Adriana Ivanova Kovashka

Assistant Professor in Computer Science at University of Pittsburgh
kovashka@cs.pitt.edu
http://people.cs.pitt.edu/~kovashka
http://scholar.google.com/citations?hl=en&user=Dl949GoAAAAJ

BACKGROUND

EDUCATION

The University of Texas at Austin (Austin, TX): 08/2008 - 08/2014 – PhD, M.S.Comp.Sci.
Major: Computer Science, Concentration: Computer Vision / Artificial Intelligence

Pomona College (Claremont, CA): 08/2004 - 05/2008 – Bachelor of Arts
Majors: Computer Science and Media Studies, Minor: German

APPOINTMENTS

University of Pittsburgh, Computer Science Dept. – Assistant Professor – 01/2015 - present.

UT Austin, Computer Science Dept. – Graduate Research Assistant – 06/2009 - 08/2014.

Google Inc. Research, Mountain View – Software Engineering Intern – 06/2012 - 08/2012.

Princeton University, Distributed Mentor Project – Research Assistant – 05/2007 - 07/2007.

HONORS AND AWARDS

- NSF CAREER Award, February 2021.
- Efficient Deep Learning (CVPR Workshop) Best Paper Award, June 2021.
- Diagram Image Retrieval & Analysis (CVPR Workshop) Best Paper Award, June 2020.
- Outstanding Reviewer: ECCV 2020, CVPR 2017 & 2015. (Given to 6%-8% of reviewers.)
- Amazon Research Award, January 2019.
- Adobe Data Science Research Award, September 2018.
- Google Faculty Research Awards, February 2018 and February 2016.
- NSF CISE Research Initiation Initiative (CRII) Award, May 2016.
- Microelectronics and Computer Development (MCD) Fellowship, UT Austin, September 2008 - May 2009. (Awarded to 10% of admitted students.)

RESEARCH

citations	h-index	i10-index	papers over 300/100/50 cit.	journals	conferences (oral/spotlight)	workshops	chapters
1940	15	21	2/3/9	5	33 (8)	14	2

grants (total)	grants (share)
$2,985,343	∼ $2,100,000

Notes:

- The IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR), the IEEE International Conference on Computer Vision (ICCV), and the European Conference on Computer Vision (ECCV) are the top-tier computer vision conferences (h5-indices 299, 176, and 144, respectively). The British Machine Vision Conference (BMVC), the Winter Conference on Applications of Computer Vision (WACV), and the Asian Conference on Computer Vision (ACCV) are the second-tier, respectable computer vision conferences, with ∼25-35% acceptance rates, and h5-indices 57, 54, and 33.

- Transactions on Pattern Analysis and Machine Intelligence (TPAMI) and the International Journal of Computer Vision (IJCV) are the top journals in computer vision (h5-indices 131 and 70).

- The Conference on Neural Information Processing Systems (NeurIPS), the AAAI Conference on Artificial Intelligence (AAAI), and the Annual Meeting of the Association for Computational Linguistics (ACL) are top-tier machine learning, artificial intelligence, and natural language processing conferences.

- Accepted publications in top-tier conferences and journals are starred.

- The majority of papers in the top-tier computer vision conferences are posters, with only a small fraction as orals or spotlights (about 5% of all submissions). Poster, spotlight and oral papers are all regular/long papers, undergo the same review process, have the same length, and appear in the same conference proceedings. The limitation on the number of orals is due to the number of submissions (over 3,300 in CVPR 2018, 6,600 in CVPR 2020, and 7,500 in CVPR 2021) correlated with the number of attendees (over 9,000 at CVPR 2019).

- PhD/Masters students' names are underlined, undergraduate students' names are double-underlined. Faculty members and researchers are listed at the end of the authors list, regardless of the amount of their contribution.

- DOI links, additional open-access and other paper links from the Computer Vision Foundation (CVF), Springer, Elsevier, etc., and preprints are provided. Hover over the DOI link to see the DOI number.

JOURNAL PUBLICATIONS (PEER-REVIEWED)

1. * Christopher Thomas and Adriana Kovashka. "Predicting Visual Political Bias using Webly Supervised Data and an Auxiliary Task." To appear, *International Journal of Computer Vision* (IJCV). Accepted: June 24, 2021. 21 pages (excl. references). IJCV impact factor: 5.698. preprint

2. Nils Murrugarra-Llerena and Adriana Kovashka. "Image retrieval with mixed initiative and multimodal feedback." In *Computer Vision and Image Understanding* (CVIU) Volume 207, June 2021. 10 pages. CVIU impact factor: 3.121. DOI, Elsevier link

3. * Keren Ye, Narges Honarvar Nazari, James Hahn, Zaeem Hussain, Mingda Zhang, Adriana Kovashka. "Interpreting the Rhetoric of Visual Advertisements." In *Transactions of Pattern Analysis and Machine Intelligence* (TPAMI) Volume 43, Issue 4, April 2021. Date of publication (IEEE Xplore): October 2019. 14 pages. TPAMI impact factor: 17.861. DOI link, included in package

4. * Adriana Kovashka, Devi Parikh, and Kristen Grauman. "WhittleSearch: Interactive Image Search with Relative Attribute Feedback." In *International Journal of Computer Vision* (IJCV), Volume 115, Issue 2, November 2015. 24 pages. IJCV impact factor: 5.698. DOI, Springer link

5. * Adriana Kovashka and Kristen Grauman. "Discovering Attribute Shades of Meaning with the Crowd." In *International Journal of Computer Vision* (IJCV), Volume 114, Issue 1, August 2015. 17 pages. IJCV impact factor: 5.698. DOI, Springer link

JOURNAL PUBLICATIONS (*UNDER REVIEW*)

1. Keren Ye, Mesut Erhan Unal, Mingda Zhang, Christopher Thomas, Adriana Kovashka, Wei Li, Danfeng Qin, Jesse Berent. "Learning to Overcome Noise in Weak Caption Supervision for Object Detection." *Under review, Transactions on Pattern Analysis and Machine Intelligence* (TPAMI), *since February 22, 2021.* 14 pages.

CONFERENCE PUBLICATIONS (PEER-REVIEWED)

1. * Meiqi Guo, Rebecca Hwa, and Adriana Kovashka. "Detecting Persuasive Atypicality by Modeling Contextual Compatibility." To appear, *Proceedings of the IEEE/CVF International Conference on Computer Vision* (ICCV), Virtual, October 2021. Accepted: July 22, 2021. Acceptance rate: 25.9%. 8 pages.

