Subhransu Maji

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My research focuses on computer vision and machine learning, aiming to enable robust and adaptive sensing of our world. Additionally, I collaborate with domain experts to develop novel applications of computer vision, particularly in ecology and remote sensing.

Education

- **University of California, Berkeley** ..... 2006 – 2011
  PhD in Computer Science, EECS Department
  with a Designated Emphasis in Communication, Computation and Statistics
  Advisor: Jitendra Malik
- **Indian Institute of Technology, Kanpur** ..... 2002 – 2006
  Bachelor of Technology (B.Tech.) in Computer Science and Engineering

Employment

- **University of Massachusetts Amherst**, College of Information and Computer Sciences
  - Associate Professor with Tenure ..... 2020 – now
  - Assistant Professor ..... 2014 – 2020
- **Toyota Technological Institute at Chicago**, Research Assistant Professor ..... 2012 – 2014

Visiting and Part-Time Positions

- **University of Amsterdam**, Visiting Faculty (Sabbatical Visit) ..... 2021 – 2022
- **Amazon**, Amazon Scholar (Part Time) ..... 2018 – 2021
- **Google**, Consuting (Part Time) ..... 2016 – 2017
- **University of Oxford**, Visiting Researcher at the VGG Group 2013
- **Johns Hopkins University**, Senior Member at the Center of Language and Speech Processing 2012
- **Microsoft Research India**, Student Intern 2010
- **Google**, Student Intern (Host: Chuck Rosenberg) 2008
- **INRIA**, Intern at the LEAR group (Host: Prof. Cordelia Schmid) 2005

Selected Awards

- Best Paper for the AI for Social Impact Track at AAAI 2024
- National Science Foundation CAREER Award, 2018
- Best Paper Honorable Mention, CVPR 2018 (Awarded to 4 / 979 papers)
- Best Paper, WACV 2015
- Google Graduate Fellowship, 2009
- General Proficiency Medal for the Best Academic Performance in the CSE Department, IIT Kanpur, 2006
- Pratibha Scholarship from the Andhra Pradesh Government, India, 2002-06
- Rajaraman Scholarship for Academic Proficiency, IIT Kanpur, 2005
- Academic Excellence Award, IIT Kanpur, 2002-04

Grants and Funding

1. **The Emergence of Star Clusters: Insights from AI** 2024-2026
   National Science Foundation
   Award: $421,175[1] (PIs: Daniela Calzetti, Subhransu Maji)

2. **Modeling and Relating Visual Tasks** 2023-2026
   National Science Foundation
   Award: $600,000 (PI: Subhransu Maji)

3. Gift from *Dolby Research* 2023-2024
   Award: $40,000

4. Gift from *Adobe Research* 2018-2024
   Award: $80,000

5. **A Hosted Analytic Collaborative Framework for Global River Water Quality and Quantity from SWOT, Landsat and Sentinel-2** 2022-2025
   National Aeronautics and Space Administration (NASA)
   Award: $2.1 million (PI: Colin Gleason, Co-PIs: Subhransu Maji, Suresh Vannan, Nikki Tebdaldi, John Garderner, Tamlin Pavelsky). My share ≈ $400,000.

6. **Climate Change AI Innovation** 2022-2023
   Award: $80,000 (PIs: Subhransu Maji, Peng Bai)

7. **Collaborative Research: MRA: Insectivore Response to Environmental Change** 2020-2023
   National Science Foundation
   Award: $344,914 (PIs: Daniel Sheldon, Subhransu Maji)
   ++ Grants above this were awarded since my tenure application in June 2019.

8. **3D Shape Understanding and Generation using Unstructured Point Clouds** 2019-2022
   National Science Foundation
   Award: $499,894 (PIs: Rui Wang, Subhransu Maji)

9. **CDSE: Machine Learning for Star Cluster Classification** 2018-2020
   National Science Foundation
   Award: $251,741 (PIs: Daniela Calzetti, Subhransu Maji)

10. **CAREER: Towards Perceptual Agents That See and Reason Like Humans** 2018-2023
    National Science Foundation
    Award: $545,586 (PI: Subhransu Maji)

11. **Collaborative Research: ABI Innovation: Dark Ecology: Deep Learning and Massive Gaussian Processes to Uncover Biological Signals in Weather Radar** 2017-2020
    National Science Foundation
    Award: $903,339 (PIs: Dan Sheldon, Subhransu Maji)

12. **Texture2Text:Rich Language-Based Understanding of Textures for Recognition & Synthesis** 2016-2019
    National Science Foundation
    Award: $450,000 (PI: Subhransu Maji)

13. Gift from *Facebook AI Research* (2016), $50,000

14. GPUs via *NVIDIA Academic Hardware Donation Program* (2013, 2015)

[1] My share as Co-PI is roughly half of the total amount unless otherwise indicated.

