Rogerio Schmidt Feris

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Education

Ph.D. degree in Computer Science (2002-2006)
University of California, Santa Barbara, USA
(Advised by Prof. Matthew Turk)

M.S. degree in Computer Science (1999-2001)
University of Sao Paulo, Brazil
(Advised by Prof. Roberto Cesar)

B.S. degree in Computer Engineering (1994-1998)
University of Rio Grande (FURG), Brazil

Professional Experience

- **Principal Scientist & Manager, MIT-IBM Watson AI Lab, MA (2020-present)**
  - I am currently leading a team focused on augmenting large language models with memory, multiple modalities (vision, speech, sound, …), and self-specialized adapter modules. Our work was integrated into the **Generative AI Commentary** system that produced narrations for video highlights of the 2023 Wimbledon and US Open tennis tournaments. This project was covered by CNN, ESPN, Fox News, and other media outlets.
  - I led the IBM-MIT team as a principal investigator for **DARPA Learning with Less Labels** (LwLL), together with Prof. Josh Tenenbaum. I also led the IBM-MIT-Purdue team as a principal investigator for **IARPA DIVA** (with Prof. Jeff Siskind and Prof. Aude Oliva). We have achieved quite strong results in the evaluation benchmarks for both LwLL and DIVA, **ranking 1st** for most of the tasks among all other performers and external institutions.

- **Research Manager, IBM T. J. Watson Research Center, NY (2016-2020)**
  - I led the research team that created a system called Cognitive Highlights, which was used to generate the **official highlights of the US Open/Wimbledon/Masters** tournaments, for the first time in history. The highlights were seen by millions of fans worldwide! This work was covered by the New York Times and many other media outlets. It was also integrated as a product offering of Watson Media. We received a prestigious **Emmy award**, which recognizes the impact of this work.
  - I served as the coordinator of the joint program between IBM Research and Watson Visual Recognition, driving efforts towards strong research and product deliverables for the Watson Vision Services. I was also a **global leader** for the multimodal

perception area at IBM, coordinating efforts across labs worldwide and leading computer vision / AI challenges.

- **Research Scientist, IBM T. J. Watson Research Center, NY (2006-2016)**
  - o I was one of the key inventors of the IBM Intelligent Video Analytics (IVA), a leading-edge camera-based system with automatic event detection and search capabilities. My work on video analysis for safety and security was published in high-profile conferences and featured at ABC news and CBS 60 minutes. Among other awards, I was named IBM Master Inventor and received an IBM Outstanding Innovation Achievement Award.

- **Affiliate Associate Professor, University of Washington, WA (2008-2016)**
  - o I have co-advised PhD students at University of Washington, in close collaboration with Prof. Ming-Ting Sun. I co-advised the PhD dissertation of Haowei Liu and Jun Xie (both working at Google now).

- **Adjunct Associate Professor, Columbia University, NY (2008, 2013, 2014)**
  - o I co-taught advanced graduate courses on "Visual Recognition and Search" at Columbia University (Electrical Engineering and Computer Science Departments).

- **Senior Software Engineer, IBM Global Technology Services, NY (2008)**
  - o In addition to working on core research, I had a one-year assignment to IBM Global Technology Services as a senior software engineer, with the goal of helping the commercialization of the IBM Intelligent Video Analytics (IVA) system. My code has been running in various components of the product.

Research Interests

- **Broad Research Interests:**
  - o Computer Vision, Natural Language Processing, Multimedia, Artificial Intelligence

- **Specific Research Interests:**
  - o Multimodal Learning (Vision, Language, Speech, Sound, …)
  - o Large Language and Multimodal Models
  - o Video Understanding
  - o Transfer and Multi-Task Learning
  - o Dynamic Neural Networks
  - o Real-world Applications of AI

Selected Awards and Distinctions

- **Technology and Engineering Emmy Award**, National Academy of Television Arts & Sciences, for the work "AI-ML curation of Sports Highlights". The Technology & Engineering Emmy® Awards recognizes engineering technologies that either represent so extensive an improvement on existing methods or are so innovative in nature that they materially have affected television. As a key innovator, Rogerio received an Emmy statuette and participated in the National Association of Broadcasters ceremony in Las Vegas.

- Notable Area Chair, NeurIPS 2023.

- Best paper award, Honorable Mention, IEEE Winter Conference on Applications of Computer Vision (WACV), for the paper "Select, Label, and Mix: Learning Discriminative Invariant Feature Representations for Partial Domain Adaptation", 2023.

- IBM Corporate Award for AI Video Enrichment and Editing (Auto-curation of Sports Highlights), 2019. This is a prestigious company-wide award which recognizes breakthrough achievements that have led to significant market and industry success for IBM.

- 1st place, TRECVID ActEV: Activities in Extended Video, 2018.
  - Activity Detection (AD) Task – 1st Place out of 30 entries.
  - Activity and Object Detection (AOD) Task – 1st Place out of 15 entries

- Best Digital Development, Yahoo Sports Tech Awards (Wimbledon Cognitive Highlights), 2018.

- Best paper runner up, CVPR Workshop on Computer Vision in Sports, for the work "Automatic Curation of Golf Highlights using Multimodal Excitement Features", 2018.

- Best papers of ECCV 2016 - IJCV Special Issue, which feature the work "A Recurrent Encoder-Decoder Network for Sequential Face Alignment", 2016.

- Best Poster Award, Greater New York Area Workshop on Multimedia and Vision, for the paper "Designing category-level attributes for discriminative visual recognition", 2013.

- Invited Speaker at the National Academy of Engineering JAFOE meeting, which gathered sixty of the most promising engineers under the age of 45 from Japan and the United States, 2012.

- TRECVid Surveillance Event Detection Competition (IBM-CMU-NUS team). I was part of the team that ranked 1st in 4 out of 7 event detection tasks, 2012.

- Named IBM Master Inventor, 2011. This title is reserved for leading inventors within IBM. Each year, only 1% of the IBM Research technical population receives this award.

- IBM Outstanding Innovation Achievement Award. IBM Research award received for contributions in physical security and video analytics, 2011.

- Far-Reaching Research Award – competitive grant from IBM Research to pursue research towards building the next-generation camera networks (with Ankur Datta, Lisa Brown, and Rick Kjeldsen), 2010.

- North American Frost & Sullivan Award for Video Surveillance Software Company of the Year, 2008. Prize given to IBM in recognition of our work in video surveillance.

- IBM Emerging Leader in Multimedia, July 2005. I was among eight students selected from top universities by IBM.

- Best Computer Science MSc Thesis in Brazil - 2nd Prize (Nationwide Competition). Award received at the Congress of Brazilian Computer Society, 2002.

