TECHNICAL PUBLICATIONS

Note 1 : In Computer Science & Engg, some conferences are more selective and aggressively reviewed than many journals. Therefore, instead of writing separate sections such as journals, chapter in books, edited books and important conferences, all items are listed together. Complicated the situation is that the same intellectual work is often double counted when major contents of (say) conference paper have been rewritten for a journal, or as a chapter in a book. This is an avoidable situation (self-plagiarism) but I have given up the fight with my colleagues. Such publications are marked "related" in the sequel below.

Note 2 : For those so inclined, journal papers, and so-called "top venues" papers appear shaded below. This situation is also complicated since some conferences fade in and out of popularity by the rankers (a top-notch ranking conference may be superceded due to a newer conference, or might be unranked due to historical east-west divide.) I have made reasonable effort based on my judgement. Journals always appear shaded below, though, perhaps they shouldn't.

Note 3 : DBLP has some (but not all) papers listed below.

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1. *"Tomographic Reconstruction Using Global Statistical Priors,"* (with Preeti G., A. Rajwade and I. Svalbe), DICTA, December 2017.

2. *"Improved Descriptors for Patch Matching and Reconstruction,"* (with R. Mitra, J. Zhang, S. Narayan, S. Ahmed, and A. Jain), ICCV Workshops, October 2017.

3. *" Kernel Generalized-Gaussian Mixture Model for Robust Abnormality Detection ,"* (with Nitin Kumar, A. Rajwade, and S. Awate) MICCAI, October 2017.

4. *" Kernel generalized Gaussian and robust statistical learning for abnormality detection in medical images ,"* (with Nitin Kumar, A. Rajwade, and S. Awate) ICIP, October 2017. [Note: Related publication.]

5. *"Realistic Projection on Casual Dual-Planar Surfaces with global illumination compensation* (with S. Ladha and K. Smith-Miles). International Journal of Image and Graphics, 16(3): 1-29 (2016).

6. *A Comparison of Some Methods for Direct 2D Reconstruction from Discrete Projected Views ,"* (with Preeti G., A. Rajwade and I. Svalbe), DGCI 2016.

7. *"Multi-slice Tomographic Reconstruction: To Couple or Not to Couple,"* (with Preeti G., A. Rajwade and I. Svalbe), ICVGIP December 2016.

8. *"Mosaicing Scenes with a Quadcopter,"* (with M. Prasad and Michael Brown) WACV (IEEE Vision Meetings). March 2016.

9. *"Hierarchical summarization for easy video applications,"* (with Nitya Sudhakar) Machine Vision and Applications. May 2015.

10. *"A Motion Blur Resilient Fiducial For Quadcopter Imaging,"* (with M. Prasad and Michael Brown) WACV (IEEE Vision Meetings). Jan 2015

11. *"Automontage: Photo sessions made easy,"* (with Nithya Manickam). ICIP 2013.

12. *"Quantifying local heterogeneity via morphologic scale: Distinguishing tumoral from stromal regions,"* (with Andrew Janowczyk and Anant Madabhushi). Journal of Pathology Informatics 4(8) (2013)

13. *"Multi-User Natural Interaction with Sensor on Activity,"* (with Shamsuddin Ladha and Kate Smith-Miles), IEEE Workshop on User-Centred Computer Vision, 2013.

14. *"High-Throughput Biomarker Segmentation on Ovarian Cancer Tissue Microarrays via Hierarchical Normalized Cuts,"* (with Andrew Janowczyk, Rajendra Singh, Dimitra Sasaroli, George Coukos, Michael Feldman, and Anant Madabhushi). IEEE Transactions on Biomedical Engineering 59(5):1240-1252 (2012).