Publications

Conferences are the primary publication venues in Computer Science, with CVPR, ICCV, ECCV, and NeurIPS being the most impactful. My interdisciplinary papers have also appeared in leading science journals. Overall my publications have been cited 26,419 times (h-index 47; i10-index 86) according to Google Scholar as of June 2024. Many of these publications result from collaborative efforts, particularly in Ecology and Astronomy. I have underlined myself, as well as the PhD, MS, undergraduate students who were under my supervision at the time of publication.

Journals

1. **Feedback in emerging extragalactic star clusters, FEAST: The relation between 3.3 μm PAH emission and Star Formation Rate traced by ionized gas in NGC 628**, Benjamin Gregg, Daniela Calzetti, Angela Adamo, Varun Bajaj, Jenna E. Ryon, Sean T. Linden, Matteo Correnti, Michele Cignoni, Matteo Messa, Elena Sabbi, John S. Gallagher, Kathryn Grasha, Alex Pedrini, Robert A. Gutermuth, Jens Melinder, Ralf Kotulla, Gustavo Perez, Mark R. Krumholz, Arjan Bik, Goran Ostlin, Kelsey E. Johnson, Giacomo Bortolini, Linda J. Smith, Monica Tosi, Subhransu Maji, Helena Faustino Vieira, *The Astrophysical Journal* (ApJ), 2024
2. **Using Spatio-Temporal Information in Weather Radar Data to Detect and Track Communal Bird Roosts**, Gustavo Perez, Wenlong Zhao, Zezhou Cheng, Maria Carolina Belotti, Yuting Deng, Victoria Simons, Elske Tielens, Jeffrey Kelly, Kyle Horton, Subhransu Maji, Daniel Sheldon, *Remote Sensing in Ecology and Conservation*, 2024
3. **Long-term Analysis of Persistence and Size of Swallow and Martin Roosts in the US Great Lakes**, Maria Carolina T. D. Belotti, Yuting Deng, Wenlong Zhao, Victoria F. Simons, Zezhou Cheng, Gustavo Perez, Elske Tielens, Subhransu Maji, Daniel Sheldon, Jeffrey F. Kelly, and Kyle G. Horton, *Remote Sensing in Ecology and Conservation*, 2023.
4. **Quantifying Long-term Phenological Patterns of Aerial Insectivores Roosting in the Great Lakes Region using Weather Surveillance Radar**, Yuting Deng, Maria Belotti, Wenlong Zhao, Zezhou Cheng, Gustavo Perez, Elske Tielens, Victoria Simons, Daniel Sheldon, Subhransu Maji, Jeffrey Kelly, Kyle Horton, *Global Change Biology*, 2023.
5. **ZeoNet: 3D Convolutional Neural Networks for Predicting Adsorption in Nanoporous Zeolites**, Yachan Liu†, Gustavo Perez†, Zezhou Cheng, Aaron Sun, Samuel Hoover, Wei Fan, Subhransu Maji and Peng Bai, *Journal of Material Chemistry A*, 2023 († equal contribution)
6. **Star Cluster Formation and Evolution in M101: An Investigation with the Legacy Extragalactic UV Survey**, Sean Linden, Gustavo Perez, Daniela Calzetti, Subhransu Maji, Matteo Messa, et al., *The Astrophysical Journal* (ApJ), 2022
7. **On Measuring and Controlling the Spectral Bias of the Deep Image Prior**, Zengling Shi, Pascal Mettes, Subhransu Maji, Cees GM Snoek, *International Journal of Computer Vision* (IJCV), 2022
8. **StarcNet: Machine Learning for Star Cluster Classification**, Gustavo Perez, Matteo Messa, Daniela Calzetti, Subhransu Maji, Dooseok Jung, Angela Adamo, Mattia Sirressi, *The Astrophysical Journal* (ApJ), 2021
9. **Neural Shape Parsers for Constructive Solid Geometry**, Gopal Sharma, Rishabh Goyal, Difan Liu, Evangelos Kalogerakis, Subhransu Maji, *IEEE Transactions on Pattern Analysis and Machine Intelligence* (PAMI), 2020
10. **Inferring 3D Shapes from Image Collections Using Adversarial Networks**, Matheus Gadelha, Aartika Rai, Subhransu Maji, Rui Wang, *International Journal of Computer Vision* (IJCV), 2020
11. **Phenology of Nocturnal Avian Migration has Shifted at the Continental Scale**, Kyle G. Horton, Frank A. La Sorte, Daniel Sheldon, Tsung-Yu Lin, Kevin Winner, Garrett Bernstein, Subhransu Maji, Wesley M. Hochachka, Andrew Farnsworth, *Nature Climate Change*, 2019
    ++ Ones above this were published since my tenure application in June 2019.
12. **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, Daniel Sheldon, *Methods in Ecology and Evolution*, 2019.
    Robert May Early Career Research Prize Shortlist

