

Rameswar Panda

50 Station Landing, Apt 621
Medford, MA 02151
☎ +1-951-880-5556
✉ rpanda@ibm.com
📄 <https://rpand002.github.io/>

Research Interests

Computer Vision: Video Analysis, Activity Recognition, Person Re-Identification

Machine Learning: Dynamic Neural Networks, Multi-task and Multi-modal learning

Education

- 2014–2018 **University of California, Riverside, USA.**
Ph.D. Candidate in Electrical and Computer Engineering
Advisor: Amit K. Roy-Chowdhury [link](#)
Thesis: Visual Learning with Weak Supervision: Applications in Video Summarization and Person Re-identification
- 2011–2013 **Jadavpur University, India.**
M.S. in Computer Engineering
Advisor: Ananda S. Chowdhury [link](#)
Thesis: Graph Theoretic Solutions for Two Multimedia Problems
- 2007–2011 **Biju Patnaik University of Technology, India.**
B.Tech. in Electronics and Telecommunication Engineering

Research Experience

- 12.2018 – Present **IBM Research, Cambridge, USA.**
Research Staff Member, AI Computer Vision
 - Dynamic Neural Networks for Video Understanding
 - Multi-Task and Multi-Modal Learning
 - Activity Recognition and Detection (IARPA DIVA)
 - Transfer and Few-Shot Learning (DARPA LwLL)
- 09.2014 – 12.2018 **University of California, Riverside, USA.**
Graduate Student Researcher, Video Computing Group
Advisor: Amit K. Roy-Chowdhury
 - Incidental Supervision for Video Summarization
 - Unsupervised Adaptive Person Re-Identification
 - Reinforcement Learning for Online Video Fast-Forwarding
 - Weakly Supervised Learning for Image-Text Retrieval
- 06.2018 – Present **NEC Labs America, Cupertino, USA.**
Research Intern, Media Analytics Group
Mentors: Xiang Yu, Samuel Schuler, Manmohan Chandraker
 - Cross-Dataset Knowledge Transfer for Person Re-Identification
- 06.2017–11.2017 **Adobe Research, San Jose, CA.**
Research Intern, Creative Intelligence Lab
Mentors: Jianming Zhang, Haoxiang Li, Joon-Young Lee, Xin Lu
 - Understanding and Overcoming Dataset Bias in Visual Emotion Analysis

- 06.2016-09.2016 **Siemens Corporate Research**, Princeton, USA.
 Research Intern, Computer Vision Group
 Mentors: Ziyang Wu, Jan Ernst
 ○ Weakly Supervised Defect Detection and Localization in Images
- 06.2013-08.2014 **Silicon Institute of Technology**, Bhubaneswar, India.
 Research Assistant, Department of ETC
 Mentor: Milan K. Biswal
 ○ Personalized Video Key Frame Extraction using Social Media Clues
- Jul. 2011 - Jun. 2013 **Jadavpur University**, Kolkata, India.
 Research Assistant, IVPR Group
 Advisor: Ananda S. Chowdhury
 ○ Video Key Frame Extraction using Delaunay Graph Clustering
 ○ Movie Scene Segmentation using Fast Spectral Clustering

Publications ([Google Scholar Profile](#))

Journal Papers

- PR 2019 **Adaptation of Person Re-identification Models for On-boarding New Camera(s).**
Rameswar Panda, Amran Hossen Bhuiyan, Vittorio Murino, Amit K. Roy-Chowdhury
 Pattern Recognition, 2019 [paper](#)
- TCSVT 2019 **Construction of Diverse Image Datasets from Web Collections with Limited Labeling.**
 Niluthpol C. Mithun, Rameswar Panda, Amit K. Roy-Chowdhury
 IEEE Transactions on Circuits and Systems for Video Technology, 2019 [paper](#)
- TIP 2017 **Diversity-aware Multi-Video Summarization.**
Rameswar Panda, Niluthpol C. Mithun, Amit K. Roy-Chowdhury
 IEEE Transactions on Image Processing, 2017 [paper](#)
- TMM 2017 **Multi-View Surveillance Video Summarization via Joint Embedding and Sparse Optimization.**
Rameswar Panda, Amit K. Roy-Chowdhury
 IEEE Transactions on Multimedia, 2017 [paper](#)
- TCYB 2017 **Nystrom Approximated Temporally Constrained Multi-similarity Spectral Clustering Approach for Movie Scene Detection.**
Rameswar Panda, Sanjay K. Kuanar, Ananda S. Chowdhury
 IEEE Transactions on Cybernetics, 2017 [paper](#)
- CVIU 2016 **Continuous Adaptation of Multi-Camera Person Identification Models through Sparse Non-redundant Representative Selection.**
 Abir Das, Rameswar Panda, Amit K. Roy-Chowdhury
 Computer Vision and Image Understanding, 2016 [paper](#)
- JVCIR 2013 **Video Key frame Extraction through Dynamic Delaunay Clustering with a Structural Constraint.**
 Sanjay K. Kuanar, Rameswar Panda, Ananda S. Chowdhury
 Journal of Visual Communication and Image Representation [paper](#)

