

Publications

Books and Edited Books

- “Camera Networks - The Acquisition and Analysis of Videos Over Wide Areas”, A. Roy-Chowdhury, B. Song, Synthesis Lectures in Computer Vision, Morgan and Claypool Publishers, 2012.
- “Distributed Video Sensor Networks”, Eds: B. Bhanu, C. Ravishankar, A. Roy-Chowdhury, H. Aghajan, D. Terzopoulos, Springer, 2010.
- “Recognition of Humans and Their Activities From Video” R. Chellappa, A. Roy-Chowdhury, S. Zhou, in Image, Video and Multimedia Processing, (Ed. Al Bovik). Morgan and Claypool Publishers, 2005.

Journal Articles

1. “Diversity-aware Multi-Video Summarization”, R. Panda, N. C. Mithun, A. Roy-Chowdhury, *IEEE Trans. on Image Processing*, 2017.
2. “Multi-View Surveillance Video Summarization via Joint Embedding and Sparse Optimization”, R. Panda, A. Roy-Chowdhury, *IEEE Trans. on Multimedia*, 2017.
3. “Managing Redundant Content in Bandwidth Constrained Networks”, T. Dao, A. Roy-Chowdhury, H. Madhyastha, S. Krishnamurthy, T. LaPorta, *IEEE/ACM Trans. on Networking*, 2016.
4. “Network Consistent Data Association”, A. Chakraborty, A. Das, A. Roy-Chowdhury, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 2016.
5. “Distributed Multi-Target Tracking and Data Association in Vision Networks”, A. T. Kamal, J. H. Bappy, J. A. Farrell, A. Roy-Chowdhury, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, 2016.
6. “Context-Aware Video Summarization”, S. Zhang, Y. Zhu, A. Roy-Chowdhury, *IEEE Trans. on Image Processing*, 2016.
7. “Opportunistic Image Acquisition of Individual and Group Activities in a Distributed Camera Network”, C. Ding, J. H. Bappy, J. A. Farrell, A. Roy-Chowdhury, *IEEE Trans. on Circuits and Systems for Video Technology*, 2016.
8. “Optimal Landmark Selection for Registration of 4D Confocal Image Stacks in Arabidopsis”, K. Mkrtchyan, A. Chakraborty, A. Roy-Chowdhury, *IEEE/ACM Transactions on Computational Biology and Bioinformatics*, 2016.
9. “A Continuous Learning Framework for Activity Recognition Using Deep Hybrid Feature Models”, M. Hasan, A. Roy-Chowdhury, *IEEE Trans. on Multimedia*, November 2015.
10. “Incremental learning of human activity models from videos”, M. Hasan, A. Roy-Chowdhury, *Computer Vision and Image Understanding*, 2015.
11. “Re-Identification in the Function Space of Feature Warps”, A. Das, N. Martinel, C. Micheloni, A. Roy-Chowdhury, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, August 2015.