2. Xian Teng, Ang Li, Yu-Ru Lin, Wen-Ting Chung and Adriana Kovashka. "Characterizing User Susceptibility to COVID-19 Misinformation on Twitter." To appear, *International AAAI Conference on Web and Social Media* (ICWSM), June 2022. Accepted: July 16, 2021. Acceptance rate: ∼20%. 11 pages.

3. * Keren Ye and Adriana Kovashka. "Linguistic Structures as Weak Supervision for Visual Scene Graph Generation." In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (CVPR), Virtual, June 2021. Acceptance rate: 21% (accepted/all submissions), 27% (accepted/papers in final decision phase). 8 pages. CVF link

4. * Mingda Zhang, Tristan Maidment, Ahmad Diab, Adriana Kovashka, Rebecca Hwa. "Domain-robust VQA with diverse datasets and methods but no target labels." In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (CVPR), Virtual, June 2021. Acceptance rate: 21% (accepted/all submissions), 27% (accepted/papers in final decision phase). 8 pages. CVF link, included in package

5. * Keren Ye and Adriana Kovashka. "A Case Study of the Shortcut Effects in Visual Commonsense Reasoning." In *Proceedings of the Thirty-Fifth AAAI Conference on Artificial Intelligence* (AAAI), Virtual, February 2021. Acceptance rate: 21%. 7 pages. aaai.org link, included in package

6. Keren Ye, Mingda Zhang and Adriana Kovashka. "Breaking Shortcuts by Masking for Robust Visual Reasoning." In *Proceedings of the Winter Conference on Applications of Computer Vision* (WACV), January 2021. Acceptance rate: ∼35%. 8 pages. DOI, CVF link

7. Mesut Erhan Unal and Adriana Kovashka. "Context for Object Detection via Lightweight Global and Mid-level Representations." In *Proceedings of the International Conference on Pattern Recognition* (ICPR), January 2021. Acceptance rate: 40.1%. 7 pages. DOI link

8. Keren Ye, Adriana Kovashka, Mark Sandler, Menglong Zhu, Andrew Howard, and Marco Fornoni. "SpotPatch: Parameter-Efficient Transfer Learning for Mobile Object Detection." In *Proceedings of the Asian Conference on Computer Vision* (ACCV), December 2020. **(Oral.)** Acceptance rate: 8% (orals), 33% (overall). 14 pages. DOI, CVF link

9. * Christopher Thomas and Adriana Kovashka. "Preserving Semantic Neighborhoods for Robust Cross-modal Retrieval." In *Proceedings of the European Conference on Computer Vision* (ECCV), Virtual, August 2020. Acceptance rate: 27%. 14 pages. DOI, ecva.net link, included in package

10. * Keren Ye, Mingda Zhang, Adriana Kovashka, Wei Li, Danfeng Qin, Jesse Berent. "Cap2Det: Learning to Amplify Weak Caption Supervision for Object Detection." In *Proceedings of the IEEE/CVF International Conference on Computer Vision* (ICCV), Seoul, Korea, October 2019. Acceptance rate: 25%. 8 pages. DOI, CVF link, included in package

11. * Christopher Thomas and Adriana Kovashka. "Predicting the Politics of an Image using Webly Supervised Data." In *Proceedings of the Conference on Neural Information Processing Systems* (NeurIPS), Montreal, Canada, December 2019. Acceptance rate: 21.1%. 9 pages. nips.cc link

12. * Nils Murrugarra-Llerena and Adriana Kovashka. "Cross-Modality Personalization for Retrieval." In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (CVPR), Long Beach, CA, June 2019. **(Oral.)** Acceptance rate: 5.6% (orals), 25.1% (overall). 8 pages. DOI, CVF link

13. * Keren Ye and Adriana Kovashka. "ADVISE: Symbolism and External Knowledge for Decoding Advertisements." In *Proceedings of the European Conference on Computer Vision* (ECCV), Munich, Germany, September 2018. Acceptance rate: ∼30%. 14 pages. DOI, CVF link

14. Christopher Thomas and Adriana Kovashka. "Artistic Object Recognition by Unsupervised Style Adaptation." In *Proceedings of the Asian Conference on Computer Vision* (ACCV), Perth, Australia, December 2018. Acceptance rate: 24.2%. 14 pages. DOI, Springer link

15. Nils Murrugarra-Llerena and Adriana Kovashka. "Image Retrieval with Mixed Initiative and Multimodal Feedback." In *Proceedings of the British Machine Vision Conference* (BMVC), Newcastle, UK, September 2018. **(Oral.)** Acceptance rate: 4.3% (orals), 29.9% (overall). 10 pages. bmva.org link

16. Mingda Zhang, Rebecca Hwa and Adriana Kovashka. "Equal But Not The Same: Understanding the Implicit Relationship Between Persuasive Images and Text." In *Proceedings of the British Machine Vision Conference* (BMVC), Newcastle, UK, September 2018. **(Spotlight.)** Acceptance rate: 6.6% (spotlights), 29.9% (overall). 10 pages. bmva.org link

17. Christopher Thomas and Adriana Kovashka. "Persuasive Faces: Generating Faces in Advertisements." In *Proceedings of the British Machine Vision Conference* (BMVC), Newcastle, UK, September 2018. Acceptance rate: 29.9%. 10 pages. bmva.org link

18. <u>Keren Ye</u>, <u>Kyle Buettner</u> and Adriana Kovashka. "Story Understanding in Video Advertisements." In *Proceedings of the British Machine Vision Conference* (BMVC), Newcastle, UK, September 2018. Acceptance rate: 29.9%. 10 pages. bmva.org link

19. * <u>Nils Murrugarra-Llerena</u> and Adriana Kovashka. "Asking Friendly Strangers: Non-Semantic Attribute Transfer." In *Proceedings of the Thirty-Second AAAI Conference on Artificial Intelligence* (AAAI), New Orleans, LA, February 2018. Acceptance rate: 24.6%. 7 pages. aaai.org link

20. <u>Bhavin Modi</u> and Adriana Kovashka. "Confidence and Diversity for Active Selection of Feedback in Image Retrieval." In *Proceedings of the British Machine Vision Conference* (BMVC), London, UK, September 2017. Acceptance rate: ∼30%. 9 pages. bmva.org link

21. * <u>Zaeem Hussain, Xiaozhong Zhang, Mingda Zhang, Keren Ye, Christopher Thomas, Zuha Agha, Nathan Ong,</u> and Adriana Kovashka. "Automatic Understanding of Image and Video Advertisements." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), Honolulu, HI, July 2017. **(Spotlight.)** Acceptance rate: 8% (spotlights), 29% (overall). 8 pages. DOI, CVF link