Conference Papers

- CVPR 2020 **Non-Adversarial Video Synthesis with Learned Priors.**
Abhishek Aich, Akash Gupta, [Rameswar Panda](#), Rakib Hyder, Salman Asif, Amit K. Roy-Chowdhury
IEEE Conference on Computer Vision and Pattern Recognition, 2020 [i](#) [paper](#)
- CVPR 2020 **Camera On-boarding for Person Re-identification using Hypothesis Transfer Learning.**
Sk Miraj Ahmed, Aske R. Lejbolle, [Rameswar Panda](#), Amit K. Roy-Chowdhury
IEEE Conference on Computer Vision and Pattern Recognition, 2020 [i](#) [paper](#)
- ECCV 2018 **Contemplating Visual Emotions: Understanding and Overcoming Dataset Bias.**
[Rameswar Panda](#), Jianming Zhang, Haoxiang Li, Joon-Young Lee, Xin Lu, Amit K. Roy-Chowdhury
European Conference on Computer Vision, 2018 [i](#) [paper](#)
- MM 2018 **Webly Supervised Joint Embedding for Cross-Modal Image-Text Retrieval.**
Niluthpol C. Mithun, [Rameswar Panda](#), Evangelos Papalexakis, Amit K. Roy-Chowdhury
ACM International Conference on Multimedia, 2018 [i](#) [paper](#)
- CVPR 2018 **FFNet: Video Fast-Forwarding via Reinforcement Learning.**
Shuyue Lan, [Rameswar Panda](#), Qi Zhu, Amit K. Roy-Chowdhury
IEEE Conference on Computer Vision and Pattern Recognition, 2018 [i](#) [paper](#)
- ICCV 2017 **Weakly Supervised Summarization of Web Videos.**
[Rameswar Panda](#), Abir Das, Ziyang Wu, Jan Ernst, Amit K. Roy-Chowdhury
International Conference on Computer Vision, 2017 [i](#) [paper](#)
- CVPR 2017 **Collaborative Summarization of Topic-Related Videos.**
[Rameswar Panda](#), Amit K. Roy-Chowdhury
IEEE Conference on Computer Vision and Pattern Recognition, 2017 [i](#) [paper](#)
- CVPR 2017 **Unsupervised Adaptive Re-identification in Open World Dynamic Camera Networks.**
[Rameswar Panda](#)^{*}, Amran Hossen Bhuiyan^{*}, Vittorio Murino, Amit K. Roy-Chowdhury
IEEE Conference on Computer Vision and Pattern Recognition, 2017 [i](#) [paper](#)
- ICASSP 2017 **Sparse Modeling for Topic-oriented Video Summarization.**
[Rameswar Panda](#)^{*}, Amit K. Roy-Chowdhury
International Conference on Acoustics, Speech and Signal Processing, 2017 [i](#) [paper](#)
- MM 2016 **Generating Diverse Image Datasets with Limited Labeling.**
Niluthpol C. Mithun, [Rameswar Panda](#), Amit K. Roy-Chowdhury
ACM International Conference on Multimedia, 2016 [i](#) [paper](#)
- ICPR 2016 **Video Summarization in a Multi-View Camera Network.**
[Rameswar Panda](#), Abir Das, Amit K. Roy-Chowdhury
International Conference on Pattern Recognition, 2016 [i](#) [paper](#)
- ICIP 2016 **Embedded Sparse Coding for Summarizing Multi-View Videos.**
[Rameswar Panda](#), Abir Das, Amit K. Roy-Chowdhury
International Conference on Image Processing, 2016 [i](#) [paper](#)
- ICIP 2015 **Active Image Pair Selection for Continuous Person Re-identification.**
Abir Das, [Rameswar Panda](#), Amit K. Roy-Chowdhury
International Conference on Image Processing, 2015 [i](#) [paper](#)
- ICPR 2014 **Scalable Video Summarization using Skeleton Graph and Random Walk.**
[Rameswar Panda](#), Sanjay K. Kuanar, Ananda S. Chowdhury
International Conference on Pattern Recognition, 2014 [i](#) [paper](#)