12. "Context-Aware Activity Modeling using Hierarchical Conditional Random Fields", Y. Zhu, N. Nayak, A. Roy-Chowdhury, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, July 2015.
13. "Hierarchical Graphical Models for Simultaneous Tracking and Recognition in Wide-Area Scenes", N. Nayak, Y. Zhu, A. Roy-Chowdhury, *IEEE Trans. on Image Processing*, July 2015.
14. "Computerized Face Recognition in Renaissance Portrait Art", R. Srinivasan, C. Rudolph, A. Roy-Chowdhury, *IEEE Signal Processing Magazine*, July 2015.
15. "Tracking multiple interacting targets in a camera network", S. Zhang, Y. Zhu, A. Roy-Chowdhury, *Computer Vision and Image Understanding*, 2015.
16. "Context Aware Spatio-temporal Cell Tracking In Densely Packed Multilayer Tissues", *Medical Image Analysis*, January 2015.
17. "Evaluation and Acceleration of High-Throughput Fixed-Point Object Detection on FPGAs", X. Ma, W. Najjar, A. Roy-Chowdhury, *IEEE Trans. on Circuits and Systems in Video Technology*, June 2015.
18. "Distributed Constrained Optimization for Bayesian Opportunistic Visual Sensing", A. Morye, C. Ding, A. Roy-Chowdhury, J. A. Farrell, *IEEE Trans. on Control Systems Technology*, 2014.
19. "Information Weighted Consensus Filters and their Application in Distributed Camera Networks", A. Kamal, J. A. Farrell, A. Roy-Chowdhury, *IEEE Trans. on Automatic Control*, 2013.
20. "Exploiting Spatio-Temporal Scene Structure for Wide-Area Activity Analysis in Unconstrained Environments", N. Nayak, Y. Zhu, A. Roy-Chowdhury, *IEEE Trans. on Information Forensics and Security*, 2013.
21. "Modeling Multi-object Interactions using String of Feature Graphs", Y. Zhu, N. Nayak, U. Gaur, B. Song, A. Roy-Chowdhury, *Computer Vision and Image Understanding*, 2013.
22. "Adaptive Geometric Tessellation For 3D Reconstruction of Anisotropically Developing Cells In Multilayer Tissues From Sparse Volumetric Microscopy Images", A. Chakraborty, M. Perales, G. V. Reddy, A. Roy-Chowdhury, *PLOS One*, 2013.
23. "Context-Aware Activity Recognition and Anomaly Detection in Video", Y. Zhu, N. Nayak, A. Roy-Chowdhury, *IEEE Journal on Selected Topics in Signal Processing, Special Issue on Anomalous Pattern Discovery*, Feb. 2013.
24. "Quantitative Analysis of Live-Cell Growth at the Shoot Apex of *Arabidopsis thaliana*: Algorithms for Feature Measurement and Temporal alignment", M. Tataw, V. Reddy, E. Keogh, A. Roy-Chowdhury, *IEEE/ACM Trans. on Computational Biology and Biomedicine*, 2013.
25. "Vector Field Analysis for Multi-Object Behavior Modeling", N. Nayak, Y. Zhu, A. Roy-Chowdhury, *Image and Vision Computing*, 2013.
26. "Collaborative Sensing In A Distributed PTZ Camera Network", C. Ding, B. Song, J. A. Farrell, A. Roy-Chowdhury, *IEEE Trans. on Image Processing*, June 2012.
27. "Distributed Camera Networks: Integrated Sensing and Analysis for Wide Area Scene Understanding", B. Song, C. Ding, J. A. Farrell, A. Roy-Chowdhury, *Signal Processing Magazine*, May 2011.