22. <u>Nils Murrugarra-Llerena</u> and Adriana Kovashka. "Learning Attributes from Human Gaze." In *Proceedings of IEEE Winter Conference on Applications of Computer Vision* (WACV), Santa Rosa, CA, March 2017. (All papers presented as **Oral**.) Acceptance rate: ∼45%. 8 pages. DOI link

23. <u>Debashis Ganguly, Mohammad H. Mofrad,</u> and Adriana Kovashka. "Detecting Sexually Provocative Images." In *Proceedings of IEEE Winter Conference on Applications of Computer Vision* (WACV), Santa Rosa, CA, March 2017. (All papers presented as **Oral**.) Acceptance rate: ∼45%. 8 pages. DOI link

24. * <u>Christopher Thomas</u> and Adriana Kovashka. "Seeing Behind the Camera: Identifying the Authorship of a Photograph." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), Las Vegas, NV, June 2016. Acceptance rate: 29.9%. 8 pages. DOI, CVF link

25. <u>Siqi Liu</u> and Adriana Kovashka. "Adapting Attributes by Selecting Features Similar across Domains." In *IEEE Winter Conference on Applications of Computer Vision* (WACV), Lake Placid, NY, March 2016. (All papers presented as **Oral**.) Acceptance rate: ∼34%. 8 pages. DOI link

26. * Adriana Kovashka and Kristen Grauman. "Attribute Adaptation for Personalized Image Search." In *Proceedings of the International Conference on Computer Vision* (ICCV), Sydney, Australia, December 2013. Acceptance rate: 27.9%. 8 pages. DOI link

27. * Adriana Kovashka and Kristen Grauman. "Attribute Pivots for Guiding Relevance Feedback in Image Search." In *Proceedings of the International Conference on Computer Vision* (ICCV), Sydney, Australia, December 2013. Acceptance rate: 27.9%. 8 pages. DOI link

28. * Adriana Kovashka, Devi Parikh, and Kristen Grauman. "WhittleSearch: Image Search with Relative Attribute Feedback." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), Providence, RI, June 2012. Acceptance rate: 24.1%. 8 pages. DOI link

29. * Devi Parikh, Adriana Kovashka, Amar Parkash, and Kristen Grauman. "Relative Attributes for Enhanced Human-Machine Communication." In *Proceedings of the AAAI Conference on Artificial Intelligence* (AAAI), Toronto, Canada, July 2012. (Invited paper.) 7 pages. ACM link

30. * Adriana Kovashka, Sudheendra Vijayanarasimhan, and Kristen Grauman. "Actively Selecting Annotations Among Objects and Attributes." In *Proceedings of the International Conference on Computer Vision* (ICCV), Barcelona, Spain, November 2011. Acceptance rate: 23.7%. 8 pages. DOI link

31. * Adriana Kovashka and Kristen Grauman. "Learning a Hierarchy of Discriminative Space-Time Neighborhood Features for Human Action Recognition." In *Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR), San Francisco, CA, June 2010. Acceptance rate: 26.7%. 8 pages. DOI link

32. * Sindhu Raghavan, Adriana Kovashka, and Raymond Mooney. "Authorship Attribution Using Probabilistic Context-Free Grammars." In *Proceedings of the Forty-Eight Annual Meeting of the Association for Computational Linguistics* (ACL), Uppsala, Sweden, July 2010. (Short paper.) Acceptance rate: 22%. 5 pages. aclweb.org link

33. Adriana Kovashka and Matthew Lease. "Human and Machine Detection of Stylistic Similarity in Art." In *Proceedings of the First Annual Conference on the Future of Distributed Work* (CrowdConf), San Francisco, CA, October 2010. 8 pages. link

CONFERENCE PUBLICATIONS (*UNDER REVIEW*)

1. Ankitkumar Joshi and Adriana Kovashka. "Alignment- and Concreteness-based Curricula for Weakly-Supervised Object Recognition." *Under review, British Machine Vision Conference* (BMVC) 2021. 9 pages.

WORKSHOP PUBLICATIONS (PEER-REVIEWED)

Note: Full archival papers appear in the conference proceedings and are over 4 pages long. Other papers (2-4 pages) are extended abstracts in workshops held in conjunction with conferences, and may or may not be in the proceedings.

1. Mingda Zhang, Chun-Te Chu, Andrey Zhmoginov, Andrew Howard, Brendan Jou, Yukun Zhu, Li Zhang, Rebecca Hwa, and Adriana Kovashka. "BasisNet: Two-stage Model Synthesis for Efficient Inference." In *Efficient Deep Learning Workshop, Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition* (CVPR-W), Virtual, June 2021. **(Best Paper Award.)** 8 pages. CVF link

2. Katelyn Morrison, Benjamin Gilby, Colton Lipchak, Adam Mattioli and Adriana Kovashka. "Exploring Corruption Robustness: Inductive Biases in Vision Transformers and MLP-Mixers." In *Uncertainty and Robustness in Deep Learning Workshop, in conjunction with the International Conference on Machine Learning* (ICML-W), Virtual, July 2021. (Extended Abstract.) 4 pages. link

3. Tristan Maidment, Mingzhi Yu, Erin Walker, Adriana Kovashka, Diane Litman, and Timothy Nokes-Malach. "Capturing Student-Robot Interactions for a Data-Driven Educational Dialogue RL Environment." In *Reinforcement Learning for Education Workshop, in conjunction*

with the Educational Data Mining Conference (EDM-W), Virtual, June 2021. (Extended Abstract.) 4 pages. link

4. <u>Zhexiong Liu</u> and Adriana Kovashka. "Graph-Symbolic VQA with Rich Visual Estimators and No Question-Answer Labels." In *Visual Question Answering Workshop, in conjunction with the IEEE/CVF Computer Vision and Pattern Recognition* (CVPR-W), Virtual, June 2021. (Extended Abstract.) 2 pages. link

5. <u>Brian Falkenstein</u>, Adriana Kovashka, Seong Jae Hwang and S. Chakra Chennubhotla. "Classifying Nuclei Shape Heterogeneity in Breast Tumors with Skeletons." In *BioImage Computing Workshop, Proceedings of the European Conference on Computer Vision* (ECCV-W), Virtual, August 2020. 11 pages. DOI, Springer link

