

Rameswar Panda

3131 Watkins Drive
Apt 32
Riverside, CA 92507

rpand002@ucr.edu
951-880-5556
<https://rpand002.github.io/>

Research Interests

Computer Vision: Video Summarization, Person Re-Identification
Machine Learning: Deep Learning, Sparse Coding

Education

2014-Present	University of California, Riverside Ph.D. in Electrical and Computer Engineering, Advisor: Amit K. Roy-Chowdhury <i>Thesis: Towards Summarizing Big Video Data</i>
2011-2013	Jadavpur University, India M.S. in Computer Engineering, Advisor: Ananda S. Chowdhury <i>Thesis: Graph Theoretic Solutions for Two Multimedia Problems</i>
2007-2011	Biju Patnaik University of Technology, India B.Tech. in Electronics and Telecommunication Engineering

Research Experience

06.2017-Present	Research Intern, Creative Intelligence Lab Adobe Research, San Jose, USA Mentors: Jianming Zhang, Haoxiang Li, Joon-Young Lee, Xin Lu
06.2016-09.2016	Research Intern, Computer Vision Group Siemens Corporate Research, Princeton, USA Mentors: Ziyan Wu, Jan Ernst
2014-Present	Graduate Student Researcher, Video Computing Group University of California, Riverside, USA Supervisor: Amit K. Roy-Chowdhury
06.2013-08.2014	Research Assistant, Department of ETC Silicon Institute of Technology, Bhubaneswar, India Supervisor: Milan K. Biswal
08.2011-06.2013	Research Assistant, IVPR Group Jadavpur University, Kolkata, India Supervisor: Ananda S. Chowdhury

Teaching Experience

Spring 2017	Teaching Assistant: Pattern Recognition (Graduate Level), UC Riverside
Fall 2016	Teaching Assistant: Stochastic Process (Graduate Level), UC Riverside
2013-2014	Instructor: Image Processing (Undergraduate Level), Silicon Institute of Technology
2012-2013	Teaching Assistant: C Programming (Undergraduate Level), Jadavpur University

Patents

- 62/430,463 | Weakly Supervised Visual Anomaly Detection and Segmentation in Images
Inventors: Rameswar Panda, Ziyang Wu, Arun Innaje, Jan Ernst
U.S. Provisional Patent Application filed on Dec 06, 2016.

Journal Publications

- TIP'17 | **Rameswar Panda**, Niluthpol C. Mithun, Amit K. Roy-Chowdhury, "Diversity-aware Multi-Video Summarization", *IEEE Transactions on Image Processing*, 2017.
- TMM'17 | **Rameswar Panda**, Amit K. Roy-Chowdhury, "Multi-View Surveillance Video Summarization via Joint Embedding and Sparse Optimization", *IEEE Transactions on Multimedia*, 2017.
- TCYB'17 | **Rameswar Panda**, Sanjay K. Kuanar, Ananda S. Chowdhury, "Nyström approximated temporally constrained multi-similarity spectral clustering approach for movie scene detection", *IEEE Transactions on Cybernetics*, 2017.
- CVIU'16 | Abir Das, **Rameswar Panda**, Amit K. Roy-Chowdhury, "Continuous Adaptation of Multi-Camera Person Identification Models through Sparse Non-redundant Representative Selection", *Computer Vision and Image Understanding*, 2016.
- JVCIR'13 | S. K. Kuanar, **Rameswar Panda**, Ananda S. Chowdhury, "Video Key frame Extraction through Dynamic Delaunay Clustering with a Structural Constraint", *Journal of Visual Communication and Image Representation*, 2013.