13. **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*, 2019
14. **Bilinear CNNs for Fine-grained Visual Recognition** Tsung-Yu Lin, Aruni RoyChowdhury, Subhransu Maji, *IEEE Transactions of Pattern Analysis and Machine Intelligence* (PAMI), Volume: 40 , Issue: 6 , June 2018
15. **Deep Filter Banks for Texture Recognition, Description, and Segmentation**, Mircea Cimpoi, Subhransu Maji, Iasonas Kokkinos, Andrea Vedaldi, *International Journal of Computer Vision* (IJCV), May 2016
16. **Part and Attribute Discovery from Relative Annotations**, Subhransu Maji, Gregory Shakhnarovich, *International Journal of Computer Vision* (IJCV), May 2014
17. **Efficient Classification for Additive Kernel SVMs** Subhransu Maji, Alexander Berg, Jitendra Malik, *IEEE Transactions of Pattern Analysis and Machine Intelligence* (PAMI), Jan 2013
18. **Poselets: A Distributed Representation for Visual Recognition** Lubomir Bourdev, Subhransu Maji, Jitendra Malik, *Journal of Vision*, September 2011

Refereed Conferences

1. **Human-in-the-Loop Visual Re-ID for Population Size Estimation**, Gustavo Perez, Grant Van Horn, Daniel Sheldon, Subhransu Maji, *European Conference on Computer Vision* (ECCV), 2024 (to appear)
2. **Improved Zero-Shot Classification by Adapting VLMs with Text Descriptions**, Oindrila Saha, Grant Van Horn, Subhransu Maji, *Computer Vision and Pattern Recognition* (CVPR), 2024
3. **Task2Box: Box Embeddings for Modeling Asymmetric Task Relationships**, Rangel Daroya, Aaron Sun, Subhransu Maji, *Computer Vision and Pattern Recognition* (CVPR), 2024
4. **DISCount: Counting in Large Image Collections with Detector-based Importance Sampling**, Gustavo Perez, Subhransu Maji†, and Daniel Sheldon†, *Association for the Advancement of Artificial Intelligence* (AAAI), 2024 (†equal advising)
   Best Paper Award for the AI for Social Impact Track
5. **LU-NeRF: Scene and Pose Estimation by Synchronizing Local Unposed NeRFs**, Zezhou Cheng, Carlos Esteves, Varun Jampani, Abhishek Kar, Subhransu Maji, Ameesh Makadia, *International Conference on Computer Vision* (ICCV), 2023
6. **MVDECOR: Multi-view Dense Correspondence Learning for Fine-Grained 3D Segmentation**, Gopal Sharma, Kangxue Yin, Subhransu Maji, Evangelos Kalogerakis, Or Litany, and Sanja Fidler, *European Conference on Computer Vision* (ECCV), 2022
7. **Improving Few-Shot Part Segmentation using Coarse Supervision**, Oindrila Saha, Zezhou Cheng, Subhransu Maji, *European Conference on Computer Vision* (ECCV), 2022
8. **Cross-Modal 3D Shape Generation and Manipulation**, Zezhou Cheng, Menglei Chai, Jian Ren, Hsin-Ying Lee, Kyle Olszewski, Zeng Huang, Subhransu Maji, and Sergey Tulyakov, *European Conference on Computer Vision* (ECCV), 2022
9. **Dynamic Transformer for Few-shot Instance Segmentation**, Haochen Wang, Jie Liu, Yongtuo Liu, Subhransu Maji, Jan-jakob Sonke, Efstratios Gavves, *ACM Multimedia*, 2022
10. **PriFit: Learning to Fit Primitives Improves Few Shot Learning on Point Clouds**, Gopal Sharma, Bidya Dash, Aruni RoyChowdhury, Matheus Gadelha, Marios Loizou, Liangliang Cao, Rui Wang, Erik Learned-Miller, Subhransu Maji, Evangelos Kalogerakis, *Eurographics Symposium on Geometry Processing*, 2022
11. **Domain Adaptors for Hyperspectral Images**, Gustavo Perez, Subhransu Maji, *International Conference on Pattern Recognition* (ICPR), 2022
12. **GANorCON: Are Generative Models useful for Few-shot Segmantic Segmentation?**, Oindrila Saha, Zezhou Cheng, Subhransu Maji, *Computer Vision and Pattern Recognition* (CVPR), 2022
13. **Semi-Supervised Learning with Taxonomic Labels**, Jong-Chyi Su, Subhransu Maji, *British Machine Vision Conference* (BMVC), 2021