ICPR 2012 **Video Story-board Design using Delaunay Graphs.**
Ananda S. Chowdhury, Sanjay K. Kuanar, Rameswar Panda, Moloy N. Das
International Conference on Pattern Recognition, 2012 [i](#) [paper](#)

Workshop Papers

CVPRW 2020 **Relationship Matters: Relation Guided Knowledge Transfer for Incremental Learning of Object Detectors.**

Kandan Ramakrishnan, [Rameswar Panda](#), Quanfu Fan, John Henning, Aude Oliva, Rogerio Feris

CVPR Workshop on Continual Learning in Computer Vision, 2020 [i](#) [paper](#)

NeurIPSW 2019 **Estimating Skin Tone and Effects on Classification Performance in Dermatology Datasets.**

Newton M. Kinyanjui, Timothy Odonga, Celia Cintas, Noel C. F. Codella, [Rameswar Panda](#), Prasanna Sattigeri, Kush R. Varshney

NeurIPS Fair Machine Learning for Health Workshop, 2019 [i](#) [paper](#)

Tutorials & Talks

June 2019 **Recent Advances in Visual Data Summarization.**

CVPR 2019, Long Beach, CA, USA.

Oct. 2018 **Visual Learning with Weak Supervision.**

IBM T.J.Watson Research Center, NY, USA.

July 2017 **Unsupervised Adaptive Re-identification in Dynamic Camera Network.**

Spotlight Presentation, CVPR, Hawaii, USA.

Sept. 2016 **Embedded Sparse Coding for Summarizing Multi-View Videos.**

Oral Presentation, ICIP, Phoenix, USA.

Dec. 2015 **Sparse Optimization for Summarizing Videos.**

GIAN Workshop on Video Understanding, IIT, Kharagpur, India.

Dec. 2013 **A Frequency Domain Approach to Silhouette based Gait Recognition.**

Oral Presentation, NCVPRIPG, Jodhpur, India.

Honors & Awards

June 2018 **S. Sue Johnson Endowed Graduate Award**, University of California, Riverside.

June 2018 **Doctoral Consortium Award**, IEEE Computer Vision and Pattern Recognition.

Apr. 2018 **Dissertation Year Program Fellowship Award**, University of California, Riverside.

Oct. 2017 **Graduate Research Symposium Scholarship**, Amazon Research.

Sept. 2014 **Dean's Distinguished Fellowship Award**, University of California, Riverside.

June 2013 **University 2nd rank in M.S.**, Jadavpur University, India.

Professional Services

Workshop Organizer Multi-modal Video Analysis and Moments in Time Challenge at ECCV 2020
Neural Architecture Search and Beyond for Representation Learning at CVPR 2020
Multi-modal Video Analysis and Moments in Time Challenge at ICCV 2019

Conference Reviewer NeurIPS, ICML, CVPR, ICCV, ECCV, AACL, ACCV, WACV, BMVC

Journal Reviewer TPAMI, TCSVT, TIP, TMM, CVIU, MVA, PRL, SPL, CSUR

Teaching Experience

- Teaching Assistant **University of California, Riverside.**
- EE 240 Pattern Recognition (Spring 2017)
 - EE 215 Stochastic Process (Fall 2016)
- Teaching Assistant **Jadavpur University, India.**
- C Programming and Data Structures
- Instructor **Silicon Institute of Technology, India.**
- Image Processing
 - Digital Signal Processing

Technical Skills

- Deep Learning Libraries Pytorch, Keras, Caffe
- Programming Python, C/C++
- Toolbox / Software MATLAB, OpenCV

References

Available on Request.