- IBM Research Accomplishment Awards
  - Dynamic Neural Networks for Efficient AI, 2020 (Outstanding Innovation Award)
  - Contributions to Science in the Learning with Less Labels (LwLL) Domain – Data Limited Learning for Vision and Beyond, 2020 (Outstanding Innovation Award)

- o Efficient and Robust Object Detection, 2018
- o CoreML, Customized Learning and De-Biasing for Watson Visual Recognition, 2018
- o Research Contributions to Watson Visual Recognition Services, 2017
- o Contributions to Safety & Physical Security through Video Analytics (O-level, Outstanding), 2010

Publications

[180+ papers, h-index 64 as of January 2024]

Books

1. R. Feris, C. Lampert, and D. Parikh (Eds.). Visual Attributes. Advances in Computer Vision and Pattern Recognition, Springer, 2016.

Peer-Reviewed Conference Publications

1. X. Sun, R. Panda, C. Chen, N. Wang, B. Pan, K. Gopalakrishnan, A. Oliva, R. Feris, and K. Saenko. Improved Techniques for Quantizing Deep Networks with Adaptive Bit-Widths. IEEE Winter Conference on Applications of Computer Vision (**WACV 2024**)

2. Z. He, G. Blackwood, R. Panda, J. McAuley, R. Feris. Synthetic Pre-Training Tasks for Neural Machine Translation. Association for Computational Linguistics (**ACL 2023** Findings).

3. H. Zhong, S. Mishra, D. Kim, S. Jin, R. Panda, H. Kuehne, L. Karlinsky, V. Saligrama, A. Oliva, and R. Feris. Learning Human Action Recognition Representations Without Real Humans. Conference on Neural Information Processing Systems (**NeurIPS 2023** Datasets Track)

4. S. Doveh, A. Arbelle, S. Harary, R. Herzig, D. Kim, P. Cascante-Bonilla, A. Alfassy, R. Panda, R. Giryes, R. Feris, S. Ullman, and L. Karlinsky. Dense and Aligned Captions (DAC) Promote Compositional Reasoning in VL Models. Conference on Neural Information Processing Systems (**NeurIPS 2023, Spotlight**).

5. M. Mirza, L. Karlinsky, W. Lin, H. Possegger, M. Kozinski, R. Feris, and H. Bischof. LaFTer: Label-Free Tuning of Zero-shot Classifier using Language and Unlabeled Image Collections. Conference on Neural Information Processing Systems (**NeurIPS 2023**).

6. R. Herzig, A. Mendelson, L. Karlinsky, A. Arbelle, R. Feris, T. Darrell, A. Globerson. Incorporating Structured Representations into Pretrained Vision & Language Models Using Scene Graphs. Conference on Empirical Methods in Natural Language Processing (**EMNLP 2023**).

7. A. Rouditchenko, S. Khurana, S. Thomas, R. Feris, L. Karlinsky , H. Huehne, D. Harwath, B. Kingsbury, and J. Glass. Comparison of Multilingual Self-Supervised and Weakly-Supervised Speech Pre-Training for Adaptation to Unseen Languages (**Interspeech 2023**).

8. K. Wang. D. Kim, R. Feris, and M. Betke. CDAC: Cross-domain Attention Consistency in Transformer for Domain Adaptive Semantic Segmentation. International Conference on Computer Vision (**ICCV 2023**).

9. P. Cascante-Bonilla, K. Shehada, J. Smith, S. Doveh, D. Kim, R. Panda, G. Varol, A. Oliva, V. Ordonez, R. Feris, and L. Karlinsky. Going Beyond Nouns With Vision & Language Models Using Synthetic Data. International Conference on Computer Vision (**ICCV 2023**).

10. W. Lin, L. Karlinsky, N. Shvetsova, H. Possegger, M. Kozinski, R. Panda, R. Feris, H. Kuehne, and H. Bischof. MAtch, eXpand and Improve: Unsupervised Finetuning for Zero-Shot Action Recognition with Language Knowledge. International Conference on Computer Vision (**ICCV 2023**).

11. J. Smith, P. Cascante-Bonilla, A. Arbelle, D. Kim, R. Panda, D. Cox, D. Yang, Z. Kira, R. Feris, and L. Karlinsky. ConStruct-VL: Data-Free Continual Structured VL Concepts Learning. Conference on Computer Vision and Pattern Recognition (**CVPR 2023**).

12. J. Smith, L. Karlinsky, V. Gutta, P. Cascante-Bonilla, D. Kim, A. Arbelle, R. Panda, R. Feris, and Zsolt Kira. CODA-Prompt: COntinual Decomposed Attention-based Prompting for Rehearsal-Free Continual Learning. Conference on Computer Vision and Pattern Recognition (**CVPR 2023**).

13. S. Doveh, A. Arbelle, S. Harary, R. Panda, R. Herzig, E. Schwartz, R. Giryes, R. Feris, S. Ullman, and L. Karlinsky. Teaching Structured Vision & Language Concepts to Vision & Language Models. Conference on Computer Vision and Pattern Recognition (**CVPR 2023**).

14. P. Wang, R. Panda, L. Hennigen, P. Greengard, L. Karlinsky, R. Feris, D. Cox, Z. Wang, and Y. Kim. Learning to Grow Pretrained Models for Efficient Transformer Training. International Conference on Learning Representations (**ICLR 2023, notable-top-25%).**

15. Z. Wang, R. Panda, L. Karlinsky, R. Feris, H. Sun, and Y. Kim. Multitask Prompt Tuning Enables Parameter-Efficient Transfer Learning. International Conference on Learning Representations (**ICLR 2023**).

16. A. Sahoo, R. Panda, R. Feris, K., and A. Das. Select, Label, and Mix: Learning Discriminative Invariant Feature Representations for Partial Domain Adaptation. IEEE Winter Conference on Applications of Computer Vision (**WACV 2023, Best Paper Award Honorable Mention**).

17. T. Li, L. Fan, Y. Yuan, H. He, Y. Tian, R. Feris, P. Indyk, and D. Katabi. Addressing Feature Suppression in Unsupervised Visual Representations. IEEE Winter Conference on Applications of Computer Vision (**WACV 2023**).

18. A., Y. Chuang, N. Shvetsova, S. Thomas, R. Feris, B. Kingsbury, L. Karlinsky, D. Harwath, H. Kuehne, and J. Glass. C2KD: Cross-Lingual Cross-Modal Knowledge Distillation for Multilingual Text-Video Retrieval. International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2023**).