6. <u>Narges Honarvar Nazari</u> and Adriana Kovashka. "Domain Generalization Using Shape Representation." In *Transferring and Adapting Source Knowledge in Computer Vision* (TASK-CV) *Workshop, in conjunction with the European Conference on Computer Vision* (ECCV-W), Virtual, August 2020. (Extended Abstract, Best Paper Finalist.) 4 pages. DOI, Springer link

7. <u>Keren Ye</u>, Adriana Kovashka, Mark Sandler, Menglong Zhu, Andrew Howard and Marco Fornoni. "SpotPatch: Parameter-Efficient Transfer Learning for Mobile Object Detection." In *Transferring and Adapting Source Knowledge in Computer Vision* (TASK-CV) *Workshop, in conjunction with the European Conference on Computer Vision* (ECCV-W), Virtual, August 2020. (Extended Abstract, Best Paper Finalist.) 4 pages. DOI, Springer link

8. <u>Zac Yu</u> and Adriana Kovashka. "Syntharch: Interactive Image Search with Attribute-Conditioned Synthesis." In *Diagram Image Retrieval and Analysis Workshop and Challenge: Representation, Learning, and Similarity Metrics, Proceedings of the IEEE/CVF Computer Vision and Pattern Recognition* (CVPR-W), Virtual, June 2020. **(Best Paper Award.)** 8 pages. DOI, CVF link

9. <u>Mingda Zhang, Keren Ye</u>, Rebecca Hwa, and Adriana Kovashka. "Story Completion with Explicit Modeling of Commonsense Knowledge." In *Minds vs. Machines Workshop: How far are we from the common sense of a toddler?, in Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition Workshops* (CVPR-W), Virtual, June 2020. (Extended Abstract.) 4 pages. DOI, CVF link

10. <u>James Hahn</u> and Adriana Kovashka. "Hiding in Plain Strokes: Handwriting and Applications to Steganography." In *Challenges and Opportunities for Privacy and Security Workshop, in conjunction with the IEEE/CVF Conference on Computer Vision and Pattern Recognition* (CVPR-W), Long Beach, CA, June 2019. (Extended Abstract.) 2 pages. link

11. <u>Christopher Thomas</u>, Adriana Kovashka, Donald Chiarulli and Steven Levitan. "A Visual Attention Algorithm Designed for Coupled Oscillator Acceleration." In *Embedded Vision Workshop, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR-W), Las Vegas, NV, June 2016. 8 pages. DOI, CVF link

12. <u>Xinyue Huang</u> and Adriana Kovashka. "Inferring Visual Persuasion via Body Language, Setting, and Deep Features." In *ChaLearn Looking at People and Faces of the World Challenge and Workshop, Proceedings of the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR-W), Las Vegas, NV, June 2016. 8 pages. DOI, CVF link

13. Adriana Kovashka and Kristen Grauman. "Discovering Shades of Attribute Meaning with the Crowd." In *Parts and Attributes Workshop, in conjunction with the European Conference on Computer Vision* (ECCV-W), Zurich, Switzerland, September 2014. (Extended Abstract.) 4 pages. link

14. Adriana Kovashka and Kristen Grauman. "Interactive Image Search with Attribute-based Guidance and Personalization." In *Computer Vision and Human Computation Workshop, in conjunction with the IEEE Conference on Computer Vision and Pattern Recognition* (CVPR-W), Columbus, OH, June 2014. (Extended Abstract.) 2 pages. link

BOOK CHAPTERS AND SURVEYS (INVITED)

1. Adriana Kovashka and Kristen Grauman, "Attributes for Image Retrieval," In *Visual Attributes (Advances in Computer Vision and Pattern Recognition)*, Springer, 2016. 26 pages. DOI, Springer link

2. Adriana Kovashka, Olga Russakovsky, Kristen Grauman, Fei-Fei Li, "Crowdsourcing in Computer Vision. In *Foundations and Trends in Computer Graphics and Vision*, NOW Publishers, 2016. 53 pages. DOI link

THESES

1. "Interactive Image Search with Attributes." PhD Thesis. University of Texas at Austin. August 2014.

2. "Dorian: Music Recommendation Strategies using Social Network Mining." Bachelor's Thesis. Pomona College. May 2008.

INVITED TALKS

1. Humans of AI: Stories, Not Stats Podcast (Host: Dhruv Batra, Georgia Tech), April 2021.

2. TWIML/AI Podcast (formerly This Week in Machine Learning & AI, Host: Sam Charrington), March 2021. https://www.youtube.com/watch?v=QmyK8cKnLOE

3. Arizona State University (Host: Yezhou Yang), March 2021.

4. University of Illinois, Urbana Champaign (Hosts: Svetlana Lazebnik and Heng Ji), Dec 2020.

5. Boston University (Host: Margrit Betke), November 2020.

6. Cornell University (Host: Serge Belongie), November 2020.

7. Georgia Tech, Machine Learning Center Seminar Series (Host: Devi Parikh), October 2020. https://www.youtube.com/watch?v=90QASAYElpo

8. Artificial Intelligence for Data Discovery & Reuse (AIDR) Symposium, Carnegie Mellon University (Hosts: Martial Hebert, Keith Webster, Ritwik Gupta, Huajin Wang), October 2020. https://youtu.be/u5M4Ja7X4aw?t=3184

9. Video Turing Test: Toward Human-Level Video Story Understanding, ECCV Workshop (Host: Gunhee Kim), August 2020.

10. Diagram Image Retrieval and Analysis: Representation, Learning, and Similarity Metrics, CVPR Workshop (Host: Liping Yang), June 2020.

11. Computer Vision for Fashion, Art and Design, CVPR Workshop (Host: Negar Rostamzadeh), June 2020. https://www.youtube.com/watch?v=Rqrpy1TU4z4

12. University of Maryland, College Park (Host: Abhinav Shrivastava), March 2020.

13. CVPR Area Chair Meeting Workshop (Hosts/Program Chairs: Kate Saenko, Silvio Savarese, Greg Mori, Ce Liu), February 2020.

14. Carnegie Mellon University, VASC Seminar (Host: Fernando De la Torre), February 2020.

15. UCLA Colloquium (Host: Jungseock Joo), January 2020.

16. University of Pittsburgh, Science 2019 (Host: Maggie McDonald), October 2019.

17. Visual Question Answering, CVPR Workshop (Host: Devi Parikh), June 2018.

18. How to be a Good Citizen of CVPR, CVPR Workshop (Host: Devi Parikh), June 2018.

19. CVPR Area Chair Meeting Workshop (Hosts/Program Chairs: David Forsyth, Aude Oliva, Deva Ramanan, Ivan Laptev), February 2018.