14. **On Equivariant and Invariant Learning of Object Landmark Representations**, Zezhou Cheng, Jong-Chyi Su, Subhransu Maji, *International Conference on Computer Vision* (ICCV), 2021
15. **A Realistic Evaluation of Semi-Supervised Learning for Fine-Grained Classification**, Jong-Chyi Su, Zezhou Cheng, Subhransu Maji, *Computer Vision and Pattern Recognition* (CVPR), 2021
16. **Exponential Moving Average Normalization for Self-supervised and Semi-supervised Learning**, Zhaowei Cai, Avinash Ravichandran, Subhransu Maji, Charless Fowlkes, Zhowen Tu, Stefano Soatto, *Computer Vision and Pattern Recognition* (CVPR), 2021
17. **Exploring and Predicting Transferability across NLP Tasks**, Tu Vu, Tong Wang, Tsendsuren Munkhdalai, Alessandro Sordoni, Adam Trischler, Andrew Mattarella-Micke, Subhransu Maji, Mohit Iyyer, *Empirical Methods in Natural Language Processing* (EMLNP), 2020
18. **Label-Efficient Learning on Point Clouds using Approximate Convex Decompositions**, Matheus Gadelha†, Aruni RoyChowdhury†, Gopal Sharma, Evangelos Kalogerakis, Liangliang Cao, Erik Learned-Miller, Rui Wang, Subhransu Maji, *European Conference on Computer Vision* (ECCV), 2020 († equal contribution)
19. **ParSeNet: A Parametric Surface Fitting Network for 3D Point Clouds**, Gopal Sharma, Difan Liu, Subhransu Maji, Evangelos Kalogerakis, Siddhartha Chaudhuri, Radomír Měch, *European Conference on Computer Vision* (ECCV), 2020
20. **When Does Self-Supervision Improve Few-Shot Learning?**, Jong-Chyi Su, Subhransu Maji, Bharath Hariharan, *European Conference on Computer Vision* (ECCV), 2020
21. **Describing Textures using Natural Language**, Chenyun Wu, Mikayla Timm, Subhransu Maji, *European Conference on Computer Vision* (ECCV), 2020
22. **PhraseCut: Language-based Image Segmentation in the Wild**, Chenyun Wu, Trung Bai, Scott Cohen, Zhe Lin, Subhransu Maji, *Conference on Computer Vision and Pattern Recognition* (CVPR), 2020
23. **Learning Generative Models of Shape Handles**, Matheus Gadelha, Giorgio Gori, Duygu Ceylan, Radomir Mech, Nathan Carr, Tamy Boubekeur, Rui Wang, Subhransu Maji, *Conference on Computer Vision and Pattern Recognition* (CVPR), 2020
24. **Active Adversarial Domain Adaptation**, Jong-Chyi Su, Yi-Hsuan Tsai, Kihyuk Sohn, Buyu Liu, Subhransu Maji, Manmohan Chandraker, *Winter Conference on Applications of Computer Vision* (WACV), 2020
25. **Detecting and Tracking Communal Bird Roosts in Weather Radar Data**, Zezhou 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)
++ Ones above this were published since my tenure application in June 2019.
26. **W!NCE: 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
27. **DeepRoof: A Data-driven Approach For Solar Potential Estimation Using Rootop Imagery**, Stephen Lee, Srinivasan Iyengar, Menghong Feng, Prashant Shenoy, Subhransu Maji, *SIGKDD Conference on Knowledge Discovery and Data Mining (KDD)*, 2019
28. **A Bayesian Perspective on the Deep Image Prior**, Zezhou Cheng, Matheus Gadelha, Subhransu Maji, Daniel Sheldon, *Computer Vision and Pattern Recognition* (CVPR), 2019
29. **Meta-Learning with Differentiable Convex Optimization**, Kwonjoon Lee, Subhransu Maji, Avinash Ravichandran, Stefano Soatto, *Computer Vision and Pattern Recognition* (CVPR), 2019
30. **Random Feature Maps for the Itemset Kernel**, Kyohei Atarashi, Subhransu Maji, Satoshi Oyama, *Association for the Advancement of Artificial Intelligence* (AAAI), 2019
31. **Multiresolution Tree Networks for 3D Point Cloud Processing**, Matheus Gadelha, Rui Wang, Subhransu Maji, *European Conference on Computer Vision* (ECCV), 2018
32. **Second-order Democratic Aggregation**, Tsung-Yu Lin, Subhransu Maji, Piotr Koniusz, *European Conference on Computer Vision* (ECCV), 2018