19. J. Lee, Y. Bu, P. Sattigeri, R. Panda, G. Wornell, L. Karlinsky, and R. Feris. A maximal correlation approach to imposing fairness in machine learning. International Conference on Acoustics, Speech and Signal Processing (**ICASSP 2022**).

20. M. Baradad, R. Chen, J. Wulff, T. Wang, R. Feris, A. Torralba, and P. Isola. Procedural Image Programs for Representation Learning. Conference on Neural Information Processing Systems (**NeurIPS 2022**).

21. Y. Kim, S. Mishra, S. Jin, R. Panda, H. Kuehne, L. Karlinsky, V. Saligrama, K. Saenko, A. Oliva, and R. Feris. How Transferable are Video Representations Based on Synthetic Data? Conference on Neural Information Processing Systems (**NeurIPS 2022** Dataset Track).

22. A. Alfassy, A. Arbelle, O. Halimi, S. Harary, R. Herzig, E. Schwartz, R. Panda, M. Dolfi, C. Auer, P. Staar, K. Saenko, R. Feris, L. Karlinsky. FETA: Towards Specializing Foundational Models for Expert Task Applications. Conference on Neural Information Processing Systems (**NeurIPS 2022** Dataset Track).

23. S. Mishra, R. Panda, C. Phoo, C. Chen, L. Karlinsky, K. Saenko, V. Saligrama, and R. Feris. Task2Sim: Towards Effective Pre-training and Transfer from Synthetic Data. Conference on Computer Vision and Pattern Recognition (**CVPR 2022**).

24. S. Harary, E. Schwartz, A. Arbelle, P. Staar, S. Abu-Hussein, E. Amrani, R. Herzig, A. Alfassy, R. Giryes, H. Kuehne, D. Katabi, K. Saenko, R. Feris, and L. Karlinsky. Unsupervised Domain Generalization by Learning a Bridge Across Domains. Conference on Computer Vision and Pattern Recognition (**CVPR 2022, Oral**).

25. P. Cascante-Bonilla, H. Wu, L. Wang, R. Feris, and V. Ordonez. SimVQA: Exploring Simulated Environments for Visual Question Answering. Conference on Computer Vision and Pattern Recognition (**CVPR 2022**).

26. Y. Li, R. Panda, Y. Kim, C. Chen, R. Feris, D. Cox, and N. Vasconcelos. VALHALLA: Visual Hallucination for Machine Translation. Conference on Computer Vision and Pattern Recognition (**CVPR 2022**).

27. N. Shvetsova, B. Chen, A. Rouditchenko, S. Thomas, B. Kingsbury, R. Feris, D. Harwath, J. Glass, and H. Kuehne. Everything at Once -- Multi-modal Fusion Transformer for Video Retrieval. Conference on Computer Vision and Pattern Recognition (**CVPR 2022**).

28. T. Li, P. Cao, Y. Yuan, L. Fan, Y. Yang, R. Feris, P. Indyk, and D. Katabi. Targeted Supervised Contrastive Learning for Long-Tailed Recognition. Conference on Computer Vision and Pattern Recognition (**CVPR 2022**).

29. B. Pan, Y. Jiang, R. Panda, Z. Wang, R. Feris, and A. Oliva. IA-RED^2: Interpretability-Aware Redundancy Reduction for Vision Transformers. Conference on Neural Information Processing Systems (**NeurIPS 2021**).

30. A. Islam. C. Chen, R. Panda, L. Karlinsky, R. Feris, and R. Radke. Dynamic Distillation Network for Cross-Domain Few-Shot Recognition with Unlabeled Data. Conference on Neural Information Processing Systems (**NeurIPS 2021**).

31. R. Panda, R. Chen, Q. Fan, X. Sun, K. Saenko, A. Oliva, and R. Feris. AdaMML: Adaptive Multi-Modal Learning for Efficient Video Recognition. International Conference on Computer Vision (**ICCV 2021**).

32. A. Islam, R. Chen, R. Panda, L. Karlinsky, R. Radke, and R. Feris. A Broad Study on the Transferability of Visual Representations with Contrastive Learning. International Conference on Computer Vision (**ICCV 2021**).

33. A. Arbelle, S. Doveh, A. Alfassy, J. Shtok, G. Lev, E. Schwartz, H. Kuehne, H. Levi, P. Sattigeri, R. Panda, R. Chen, A. Bronstein, K. Saenko, S. Ullman, R. Giryes, R. Feris, and L. Karlinsky. Detector-Free Weakly Supervised Grounding by Separation. International Conference on Computer Vision (**ICCV 2021, Oral**).

34. X. Sun, R. Panda, R. Chen, A. Oliva, R. Feris, and K. Saenko. Dynamic Network Quantization for Efficient Video Inference. International Conference on Computer Vision (**ICCV 2021**).

35. B. Chen, A. Rouditchenko, K. Duarte, H. Kuehne, S. Thomas, A. Boggust, R. Panda, B. Kingsbury, R. Feris, D. Harwath, J. Glass, M. Picheny, and S. F. Chang. Multimodal Clustering Networks for Self-supervised Learning from Unlabeled Videos. International Conference on Computer Vision (**ICCV 2021**).

36. A. Rouditchenko, A. Boggust, D. Harwath, B. Chen, D. Joshi, S.Thomas, K. Audhkhasi, H. Kuehne, R. Panda, R. Feris, B. Kingsbury, M. Picheny, A.Torralba, and J. Glass. AVLnet: Learning Audio-Visual Language Representations from Instructional Videos. Interspeech 2021

37. A. Rouditchenko, A. Boggust, D. Harwath, S. Thomas, H. Kuehne, B. Chen, R. Panda, R. Feris, B. Kingsbury, M. Picheny and J. Glass. Cascaded Multilingual Audio-Visual Learning from Videos. Interspeech 2021

38. G. Bukchin, E. Schwartz, K. Saenko, O. Shahar, R. Feris, R. Giryes, and L. Karlinsky. Fine-grained Angular Contrastive Learning with Coarse Labels. Conference on Computer Vision and Pattern Recognition (**CVPR 2021, Oral**).

39. H. Wu, Y. Gao, X. Guo, Z. Al-Halah, S. Rennie, K. Grauman, and R. Feris. Fashion IQ: A New Dataset Towards Retrieving Images by Natural Language Feedback. Conference on Computer Vision and Pattern Recognition (**CVPR 2021**).

40. S. Whitehead, H. Wu, H. Ji, R. Feris, and K. Saenko. Separating Skills and Concepts for Novel Visual Question Answering. Conference on Computer Vision and Pattern Recognition (**CVPR 2021**).

41. M. Monfort, S. Jin, D. Harwath, R. Feris, J. Glass, and A. Oliva. Spoken Moments: A Large Scale Dataset of Audio Descriptions of Dynamic Events in Video. Conference on Computer Vision and Pattern Recognition (**CVPR 2021**).