28. "A Physics-Based Analysis of Image Appearance Models", Y. Xu, A. Roy-Chowdhury, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, August 2011.
29. "Adaptive Cell Segmentation and Tracking for Volumetric Confocal Microscopy Images of A Developing Plant Meristem", M. Liu, A. Chakraborty, D. Singh, M. Gopi, R. Yadav, G.V. Reddy, and A. Roy-Chowdhury, *Molecular Plant*, 2011.
30. "Tracking and Activity Recognition Through Consensus in Distributed Camera Networks", B. Song, A. Kamal, C. Soto, C. Ding, J. Farrell, A. Roy-Chowdhury. *IEEE Trans. on Image Processing*, October 2010.
31. "Automated tracking of stem cell lineages of Arabidopsis shoot apex using local graph matching", M. Liu, R. Yadav, A. Roy-Chowdhury, G. V. Reddy, *The Plant Journal*, 2010.
32. "Rate-invariant Recognition of Humans and Their Activities", A. Veeraraghavan, A. Srivastava, A. Roy-Chowdhury, R.Chellappa. *IEEE Trans. on Image Processing*, June 2009.
33. "Continuous Learning of a Multilayered Network Topology in a Video Camera Network", X. Zou, B. Bhanu, A. Roy-Chowdhury, *Eurasip Journal on Image and Video Processing*, 2009.
34. "Robust Tracking in A Camera Network: A Multi-Objective Optimization Framework", B. Song and A. Roy-Chowdhury, *IEEE Journal on Selected Topics in Signal Processing: Special Issue on Distributed Processing in Vision Networks*, August 2008.
35. "Inverse Compositional Estimation of 3D Pose And Lighting in Dynamic Scenes", Y. Xu and A. Roy-Chowdhury, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, July 2008.
36. "Integrating Illumination, Motion and Shape Models for Robust Face Recognition In Video", Y.Xu, A. Roy-Chowdhury and K. Patel, *Eurasip Journal on Advances in Signal Processing: Special Issue on Advanced Signal Processing and Pattern Recognition Methods for Biometrics*, 2008.
37. "Activity Representation Using 3D Shape Models", M. Abdelkader, A. Roy-Chowdhury, R. Chellappa and U. Akdemir, *Eurasip Journal on Image and Video Processing: Special Issue on Anthropocentric Video Analysis: Tools and Applications*, 2008.
38. "Towards A Measure of Deformability of Shape Sequences", A. Roy-Chowdhury, *Pattern Recognition Letters*, Vol. 28, 2007.
39. "Integrating Motion, Illumination and Structure in Video Sequences, With Applications in Illumination-Invariant Tracking", Y. Xu and A. Roy-Chowdhury, *IEEE Trans. on Pattern Analysis and Machine Intelligence*, May 2007.
40. "Towards A Multi-Terminal Video Compression Algorithm By Integrating Distributed Source Coding With Geometrical Constraints", B. Song, E. Tuncel, A. Roy-Chowdhury, *Journal of Multimedia*, 2007. (Invited Paper)
41. "Matching Shape Sequences in Video with Applications in Human Motion Analysis", A. Veeraraghavan, A. Roy-Chowdhury, R. Chellappa. *IEEE Trans. on Pattern Analysis and Machine Intelligence*, pp. 1896-1909, December, 2005.
42. "Shape Activities: Dynamic Stochastic Models for Moving/Deforming Shapes with Application to Abnormal Activity Detection", N. Vaswani, A. Roy-Chowdhury, R.Chellappa. *IEEE Trans. on Image Processing*, pp. 1603-1616, October, 2005.

43. “Statistical Bias in 3D Reconstruction from Monocular Video”, Amit K. Roy-Chowdhury, R. Chellappa. *IEEE Trans. on Image Processing*, pp. 1057-1062, August 2005.
44. “Identification of Humans Using Gait”, A. Kale, A.N.Rajagopalan, A.Sunderesan, N.Cuntoor, A. Roy-Chowdhury, V. Krueger, R. Chellappa. *IEEE Trans. on Image Processing*, pp. 1163-1173, Sept. 2004.
45. “An Information Theoretic Criterion for Evaluating the Quality of 3D Reconstructions”, Amit K. Roy-Chowdhury, R. Chellappa. *IEEE Transactions on Image Processing*, pp. 960-973, July 2004.
46. “Wide Baseline Image Registration With Application to 3D Face Modeling”, Amit K. Roy-Chowdhury, R. Chellappa, Trish Keaton. *IEEE Transactions on Multimedia*, pp. 423-434, June 2004.
47. “Face Reconstruction From Video Using Uncertainty Analysis and A Generic Model”, Amit K. Roy-Chowdhury, R. Chellappa. *Computer Vision and Image Understanding*, 91(1-2), pp. 188-213, July-August 2003.
48. “Stochastic Approximation and Rate Distortion Analysis for Robust Structure and Motion Estimation”, Amit K. Roy-Chowdhury, R. Chellappa. *International Journal of Computer Vision*, Volume 55(1), pp. 27-53, October 2003.

Selected Conference Papers

(Papers with acceptance rates similar to major journals, and a multi-tiered review process.)