33. **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)
34. **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
35. **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
Best Paper Honorable Mention Award
36. **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
37. **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
38. **3D Shape Induction from 2D Views of Multiple Objects**, Matheus Gadelha, Subhransu Maji, Rui Wang, *International Conference on 3D Vision* (3DV), 2017
39. **3D Shape Generation using Spatially Ordered Point Clouds**, Matheus Gadhela, Subhransu Maji, Rui Wang, *British Machine Vision Conference* (BMVC), 2017
40. **Improved Bilinear Pooling with CNNs**, Tsung Yu Lin, Subhransu Maji, *British Machine Vision Conference* (BMVC), 2017,
41. **Adapting Models to Signal Degradation using Distillation**, Jong-Chyi Su, Subhransu Maji, *British Machine Vision Conference* (BMVC), 2017
42. **3D Shape Segmentation with Projective Convolutional Networks**, Evangelos Kalogerakis, Melinos Averkiou, Surbhransu Maji, Siddharth Chaudhuri, *Computer Vision and Pattern Recognition* (CVPR), 2017
43. **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
44. **Visualizing and Understanding Deep Texture Representations**, Tsung-Yu Lin, Subhransu Maji, *IEEE Conference on Computer Vision* (CVPR), 2016
45. **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
46. **Bilinear CNN Models For Fine-grained Visual Recognition**, Tsung-Yu Lin, Aruni RoyChowdhury, Subhransu Maji, International *Conference on Computer Vision* (ICCV), 2015
47. **Multi-view CNNs for 3D Shape Recognition**, Hang Su, Subhransu Maji, Evangelos Kalogerakis, Erik Learned-Miller *International Conference on Computer Vision* (ICCV), 2015
48. **Deep Filter Banks for Texture Recognition and Segmentation** Mircea Cimpoi, Subhransu Maji, Andrea Vedaldi *IEEE Conference on Computer Vision* (CVPR) 2015
++Above are publications since joining UMass, Amherst as an Assistant Professor in September 2014.
49. **Learning Localized Perceptual Similarities for Interactive Categorization** Catherine Wah, Subhransu Maji, Serge Belongie, *Winter Conference on Applications of Computer Vision* (WACV), 2015
Best Paper Award
50. **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
51. **Parsing World's Skylines with Shape Constrained MRFs**, Rashmi V. Tonge, Subhransu Maji, C.V. Jawahar, *IEEE Conference on Computer Vision* (CVPR), 2014
52. **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

53. **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
54. **Describing Textures in the Wild**, Mircea Cimpoi, Subhransu Maji, Iasonas Kokkinos, Sammy Mohamed, Andrea Vedaldi, *IEEE Conference on Computer Vision* (CVPR), 2014
55. **Active Boundary Annotation using Random MAP Perturbations** Subhransu Maji, Tamir Hazan, Tommi Jaakkola, AISTATS 2014
56. **Learning Efficient Random MAP Predictors with Non-Decomposable Loss Functions**, Tamir Hazan, Subhransu Maji, Joseph Keshet, Tommi Jaakkola, *Neural Information Processing Systems* (NIPS) 2013
57. **On Sampling from the Gibbs Distribution with Random MAP Perturbations** Tamir Hazan, Subhransu Maji, Tommi Jaakkola, *Neural Information Processing Systems* (NIPS), 2013
58. **Part Discovery from Partial Correspondence**, Subhransu Maji, Gregory Shakhanarovich, *IEEE Conference on Computer Vision* (CVPR), 2013
    ++Above are publications since joining TTIC in January 2012, after I finished my PhD at UC Berkeley.
59. **Describing People: A Poselet-Based Approach to Attribute Classification**, Lubomir Bourdev, Subhransu Maji, Jitendra Malik, International *Conference on Computer Vision* (ICCV), 2011
60. **Semantic Contours from Inverse Detectors**, Bharath Hariharan, Pablo Arbelaez, Lubomir Bourdev, Subhransu Maji, Jitendra Malik, *International Conference on Computer Vision* (ICCV), 2011
61. **Action Recognition from a Distributed Representation of Pose and Appearance** Subhransu Maji, Lubomir Bourdev, Jitendra Malik, *IEEE Conference on Computer Vision* (CVPR), 2011
62. **Biased Normalized Cuts**, Subhransu Maji, Nisheeth Vishnoi, Jitendra Malik, *IEEE Conference on Computer Vision* (CVPR), 2011
63. **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
64. **Detecting People Using Mutually Consistent Poselet Activations**, Lubomir Bourdev, Subhransu Maji, Thomas Brox, Jitendra Malik, *European Conference on Computer Vision* (ECCV), 2010
65. **Max-Margin Additive Classifiers for Detection**, Subhransu Maji, Alexander Berg, *International Conference on Computer Vision* (ICCV), 2009
66. **Object Detection Using a Max-Margin Hough Transform**, Subhransu Maji, Jitendra Malik, *IEEE Conference on Computer Vision* (CVPR), 2009
67. **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, ICDSC, 2009
68. **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
    Best Paper Award
69. **Classification using Intersection Kernel SVMs is Efficient**, Subhransu Maji, Alexander Berg and Jitendra Malik, *IEEE Conference on Computer Vision* (CVPR), 2008
70. **Confidence Based updation of Motion Conspicuity in Dynamic Scenes**, Vivek Kumar Singh, Subhransu Maji, Amitabha Mukerjee, *Computer and Robot Vision* (CRV), 2006

Workshops

1. **COSE: A Consistency-Sensitivity Metric for Saliency on Image Classification**, Rangel Daroya†, Aaron Sun†, Subhransu Maji, *Visual Inductive Priors for Data-Efficient Deep Learning Workshop*, ICCV 2023 (†equal contribution)