42. A. Singh, O. Chakraborty, A. Varshney, R. Panda, R. Feris, K. Saenko, and A. Das. Semi-Supervised Action Recognition with Temporal Contrastive Learning. Conference on Computer Vision and Pattern Recognition (**CVPR 2021**).

43. C. Chen, R. Panda, K. Ramakrishnan, R. Feris, J. Cohn, A. Oliva, and Q. Fan. Deep Analysis of CNN-based Spatio-temporal Representations for Action Recognition. Conference on Computer Vision and Pattern Recognition (**CVPR 2021**).

44. B. Pan, R. Panda, C. Fosco, C. Lin, A. Andonian, Y. Meng, K. Saenko, A. Oliva, and R. Feris. VA-RED^2: Video Adaptive Redundancy Reduction. International Conference on Learning Representations (**ICLR 2021**).

45. Y. Meng, R. Panda, C. Lin, P. Sattigeri, L. Karlinsky, K. Saenko, A. Oliva, and R. Feris. AdaFuse: Adaptive Temporal Fusion Network for Efficient Action Recognition. International Conference on Learning Representations (**ICLR 2021**).

46. L. Karlinsky, J. Shtok, A. Alfassy, M. Lichtenstein, S. Harary, E. Schwartz, S. Doveh, P. Sattigeri, R. Feris, A. Bronstein, and R. Giryes. StarNet: towards Weakly Supervised Few-Shot Object Detection. AAAI Conference on Artificial Intelligence (**AAAI 2021**).

47. R. Panda, M. Merler, M. Jaiswal, H. Wu, K. Ramakrishnan, U. Finkler, C. Chen, M. Cho, R. Feris, D. Kung, and B. Bhattacharjee. NASTransfer: Analyzing Architecture Transferability in Large Scale Neural Architecture Search. AAAI Conference on Artificial Intelligence (**AAAI 2021**).

48. U. Finkler, M. Merler, R. Panda, M. Jaiswal, H. Wu, K. Ramakrishnan, C. Chen, M. Cho, D. Kung, R. Feris, and B. Bhattacharjee. Large Scale Neural Architecture Search with Polyharmonic Splines. AAAI Workshop on Meta-Learning for Computer Vision, 2021.

49. X. Sun, R. Panda, R. Feris, and K. Saenko. AdaShare: Learning What to Share for Efficient Deep Multi-Task Learning. Conference on Neural Information Processing Systems (**NeurIPS 2020**).

50. Y. Guo, N. Codella, L. Karlinsky, J. Codella, J. Smith, K. Saenko, T. Rosing, and R. Feris. A Broader Study of Cross-Domain Few-Shot Learning. European Conference on Computer Vision (**ECCV 2020**).

51. Y. Meng, C. Lin, R. Panda, P. Sattigeri, L. Karlinsky, K. Saenko, A. Oliva, and R. Feris. AR-Net: Adaptive Frame Resolution for Efficient Action Recognition. European Conference on Computer Vision (**ECCV 2020**).

52. Z. Tang, Y. Gao, P. Sattigeri, L. Karlinsky, R. Feris, and D. Metaxas. OnlineAugment: Online Data Augmentation with Less Domain Knowledge. European Conference on Computer Vision (**ECCV 2020**).

53. M. Lichtenstein, P. Sattigeri, R. Feris, R. Giryes, and L. Karlinsky. TAFSSL: Task-Adaptive Feature Sub-Space Learning for few-shot classification. European Conference on Computer Vision (**ECCV 2020**).

54. A. Andonian, C. Fosco, M. Monfort, A. Lee, R. Feris, C. Vondrick, and A. Oliva. We Have So Much In Common: Modeling Semantic Relational Set Abstractions in Videos. European Conference on Computer Vision (**ECCV 2020**).

55. A. Sahoo, A. Singh, R. Panda, R. Feris, and A. Das. Mitigating Dataset Imbalance via Joint Generation and Classification. ECCV Workshop on Imbalance Problems in Computer Vision, 2020.

56. C. Lin, Y. Hung, R. Feris, and L. He. Video Instance Segmentation Tracking. Conference on Computer Vision and Pattern Recognition (**CVPR 2020**).

57. Z. Wang, M. Yu, Y. Wei, R. Feris, J. Xiong, W. Hwu, T. Huang, and H. Shi. Differential Treatment for Stuff and Things: A Simple Unsupervised Domain Adaptation Method for Semantic Segmentation. Conference on Computer Vision and Pattern Recognition (**CVPR 2020**).

58. K. Ramakrishnan, R. Panda, Q. Fan, J. Henning, A. Oliva, and R. Feris. Relationship Matters: Relation Guided Knowledge Transfer for Incremental Learning of Object Detectors. CVPR Workshop on Continual Learning in Computer Vision, 2020.

59. M. Khoi-Nguyen, D. Joshi, R. Yeh, J. Xiong, R. Feris, and M. Do. Learning Motion in Feature Space: Locally- Consistent Deformable Convolution Networks for Fine Grained Action Detection. International Conference on Computer Vision (**ICCV 2019, Oral**), Seoul, Korea, 2019.

60. A. Alfassy, L. Karlinsky, A. Aides, J. Shtok, S. Harary, R. Feris, R. Giryes, and A. Bronstein. LaSO: Label-Set Operations Networks for Multi-label Few-shot Learning. Conference on Computer Vision and Pattern Recognition (**CVPR 2019, Oral**), Long Beach, California, 2019.

61. Y. Guo, H. Shi, A. Kumar, K. Grauman, T. Rosing, and R. Feris. SpotTune: Transfer Learning through Adaptive Fine-tuning. Conference on Computer Vision and Pattern Recognition (**CVPR 2019**), Long Beach, California, 2019.

62. L. Karlinsky, J. Shtok, S. Harary, E. Schwartz, A. Aides, R. Feris, R. Giryes, and A. Bronstein. RepMet: Representative-based Metric Learning for Classification and One-shot Object Detection. Conference on Computer Vision and Pattern Recognition (**CVPR 2019**), Long Beach, California, 2019.

63. C. Chen, Q. Fan, N. Mallinar, T. Sercu, and R. Feris. Big-Little Net: An Efficient Multi-Scale Feature Representation for Visual and Speech Recognition. International Conference on Learning Representations (**ICLR 2019**), New Orleans, Louisiana, 2019.

64. A. Boggust, K. Audhkhasi, D. Joshi, D. Harwath, S. Thomas, R. Feris, D. Gutfreund, Y. Zhang, A. Torralba, M. Picheny, and James Glass. Grounding Spoken Words in Unlabeled Video. CVPR Workshop on Sight and Sound, 2019.

