

BIO-DATA

1 Name:

Subhashis Banerjee

2 Present Address:

Professor

Department of Computer Science and Engineering
Indian Institute of Technology

New Delhi 110016

3 Academic Qualifications:

Ph.D Thesis: On Stochastic Relaxation Paradigms for Computational Vision

Electrical Engineering

Indian Institute of Science, Bangalore

1989

ME Electrical Engineering

Indian Institute of Science, