC), 2017
 19. **Improved Bilinear Pooling with CNNs**, *Tsung Yu Lin, Subhransu Maji*, British Machine Vision Conference (BMVC), 2017, oral presentation

20. **Adapting Models to Signal Degradation using Distillation**, *Jong-Chyi Su, Subhransu Maji*, British Machine Vision Conference (BMVC), 2017
21. **3D Shape Segmentation with Projective Convolutional Networks**, *Evangelos Kalogerakis, Melinos Averkiou, Subhransu Maji, Siddharth Chaudhuri*, Computer Vision and Pattern Recognition (CVPR), 2017, **oral presentation**
22. **Texture Attribute Synthesis and Transfer using Feed-forward CNNs**, *Thomas Irmer, Tobias Glasmachers, Subhransu Maji*, IEEE Winter Conference on Applications of Computer Vision (WACV), 2017
23. **Visualizing and Understanding Deep Texture Representations**, *Tsung-Yu Lin, Subhransu Maji*, IEEE Conference on Computer Vision (CVPR) 2016, Las Vegas, USA
24. **One-to-many Face Recognition with Bilinear CNNs**, *Aruni RoyChowdhury, Tsung-Yu Lin, Subhransu Maji, Erik Learned-Miller*, Winter Conference on Applications of Computer Vision (WACV) 2016, Lake Placid, USA
25. **Bilinear CNN Models For Fine-grained Visual Recognition**, *Tsung-Yu Lin, Aruni RoyChowdhury, Subhransu Maji*, International Conference on Computer Vision (ICCV) 2015, Santiago, Chile (oral presentation)
26. **Multi-view CNNs for 3D Shape Recognition**, *Hang Su, Subhransu Maji, Evangelos Kalogerakis, Erik Learned-Miller* International Conference on Computer Vision (ICCV) 2015, Santiago, Chile
27. **Deep Filter Banks for Texture Recognition and Segmentation** *Mircea Cimpoi, Subhransu Maji, Andrea Vedaldi* IEEE Conference on Computer Vision (CVPR) 2015, Boston, **oral presentation**
28. **Learning Localized Perceptual Similarities for Interactive Categorization** *Catherine Wah, Subhransu Maji, Serge Belongie*, Winter Conference on Applications of Computer Vision (WACV) 2015, Waikoloa Beach, US, **best paper award**
29. **Knowing a Good HOG Filter when You See it: Efficient Selection of Filters for Detection**, *Ejaz Ahmed, Gregory Shakhnarovich, Subhransu Maji*, European Conference on Computer Vision (ECCV) 2014, Zurich, Switzerland, **oral presentation**
30. **Parsing World's Skylines with Shape Constrained MRFs**, *Rashmi V. Tonge, Subhransu Maji, C.V. Jawahar*, IEEE Conference on Computer Vision (CVPR) 2014, Columbus, Ohio, USA
31. **Similarity Comparisons for Interactive Fine-Grained Categorization**, *Catherine Wah, Grant Van Horn, Steven Branson, Subhransu Maji, Pietro Perona, Serge Belongie*, IEEE Conference on Computer Vision (CVPR) 2014, Columbus, Ohio, USA
32. **Understanding Objects in Detail with Fine-grained Attributes**, *A. Vedaldi, S. Mahendran, S. Tsogkas, S. Maji, B. Girshick, J. Kannala, E. Rahtu, I. Kokkinos, M. B. Blaschko, D. Weiss, B. Taskar, K. Simonyan, N. Saphra, S. Mohamed*, IEEE Conference on Computer Vision (CVPR) 2014, Columbus, Ohio, USA
33. **Describing Textures in the Wild**, *Mircea Cimpoi, Subhransu Maji, Iasonas Kokkinos, Sammy Mohamed, Andrea Vedaldi*, IEEE Conference on Computer Vision (CVPR) 2014, Columbus, Ohio, USA
34. **Active Boundary Annotation using Random MAP Perturbations** *Subhransu Maji, Tamir Hazan, Tommi Jaakkola*, AISTATS 2014, Reykjavik, Iceland
35. **Learning Efficient Random MAP Predictors with Non-Decomposable Loss Functions**, *Tamir Hazan, Subhransu Maji, Joseph Keshet, Tommi Jaakkola*, Neural Information Processing Systems (NIPS) 2013, Lake Tahoe, USA