65. K. Ramakrishnan, M. Monfort, B. McNamara, A. Lascelles, D. Gutfreund, R. Feris, and A. Oliva. Identifying Interpretable Action Concepts in Deep Networks. CVPR Workshop on Explainable AI, 2019.

66. M. Jaiswal et al. Video-Text Compliance: Activity Verification Based on Natural Language Instructions. ICCV Workshop on Large Scale Holistic Video Understanding, 2019.

67. Z. Shen, H. Shi, J. Yu, H. Phan, R. Feris, L. Cao, D. Liu, X. Wang, T. Huang, M. Savvides. Learning Object Detection from Scratch via Gated Feature Reuse. British Machine Vision Conference (BMVC), 2019.

68. E. Schwartz*, L. Karlinsky*, J. Shtok, S. Harary, M. Marder, A. Kumar, R. Feris, R. Giryes, and A. Bronstein. Delta-Encoder: an Effective Sample Synthesis Method for Few-shot Object Recognition. Neural Information Processing Systems (**NeurIPS 2018, Spotlight**), Montreal, Canada, 2018. (* equal contribution)

69. X. Guo*, H. Wu*, Y. Cheng, S. Rennie, G. Tesauro, and R. Feris. Dialog-based Interactive Image Retrieval. Neural Information Processing Systems (**NeurIPS 2018**), Montreal, Canada, 2018. (*equal contribution)

70. A. Kumar, P. Sattigeri, K. Wadhawan, L. Karlinsky, R. Feris, W. T. Freeman, and G. Wornell. Co-regularized Alignment for Unsupervised Domain Adaptation. Neural Information Processing Systems (**NeurIPS 2018**), Montreal, Canada, 2018.

71. R. Gao, R. Feris and K. Grauman. Learning to Separate Object Sounds by Watching Unlabeled Video. European Conference on Computer Vision (**ECCV 2018, Oral**), Munich, Germany, 2018.

72. B. Cheng*, Y. Wei*, H. She, R. Feris, J. Xiong, and T. Huang. Revisiting RCNN: On Awakening the Classification Power of Faster RCNN. European Conference on Computer Vision (**ECCV 2018**), Munich, Germany, 2018. (* equal contribution)

73. Z. Wu*, T. Nagarajan*, A. Kumar, S. Rennie, L. Davis, K. Grauman, and R. Feris. BlockDrop: Dynamic Inference Paths in Residual Networks. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR 2018, Spotlight**), Salt Lake City, Utah, June 2018. (* equal contribution)

74. X. Peng, Z. Tang, F. Yang, R. Feris, and D. Metaxas. Jointly optimize data augmentation and network training: Adversarial data augmentation in human pose estimation. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR 2018**), Salt Lake City, Utah, June 2018.

75. M. Merler, D. Joshi, K. Mac, Q. Nguyen, S. Hammer, J. Kent, J. Xiong, M. Do, J. Smith, and R. Feris. The Excitement of Sports: Automatic Highlights using Audio-Visual Cues. CVPR Workshop on Sight and Sound, 2018.

76. N. Codella, C. Lin, A. Halpern, M. Hind, R. Feris, and J. Smith. Collaborative Human-AI (CHAI): Evidence-Based Interpretable Melanoma Classification in Dermoscopic Images. MICCAI Workshop on Interpretability of Machine Intelligence in Medical Image Computing, 2018.

77. N. Codella, D. Anderson, T. Philips, A. Porto, K. Massey, J. Snowdon, R. Feris, and J. Smith. Segmentation of both Diseased and Healthy Skin from Clinical Photographs in a Primary Care Setting. International Engineering in Medicine and Biology Conference, 2018.

78. M. Beigi, L. M Brown, Q. Fan, J. Henning, C. Lin, H. Shi, C. Shu, and R. Feris. Object-Centric Spatio-Temporal Activity Detection and Recognition. NIST TRECVID Workshop, 2018.

79. Y. Lu, A. Kumar, S. Zhai, Y. Cheng, T. Javidi, and R. Feris. Fully Adaptive Feature Sharing in Multi-Task Networks with Applications in Person Attribute Classification. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR 2017, Spotlight**), Honolulu, Hawaii, July 2017.

80. S. Zhai, H. Wu, A. Kumar, Y. Cheng, Y. Lu, Z. Zhang,and R. Feris. S3Pool: Pooling with Stochastic Spatial Sampling. IEEE Conference on Computer Vision and Pattern Recognition (**CVPR 2017**), Honolulu, Hawaii, July 2017.

81. M. Merler, D. Joshi, Q. Nguyen, S. Hammer, J. Kent, J. R Smith, and R. Feris. Automatic Curation of Golf Highlights using Multimodal Excitement Features. Workshop of Computer Vision in Sports (in conjunction with CVPR), 2017.

82. Z. Cai, Q. Fan, R. Feris, and N. Vasconcelos. A Unified Multi Scale Deep Convolutional Neural Network for Fast Object Detection. European Conference on Computer Vision (**ECCV 2016**), Amsterdam, Netherlands, 2016.

83. X. Peng, R. Feris, X. Wang, and D. Metaxas. A Recurrent Encoder-Decoder Network for Sequential Face Alignment. European Conference on Computer Vision (**ECCV 2016, Oral**), Amsterdam, Netherlands, 2016.

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2. J. Lee, Y. Bu, P. Sattigeri, R. Panda, G. Wornell, L. Karlinsky, and R. Feris. A Maximal Correlation Framework for Fair Machine Learning. Entropy 24(4), 461, 2022.

3. E. Schwartz, L. Karlinsky, R. Feris, R. Giryes, and A. Bronstein. Baby steps towards few-shot learning with multiple semantics. Pattern Recognition Letters, 2022.

4. X. Peng , R. Feris, X. Wang, and D. Metaxas. Red-net: A recurrent encoder-decoder network for video-based face alignment. International Journal of Computer Vision (**IJCV**), 2018.

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Book Chapters

1. R. Feris, C. Lampert and D. Parikh. Introduction to Visual Attributes. In Visual Attributes (eds: R. S. Feris, C. Lampert, and D. Parikh), Springer, 2017.

2. H. Liu, R. Feris, and M.T. Sun. Benchmarking Datasets for Human Activity Recognition. Visual Analysis of Humans – Looking at People, Springer 2011.

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Theses and Reports

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2. M. Merler, N. Ratha, R. Feris, and J. Smith. Diversity in Faces. arXiv 2019.