20. University of Rochester, Computer Science Colloquium (Hosts: Henry Kautz, Jiebo Luo), December 2017.

21. University of Pittsburgh, Advancing Research through Computing Symposium (Host: Kim F. Wong, Center for Research Computing), March 2017.

22. Google Pittsburgh (Host: Andrew Gallagher), May 2016.

23. University of Pittsburgh, Intelligent Systems Program, March 2016.

24. University of Pittsburgh, Computational Aesthetics Workshop (Host: Alison Langmead), November 2015.

25. Parts and Attributes, ECCV Workshop (Hosts: Rogerio Feris, Christoph Lampert, Devi Parikh), September 2014.

26. Text and Video Analytics, Army Research Laboratory CARS Workshop (Host: Peter A. Kind), July 2014.

27. University of North Carolina, Computer Science Colloquium (Host: Tamara Berg), April 2014.

28. Carnegie Mellon University, VASC Seminar (Hosts: Yaser Sheikh, Kris Kitani), April 2014.

29. University of Pittsburgh, Computer Science Colloquium, March 2014.

30. eBay Research Labs (Host: Robinson Piramuthu), March 2014.

31. Oregon State University, EECS Colloquium (Host: Martin Erwig), March 2014.

32. Stony Brook University, Computer Science Colloquium (Host: Yejin Choi), February 2014.

33. Lafayette College, Computer Science Colloquium (Host: Jeffrey Pfaffmann), February 2014.

34. Vision and Language, NAACL-HLT Workshop (Hosts: Julia Hockenmaier and Tamara Berg), June 2013.

INVITED PANELS

- Ensuring Scholarly Access to Digital Records Workshop Series (Hosts: Sylvester A. Johnson and William A. Ingram, Virginia Tech, and the National Archives and Records Administration, funded by The Andrew W. Mellon Foundation), April-May 2021.

CURRENT/COMPLETED FUNDING

Note: National Science Foundation (NSF) research grants listed first, in reverse chronological order, then other research grants, then workshop grants.

1. Title: "CAREER: Natural Narratives and Multimodal Context as Weak Supervision for Learning Object Categories"

    - Role: **Sole PI**
    - Funding agency: **NSF** - CISE - IIS - Robust Intelligence
    - Total Intended Award Amount: $547,138 (direct & indirect)
    - Total Awarded Amount to Date: $90,374
    - Duration: May 1, 2021 to April 30, 2026
    - Date awarded: February 24, 2021

2. Title: "RI: Small: Domain-robust object detection through shape and context"

    - Role: **Sole PI**
    - Funding agency: **NSF** - CISE - IIS - Robust Intelligence
    - Amount: $461,846 (direct & indirect)
    - Duration: October 1, 2020 to September 30, 2023
    - Date awarded: August 10, 2020

3. Title: "NRI: INT: Designing Effective Dialogue, Gaze, and Gesture Behaviors in a Social Robot that Supports Collaborative Learning in Middle School Mathematics"

    - Role: Co-PI, PI: Erin Walker, Other Co-PIs: Diane Litman, Timothy Nokes-Malach
    - Funding agency: **NSF** - CISE - IIS - National Robotics Initiative (NRI)
    - Amount: $900,000 (direct & indirect)
    - Duration: October 1, 2020 to September 30, 2023
    - Date awarded: September 14, 2020

4. Title: "RAPID: Countering COVID-19 Misinformation via Situation-Aware Visually Informed Treatment"

- Role: Co-PI, PI: Yu-ru Lin, Other Co-PI: Wen-ting Chung
- Funding agency: **NSF** - CISE - IIS - COVID-19 Research
- Amount: $104,491 (direct & indirect)
- Duration: May 1, 2020 to April 30, 2022
- Date awarded: April 24, 2020

5. Title: "RI: Small: Modeling Vividness and Symbolism for Decoding Visual Rhetoric"

   - Role: **PI**, Co-PI: Rebecca Hwa
   - Funding agency: **NSF** - CISE - IIS - Robust Intelligence
   - Amount: $449,978 (direct & indirect)
   - Duration: August 1, 2017 to July 31, 2021
   - Date awarded: July 27, 2017

6. Title: "CRII: RI: Automatically Understanding the Messages and Goals of Visual Media"

   - Role: **Sole PI**
   - Funding agency: **NSF** - CISE - IIS - Robust Intelligence
   - Amount: $182,590 (direct & indirect, incl. REU supplement)
   - Duration: June 1, 2016 to May 31, 2019
   - Date awarded: May 27, 2016

7. Title: "Influence Detection through Multimodal Discourse and Vividness Analysis"

   - Role: **PI**, Co-PIs: Diane Litman, Rebecca Hwa, Malihe Alikhani, Yu-ru Lin, Jeffrey Cohn, Tessa Provins
   - Funding agency: Pitt Cyber Accelerator Grants (University of Pittsburgh)
   - Amount: $19,600 (direct cost)
   - Date awarded: March 18, 2021

8. Title: Sensing Infrastructure

   - Role: Co-PI, PI: Adam Lee, Other Co-PIs: Amy Babay, Jacob Biehl, Olga Kuchinskaya, Stephen Lee, Eleanor 'Nora' Mattern
   - Funding agency: Pitt Cyber Accelerator Grants (University of Pittsburgh)
   - Amount: $15,000 (direct cost)
   - Date awarded: April 6, 2020

9. Title: "Common sense for computer vision tasks"

   - Role: **Sole PI**
   - Funding agency: Momentum Funds (University of Pittsburgh)
   - Amount: $13,800 (direct cost)
   - Date awarded: January 30, 2020

10. Title: "Functional objects: How objects foreshadow film plots and explain advertisements"

- Role: **Sole PI**
- Funding agency: Amazon Inc
- Amount: $62,000 (direct cost)
- Date awarded: January 15, 2019

11. Title: "Inferring Messages of Ads using Common Sense from Film and Knowledge Bases"

   - Role: **Sole PI**
   - Funding agency: Adobe Inc
   - Amount: $10,000 (direct cost)
   - Date awarded: November 26, 2018

12. Title: "Inferring Advertised Properties for Automatic Personalization of Visual Advertisements"

   - Role: **Sole PI**
   - Funding agency: Adobe Inc
   - Amount: $49,040 (direct cost)
   - Date awarded: September 10, 2018

13. Title: "Mixed-Initiative Image Retrieval"

   - Role: **Sole PI**
   - Funding agency: Central Research Development Fund (University of Pittsburgh)
   - Amount: $17,750 (direct cost)
   - Duration: August 1, 2018 to June 30, 2020
   - Date awarded: July 5, 2018