15. *" The Eighth Indian Conference on Vision, Graphics and Image Processing, ICVGIP ,"* (with Bill Triggs and Kavita Bala), Editors. ACM 2012, ISBN 978-1-4503-1660-6

16. *"A high-throughput active contour scheme for segmentation of histopathological imagery,"* (with Jun Xu, Andrew Janowczyk, and Anant Madabhushi). Medical Image Analysis 15(6): 851-862 (2011)

17. *Recent advances in visual computing* *"Editorial introduction,"* (with P. J. Narayanan and A. N. Rajagopalan). The Visual Computer 27(12): 1037 (2011).

18. *"Tracing specular light paths in point-based scenes,"* (with Rhushabh Goradia, M.S. Sriram Kashyap, Parag Chaudhuri). The Visual Computer 27(12): 1083-1097 (2011).

19. *"Resolving occlusion in multiframe reconstruction of deformable surfaces,"* (with A. Shaji, A. Varol, P. Fua, Yashoteja, and A.Jain) IEEE CVPR Workshop June 2011. Pages: 31–36.

20. *"Local morphologic scale application to segmenting tumor infiltrating lymphocytes in ovarian cancer TMAs,"* (with Andrew Janowczyk, Michael D. Feldman and Anant Madabhushi). SPIE Medical Imaging (2011, 14pp)

21. *"Projection Defocus Correction using Adaptive Kernel Sampling and Geometric Correction in Dual-planar Environments,"* (with Shamsuddin Ladha and Kate Smith-Miles) IEEE Computer Vision and Pattern Recognition CVPR Workshops, PROCAMS (2011).

22. *"Rendering Wave Effects with Augmented Light Field,"* (with Se Baek Oh, Sriram Kashyap, Rohit Garg, and Ramesh Raskar). Computer Graphics Forum 29(2):507–516, 2011.

23. *"Hybrid SVM for Multiclass Arrhythmia Classification."* (with A. Joshi, V.K. Jayaraman, B.D. Kulkarni), International Journal of Functional Informatics and Personalized Medicine. 3(1):29–47

24. *Implicit surface octrees for ray tracing point models ,"* (with Sriram Kashyap, Parag Chaudhuri and Rhushabh Goradia). ICVGIP 2010. Related.

25. *"A weighted mean shift, normalized cuts initialized color gradient based geodesic active contour model applications to histopathology image segmentation,"* (with Xu, J, Janowczyk A, and Madabhushi, A). SPIE Medical Imaging. 2010. Related.

26. *"GPU-Based Ray Tracing of Splats,"* (with Sriram Kashyap, Parag Chaudhuri and Rhushabh Goradia). Pacific Graphics, 2010

27. *"Real Time Ray Tracing of Point-based Models,"* (with Sriram Kashyap, and Rhushabh Goradia). ACM Siggraph SI3D 2010. Related.

28. *"Hybrid SVM for Multiclass Arrhythmia Classification."* (with A. Joshi, V.K. Jayaraman, B.D. Kulkarni). BIBM 2009. Related.

29. *"Classifying Ayurvedic Pulse Signals Via Consensus Locally Linear Embedding,"* (with A. Jog and Anant Madabhushi) Biosignals, January 2009. Pages 388–395.

30. *"Hierarchical Normalized Cuts: Unsupervised Segmentation of Vascular Biomarkers from Ovarian Cancer Tissue Microarrays,"* (with Andrew Janowczyk, Rajendra Singh, Dimitra Sasaroli, George Coukos, Michael Feldman, and Anant Madabhushi). MICCAI(1) 2009. Related.

31. *"Real-time Droplet Modeling using Color-Space Environment Matting,"* (with B. Choudhury and P. Hao) SIGGRAPH Posters, August 2009. Article No. 78.

32. *"Fast Lead Star Detection,"* (with M. Nitya) WACV (IEEE Vision Meetings) December 2009. Pages 1–6.

33. *"Riemannian Manifold Optimisation for Non-rigid Structure from Motion"* (with A. Shaji) IEEE CVPR Workshop on Nonrigid Shape Analysis and Deformable Image Alignment. June 2008. Pages: 1 - 6 .