2. **PARTICLE: Part Discovery and Contrastive Learning for Fine-grained Recognition**, Oindrila Saha, Subhransu Maji, *Visual Inductive Priors for Data-Efficient Deep Learning Workshop*, ICCV 2023
3. **Accidental Turntables: Learning 3D Pose by Watching Objects Turn**, Zezhou Cheng, Matheus Gadelha, Subhransu Maji, Workshop on *Recovering 6D Object Pose* (R6D), ICCV 2023
4. **An AI-Assisted Labeling Tool for Cataloging High-Resolution Images of Galaxies Gustavo Perez**, Sean Linden, Timothy McQuaid, Matteo Messa, Daniela Calzetti, Subhransu Maji, *NeurIPS AI for Science: Progress and Promises*, 2022
5. **How Well Does CLIP Understand Texture?**, Chenyun Wu and Subhransu Maji, *CV in the Wild Workshop*, ECCV 2022
6. **AI for Conservation: Learning to Track Birds with Radar**, Zezhou Cheng, Subhransu Maji, Daniel Sheldon, XRDS: Crossroads, *The ACM Magazine for Students*, 2021.
7. **Deep Manifold Prior**, Matheus Gadelha, Rui Wang, Subhransu Maji, *VIPriors Workshop* (ICCV), 2021
8. **Shot in the Dark: Few-Shot Learning with No Base-Class Labels**, Zityan Chen, Subhransu Maji, Erik Learned-Miller, *Learning from Limited or Imperfect Data* (L2ID) Workshop, CVPR, 2021
9. **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), CVPR 2019
10. **Jointly Learning Multiple Perceptual Similarities**, Liwen Zhang, Subhransu Maji, and Ryota Tomioka, Multi-View Representation Learning Workshop (MVRL) at ICML, 2016
11. **Distinguishing Weather Phenomena from Bird Migration Patterns in Radar Imagery**, Aruni RoyChowdhury, Daniel Sheldon, Subhransu Maji, Erik Learned-Miller, IEEE Workshop on Perception Beyond the Visual Spectrum (PBVS), 2016
12. **Visualizing Deep Texture Representations** Tsung-Yu Lin, Subhransu Maji, Workshop on Visualization for Deep Learning at ICML, 2016
13. **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
14. **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
15. **Discovering a Lexicon of Parts and Attributes**, Subhransu Maji, Second International Workshop on Parts and Attributes, ECCV 2012, **oral**, *Best poster runner-up at Fine-Grained Visual Recognition Workshop*, 2013
16. **Linearized Smooth Additive Classifiers**, Subhransu Maji, Workshop on Web-scale Vision and Social Media, ECCV 2012, **oral**
17. **Part Annotations via Pairwise Correspondence**, Subhransu Maji and Gregory Shakhanarovich, 4th Workshop on Human Computation, AAAI 2012, **oral**
18. **Fast Unsupervised Alignment of Video and Text for Indexing Names and Faces**, Subhransu Maji and Ruzena Bajscy, Multimedia Semantics Workshop, ACM Multimedia 2007

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, Subhransu Maji, M. C. Christoudias, Trevor Darrell, Jitendra Malik, Shankar S. Sastry, Distributed Video Sensor Networks, Springer, 2010

Professional Activities

Tutorials and Workshops

- Co-organizer CV4Science workshop @ CVPR 2024 (with Katie Bouman and David Fouhey)
- Co-organizer Fine-Grained Visual Categorization workshop ($FGVC^2$ – $FGVC^{11}$) @ CVPR (with many others)
- Co-founder and co-organizer of the New England Computer Vision workshop, 2015
- Co-organizer Computer Vision and Human Computation (CVHC) workshop, CVPR 2014 (with Jia Deng)
- Towards a Detailed Understanding of Objects and Scenes in Natural Images, CLSP Workshop, Johns Hopkins university, 2012 (with Andrea Vedaldi, Esa Rahtu, Matthew Blaschko, Iasonas Kokkinos, Ben Taskar)
- *Tutorial* on Computational Visual Recognition, ICVGIP 2012, IIT Bombay
- *Tutorial* on Additive Kernels and Explicit Embeddings for Large-Scale Computer Vision, ECCV 2012

External Service

- Program Chair
  - Winter Conference on Computer Vision (WACV), 2024
  - Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2021
- Associate Editor, International Journal for Computer Vision (IJCV), 2019-current
- Area Chair
  - Neural Information Processing Systems (NeurIPS), 2024
  - IEEE Computer Vision and Pattern Recognition (CVPR), 2016, 2018, 2019, 2020, 2021, 2022, 2023
  - European Conference on Computer Vision (ECCV), 2020, 2022, 2024
  - International Conference on Computer (ICCV), 2021, 2023
  - Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP), 2014, 2016, 2018
- Tutorial Chair, International Conference on Computer Vision, Graphics and Image Processing, 2016
- Senior Program Committee, International Joint Conference on Artificial Intelligence (IJCAI), 2019
- 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 (NeurIPS), 2010 - 2017
  - 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)
  - 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 in the past several years.