3. B. Cheng, Y. Wei, R. Feris, J. Xiong, W. Hwu, T. Huang, and H. Shi. Decoupled Classification Refinement: Hard False Positive Suppression for Object Detection. arXiv 2018.

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Demos and Posters

1. D. Joshi, M. Merler , Q. Nguyen, S. Hammer, J. Kent, J. Smith, and R. Feris. IBM High-Five: Highlights from Intelligent Video Engine. ACM Multimedia, 2017.

2. F. Yu, L. Cao, R. Feris, J. Smith, and S. F. Chang. Designing Category-level Attributes for Discriminative Visual Recognition. Greater New York Area Workshop on Multimedia and Vision, 2013. (Best Poster Award)

3. IBM Centennial Demo – Traffic Analysis Using Video Analytics. Lincoln Center, Manhattan, New York 2011.

4. R. Feris, L. Brown, Q. Fan, A. Datta, S. Pankanti, A. Hampapur, Y. Zhai, R. Bobbitt, R. Kjeldsen, M. Lu, C. Shu, S. Russo, and C. Milite. IBM Smart Surveillance System: Searchable Video Analytics for Urban Environments and Retail Stores. CVPR DEMO, 2010.

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Issued Patents

1. 11,263,488 - System and method for augmenting few-shot object classification with semantic information from multiple sources
2. 11,176,587 - Method, a system, and a computer readable storage medium for auto recommendations for an online shopping cart
3. 11,100,145 - Dialog-based image retrieval with contextual information
4. 11,079,924 - Cognitive graphical control element
5. 10,977,303 - Image retrieval using interactive natural language dialog
6. 10,679,047 - System and method for pose-aware feature learning
7. 10,607,089 - Re-identifying an object in a test image
8. 10,595,101 - Auto-curation and personalization of sports highlights
9. 10,424,342 - Facilitating people search in video surveillance
10. 10,390,986 - Control device for controlling a rigidity of an orthosis and method of controlling a rigidity of an orthosis
11. 10,275,608 - Object-centric video redaction
12. 10,169,661 - Filtering methods for visual object detection
13. 10,163,355 - Dynamic management system, method, and recording medium for cognitive drone-swarms
14. 10,163,042 - Finding missing persons by learning features for person attribute classification based on deep learning
15. 10,089,551 - Self-optimized object detection using online detector selection
16. 10,040,551 - Drone delivery of coffee based on a cognitive state of an individual
17. 9,495,599 - Determination of train presence and motion state in railway environments
18. 9,477,890 - Object detection using limited learned attribute ranges
19. 9,471,852 - User-configurable settings for content obfuscation
20. 9,460,361 - Foreground analysis based on tracking information
21. 9,460,349 - Background understanding in video data
22. 9,443,148 - Visual monitoring of queues using auxiliary devices
23. 9,430,874 - Estimation of object properties in 3D world
24. 9,424,659 - Real time processing of video frames
25. 9,396,548 - Multi-cue object detection and analysis
26. 9,342,594 - Indexing and searching according to attributes of a person
27. 9,330,312 - Multispectral detection of personal attributes for video surveillance
28. 9,330,111 - Hierarchical ranking of facial attributes
29. 9,322,647 - Determining camera height using distr of object heights and object image heights
30. 9,299,162 - Multi-mode video event indexing
31. 9,280,833 - Topology determination for non-overlapping camera network
32. 9,262,445 - Image ranking based on attribute correlation
33. 9,251,425 - Object retrieval in video data using complementary detectors
34. 9,245,186 - Semantic parsing of objects in video
35. 9,224,049 - Detection of static object on thoroughfare crossings
36. 9,224,046 - Multi-view object detection using appearance model transfer from similar scenes
37. 9,165,375 - Automatically determining field of view overlap among multiple cameras
38. 9,134,399 - Attribute-based person tracking across multiple cameras
39. 9,104,919 - Multi-cue object association
40. 9,082,201 - Surface contamination determination system
41. 9,069,104 - Pathway management using model analysis and forecasting
42. 9,058,669 - Incorporating video meta-data in 3D models
43. 8,948,454 - Boosting object detection performance in videos
44. 8,934,670 - Real time processing of video frames for triggering an alert
45. 8,837,776 - Rule-based combination of a hierarchy of classifiers for occlusion detection
46. 8,824,791 - Color correction for static cameras

47. 8,811,663 - Object detection in crowded scenes
48. 8,774,532 - Calibration of video object classification
49. 8,675,917 - Abandoned object recognition using pedestrian detection
50. 8,620,026 - Video-based detection of multiple object types under varying poses
51. 8,488,881 - Object segmentation at a self-checkout
52. 8,483,481 - Foreground analysis based on tracking information
53. 8,249,301 - Video object classification
54. 8,170,276 - Object detection system based on a pool of adaptive features
55. 8,107,678 - Detection of abandoned and removed objects in a video stream
56. 7,738,725 - Stylized rendering using a multi-flash camera

Invited Talks

- Keynote speaker, Conference on Graphics, Patterns and Images (Sibgrapi 2023), Brazil, 2023. "Learning with Real and Unreal Data in the Era of Foundation Models"

- Invited Speaker, IJCAI Workshop on Generalizing from Limited Resources in the Open World, 2023. "Learning Trusted Models with Less Data"

- Google Research India, 2022. "Representation Learning based on Synthetic Data"

- "Computational Visual Pathways for Multi-Task Learning and Simulation"
  - Flatiron Institute, 2022
  - Binghamton University, 2022
  - University of British Columbia, 2021

- Boston University AIR Distinguished Speaker Series, 2021. "Dynamic Neural Networks for Efficient Multimodal Video Understanding"

- Invited speaker, CVPR Workshop on Learning from Limited and Imperfect Data, 2021. "How Transferable are Contrastive Representations?"
- Keynote speaker, CVPR Workshop on Multimodal Learning and Applications, 2021. "Adaptive Multimodal Learning for Efficient Video Understanding"

- Keynote speaker, CVPR LatinX in CV Workshop. "Adaptive Multimodal Learning for Efficient Video Understanding"

- Keynote speaker, ICML LatinX in AI workshop, 2020. "Dynamic Neural Networks for Efficient Image and Video Classification"

- Keynote speaker, CVPR Workshop on Diagram Image Retrieval and Analysis, 2020. "Visual Learning Beyond Natural Images"

- Invited speaker, What's Next in AI – AI We can Scale, MIT-IBM Watson AI Lab event. "Learning to Learn"

- Invited speaker, NeurIPS Workshop on Energy Efficient Machine Learning and Cognitive Computing, 2019. "Adaptive (Dynamic) Neural Networks for Efficient Inference"