14. Title: "Modeling Narrative Structure in Advertisement Videos"

   - Role: **Sole PI**
   - Funding agency: Google Faculty Research Awards
   - Amount: $42,900 (direct cost)
   - Date awarded: February 21, 2018

15. Title: "Deeply Interactive Image Search: Learning Attribute Vocabularies and Spatial Support from People"

   - Role: **Sole PI**
   - Funding agency: Central Research Development Fund (University of Pittsburgh)
   - Amount: $15,749 (direct cost)
   - Duration: July 31, 2016 to June 30, 2018
   - Date awarded: June 24, 2016

16. Title: "Decoding Video Advertisements"

   - Role: **Sole PI**

- Funding agency: Google Faculty Research Awards
- Amount: $41,361 (direct cost)
- Date awarded: February 8, 2016

17. Title: "Group Travel Grant for the Doctoral Consortium of the IEEE Conference on Computer Vision and Pattern Recognition"

    - Role: Sole PI
    - Funding agency: **NSF** - CISE - IIS - Robust Intelligence
    - Amount: $20,000 (direct cost)
    - Duration: June 1, 2017 to May 31, 2018
    - Date awarded: May 9, 2017

18. Title: "Group Travel Grant for the Doctoral Consortium of the IEEE Conference on Computer Vision and Pattern Recognition"

    - Role: Sole PI
    - Funding agency: **NSF** - CISE - IIS - Robust Intelligence
    - Amount: $17,050 (direct cost)
    - Duration: June 1, 2016 to May 31, 2017
    - Date awarded: March 23, 2016

19. Title: "Group Travel Grant for the Doctoral Consortium of the IEEE Conference on Computer Vision and Pattern Recognition"

    - Role: Sole PI
    - Funding agency: **NSF** - CISE - IIS - Robust Intelligence
    - Amount: $15,050 (direct cost)
    - Duration: June 1, 2015 to May 31, 2016
    - Date awarded: April 23, 2015

PATENTS

1. "Efficiently identifying images, videos, songs or documents most relevant to the user based on attribute feedback," Inventors: Kristen Grauman, Adriana Kovashka, Devi Parikh, Owner: Board of Regents, The University of Texas System, Issued: March 22, 2016

2. "Efficiently identifying images, videos, songs or documents most relevant to the user using binary search trees on attributes for guiding relevance feedback," Inventors: Kristen Grauman, Adriana Kovashka, Owner: Board of Regents, The University of Texas System, Issued: November 3, 2015

DATASETS COLLECTED AND MADE PUBLICLY AVAILABLE

- Political Articles (Images and Text), 2019. Images: ~1,000,000. Annotations: ~10,000. http://people.cs.pitt.edu/~chris/politics/

- Personalized Gaze and Descriptions of Advertisements, 2019. Images: ∼900, Annotations: ∼4,000. http://cs.pitt.edu/~nineil/crossmod/

- Automatic Understanding of Image and Video Advertisements, 2017. Images: 64,832. Videos: 3,477. Annotations: ∼1,000,000. Access sessions: 10,707, including 3,789 from the United States (45 different states, including 862 from California), 1,856 from India, 670 from Japan, 597 from China, 350 from France, 331 from the United Kingdom, 301 from Russia, and more from 91 other countries. http://people.cs.pitt.edu/~kovashka/ads/

- Implicit Relationship (Parallel/Non-parallel) between Images and Text in Ads, 2018. Images/annotations: ∼1,000. http://people.cs.pitt.edu/~mzhang/ads_parallelity/

- Story Understanding and Climax in Video Advertisements, 2018. Videos/annotations: ∼1,000. http://people.cs.pitt.edu/~yekeren/ads_climax/

- Human Gaze Data for Attributes, 2017. Images/annotations: ∼800. http://people.cs.pitt.edu/~nineil/gaze_proj/

PRESS

- La Republicca (Italy). "Facce da pubblicità: così l'Ai genera il volto giusto per ogni spot." August 8, 2018. https://www.repubblica.it/tecnologia/2018/08/08/news/facce_da_pubblicita_l_ai_genera_il_volto_giusto_per_ogni_spot-203606422/

- TechXplore.com. "Using machine learning to generate persuasive faces for ads." August 6, 2018. https://techxplore.com/news/2018-08-machine-persuasive-ads.html

- Computer Vision News. "Women in Computer Vision: Adriana Kovashka." July 2018. https://www.rsipvision.com/ComputerVisionNews-2018July/34/

- Techerati.com. "New photographs from dead photographers with convolutional neural networks." November 12, 2015. https://www.techerati.com/the-stack-archive/world/2015/11/12/new-photographs-from-dead-photographers-with-convolutional-neural-networks/

TEACHING AND MENTORING

UNDERGRADUATE COURSES TAUGHT

1. CS1674: Introduction to Computer Vision – developed new course

   - Semesters taught: Fall 2015 (as CS1699; enrolled: 38), Fall 2016 (36), Spring 2018 (48), Fall 2018 (19), Fall 2019 (38), Fall 2020 (remote; 34)
   - Student evaluations: 3.39 (2015), 3.89 (2016), 4.19 (2018), 4.64 (2018), 4.63 (2019), 4.56 (2020)

2. CS1678: Introduction to Deep Learning – developed new course

   - Semesters taught: Spring 2020 (as CS1699, enrolled: 48), Spring 2021 (remote; 42)

- Student evaluations: 4.08 (2020), 4.22 (2021)

3. CS1675: Introduction to Machine Learning

    - Semesters taught: Fall 2018 (enrolled: 51)
    - Student evaluations: 4.36 (2018)

GRADUATE COURSES TAUGHT

1. CS2770: Computer Vision – developed new course

    - Semesters taught: Spring 2017 (enrolled: 19), Spring 2018 (35), Spring 2019 (34; including both Computer Science and Intelligent Systems Program sections), Spring 2020 (35; CS&ISP), Spring 2021 (remote; 38; CS&ISP)
    - Evaluations: 4.47 (2017), 4.26 (2018), 4.25 (2019; weighted average of CS and ISP sections), 4.41 (2020; weighted average), 4.11 (2021; weighted average)

2. CS2750: Machine Learning

    - Semesters taught: Spring 2016 (enrolled: 27), Spring 2017 (25)
    - Evaluations: 3.72 (2016), 3.95 (2017)

3. CS3710: Visual Recognition

    - Semesters taught: Spring 2015 (enrolled: 15)
    - Evaluations: 3.88 (2015)