36. **On Sampling from the Gibbs Distribution with Random MAP Perturbations** *Tamir Hazan, Subhransu Maji, Tommi Jaakkola*, Neural Information Processing Systems (NIPS) 2013, Lake Tahoe, USA
37. **Part Discovery from Partial Correspondence**, *Subhransu Maji, Gregory Shakhnarovich*, IEEE Conference on Computer Vision (CVPR) 2013, Portland, USA
38. **Describing People: A Poselet-Based Approach to Attribute Classification**, *Lubomir Bourdev, Subhransu Maji, Jitendra Malik*, International Conference on Computer Vision (ICCV) 2011, Barcelona, Spain, **oral presentation**
39. **Semantic Contours from Inverse Detectors**, *Bharath Hariharan, Pablo Arbelaez, Lubomir Bourdev, Subhransu Maji, Jitendra Malik*, International Conference on Computer Vision (ICCV) 2011, Barcelona, Spain
40. **Action Recognition from a Distributed Representation of Pose and Appearance** *Subhransu Maji, Lubomir Bourdev, Jitendra Malik*, IEEE Conference on Computer Vision (CVPR) 2011, Colorado Springs, USA
41. **Biased Normalized Cuts**, *Subhransu Maji, Nisheeth Vishnoi, Jitendra Malik*, IEEE Conference on Computer Vision (CVPR) 2011, Colorado Springs, USA
42. **Object Segmentation by Alignment of Poselet Activations to Image Contours**, *Thomas Brox, Lubomir Bourdev, Subhransu Maji, Jitendra Malik*, IEEE Conference on Computer Vision (CVPR) 2011, Colorado Springs, USA
43. **Detecting People Using Mutually Consistent Poselet Activations**, *Lubomir Bourdev, Subhransu Maji, Thomas Brox, Jitendra Malik*, European Conference on Computer Vision (ECCV) 2010, Crete, Greece
44. **Max-Margin Additive Classifiers for Detection**, *Subhransu Maji, Alexander Berg*, International Conference on Computer Vision (ICCV) 2009, Kyoto, Japan, **oral presentation**
45. **Object Detection Using a Max-Margin Hough Transform**, *Subhransu Maji, Jitendra Malik*, IEEE Conference on Computer Vision (CVPR) 2009, Miami, USA, **oral presentation**
46. **Multiple-View Object Recognition in Band-Limited Distributed Camera Networks**, *Allen Y. Yang, Subhransu Maji, C. M. Christoudias, Trevor Darrell, Jitendra Malik and S. S. Sastry*, ICSDC 2009, Komo, Italy, **oral presentation**
47. **Distributed Compression and Fusion of Nonnegative Sparse Signals for Multiple-View Object Recognition**, *Allen Y. Yang, Subhransu Maji, K. Hong, P. Yan, Shankar S. Sastry*, International Conference on Information Fusion (ICIF) 2009, Seattle, USA, **best paper award**
48. **Classification using Intersection Kernel SVMs is Efficient**, *Subhransu Maji, Alexander C. Berg and Jitendra Malik*, IEEE Conference on Computer Vision (CVPR) 2008, Anchorage, USA
49. **Confidence Based updation of Motion Conspicuity in Dynamic Scenes**, *Vivek Kumar Singh, Subhransu Maji, Amitabha Mukerjee*, Computer and Robot Vision (CRV) 2006, Québec City, Canada

Workshops

1. **Visualizing and Describing Fine-grained Categories as Textures**, *Tsung-Yu Lin, Mikayla Timm, Chenyun Wu, Subhransu Maji*, The Sixth Fine-Grained Visual Categorization Workshop (FGVC6) at CVPR 19