- Invited speaker, CVPR Workshop on Learning from Imperfect Data, 2019. "Learning More from Less: Weak Supervision and Beyond"

- Keynote speaker, CVPR Workshop on Understanding Subjective Attributes of Data, 2019. "Is It All Relative? Interactive Fashion Search based on Relative Natural Language Feedback"

- Invited speaker, CVPR Workshop on Energy Efficient Machine Learning and Cognitive Computing, 2019. "Speeding up Deep Neural Networks with Adaptive Computation and Efficient Multi-Scale Architectures"

- Keynote speaker, Conference on Graphics, Patterns and Images (SIBGRAPI 2016), Sao Jose dos Campos, Brazil, 2016. "Representation Learning Beyond Human Labels: Practical Applications in Visual Analysis of People"

- Keynote speaker, International Joint Conference on Artificial Intelligence (IJCAI) BeyondLabeler Workshop, New York City, USA, 2016. "Representation Learning Beyond Human Labels: Practical Applications in Visual Analysis of People"

- Invited Speaker, NYC Computer Vision Meetup, 2015. "Deep Domain Adaptation for Describing People Based on Fine-grained Attributes"

- Invited Speaker, Workshop on Recent Trends in Computer Vision, Boston, USA, 2015. "Deep Domain Adaptation for Describing People Based on Fine-grained Attributes".

- Invited Speaker, International Conference on Multimedia Retrieval (ICMR) Practitioner's day, Glasgow, Scotland, 2014. "Multimedia Analytics at IBM Research"

- NYU Center for Urban Science and Progress, New York City, 2014. "Smart Surveillance: Towards Visual Search based on Fine-Grained Semantic Attributes". Host: Claudio Silva

- Invited Speaker, CVPR Workshop on Fine-Grained Visual Categorization, Portland, Oregon, 2013. "Fine-Grained Attribute Classification and Search: Two Case Studies and Lessons Learnt"

- IBM Research, Brazil, 2013. "Learning Visual Semantics". Host: Andrea Mattos

- Invited Speaker, National Academy of Engineering JAFOE meeting, Irvine, California, 2012. "Intelligent Video Surveillance"

- University of Delaware, 2012. "Attribute-based Object Retrieval". Host: Jingyi Yu

- Invited Speaker, ICMR 2011 Practitioner's day, Trento, Italy 2011. "Attribute-based Object Retrieval"

- City College of New York, May 2010. "Searching for People and Vehicles in Urban Environments". Host: Yingli Tian

- Cognitec, Dresden, Germany, September 2008. "The IBM Smart Surveillance System". Host: Roger Kelesoglu

- Invited speaker, IBM Conference on Maturing and Leveraging Biometrics Analytics, 2008. "Person Identification through Search Based on Physical Attributes"

- University of Washington, 2007. "The IBM Smart Surveillance System". Host: Linda Shapiro

- Princeton University, 2007. "Computer Vision for Digital Photography and Smart Surveillance". Host: Fei-Fei Li

- Kodak Research, Intelligent Systems Lab, Rochester, NY, 2007. "Multi-Flash Photography and Applications". Host: Jiebo Luo

- HP Laboratories, Computer Vision and Graphics group, Palo Alto, CA, 2007. "Detection and Modeling of Depth Discontinuities with Lighting and Viewpoint Variation". Host: Bruce Culbertson

- Adobe Advanced Technology Labs, Seattle, 2006. "Discontinuity Detection and Modeling with Lighting and Viewpoint Variation" (also presented at University of Washington). Host: David Salesin

- Jet Propulsion Laboratory, Pasadena, CA, 2006. "Detection and Analysis of Depth Discontinuities in Computer Vision". Host: Larry Matthies

- IBM T.J. Watson Research, Hawthorne, NY, 2005. "What Can We Do with a Multi-Flash Camera?" Host: Deepak Turaga (as part of Emerging Leaders in Multimedia Seminar)

- Microsoft Research, Redmond, 2001. "A Wavelet Subspace Method for Real-time Face Tracking". Host: Kentaro Toyama

Academic Experience

- **Adjunct Associate Professor, Columbia University**

  o Instructor: Visual Recognition and Search, Spring 2014 (Graduate course)
  http://rogerioferis.com/VisualRecognitionAndSearch2014/home.html
  Evaluation: 5.00/5.00

  o Instructor: Visual Recognition and Search, Spring 2013 (Graduate course)
  http://rogerioferis.com/VisualRecognitionAndSearch2013/home.html
  Evaluation: 4.56/5.00

  o Instructor: Automatic Video Surveillance, Spring 2008 (Graduate Course)
  http://www.andrewsenior.com/technical/surveillanceclass/

- **Affiliate Associate Professor, University of Washington**

  o Co-advised the PhD dissertations of Haowei Liu and Jun Xie (both working at Google now) and was involved in several other academic activities (such as selection of PhD students)

- **Short Courses / Tutorials**

  o ICCV 2019 Tutorial on Visual Learning with Limited Labeled Data
  https://sites.google.com/view/learning-with-limited-data/home
  with Kate Saenko, Leonid Karlinsky, Ross Girshick, Judy Hoffman, Kevin Swersky, and Lorenzo Torresani

  o ICCV 2015 Tutorial on Tools for Efficient Object Detection
  http://mp7.watson.ibm.com/ICCV2015/ObjectDetectionICCV2015.html

with Piotr Dollar, Xiaoyu Wang, Kaiming He, Ross Girshick, Rodrigo Benenson, and Jan Hosang

- o CVPR 2014 Tutorial on Learning Visual Semantics: Models, Massive Computation, and Innovative Applications
  http://mp7.watson.ibm.com/LearningVisualSemantics/index.htm
  with Liangliang Cao, John Smith, and Shih-Fu Chang

- o CVPR 2012 Tutorial on Looking at People: Benchmarking Human Activity Recognition with Haowei Liu and Ming-Ting Sun

Professional Activities

- **Program Chair**
  - o IEEE Winter Conference on Applications of Computer Vision (WACV) 2017
  - o 1st GNY Area Vision and Multimedia Meeting, 2011.