1. “Joint Prediction of Activity Labels and Starting Times in Untrimmed Videos”, T. Mahmud, M. Hasan and A. Roy-Chowdhury, IEEE International Conference on Computer Vision, 2017.
2. “Exploiting Spatial Structure for Localizing Manipulated Image Regions”, J. H. Bappy, A. Roy-Chowdhury, J. Bunk, L. Nataraj and B. S. Manjunath, IEEE International Conference on Computer Vision, 2017.
3. “Weakly Supervised Summarization of Web Videos”, R. Panda, A. Das, Z. Wu, J. Ernst and A. Roy-Chowdhury, IEEE International Conference on Computer Vision, 2017.
4. “Unsupervised Adaptive Re-identification in Open World Dynamic Camera Networks”, R. Panda, A. H. Bhuiyan, V. Murino, A. Roy-Chowdhury, IEEE Conf. on Computer Vision and Pattern Recognition, 2017 (**Spotlight**).
5. “Collaborative Summarization of Topic-Related Videos”, R. Panda, A. Roy-Chowdhury, IEEE Conf. on Computer Vision and Pattern Recognition, 2017.
6. “Non-Uniform Subset Selection for Active Learning in Structured Data”, S. Paul, J.H. Bappy, A. Roy-Chowdhury, IEEE Conf. on Computer Vision and Pattern Recognition, 2017.
7. “The Impact of Typicality for Informative Representative Selection”, J.H. Bappy, S. Paul, A. Roy-Chowdhury, IEEE Conf. on Computer Vision and Pattern Recognition, 2017.
8. “Online Adaptation for Joint Scene and Object Classification”, J. H. Bappy, S. Paul, A. Roy-Chowdhury, European Conf. on Computer Vision, 2016.

9. “Temporal Model Adaptation for Person Re-Identification”, N. Martinel, C. Micheloni, A. Roy-Chowdhury, European Conf. on Computer Vision, 2016.
10. “Generating Diverse Image Datasets with Limited Labeling”, N. C. Mithun, R. Panda, A. Roy-Chowdhury, ACM Multimedia, 2016.
11. “Learning Temporal Regularity in Video Sequences”, M. Hasan, J. Choi, J. Neumann, A. Roy-Chowdhury, L.S. Davis, IEEE Conf. on Computer Vision and Pattern Recognition, 2016.
12. “Context-Aware Active Learning of Activity Recognition Models”, M. Hasan, A. Roy-Chowdhury, IEEE Intl. Conf. on Computer Vision, 2015.
13. “Context-Aware Activity Forecasting”, A. Chakraborty, A. Roy-Chowdhury, Asian Conf. on Computer Vision, 2014.
14. “Consistent Re-identification In A Camera Network”, A. Das, A. Chakraborty, A. Roy-Chowdhury, European Conf. on Computer Vision, 2014.
15. “Continuous Learning of Human Activity Models Using Deep Nets”, M. Hasan, A. Roy-Chowdhury, European Conf. on Computer Vision, 2014.
16. “Incremental Activity Modeling and Recognition in Streaming Videos”, M. Hasan, A. Roy-Chowdhury, IEEE Computer Vision and Pattern Recognition, 2014.
17. “Managing Redundant Content in Bandwidth Constrained Wireless Networks”, T. Dao, S. Krishnamurthy, A. Roy-Chowdhury, T. LaPorta, CoNEXT 2014.
18. “Recognizing the Royals - Leveraging Computerized Face Recognition for Identifying Subjects in Ancient Artworks”, R. Srinivasan, C. Rudolph, A. Roy-Chowdhury, ACM Multimedia, 2013.
19. “Context-Aware Modeling and Recognition of Activities in Video”, Y. Zhu, N. Nayak, A. Roy-Chowdhury, IEEE Conf. on Computer Vision and Pattern Recognition, 2013 (**Oral - Acceptance Rate $\sim 3.2\%$**).
20. “Information Consensus for Distributed Multi-Target Tracking”, A. Kamal, J.A. Farrell, A. Roy-Chowdhury, IEEE Conf. on Computer Vision and Pattern Recognition, 2013.
21. “Alignment of Real-Time Live-Cell Growth Data for Quantitative Analysis of Growth at the Shoot Apex of *Arabidopsis thaliana*”, M. Tataw, V. Reddy, A. Roy-Chowdhury, ACM Conference on Bioinformatics, Computational Biology and Biomedicine, 2012.
22. “Features With Feelings - Incorporating User Preferences in Video Categorization”, R. Srinivasan and A. Roy-Chowdhury, Asian Conf. on Computer Vision, 2012.
23. “A ‘String of Feature Graphs’ Model for Recognition of Complex Activities in Natural Videos”, U. Gaur, Y. Zhu, B. Song, A. Roy-Chowdhury, IEEE Conf. on Computer Vision, 2011 (**Oral - Acceptance Rate $\sim 4.5\%$**).
24. “Cell Resolution 3D Reconstruction of Developing Multilayer Tissues from Sparsely Sampled Volumetric Microscopy Images”, A. Chakraborty, R. Yadav, G. V. Reddy, A. Roy-Chowdhury, IEEE Intl. Conf. on Bioinformatics and Biomedicine, 2011.