PHD STUDENTS SUPERVISED

1. Nils Murrugarra-Llerena (Computer Science, 01/2015-08/2019) – Status: Graduated – Committee: Adriana Kovashka, Rebecca Hwa, Milos Hauskrecht, Daqing He – Next position: Research Scientist at Snap Inc

2. Wei Guo (CS, advised by Jingtao Wang 01/2015-04/2018, *co-advised 05/2018-04/2019*) – Status: Graduated – Committee: Jingtao Wang, Adriana Kovashka, Diane Litman, Byeong-Young Cho – Next position: Google Inc

3. Chris Thomas (CS, 05/2015-08/2020) – Status: Graduated – Committee: Adriana Kovashka, Rebecca Hwa, Diane Litman, Abhinav Gupta *(Carnegie Mellon University)* – Next position: Postdoc Researcher, Columbia University (Advisor: Shih-Fu Chang)

4. Keren Ye (CS, 2016-present) – Status: PhD oral defense passed July 2021, expected graduation August 2021 – Committee: Adriana Kovashka, Diane Litman, Milos Hauskrecht, Seong Jae Hwang, Daqing He – Next position: Senior Applied Research Scientist, Cruise

5. Mingda Zhang (CS, co-advised by Rebecca Hwa, 2016-present) – Status: PhD proposal passed March 2021, expected graduation December 2021 – Committee: Adriana Kovashka, Rebecca Hwa, Diane Litman, Seong Jae Hwang, Daqing He – Next position: Google Inc

6. Narges Honarvar Nazari (CS, 2018-present)

7. Mesut Erhan Unal (CS, 2019-present)

8. Tristan Maidment (Intelligent Systems Program, 2020-present)

9. Giacomo Nebbia (Intelligent Systems Program, 2021-present)

PHD STUDENT COMMITTEE MEMBERSHIP

Student is in CS unless noted otherwise. Starred: served during only one milestone examination.

- ChangSheng Liu (Chair: Rebecca Hwa)
- Omid Kashefi (ISP, Chair: R. Hwa)
- Huy Nguyen (Chair: Diane Litman)
- *Fan Zhang (Chair: D. Litman)
- Luca Lugini (Chair: D. Litman)
- *Tazin Afrin (Chair: D. Litman)
- Haoran Zhang (Chair: D. Litman)
- Ahmed Magooda (Chair: D. Litman)
- Mingzhi Yu (Chair: D. Litman)
- Charmgil Hong (Chair: Milos Hauskrecht)
- Patrick Luo (Chair: M. Hauskrecht)
- Yanbing Xue (Chair: M. Hauskrecht)
- Siqi Liu (Chair: M. Hauskrecht)
- Jeongmin Lee (Chair: M. Hauskrecht)
- Salim Malakouti (Chair: M. Hauskrecht)
- *Matt Barren (Chair: M. Hauskrecht)
- Xiaoyu Ge (Chair: Panos Chrysanthis)
- Xiaozhong Zhang (Chair: P. Chrysanthis)
- Alireza Samadian (Chair: Kirk Pruhs)
- Lei Zhao (Chair: Youtao Zhang)
- Sumedha Singla (Co-Chairs: Seong Jae Hwang, Kayhan Batmanghelich)
- *Rui Meng (DINS, Chair: Daqing He)
- *Daniel Steinberg (ISP, Chair: P. Munro)
- *Khushboo Thaker (ISP, Co-Chairs: Daqing He, Peter Brussilovsky)
- *David Langerman (CoE, Chair: A. George)

MASTERS STUDENTS SUPERVISED

1. Bhavin Modi (co-author)
2. Xinyue Huang (co-author)
3. Brian Falkenstein (co-author)
4. Jonathan Lobo
5. Andrew Levandoski
6. Ankitkumar Joshi (DINS Masters, now CS PhD with M. Hauskrecht; paper under review)

UNDERGRADUATE STUDENTS SUPERVISED

1. Christian Clark
2. Austin Marcus
3. Kyle Buettner (CoE; co-author)
4. James Hahn (CS BPhil; co-author)
5. Zac Yu (CS BPhil; co-author)
6. Jacob McAfoos (internship sponsor)
7. Harrison Green (internship sponsor)
8. Joan Delgado (SURA sponsor)
9. Lanyi Wang (SCI Summer Scholar)
10. Vasilis Sarris
11. Varun Venkatesh
12. Alex Zharichenko

13. Vibhu Kundeti
14. Matthew Ross

SERVICE

PROFESSIONAL SERVICE

Note: Area chairs (ACs) are in charge of suggesting reviewers for about 30 papers per AC, leading discussion, and making acceptance decisions (in CVPR) or recommendations. In CVPR and ICLR, they report directly to the program chairs (PCs); in some conferences (e.g. AAAI, NeurIPS), there are also Senior Area Chairs. The number of ACs has grown commensurate with the growth of CVPR, from about 100 in CVPR 2018 to over 250 in CVPR 2021.

1. **Chairing Duties at Conferences and Journals (by Invitation):**

   - **Program Co-Chair:** ICCV 2025. (Other Co-Chairs: Derek Hoiem, Philippos Mordohai, Jingyu Yu, Lihi Zelnik-Manor)
   - **Area Chair:**
     - AAAI 2022 (Senior Area Chair, a.k.a. Senior Meta-Reviewer; Program Chairs: Vasant Honavar, Matthijs Spaan)
     - CVPR 2021 (Area Chair; PCs: David Forsyth, Georgia Gkioxari, Tinne Tuytelaars, Ruigang Yang, Jingyi Yu)
     - AAAI 2021 (Senior Area Chair; PCs: Kevin Leyton-Brown, Mausam)
     - ICLR 2021 (Area Chair; PCs: Katja Hofmann, Alice Oh, Naila Murray, Ivan Titov)
     - NeurIPS 2020 (Area Chair; Senior Area Chair: Kristen Grauman; PCs: Marc'Aurelio Ranzato, Raia Hadsell, Maria Florina Balcan, Hsuan-Tien Lin)
     - CVPR 2020 (Area Chair; PCs: Silvio Savarese, Kate Saenko, Greg Mori, Ce Liu)
     - CVPR 2019 (Area Chair; PCs: Abhinav Gupta, Derek Hoiem, Zhuowen Tu, Gang Hua)
     - CVPR 2018 (PCs: David Forsyth, Aude Oliva, Deva Ramanan, Ivan Laptev)
     - WACV 2017 (PCs: Michael Brown, Matthew Turk, Rogerio Feris, Conrad Sanderson)
     - WACV 2016 (PCs: Greg Mori, Robert Pless, Rahul Sukthankar, Scott McCloskey)
     - ICVGIP 2016 (PCs: Michael Brown, Dhruv Batra, Vijay Natarajan)
   - **Doctoral Consortium Chair/Co-Chair:**
     - CVPR 2022 (PCs: Dimitris Samaras, Kristin Dana, Gang Hua, Stefan Roth)
     - CVPR 2017 (PCs: James Rehg, Yanxi Liu, Ying Wu, Camillo Taylor)
     - CVPR 2016 (PCs: Tamara Berg, Lihi Zelnik-Manor, Lourdes Agapito, Jana Kosecka)
     - CVPR 2015 (PCs: Kristen Grauman, Erik Learned-Miller, Antonio Torralba, Andrew Zisserman)
   - **Tutorials Chair/Co-Chair:**
     - CVPR 2020 (PCs: Kate Saenko, Silvio Savarese, Greg Mori, Ce Liu)
     - WACV 2018 (PCs: Rahul Sukthankar, Kristin Dana, Xiaoming Liu, Tal Hassner)
   - **Session Chair:** ICLR 2021, CVPR 2019, 2018, 2016, WACV 2016.