- **Associate Editor**, IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), 2018-2023

- **Area Chair**
  - o Conference on Computer Vision and Pattern Recognition (CVPR) - 2015, 2016, 2017, 2020, 2021, 2023
  - o Neural Information Processing Systems (NeurIPS) - 2018, 2019, 2020, 2021, 2022, 2023
  - o International Conference on Learning Representations (ICLR) – 2021, 2022, 2023, 2024
  - o European Conference on Computer Vision (ECCV) – 2020, 2024
  - o International Conference on Machine Learning (ICML) - 2021
  - o International Conference on Computer Vision (ICCV) – 2015, 2023
  - o ACM Multimedia - 2017
  - o International Symposium on Visual Computing (ISVC) - 2015

- **Organizing Committee**
  - o CVPR Workshop on What is Next in Multimodal Foundation Models?, 2024
  - o ICCV Workshop on What is Next in Multimodal Foundation Models?, 2023
  - o CVPR Workshop on Dynamic Neural Networks Meets Computer Vision, 2021
  - o CVPR Workshop on Neural Architecture Search, 2021
  - o CVPR Workshop on Visual Learning with Limited Labels: Zero-Shot, Few-Shot, Any-Shot, and Cross-Domain Few-Shot Learning, 2020
  - o CVPR Workshop on Computer Vision for Fashion, Art, and Design, 2020
  - o CVPR Workshop on Neural Architecture Search and Beyond for Representation Learning, 2020
  - o CVPR Workshop on Diagram Image Retrieval and Analysis, 2020
  - o CVPR Workshop on Fair, Data-Efficient and Trusted Computer Vision, 2020
  - o CVPR Workshop on Skin Image Analysis, 2020 (Steering Committee)
  - o ECCV Workshop on Multimodal Video Analysis, 2020
  - o CVPR Workshop on Bias Estimation in Face Analytics, 2019
  - o CVPR Workshop on Skin Image Analysis, 2019 (Steering Committee)
  - o ICCV Workshop on Linguistics Meets Image and Video Retrieval, 2019
  - o ICCV Workshop on Moving Cameras: from Body Cameras to Drones, 2019

- o ICCV Workshop on Computer Vision for Fashion, Art, and Design, 2019 (Steering Committee)
- o ICCV Workshop on Multimodal Video Analysis and Moments in Time Challenge, 2019
- o ICML Workshop on Towards learning with limited labels: Equivariance, Invariance, and Beyond, 2018
- o ECCV Workshop on Bias Estimation in Face Analytics, 2018
- o ECCV Workshop on Computer Vision for Fashion, Art, and Design, 2018
- o CVPR Workshop on Moving Cameras: from Body Cameras to Drones, 2016
- o ECCV Workshop on Parts and Attributes, 2014
- o ECCV Workshop on Parts and Attributes, 2012
- o GNY Area Vision and Multimedia Meeting, 2012
- o ECCV Workshop on Parts and Attributes, 2010
- o IBM Watson Emerging Leaders in Multimedia Workshop, 2006 and 2007
- o I Workshop on Artificial Intelligence and Computer Vision, 1997

- **Industry chair**

  - o Corporate Relations Chair, CVPR 2018
  - o Industry and Practitioner Chair, ICMR 2016
  - o Corporate Relations Chair, FG 2011

- **LDV Vision Summit:** judge for the Entrepreneurial Computer Vision Challenges (http://www.ldv.co/visionsummit/2015/speakers), 2015

- **Award Committee Member**

  - o City University of Hong Kong (CUHK) International Selection Committee for PhD thesis Award, 2015
  - o Member of the committee for selection of the best paper award – International Conference in Image Processing (ICIP 2008)

- Watson Chair of the Multimedia Professional Interest Community (2013 – 2017)

- Doctoral Consortium Co-Chair, IEEE Conference on Automatic Face and Gesture Recognition (FG 2011), Santa Barbara, USA, 2011

- Grant reviewer: Expert proposal evaluator for FIT-IT, Vienna, Austria, 2011.

- Department Intern Coordinator, IBM Research, 2010

- Seminar PIC Coordinator, IBM Research, 2010-2011

- Program Committee Member: CVPR (2007-2014), ICCV (2007, 2009, 2011), ECCV (2008,2010,2012), AVSS (2008), WACV (2011), ICIP (2009), ICPR (2010,2014), ACCV (2007,2009), Visual Surveillance Workshop (2009,2010) and others

- Reviewer for major conferences and journals in computer vision/graphics, including ACM SIGGRAPH, IEEE Transactions on PAMI, Pattern Recognition Letters, IVC Journal, CVIU Journal, CVPR, ICCV, Face and Gesture Recognition, Eurographics, ISMAR, etc.

Media Press Coverage

- A simpler path to better computer vision. MIT News, 2022

- In machine learning, synthetic data can offer real performance improvements. MIT News, 2022.

- A safer, lower-cost alternative to real data for pretraining computer vision models. IBM Research blog, 2022.

- Hallucinating to Better Text Translation. Communications of the ACM / MIT News, 2022.

- IBM's StarNet brings explainable AI to image classification. VentureBeat, 2020.
- Shrinking deep learning's carbon footprint. MIT News, 2020.

- Toward a machine learning model that can reason about everyday actions. MIT News, 2020.

- IBM researchers develop a pair of low-power, high-performance computer vision systems. VentureBeat, 2018.

- Coffee delivery drone patented by IBM. BBC News, 2018.

- Enjoy Those U.S. Open Highlights. A Computer Picked Them for You. New York Times, 2017.

- How an IBM Computer Picks U.S. Open Highlights. Fortune, 2017.

- IBM's Watson Serves Up This Year's U.S. Open Highlights. NBC News, 2017.

- How Artificial Intelligence May be Tennis's Ace for Serving Grand Slam Fans. Newsweek, 2017.

- IBM's Watson is creating US Open tennis highlight videos. Engadget, 2017.

- IBM uses AI to serve up Wimbledon highlights. CNet, 2017.

- IBM To Provide Wimbledon Highlights Using Artificial Intelligence. SportTechie, 2017.

- IBM Watson is creating highlight reels at the Masters. ZDNet, 2017.

- Fighting terrorism in New York City. CBS 60 Minutes, 2011. (starting at minute 7:20)

- ABC7 puts video analytics to the test. ABC News, 2010.

- Cameras help confirm Scott suicide ruling. ABC News, 2009.

- Intelligent Iris. ABC News, 2008.

- The Nonphotorealistic camera. SlashDot, 2004.

- Master's dissertation / Brazilian Media: My work on face tracking was featured at Jornal do SBT and TV USP.

- High-School Project / Brazilian Media: In 1993, during my technical high-school, I developed a software for constructing facial sketches from witnesses' descriptions (coding in assembly for accessing the video memory card, dealing with bit planes, etc.) My work was reported in several newspapers, magazines, and television programs, including Ciencia Viva and RBS TV.

Ph.D. Thesis Committees

- Karim Ahmed, Dartmouth College, 2019
- Brendan Jou, Columbia University, 2016
- Xiaodong Yang, City University of New York, 2015
- Shizhi Chen, City University of New York, 2013
- Eanes Pereira, Universidade Federal de Campina Grande, 2012
- Haowei Liu, University of Washington, 2011