25. “3D Neuron Tip Detection in Volumetric Microscopy Images”, M. Liu, H. Peng, A. Roy-Chowdhury, E. Myers, *IEEE Intl. Conf. on Bioinformatics and Biomedicine*, 2011.
26. “A Large-scale Benchmark Dataset for Event Recognition in Surveillance Video”, Sangmin Oh, Anthony Hoogs, Amitha Perera, Naresh Cuntoor, C.-C. Chen, Jong Taek Lee, Saurajit Mukherjee, J. K. Aggarwal, Hyungtae Lee, Larry Davis, Eran Swears, Xioyang Wang, Qiang Ji, Kishore Reddy, Mubarak Shah, Carl Vondrick, Hamed Pirsiavash, Deva Ramanan, Jenny Yuen, Antonio Torralba, Bi Song, Anesdo Fong, Amit Roy-Chowdhury, and Mita Desai, *IEEE Conf. on Computer Vision and Pattern Recognition*, 2011.
27. “A Stochastic Graph Evolution Framework for Robust Multi-Target Tracking”, T. Jeng, E. Staudt, A. Roy-Chowdhury, *European Conf. on Computer Vision*, 2010.
28. “Interactive Event Search Using Transfer Learning”, A. Lam, C. Shelton, A. Roy-Chowdhury, *Asian Conf. on Computer Vision*, 2010.
29. “Multilinear Feature Extraction and Classification of Multi-Focal Images, With Applications in Nematode Taxonomy”, M. Liu, A. Roy-Chowdhury, *IEEE Conf. on Computer Vision and Pattern Recognition*, 2009.
30. “Distributed Multi-Target Tracking In A Self-Configuring Camera Network”, C. Soto, B. Song, A. Roy-Chowdhury, *IEEE Conf. on Computer Vision and Pattern Recognition*, 2009.
31. “A Theoretical Analysis of Linear and Multi-linear Models of Image Appearance”, Y. Xu, A. Roy-Chowdhury, *IEEE Conf. on Computer Vision and Pattern Recognition*, 2008.
32. “Learning A Geometry-Integrated Image Appearance Manifold From A Small Training Set”, Y. Xu, A. Roy-Chowdhury, *IEEE Conf. on Computer Vision and Pattern Recognition*, 2008.
33. “Stochastic Adaptive Tracking In A Camera Network”, B. Song and A. Roy-Chowdhury, *IEEE Intl. Conf. on Computer Vision*, 2007.
34. “Closed-Loop Tracking and Change Detection in Multi-Activity Sequences”, B. Song, N. Vaswani and A. Roy-Chowdhury, *IEEE Computer Vision and Pattern Recognition*, 2007.
35. “The Function Space of an Activity”, A. Veeraraghavan, R. Chellappa, A. Roy-Chowdhury, *IEEE Computer Vision and Pattern Recognition*, 2006. (**Oral Presentation, Acceptance Rate 4.8%**)
36. “Integrating the Effects of Motion, Illumination and Structure in Video Sequences”, Y. Xu, A. Roy-Chowdhury, *IEEE Intl. Conf. on Computer Vision*, 2005.
37. “A Measure of Deformability of Shapes, With Applications in Human Motion Analysis”, A. Roy-Chowdhury, *IEEE Computer Vision and Pattern Recognition*, 2005. (**Oral Presentation, Acceptance Rate 6.5%**)
38. “Role of Shape and Kinematics in Human Movement Analysis”, A. Veeraraghavan, A. Roy-Chowdhury, R. Chellappa, *IEEE Computer Vision and Pattern Recognition*, 2004.
39. “Activity Recognition Using the Dynamics of the Configuration of Interacting Objects”, N. Vaswani, Amit K. Roy-Chowdhury, R. Chellappa. *IEEE Computer Vision and Pattern Recognition*, 2003.