2. **Jointly Learning Multiple Perceptual Similarities**, *Liwen Zhang, Subhransu Maji, and Ryota Tomioka*, Multi-View Representation Learning Workshop (MVRL) at ICML, 2016
3. **Distinguishing Weather Phenomena from Bird Migration Patterns in Radar Imagery**, *Aruni Roy-Chowdhury, Daniel Sheldon, Subhransu Maji, Erik Learned-Miller*, IEEE Workshop on Perception Beyond the Visual Spectrum (PBVS), 2016
4. **Visualizing Deep Texture Representations** *Tsung-Yu Lin, Subhransu Maji*, Workshop on Visualization for Deep Learning at ICML, 2016
5. **Learning Localized Perceptual Similarity Metrics for Interactive Categorization**, *Catherine Wah, Subhransu Maji, and Serge Belongie*, Human-Machine Communication for Visual Recognition and Search, ECCV 2014
6. **Using Human Knowledge to Judge Part Goodness: Interactive Part Selection** *Ejaz Ahmed, Subhransu Maji, Gregory Shakhnarovich, Larry Davis*, Workshop on Computer Vision and Human Computation, CVPR 2014
7. **Discovering a Lexicon of Parts and Attributes**, *Subhransu Maji*, Second International Workshop on Parts and Attributes, ECCV 2012, **oral presentation**, *Best poster runner-up at Fine-Grained Visual Recognition Workshop*, 2013
8. **Linearized Smooth Additive Classifiers**, *Subhransu Maji*, Workshop on Web-scale Vision and Social Media, ECCV 2012, **oral presentation**
9. **Part Annotations via Pairwise Correspondence**, *Subhransu Maji and Gregory Shakhnarovich*, 4th Workshop on Human Computation, AAAI 2012, **oral presentation**
10. **Fast Unsupervised Alignment of Video and Text for Indexing Names and Faces**, *Subhransu Maji and Ruzena Bajscy*, Multimedia Semantics Workshop, ACM Multimedia 2007, Augsburg, Germany

Technical reports and preprints (non peer-reviewed)

1. **Fine-Grained Visual Classification of Aircraft**, *Subhransu Maji, Esa Rahtu, Juho Kannala, Matthew Blaschko and Andrea Vedaldi*, arXiv:1306.5151, Jun 2013
2. **Large Scale Image Annotations on Amazon Mechanical Turk** *Subhransu Maji*, EECS Department, UCB, Tech. Rep. UCB/EECS-2011-79, July 2011
3. **Fast and Accurate Digit Classification**, *Subhransu Maji, Jitendra Malik*, EECS Department, UCB, Tech. Rep. UCB/EECS-2009-159, Nov. 2009

Book chapters

1. **A Taxonomy of Part and Attribute Discovery Techniques**, *Subhransu Maji*, Visual Attributes, Springer, 2016, D. Parikh, R. Feris, C. Lampert, Eds.

2. **Perturbation Models and PAC-Bayesian Generalization Bounds** *J. Keshet, S. Maji, T. Hazan, T. Jaakkola*, Perturbations, Optimization, and Statistics, MIT Press, 2016, T. Hazan, G. Papandreou, and D. Tarlow, Eds.
3. **Multiple-view Object Recognition in Smart Camera Networks**, *Allen Y. Yang, Subhansu Maji, M. C. Christoudias, Trevor Darrell, Jitendra Malik, Shankar S. Sastry*, Distributed Video Sensor Networks, Springer, 2010

Student supervision

Advisees

- Gustavo Perez, PhD student, UMass Amherst (*current*)
- Matheus Gadelha, PhD student, UMass Amherst (*current*, w/ Rui Wang)
- Zezhou Cheng, PhD student, UMass Amherst (*current*, w/ Dan Sheldon)
- Chenyun Wu, PhD student, UMass Amherst (*current*)
- Mikayla Timm, PhD student, UMass Amherst (*current*)
- JongChyi Su, PhD student, UMass Amherst (*current*)
- TsungYu Lin, PhD student, UMass Amherst (*current*)
- Gopal Sharma, PhD student, UMass Amherst (*current*, w/ Evangelos Kalogerakis)