34. *"Multifractality In Arterial Pulse,"* (with A. Joshi, V.K. Jayaraman, B.D. Kulkarni) 19th ICPR. 2008, 4pp.

35. *"Arterial Pulse Rate Variability Analysis for Diagnoses,"* (with A. Joshi, V.K. Jayaraman, B.D. Kulkarni) 19th ICPR. 2008, 4pp.

36. *"Manifold Optimisation for Motion Factorization,"* (with A. Shaji and D. Suter). 19th ICPR. 2008,4pp.

37. *"Fast, Processor-Cardinality Agnostic PRNG with a Tracking Application,"* (with Andrew Janowczyk) ICVGIP December 2008. Pages 171-178 **[Best Paper]**.

38. *"Fast Color-Space Decomposition based Environment Matting,"* (with B. Choudhury and Deepali Singla) ACM Siggraph i3D 2008 (Symposium on Interactive 3D Graphics and Games) **[Best Poster (Honorable Mention)]**

39. *"GPU-based hierarchical Computations for View-Independent Visibility,"* (with R. Goradia and P. Ajmera) ICVGIP December 2008. Pages 560-567.

40. *"Images: a new computer graphics primitive,"* (with Biswarup Choudhury). Microsoft Techvista October 2008. Related.

41. *"GPU-based Global Illumination of Point Models using Fast Multipole Method,"* (with Rhushabh Goradia). First Prize. Microsoft Techvista October 2008. Related.

42. *" A Survey of Image-based Relighting Techniques. ,"* (with B. Choudhury). JVRB 4 (2007).

43. *"Efficient Image Updates Using Light Fields,"* (with A. Pandey and B. Choudhury) in Pattern Recognition Letters, Volume 28–3, pp. 375-383 2007.

44. *"Human Pose Extraction from Monocular Videos using Non-rigid Factorization,"* (with A. Shaji, Behjat Siddiquie, and David Suter) British Machine Vision Conference, October 2007. Pages 167-177

45. *"Visibility Map for Global Illumination in Points Clouds,"* (with R. Goradia and A. Dutta). ACM Graphite Dec 2007. Pages 39–46.

46. *"Data-Intensive Image Based Relighting,"* (with B. Choudhury). ACM Siggraph Graphite Dec 2007. Pages 155–162

47. *"Nadi Tarangini: A Pulse Based Diagnostic System,"* (with Joshi, A.J., Jayaraman, V.K., and Kulkarni, B.D) IEEE EMBC Dec 2007. Pages: 2207–2210

48. *"Nadi Tarangini: A Pulse Based Diagnostic System,"* (with A. Joshi), 3rd prize Microsoft Techvista, Delhi Oct 2007. Related.

49. *"Arterial Pulse System: Modern Methods For Traditional Indian Medicine,"* (with Joshi, A.J., Jayaraman, V.K., and Kulkarni, B.D.) IEEE EMBC 2007. Pages: 608–611

50. *"Vision-Based Posing of 3D Virtual Actors,"* (with A. Vaidya and A. Shaji) in Lecture Notes on Computer Science (Proceedings of the Seventh Asian Conference on Computer Vision), Editors: P. J. Narayanan, Shree K. Nayar, Heung-Yeung Shum. Pages 91–100 (January 2006). ISBN:3-540-31244-7

51. *" A Survey of Image-based Relighting Techniques. ,"* (with B. Choudhury). GRAPP 2006. Related.

52. *"Ad-hoc Multi-planar Projector Displays,"* (with P. Kashyap) in ICVGIP 2006. Lecture Notes in Computer Science, Vol. 4338. Pages 289–298. Editors: Kalra, Prem, and Peleg, Shmuel.

53. *"Real-Time Camera Walks Using Light Fields,"* (with D. Singla and B. Choudhury) in ICVGIP 2006. Lecture Notes in Computer Science, Vol. 4338. Pages 321–332 Editors: Kalra, Prem; and Peleg, Shmuel.