Other Referred Conference Publications

1. “Real Estate Image Classification”, J.H. Bappy, J. Barr, N. Srinivasan, A.K. Roy-Chowdhury, *IEEE Winter Conference on Applications of Computer Vision*, 2017.
2. “Detection and Localization of Image Forgeries using Resampling Features and Deep Learning”, J. Bank, T. Mohammad, L. Nataraj, A. Flenner, B. Manjunath, S. Chandrasekaran, A. Roy-Chowdhury, L. Peterson, *CVPR Workshop on Media Forensic*, 2017.
3. “Sparse Modeling for Topic-oriented Video Summarization”, R. Panda, A. Roy-Chowdhury, *IEEE International Conference on Acoustics, Speech and Signal Processing*, 2017.
4. “Video Summarization in a Multi-View Camera Network”, R. Panda, A. Das, A. Roy-Chowdhury, *International Conf. on Pattern Recognition*, 2016.
5. “Inter-dependent CNNs for Joint Scene and Object Recognition”, J. H. Bappy, A. Roy-Chowdhury, *International Conf. on Pattern Recognition*, 2016.
6. “Efficient Selection of Informative and Diverse Training Samples with Applications in Scene Classification”, S. Paul, J. H. Bappy, A. Roy-Chowdhury, *IEEE International Conf. on Image Processing*, 2016.
7. “Embedded Sparse Coding for Summarizing Multi-view Videos”, R. Panda, A. Das, A. Roy-Chowdhury, *IEEE International Conf. on Image Processing*, 2016.
8. “A Poisson Process Model for Activity Forecasting”, T. Mahmud, M. Hasan, A. Chakraborty, A. Roy-Chowdhury, *IEEE International Conf. on Image Processing*, 2016.
9. “CNN Based Region Proposals for Efficient Object Detection”, J. H. Bappy, A. Roy-Chowdhury, *IEEE International Conf. on Image Processing*, 2016.
10. “Adaptive Algorithm Selection, with Applications in Pedestrian Detection”, S. Zhang, Q. Zhu, A. Roy-Chowdhury, *IEEE International Conf. on Image Processing*, 2016.
11. “Video Summarization Through Change Detection in a Non-Overlapping Camera Network”, S. Zhang, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2015.
12. “Active Image Pair Selection for Continuous Person Re-identification”, A. Das, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2015.
13. “Robust Face Recognition Based on Saliency Maps of Sigma Sets”, R. Srinivasan, A. Roy-Chowdhury, *IEEE Intl. Conf. on Biometrics: Theory, Applications and Systems*, 2015.
14. “A Camera Network Tracking (CamNeT) Dataset and Performance Baseline”, S. Zhang, T. Faltemier, A. Roy-Chowdhury, *Workshop on Applications in Computer Vision*, 2014.
15. “Learning a Sparse Dictionary of Video Structure for Activity Modeling”, N. Nayak, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2014.
16. “A Conditional Random Field Model For Tracking In Densely Packed Cell Structures”, A. Chakraborty, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2014.