PhD Thesis Committees

- Hang Su, PhD student, UMass Amherst (*current*)
- Huaizu Jiang, PhD student, UMass Amherst (*current*)
- Aruni RoyChowdhury, PhD student, UMass Amherst (*current*)
- Pia Bideau, PhD student, UMass Amherst (*current*)
- Souyoung Jin, PhD student, UMass Amherst (*current*)
- Venkatesh N. Murthy, PhD student, UMass Amherst, 2019
- Tao Sun, PhD student, UMass Amherst, 2018
- Zhaoliang Lun, PhD student, UMass Amherst, 2017
- Arvind R Neelakantan, PhD student, UMass Amherst, 2017
- David Belanger, PhD student, UMass Amherst, 2017
- Steven Cheng-Xian Li, PhD student, UMass Amherst, 2016

Interns and student collaborators

- Samantha Cote, Undergraduate student, UMass Amherst, *honors project*, 2019
- Wataru Noguchi, Graduate student, Hokkaido University, *visitor*, 2019
- Kyohei Atarashi, Graduate student, Hokkaido University, *visitor*, 2019
- Kei Takada, Graduate student, Hokkaido University, *visitor*, 2018
- Tongyi Cao, PhD student, UMass Amherst, *synthesis project*, 2019
- Kwonjoon Lee, PhD student, UCSD, *summer intern*, 2018
- Yang Zhou, PhD student, UMass Amherst, *synthesis project*, 2018
- Emma Strubell, PhD student, UMass Amherst, *synthesis project*, 2016
- Thomas Irmer (MS student at Ruhr-Universitat Bochum, co-advised with Tobias Glasmachers)
- Brayden Neal, undergraduate student (REU program), UPenn, Summer 2016 (*current*)
- Liwen Zhang, PhD student at University of Chicago (Co-supervised with Ryota Tomioka) (*current*)
- Mikayla Trimm, undergraduate student (REU program), UCF, Summer 2015
- Kundan Kumar, undergraduate student, IIT Kanpur, Summer 2015
- Mircea Cimpoi, PhD student at Oxford University (Co-supervised w/ Andrea Vedaldi), 2013-2015
- Ejaz Ahmed, PhD student at UMD (Intern w/ Greg Shakhnarovich), summer 2014
- Catherine Wah, PhD student at UCSD, Intern, Feb - April '13, Jan - April '14
- Rashmi Tonge, MS student at IIIT Hyderabad (Thesis co-supervisor w/ C.V. Jawahar), 2013 - 2014

Teaching

- Instructor, CMPSCI 670: Computer Vision, UMass Amherst, Fall 2019 (73 students)
- Instructor, CMPSCI 370: Intro. to Computer Vision, UMass Amherst, Spring 2018 (53 students)
- Instructor, CMPSCI 670: Computer Vision, UMass Amherst, Fall 2018 (61 students)
- Instructor, CMPSCI 370: Intro. to Computer Vision, UMass Amherst, Spring 2018 (51 students)
- Instructor, CMPSCI 670: Computer Vision, UMass Amherst, Fall 2017 (66 students)
- Instructor, CMPSCI 370: Intro. to Computer Vision, UMass Amherst, Spring 2017 (40 students)
- Instructor, CMPSCI 670: Computer Vision, UMass Amherst, Fall 2016 (39 students)
- Instructor, CMPSCI 370: Intro. to Computer Vision, UMass Amherst, Spring 2016 (33 students)
- Instructor, CMPSCI 370HH: Honors section for 370, UMass Amherst, Spring 2016 (4 students)
- Instructor, CMPSCI 689: Machine Learning, UMass Amherst, Spring 2015 (39 students)
- Instructor, CMPSCI 670: Computer Vision, UMass Amherst, Fall 2014 (25 students)
- Guest lecturer, Visual Recognition , TTI Chicago, Winter 2012
- Guest lecturer, CS 294: Visual Search Engines, UC Berkeley, Fall 2010

- Guest lecturer, CS 280: Computer Vision, UC Berkeley, Spring 2010
- GSI for CS 162, Operating Systems and Systems Programming, UC Berkeley, Fall 2006
- Co-organized and taught 'Data Structures and Algorithms', IIT Kanpur, Summer 2006

Invited talks, presentations, etc.