54. *"Reducing False Positives in Video Shot Detection Using Learning Techniques,"* (with M. Nithya and A. Parnami) in ICVGIP 2006. Lecture Notes in Computer Science, Vol. 4338, Pages 421–432. Editors: Kalra, Prem, and Peleg, Shmuel. Related: "IIT Bombay at TrecVid 2006". http://www-nlpir.nist.gov/projects/tvpubs/tv6.papers/iit_bombay.pdf

55. *"Retrieving Images for Remote Sensing Applications,"* (with N. Sawant and B. Krishna Mohan) in ICVGIP 2006. Lecture Notes in Computer Science, Vol. 4338. Pages 849–860. Editors: Kalra, Prem, and Peleg, Shmuel.

56. *"Grafting Locomotive Motion,"* (with S. Shanbhag) in the Journal of WSCG (Fourteenth International Conferences on Computer Graphics, Visualization, and Computer Vision) Czech Republic (February 2006). Pages 311–319.

57. *"Arrhythmia Classification Using Local Holder Exponents and Support Vector Machine,"* (with A. Joshi, S. Phadke, V. Jayaraman and B.D. Kulkarni) in Lecture Notes on Computer Science (International Conference on Pattern Recognition and Machine Intelligence), Editors: S. K. Pal. Pages 242-247 (December 2005.)

58. *"Search and Transitioning for Motion Captured Sequences,"* (with S.K. Basu and S. Shanbhag) in Twelfth ACM Virtual Reality Software and Technology. Pages 220-223. November 2005.

59. *"Irregular, Unknown Light Sources in Dynamic Global Illumination,"* (with M. Srivastava) in Image and Vision Computing. Vol 22(14). Pages 1203-1210. http://dx.doi.org/10.1016/j.imavis.2004.03.014. July 2004.

60. *"Real-Time Detection and Understanding of Isolated Protruded Fingers,"* (with A. Sawa) in Advances in Real-Time Vision for Human-Machine Interaction Editor: Branislav Kisacanin. Springer Verlag. June 2005. Pages 57–67.

    Related: In proceedings of the IEEE Computer Vision and Pattern Recognition (CVPR) Workshop, July 2004.)

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62. *"The Fast Multipole Method for Global Illumination,"* (with A. Karapurkar and N. Goel) in Recent Trends in Computer Vision and Graphics, Editors, B. Chanda, S. Chandran and L. Davis. Allied Publishers. December 2004. Pages 119–125. ICVGIP 2004. **Marked as one of two Best Papers (Honorable Mention).**

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65. *"Human Shapes: From Pixels to Behaviour,"* in Recent Trends in Practice and Theory of Information Technology (pages 200–211). Editor: S. N. Maheshwari, Viva Publishers. Jan 2005.

66. *"Recent Trends in Computer Vision, Graphics and Image Processing,"* (Co-editor with B. Chanda and L. Davis). Proceedings of the Fourth Indian Conference on Computer Vision, Graphics, and Image Processing, December 2004. Allied Publishers.

67. *"Parallel Action Synthesis for Skeletally Animated Characters,"* (with S. Shanbhag) in Vision and Graphics: National Scenario, Editor, Sharat Chandran and R.S. Jadon, pages 41–44. February 2004. WCVGIP 2004.

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69. *"Spanning Trees and Normalized Cuts for Internet Image and Video Segmentation,"* (with Abhishek Ranjan) in 16th Annual Symposium on Internet Imaging, San Jose (January 2004). SPIE 5304. Pages 37–44.

70. *"Fast image transforms using Diophantine methods,"* (with A. Potty and M. Sohoni) in IEEE Transactions on Image Processing. 12 (2003), pages 678–684.

71. *"Region Relationship for Semantic Cued Image Retrieval,"* (with N. Kiran). ACM Digital Library Proceedings of the ACM Symposium on Applied Computing Melbourne, (March 2003, pages 760–764).

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109. *"Division and Synthesis of computation,"* (with Larry Davis) Position Paper, IEEE workshop on Large Grained Parallelism (October 1986).