17. "Context-Aware Graphical Models for Video Analysis", Y. Zhu, A. Roy-Chowdhury, *GlobalSIP*, 2013.
18. "Capturing High Fidelity Images In PTZ Camera Networks", C. Ding, J. A. Farrell, A. Roy-Chowdhury, *GlobalSIP*, 2013.
19. "Quantitative Modeling of Artist Styles in Renaissance Face Portraiture", R. Srinivasan, A. Roy-Chowdhury, C. Rudolph, J. Kohl, *Intl. Workshop on Historical Document Processing and Imaging*, 2013.
20. "Automated Registration of Live Imaging Stacks of Arabidopsis", K. Mkrtchyan, A. Chakraborty, A. Roy-Chowdhury, *International Symposium on Biomedical Imaging*, 2013.
21. "Constrained Optimization for Opportunistic Distributed Visual Sensing", A. Morye, C. Ding, A. K. Roy-Chowdhury, J. A. Farrell, *American Controls Conference*, 2013.
22. "Opportunistic Sensing in a Distributed PTZ Camera Network", C. Ding, A. Morye, J. A. Farrell, A. Roy-Chowdhury, *IEEE Intl. Conf. on Distributed Smart Cameras*, 2012.
23. "Information Weighted Consensus", A. Kamal, J. A. Farrell, A. Roy-Chowdhury, *IEEE Controls and Decision Conference*, 2012.
24. "Coordinated Sensing and Tracking for Mobile Camera Platforms", C. Ding, J. A. Farrell, A. Roy-Chowdhury, *American Controls Conference*, 2012.
25. "Video Classification Based on Social Attitudes", R. Srinivasan, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2012.
26. "Consensus-Based Distributed Estimation in Camera Networks", A. Kamal, J. A. Farrell, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2012.
27. "A Generalized Kalman Consensus Filter for Wide Area Video Networks", A. Kamal, C. Ding, B. Song, J. A. Farrell, A. Roy-Chowdhury, *IEEE Controls and Decision Conference*, 2011.
28. "Dynamic Modeling of Streaklines for Motion Pattern Analysis in Video", N. Nayak, B. Song, A. Roy-Chowdhury, *Intl. Workshop on Machine Learning for Vision-based Motion Analysis*, 2011.
29. "Optimized imaging and target tracking within a distributed camera network", A. Morye, C. Ding, B. Song, A. Roy-Chowdhury, J. A. Farrell, *American Controls Conference*, 2011.
30. "Efficient cell segmentation and tracking of developing plant meristem", K. Mkrtchyan, D. Singh, M. Liu, G. V. Reddy, A. Roy-Chowdhury, M. Gopi, *Intl. Conf. on Image Processing*, 2011.
31. "Vector Field Analysis for Motion Pattern Identification in Video", N. Nayak, T. A. Kamal, A. Roy-Chowdhury, *Intl. Conf. on Image Processing*, 2011.
32. "Belief Consensus for Distributed Action Recognition", T. A. Kamal, B. Song, A. Roy-Chowdhury, *Intl. Conf. on Image Processing*, 2011.
33. "Pattern Analysis of Stem Cell Growth Dynamics in the Shoot Apex of Arabidopsis", O. Tataw, M. Liu, R. Yadav, G. V. Reddy, A. Roy-Chowdhury, *Intl. Conf. on Image Processing*, 2010.
34. "Multi-focal Nematode Image Classification Using the 3D X-Ray Transform", M. Liu, A. Roy-Chowdhury, M. Yoder, P. DeLay, *Intl. Conf. on Image Processing*, 2010.