- Modeling Tasks and Domains for Transfer Learning, Extreme Vision Workshop, ICCV 2019
- Dark Ecology: Unraveling Mysteries of Bird Migration using Weather Radar and Machine Learning, Computer Vision for Wildlife Conservation Workshop, ICCV 2019
- Improving Second-Order Representations, Tutorial on Second and Higher-order Representations in Computer Vision, ICCV 2019
- Task Embedding for Model Recommendation, CVPR AC Workshop, USCD (March 2019)
- Task Embedding for Model Recommendation, ICERM, Brown University (Feb 2019)
- Adversarial attacks against ML systems, Security Seminar, UMass Amherst (Fall 18)
- Learning to generate 3D shapes, Caltech (August 2018)
- Improved bilinear CNNs via the Matrix Square-Root and its Gradient, Manifold Learning Workshop, ICCV 2017.
- Factorized architectures for fine-grained recognition, Amazon AWS AI (Sept 2017)
- Cross quality distillation (or "How to see Blurry pictures better"), Google Research, *Cambridge, MA* (June 2016)
- Invited talk, CVPR16 Area Chair Workshop, *Vancouver* (Feb 2016)
- Bilinear CNN models for fine-grained visual recognition
 - Department Colloquium, *University of Rochester* (April 2017)
 - Department Colloquium, *Rochester Polytechnic Institute* (April 2017)
 - Department Colloquium, *Worcester Polytechnic Institute* (Sept 2016)
 - Computer vision seminar, *Boston University* (March 2016)
 - Computer vision seminar, *University of Washington* (Oct 2015)
 - Microsoft Research, *Seattle* (Oct 2015)
 - Computer vision seminar, *UC Berkeley* (Sept 2015)
 - Google research, *Mountain view* (Sept 2015)
 - Computer vision seminar, *MIT* (May 2015)
- Invited talk, ImageNet workshop at ICCV15, *Santiago* (Dec 2015)
- The world of computer vision, Science Quest, *UMass Amherst* (Oct 2015)

- But what is it made of? (“Learning to recognize materials”), Faculty seminar, UMass Amherst (Dec 2014)
- Rich semantic representations for detailed visual recognition
 - Invited talk, *Toyota Technological Institute at Chicago* (April 2014)
 - Invited talk, *University of Minnesota, Twin-Cities* (March 2014)
 - Invited talk, *Imperial College London* (March 2014)
 - Invited talk, *Microsoft research, Cambridge, UK* (March 2014)
 - Invited talk, *Adobe Research, San Francisco* (March 2014)
 - Invited talk, *University of North Carolina, Chapel Hill* (March 2013)
 - Invited talk, *University of Southern California* (March 2013)
 - Invited talk, *University of Maryland, College Park* (March 2013)
 - Invited talk, *University of California, Berkeley* (March 2013)
 - Invited talk, *University of Massachusetts, Amherst* (Feb 2014)
- Discovering the structure of visual categories
 - Robotics seminar, *Oxford University* (Sept 2013)
 - Invited talk, *Microsoft research, Cambridge, UK* (Sept 2013)
 - Machine learning and friends seminar, *UMass, Amherst* (Oct 2013)
 - Invited talk, *Kyoto university* (May 2013)
 - Faculty research seminar, *Toyota Technological Institute, Chicago* (2013)
- Discovering a lexicon of parts and attributes
 - CLSP Summer Workshop, *Johns Hopkins University* (2012)
 - Midwest vision workshop, *UIUC* (2012)
 - Keynote talk, Workshop on Parts and Attributes, *ECCV Florence* (2012)
 - Computer vision seminar, *Caltech* (2012)
- Linearized Smooth Additive Classifiers, Workshop on Web-scale Vision and Social Media, *ECCV, Florence* (2012)
- Fast and accurate object and action detection
 - Computer vision seminar, *MIT* (2011)
 - Robotics institute seminar, *CMU* (2011)
 - Invited talk, Google research, *Mountain view* (2011)
 - Vision workshop, *Mysore park* (2011)
- Large-scale image annotations using Amazon mechanical turk
 - Intel research, *Berkeley* (2011)
 - RAD LAB seminar, *Berkeley* (2011)
 - Machine learning tea, *Berkeley* (2011)