Service within UMass Amherst

- Annual faculty review (AFR) commitee (AY 2022-23, 2023-24, AY 17-18)
- Faculty mentor, Data science for common good (DS4CG)
- CARE committeee (member, and co-chaired the PhD student mentoring committee, AY 20-21)
- Data science faculty hiring commitee (chair AY 19-20, member 15-16, 21-22)
- Faculty hiring commitee (member, AY 22-23, AY 18-19)
- Budget & executive commiteee
- MS admissions commitee
- Faculty awards commitee
- Graduate program commitee
- Distinguished lecture series coordinator

Student supervision

Current PhD students

1. Mustafa Chasmai, PhD, UMass Amherst
2. Joseph Majesky, PhD, UMass Amherst (w/ Dan Sheldon)
3. Aaron Sun, PhD, UMass Amherst
4. Rangel Daroya, PhD, UMass Amherst
5. Max Hamilton, PhD, UMass Amherst
6. Oindrila Saha, PhD student, UMass Amherst

Graduated PhD Students

1. Gustavo Perez, PhD Student, UMass Amherst, 2024 (next Postdoc at UC Berkeley)
   Thesis: *Data to Science with AI and Human-in-the-Loop*
   Awards: Fullbright fellowship 2018; Outstanding Synthesis Award, CICS UMass, 2021; Best Paper at AAAI (AI for Social Impact Track) 2024
2. Zezhou Cheng, PhD Student, UMass Amherst, 2024 (next Postdoc at Caltech)
   Thesis: *Learning to See with Minimal Human Supervision*
   Awards: Outstanding Synthesis Award, CICS UMass, 2021; UMass Amherst CICS Edward Riseman and Allen Scholarship 2018

3. Gopal Sharma (co-supervised w/ Evangelos Kalogerakis), PhD Student, UMass Amherst, 2022 (next Postdoc at University of British Columbia)
   Thesis: *Representation Learning for Shape Decomposition, By Shape Decomposition*
4. Chenyun Wu, PhD student, UMass Amherst, 2021 (next to Google)
   Thesis: *Understanding of Visual Domains via the Lens of Natural Language*
5. Matheus Gadelha (co-supervised w/ Rui Wang), PhD student, UMass Amherst, 2021 (next to Adobe)
   Thesis: *3D Shape Understanding and Generation*
6. JongChyi Su, PhD student, UMass Amherst, 2021 (next to Facebook)
   Thesis: *Learning from Limited Labeled Data for Visual Recognition*
   Awards: CICS Outstanding TA Award 2021
7. TsungYu Lin, PhD student, UMass Amherst, 2020 (next to Facebook)
   Thesis: *Higher-order Representations for Visual Recognition*
   Awards: Dissertation Writing Award; 2014 Robin Popplestone Fellowship at CICS, UMass Amherst; Robert May Early Career Research Prize Shortlist 2019.

PhD Thesis Committee

- Li Ding, PhD Student, UMass Amherst, 2024 (Advisor: Lee Spector)
- Mohit Yadav, PhD student, UMass Amherst, 2023 (Advisor: Dan Sheldon)
- Stefan Stojanov PhD Thesis, Georgia Tech, 2023 (Advisor: Jim Rehg)
- Colin Samplawski, PhD student, UMass Amherst, 2023 (Advisor: Ben Marlin)
- Meet Vadera, PhD student, UMass Amherst, 2022 (Advisor: Ben Marlin)
- Difan Liu, PhD student, Umass Amherst, 2022 (Advisor: Evangelos Kalogerakis)
- Tu Vu, PhD student, UMass Amherst, 2023 (Advisor: Mohit Iyyer)
- Zhan Xu, PhD student, UMass Amherst, 2023 (Advisor: Evangelos Kalogerakis)
- Zenglin Shi, PhD student, University of Amsterdam, 2022 (Advisor: Cees Snoek)
- Patsorn Sangkloy, PhD student, Georgia Tech, 2022 (Advisor: James Hays)
- Trapit Basal, PhD student, UMass Amherst, 2021 (Advisor: Andrew McCallum)
- Hang Su, PhD student, UMass Amherst, 2020 (Advisor: Erik Learned-Miller)
- Huaizu Jiang, PhD student, UMass Amherst, 2020 (Advisor: Erik Learned-Miller)
- Aruni RoyChowdhury, PhD student, UMass Amherst, 2020 (Advisor: Erik Learned-Miller)
- Pia Bideau, PhD student, UMass Amherst, 2020 (Advisor: Erik Learned-Miller)
- Souyoung Jin, PhD student, UMass Amherst, 2020 (Advisor: Erik Learned-Miller)
- Venkatesh N. Murthy, PhD student, UMass Amherst, 2019 (Advisor: Manmatha)
- Tao Sun, PhD student, UMass Amherst, 2018 (Advisor: Dan Sheldon)
- Zhaoliang Lun, PhD student, UMass Amherst, 2017 (Advisor: Rui Wang)
- Arvind R Neelakantan, PhD student, UMass Amherst, 2017 (Advisor: Andrew McCallum)
- David Belanger, PhD student, UMass Amherst, 2017 (Advisor: Andrew McCallum)
- Steven Cheng-Xian Li, PhD student, UMass Amherst, 2016 (Avisor: Ben Marlin)