35. "Multi-Target Tracking Using Long-term Stochastic Associations", T. Jeng, B. Song, E. Staudt, A. Roy-Chowdhury, A. Sengupta, *Intl. Conf. on Image Processing*, 2010.
36. "The Human Action Image", R.J. Sethi, A.K. Roy-Chowdhury, *Intl. Conf. on Pattern Recognition*, 2010.
37. "A Neurobiologically Motivated Stochastic Method for Analysis of Human Activities in Video", R.J. Sethi, A. Roy-Chowdhury, *Intl. Conf. on Pattern Recognition*, 2010.
38. "Modeling and Recognition of Complex Multi-Person Interactions in Video", R. Sethi, A. Roy-Chowdhury, *ACM MM Workshop on Multimodal Pervasive Video Analysis*, 2010.
39. "Modeling Multi-Object Activities in Phase Space", R. Sethi, A. Roy-Chowdhury, *2nd International Workshop on Video Event Categorization, Tagging and Retrieval*, 2010.
40. "Cell Volume Estimation from a Sparse Collection of Noisy Confocal Image Slices", A. Chakraborty, M. Liu, G. V. Reddy, A. Roy-Chowdhury, *Indian Conf. on Computer Vision, Graphics and Image Processing*, 2010.
41. "Physics-based Activity Modelling in Phase Space", R. Sethi, A. Roy-Chowdhury, *Indian Conf. on Computer Vision, Graphics and Image Processing*, 2010.
42. "The Human Action Image and its Application to Motion Recognition", R. Sethi, A. Roy-Chowdhury, *Indian Conf. on Computer Vision, Graphics and Image Processing*, 2010.
43. "Query-based Retrieval of Complex Activities using Strings of Motion-Words", U. Gaur, B. Song, A. Roy-Chowdhury, *IEEE Workshop on Motion and Video Computing*, 2009.
44. "Activity Recognition by Integrating the Physics of Motion with a Neuromorphic Model of Perception", R. Sethi, A. Roy-Chowdhury, S. Ali, *IEEE Workshop on Motion and Video Computing*, 2009.
45. "Exploiting Local Structure for Tracking Plant Cells in Noisy Images", M. Liu, A. Roy-Chowdhury, G. Reddy, *IEEE Intl. Conf. on Image Processing*, 2009.
46. "Robust Estimation of Stem Cell Lineages Using Local Graph Matching", M. Liu, A. Roy-Chowdhury and G. Reddy, *IEEE Computer Society Workshop on Mathematical Methods in Biomedical Image Analysis*, 2009. (**Oral Acceptance Rate $\sim 20\%$**)
47. "Efficient Motion Estimation Under Varying Illumination", Y. Xu and A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2008.
48. "Multi-Target Tracking Through Opportunistic Camera Control In A Resource Constrained Multimodal Sensor Network", J. Nayak, L. Gonzalez-Argueta, B. Song, A. Roy-Chowdhury and E. Tuncel, *IEEE/ACM Intl. Conf. on Distributed Smart Cameras*, 2008.
49. "Decentralized Camera Network Control Using Game Theory", B. Song, C. Soto, A. Roy-Chowdhury and J. Farrell, *Workshop on Smart Camera and Visual Sensor Networks at IEEE/ACM Intl. Conf. on Distributed Smart Cameras*, 2008.
50. "Pose and Illumination Invariant Face Recognition in Video", Y. Xu, A. Roy-Chowdhury, K. Patel, *IEEE Computer Society Workshop on Biometrics (in conjunction with CVPR)*, 2007.

51. "Determining Topology In A Distributed Camera Network", X. Zou, B. Bhanu, B. Song, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2007.
52. "Modeling Time-Varying Illumination Patterns in Video", Y. Xu, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2007.
53. "Super-resolved Facial Texture Under Changing Pose and Illumination", J. Yu, B. Bhanu, Y. Xu, A. Roy-Chowdhury, *IEEE Intl. Conf. on Image Processing*, 2007.
54. "Integrated Tracking and Recognition of Human Activities in Shape Space", B. Song, A. Roy-Chowdhury and N. Vaswani, *Indian Conf. on Computer Vision, Graphics and Image Processing*, 2006.
55. "Pose and Illumination Invariant Registration and Tracking for Video-based Face Recognition", Y. Xu and A. Roy-Chowdhury, *IEEE Computer Society Workshop on Biometrics (in association with CVPR)*, 2006.
56. "Learning Illumination Models While Tracking", Y. Xu and A. Roy-Chowdhury, *Intl. Symposium on 3D Data Processing, Visualization and Transmission*, 2006.
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