Conference Publications

- ICCV'17 | **Rameswar Panda**, Abir Das, Ziyang Wu, Jan Ernst, Amit K. Roy-Chowdhury, "Weakly Supervised Summarization of Web Videos", *International Conference on Computer Vision*, 2017.
- CVPR'17 | **Rameswar Panda**, Amit K. Roy-Chowdhury, "Collaborative Summarization of Topic-Related Videos", *IEEE Conference on Computer Vision and Pattern Recognition*, 2017.
- CVPR'17 | **Rameswar Panda**, Amran Hossen Bhuiyan, Vittorio Murino, Amit K. Roy-Chowdhury, "Unsupervised Adaptive Re-identification in OpenWorld Dynamic Camera Networks", *IEEE Conference on Computer Vision and Pattern Recognition*, (Spotlight), 2017.
- ICASSP'17 | **Rameswar Panda**, Amit K. Roy-Chowdhury, "Sparse Modeling for Topic-oriented Video Summarization", *International Conference on Acoustics, Speech and Signal Processing*, 2017.
- MM'16 | Niluthpol C. Mithun, **Rameswar Panda**, Amit K. Roy-Chowdhury, "Generating Diverse Image Datasets with Limited Labeling", *ACM International Conference on Multimedia*, 2016.
- ICPR'16 | **Rameswar Panda**, Abir Das, Amit K. Roy-Chowdhury, "Video Summarization in a Multi-View Camera Network", *International Conference on Pattern Recognition*, 2016.
- ICIP'16 | **Rameswar Panda**, Abir Das, Amit K. Roy-Chowdhury, "Embedded Sparse Coding for Summarizing Multi-View Videos", *International Conference on Image Processing*, 2016.
- ICIP'15 | Abir Das, **Rameswar Panda**, Amit K. Roy-Chowdhury, "Active Image Pair Selection for Continuous Person Re-identification", *International Conference on Image Processing*, 2015.
- ICPR'14 | **Rameswar Panda**, S. K. Kuanar, A. S. Chowdhury, "Scalable Video Summarization using Skeleton Graph and Random Walk", *International Conference on Pattern Recognition*, 2014.
- ICPR'12 | A. S. Chowdhury, S. K. Kuanar, **Rameswar Panda**, M. N. Das, "Video Story-board Design using Delaunay Graphs", *International Conference on Pattern Recognition*, 2012.

Selected Projects

Re-identification in Dynamic Camera Networks (Matlab)	09.2016-12.2016
Proposed an unsupervised adaptation scheme based on geodesic flow kernel that can effectively find the best source camera (already installed) to adapt with a newly introduced target camera, without requiring a very expensive training phase.	
Visual Anomaly Detection in Images (Caffe, Python, C++)	06.2016-09.2016
Formulated a weakly-supervised framework based on CNNs which requires only binary image-level labels on specifying whether an image contains any anomalies or not.	
Collaborative Video Summarization (Caffe, Python, Matlab)	01.2016-04.2016
Developed a collaborative sparse optimization approach to extract an informative summary of a specified video by exploiting additional knowledge from topic-related videos.	
Diversity-aware Multi-Video Summarization (Caffe, Matlab)	02.2016-05.2016
Proposed a diversity-aware sparse optimization method for multi-video summarization by exploring the complementarity within the videos.	
Camera Network Video Summarization (Matlab)	08.2015-01.2016
Developed an unsupervised sparse coding approach for joint representation learning of video shots and summarization of multi-view videos in a camera network.	

Skills

Programming Languages: C, C++, Matlab, Python
Libraries: OpenCV, Caffe, TensorFlow, Keras
Operating Systems: Windows, Unix, Mac OS
Human Computation: Amazon Mechanical Turk
Other Expertise: MS Office (Word, Excel, and PowerPoint), Latex etc.

Honors & Awards

2014	Dean's Distinguished Fellowship Award, UC Riverside
2013	University 2 nd rank in M.S., Jadavpur University
2011	98.34% in Graduate Aptitude Test in Engineering (GATE), India

Courseworks

Graduate Coursework: Stochastic Process, Convex Optimization, Computer Vision, Information Theory, Pattern Recognition, Operating Systems, Computer Architecture,
Independent Study: Deep Learning
Selected Undergraduate Coursework: C/C++ Programming, Digital Signal Processing, Image Processing, Artificial Neural Networks, Data Structures, Computer Networks

Professional Services

Member: IEEE, CVF
Conference Reviews: ICIP, ICPR, ICCV, ECCV, CVPR
Journal Reviews: IEEE Transactions on Pattern Analysis and Machine Intelligence (TPAMI), IEEE Transactions on Image Processing (TIP), IEEE Transactions on Multimedia (TMM), ACM Computing Surveys (CSUR), Computer Vision and Image Understanding (CVIU), Pattern Recognition Letters (PRL), Signal Processing: Image Communication (SPIC)