Interns and student collaborators

- Advait Gosai, Undergraduate student, UMass Amherst, Honors Thesis, 2024
- Patrick Do, Undergraduate student, Umass Amherst, Independent study, 2024
- Larissa Zhu, Lucky Kovvuri, Mantra Burugu, and Tan Le, Undergraduate students, ERSP team, 2023-24

- Abhishek Lalwani, MS student, UMass Amherst, 2020
- Edward Schneeweiss, MS student, 2020
- Prithwijit Chakrabarty, MS student, 2020
- Samantha Cote, Undergraduate student, UMass Amherst, *honors thesis*, 2019
- 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 w/ Tobias Glasmachers)
- Brayden Neal, undergraduate student (REU program), UPenn, Summer 2016
- Liwen Zhang, PhD student at University of Chicago (Co-supervised w/ Ryota Tomioka)
- 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 2013, Jan - April 2014
- Rashmi Tonge, MS student at IIIT Hyderabad (Thesis co-supervisor w/ C.V. Jawahar), 2013 - 2014

Teaching

I have taught Graduate Computer Vision (670) and Undergraduate Computer Vision (370), Graduate Machine Learning (689) and Deep Learning (682) courses at UMass Amherst.

- CMPSCI 370: Introduction to Computer Vision, UMass Amherst, Spring 2024
- CMPSCI 682: Neural Networks: A Modern Introduction, UMass Amherst, Fall 2023 (with Chuang Gan)
- CMPSCI 370: Introduction to Computer Vision, UMass Amherst, Spring 2023
- CMPSCI 370HH: Honors Section for 370, UMass Amherst, Spring 2023
- CMPSCI 670: Computer Vision, UMass Amherst, Fall 2022
- CMPSCI 370: Introduction to Computer Vision, UMass Amherst, Spring 2021
- CMPSCI 670: Computer Vision, UMass Amherst, Fall 2020
- CMPSCI 670: Computer Vision, UMass Amherst, Fall 2019
- CMPSCI 370: Introduction to Computer Vision, UMass Amherst, Spring 2018
- CMPSCI 670: Computer Vision, UMass Amherst, Fall 2018 (61 students)
- CMPSCI 370: Introduction to Computer Vision, UMass Amherst, Spring 2018 (51 students)
- CMPSCI 670: Computer Vision, UMass Amherst, Fall 2017 (66 students)
- CMPSCI 370: Introduction to Computer Vision, UMass Amherst, Spring 2017 (40 students)
- CMPSCI 670: Computer Vision, UMass Amherst, Fall 2016 (39 students)
- CMPSCI 370: Introduction to Computer Vision, UMass Amherst, Spring 2016 (33 students)
- CMPSCI 370HH: Honors section for 370, UMass Amherst, Spring 2016 (4 students)
- CMPSCI 689: Machine Learning, UMass Amherst, Spring 2015 (39 students)
- 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
- TA 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 and Presentations

- AI for Decision Making, AI for Social Good Workshop, Dagstuhl, 2024
- Tracking Bird Migration with Weather Radars and Machine Learning, CV4Ecology Workshop, Caltech 2023
- Counting in the Open World, Open World Vision Workshop, CVPR 2023
- Learning Representations by Convex Decompositions, VIPriors Workshop, ICCV 2023
- Modeling Visual Tasks and their Relations
  - Computer vision seminar, *University of Amsterdam*, 2021
  - Computer vision seminar, *TU Delft*, 2021
  - Computer vision seminar, *KU Leuven*, 2021
  - CVIT Summer School, *IIT Hyderabad*, 2021
  - Invited talk, *AIBee*, 2021
  - Department colloquium, *Boston University,* 2020
  - Department colloquium, *Yale University,* 2020
  - Department colloquium, *University of Maryland, College Park,* 2020
  - Department colloquium, *University of Chicago,* 2020
  - Department colloquium, *Toyota Technological Institute at Chicago,* 2020
  - Keynote talk, *WebFG Workshop*, ACCV 2020
  - Keynote talk, *Exteme Vision Modeling Workshop*, ICCV 2019
  - Invited talk, *CVPR Area Chair Workshop, USCD*, 2019
  - Invited talk, *ICERM Workshop, Brown University,* 2019
- DarkEcology: Unraveling Mysteries of Bird Migration using Weather Radar and Machine Learning, Invited talk, *Computer Vision for Wildlife Conservation (CVWC) Workshop, ICCV* 2019
- Adversarial Attacks Against Machine Learning 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, CVPR Area Chair Workshop, 2016
- Bilinear CNNs 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, 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 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)