- **Associate Editor:** Transactions on Pattern Analysis and Machine Intelligence (TPAMI) – Editor-in-Chief: Sven Dickinson. Impact factor: 17.861.

- **Guest Editor:** Distributed and Parallel Databases (DAPD) Special Issue: Machine Learning for Big Data, 2019 – Editor-in-Chief: Mohamed Mokbel. Impact factor: 0.757.

- *Declined invitations: Invited to be Associate Program Chair for Computer Vision at AAAI 2022, but declined due to the large time commitment. Invited to be Associate Editor for the Neurocomputing journal (impact factor 4.438) but declined.*

2. **Workshop Organization:**

- **Organizer in advisory role:** Fair, Data-Efficient & Trusted Computer Vision (CVPR 2020)

- **Organizer in advisory role:** Diagram Image Retrieval and Analysis (DIRA): Representation, Learning, and Similarity Metrics (CVPR 2020)

- **Organizer in advisory role:** Linguistics Meets Image and Video Retrieval (ICCV 2019)

- **Lead Organizer:** Towards Automatic Understanding of Visual Advertisements (CVPR 2018)

- **Organizer:** Visual Understanding of Subjective Attributes of Data (CVPR 2018)

- **Organizer:** Women in Computer Vision (CVPR 2015)

- **Lead Organizer:** Human-Machine Communication for Visual Recognition and Search (ECCV 2014)

3. **Reviewing, Judging and Mentoring:**

- **Panelist:** National Science Foundation (NSF), 2015, 2017, 2019, 2020, 2021.

- **Senior Program Committee Member:** AAAI 2020, IJCAI 2016.

- **Program Committee, Conferences:**
  - CVPR 2013, 2015 (Outstanding Reviewer), 2016, 2017 (Outstanding Reviewer);
  - ICCV 2013, 2015, 2017, 2019, 2021;
  - ECCV 2012, 2014, 2016, 2020 (Outstanding Reviewer);
  - BMVC 2020, 2021;
  - NeurIPS 2014, 2015, 2016, 2018 (Top 30% of Reviewers), 2019;
  - ICLR 2018, 2019, 2020;
  - AAAI 2014;
  - EMNLP 2020;
  - ACL 2021;
  - EACL 2021;
  - HCOMP 2012, 2020;
  - UIST 2015;
  - Workshops: Women in Computer Vision (CVPRW) 2020; ChaLearn (ECCVW) 2020; EGOCV (CVPRW) 2014, 2016; BigVision (CVPRW) 2016.

- **Reviewer, Journals:**
  - TPAMI 2014-2020;

- IJCV 2013, 2018, 2019;
  - CVIU 2014;
  - TKDE 2014.
- **Judge:** LDV Vision Summit 2016 Computer Vision Challenge.
- **Mentor:** CVPR 2021 Women in Computer Vision Workshop, WACV 2021 Doctoral Consortium.

COMPUTER SCIENCE DEPARTMENT SERVICE

1. Member and lead for fellowships and awards, Graduate Program and Examination Committee (GPEC), 09/2019 - present.

2. Member, Graduate Admissions and Financial Aid (GAFA), 01/2015 - 04/2018, 09/2019 - present.

3. Speaker/Mentor, High School Academy, Technology Leadership Initiative (outreach program), 07/2021.

4. Mentor, exploreCSR (STEM inclusion program), 03/2021 - 04/2021.

5. Member, CS Chair's Election Committee, 10/2019 - 11/2019.

6. Advisor, Undergraduate Advising Committee (UGRAC), 09/2018 - 04/2019.

7. Member, AI/ML CS Degree Ad-Hoc Committee, 09/2018 - 12/2018.

8. Member, Graduate Evaluation of Teaching (GREAT), 01/2015 - 04/2017.

9. Co-Organizer, CS Day, 01/2015 - 04/2017.

SCHOOL OF COMPUTING AND INFORMATION SERVICE

1. Member, SCI Academic Council, 09/2019 - present.

2. Member, ISP Chair Search Committee, 05/2020 - 08/2020.

3. Member, SCI Planning and Budget Committee (elected), 01/2020 - 04/2020.

4. Panelist-Mentor, SCI Mentoring Lunch & Learn Series, Topic: "How to set a research agenda, how to create a research brand and how to communicate about it", 12/2019.

5. Member, SCI Faculty Recruiting Committee (elected), 12/2017 - 05/2019.

6. Member, ISP Admissions Committee, 01/2019 - 04/2019.

UNIVERSITY OF PITTSBURGH SERVICE

1. Founding member, Pitt Disinformation Lab (invited by Michael Colaresi).

2. Reviewer, Pitt Momentum Funds, 2020.

3. Reviewer, Barry Goldwater Scholarship Review Committee (by invitation), 2020.

4. Member, Center for Research Computing Recruiting Advisory Committee, 12/2017 - 08/2018.

TALKS HOSTED AT UNIVERSITY OF PITTSBURGH

1. Sven Dickinson, University of Toronto and Samsung Toronto AI Research (November 2020, CS Colloquium)

2. James Hays, Georgia Tech and Argo AI (February 2019, ISP Forum)

3. James Rehg, Georgia Tech (March 2017, CS 50th Anniversary Keynote Speaker)

4. Olga Russakovsky, Carnegie Mellon University (December 2015, Pitt CS Distinguished Lecturer Series)