

## Rameswar Panda

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RESEARCH INTERESTS      Computer Vision, Machine Learning, Deep Learning

EDUCATION      **University of California, Riverside, CA, USA**

Ph.D. Candidate, Electrical and Computer Engineering (2014-Present)

- Thesis Topic: *Video Summarization with Real-time Applications*
- Advisor: Amit K. Roy-Chowdhury, Ph.D

**Jadavpur University, Kolkata, India**

M.S., Computer Engineering, June 2013

- Thesis Topic: *Graph Theoretic Solutions for Two Multimedia Problems*
- Advisor: Ananda S. Chowdhury, Ph.D

**Biju Patnaik University of Technology, Rourkela, India**

B.Tech., Electronics and Telecommunication Engineering, June 2011

RESEARCH EXPERIENCE	<b>Research Assistant</b> Sept 2014 to Present Video Computing Group, University of California, Riverside Supervisor: Amit K. Roy-Chowdhury, Ph.D
	<b>Research Assistant</b> June 2013 to Aug 2014 Department of ETC, Silicon Institute of Technology Supervisor: Milan K. Biswal, Ph.D
	<b>Research Assistant</b> Aug 2011 to June 2013 IVPR Group, Jadavpur University Supervisor: Ananda S. Chowdhury, Ph.D

PUBLICATIONS

1. Abir Das, **Rameswar Panda**, Amit K. Roy-Chowdhury. "Active Image Pair Selection for Continuous Person Re-identification." *IEEE International Conference on Image Processing (ICIP)*, 2015.
2. **Rameswar Panda**, S. K. Kuanar, A. S. Chowdhury. "Scalable Video Summarization using Skeleton Graph and Random Walk." *IEEE International Conference on Pattern Recognition (ICPR), Oral*, 2014.
3. S. K. Kuanar, **Rameswar Panda**, A. S. Chowdhury. "Video Key frame Extraction through Dynamic Delaunay Clustering with a Structural Constraint." *Journal of Visual Communication and Image Representation (JVCIR), Elsevier*, 24(7):1212–1227, 2013.
4. A. S. Chowdhury, S. K. Kuanar, **Rameswar Panda**, M. N. Das. "Video Storyboard Design using Delaunay Graphs." *IEEE International Conference on Pattern Recognition (ICPR)*, 2012.

SUBMITTED  
PUBLICATIONS

1. **Rameswar Panda**, Amit K. Roy-Chowdhury. "Summarizing Multi-View Videos via Stochastic Frame Embedding,". Submitted to *IEEE International Conference on Image Processing (ICIP)*, 2016.
2. **Rameswar Panda**, Sanjay K. Kuanar, A. S. Chowdhury. "A Multi-Similarity Spectral Clustering approach for Movie Scene Detection,". Submitted to *IEEE Transactions on Cybernetics*.
3. Abir Das, **Rameswar Panda**, Amit K. Roy-Chowdhury. "Continuous Person Re-identification through Sparse Non-redundant Representative Selection,". Submitted to *Computer Vision and Image Understanding, Elsevier*.

SELECTED  
PROJECTS

**Summarizing Multi-View Videos**

Sept 2014 to Sept 2015

Formulated a stochastic frame embedding framework to preserve data correlations in a multi-view camera network. Utilized a two phase Quadraticity-Lipschitzization procedure to solve the embedding objective function efficiently and showed that sparse coding combined with frame embedding achieves better performance in multi-view summarization compared to all prior works. The work is under review in IEEE International Conference on Image Processing (ICIP), 2016.

**Scalable Video Summarization**

June 2013 to Dec 2013

Proposed a scalable video summarization technique using the concept of scalable video coding from video adaption. A truly scalable approach for video summarization is designed using local graph clustering in analysis step and different forms of scalability in generation step. This work has been accepted to the IEEE International Conference on Pattern Recognition (ICPR), Oral, 2014.

**Movie Scene Detection**

Dec 2012 to June 2013

A novel combination of Nystrom extension and multi-similarity spectral clustering with temporal integrity constraint is proposed to achieve fast as well as well performed movie scene segmentation. Moreover, application of our proposed method increases the interactivity of user in social multimedia websites like YouTube and IMDb. The work is under review in IEEE Transactions on Cybernetics (TCyb).

**Graph Theoretic Video Summarization**

Aug 2011 to Dec 2012

Proposed a technique to extract key frames using Delaunay clustering with structural constraints. Showed that our approach produces better quality summaries compared to all other state-of-the-art methods using both objective and subjective comparisons. The work has been published in Journal of Visual Communication and Image Representation (JVCIR), Elsevier and IEEE International Conference on Pattern Recognition (ICPR), 2012.

**Trust Dependent Ant Colony Routing in VANET**

Jan 2010 to May 2011

Inter-vehicle communication is a promising way to share and disseminate real-time and nearby safety information on the road. A trust based cluster head selection and ant colony routing technique are proposed for efficient data communication in a simple highway scenario VANET.

HONORS  
AND AWARDS

- Received Deans Distinguished Fellowship, University of California, Riverside. (2014)
- Selected as one of the participant (out of 25) to attend I-Care 2013 organized by IBM Research, India. (2013)
- Secured an university rank of 2 in M.S. with 91.78% from Jadavpur University. (2013)
- Secured 98.34 percentile in Graduate Aptitude Test in Engineering (GATE), India. (2011)

TEACHING EXPERIENCE	Instructor	Fall 2013, Spring 2014
	<ul style="list-style-type: none"> <li>• Digital Signal Processing</li> <li>• Image Processing</li> </ul> Silicon Institute of Technology, Bhubaneswar, India	
	Teaching Assistant	Autumn 2012, Spring 2013
	<ul style="list-style-type: none"> <li>• Numerical Analysis</li> <li>• C Programming and Data Structure</li> </ul> Instructor: Ananda S. Chowdhury, Ph.D Jadavpur University, Kolkata, India	
PROFESSIONAL SERVICES	Reviewer	
	<ul style="list-style-type: none"> <li>• Conference: ICIP 2015, ICCV 2015, CVPR 2016</li> <li>• Journal: IEEE Transaction on Image Processing (TIP), Computer Vision and Image Understanding (CVIU), Pattern Recognition Letters (PRL), Signal Processing: Image Communication (SPIC)</li> </ul>	
SKILLS	<ul style="list-style-type: none"> <li>• Programming Languages: C, C++, Matlab, Python</li> <li>• Libraries: OpenCV, Torch, Caffe</li> <li>• Operating Systems: Windows, Unix, Mac OS</li> <li>• Human Computation: Amazon Mechanical Turk</li> <li>• Other Expertise: MS Office (Word, Excel, and PowerPoint), Latex etc.</li> </ul>	
COURSEWORKS	<ul style="list-style-type: none"> <li>• Graduate Coursework: Stochastic Process, Convex Optimization, Advanced Computer Vision, Information Theory, Pattern Recognition, Operating Systems, Computer Architecture, Independent Study: Deep Learning</li> <li>• Selected Undergraduate Coursework: Digital Signal Processing, Image Processing, Artificial Neural Networks, Data Structures, Computer Networks</li> </ul>	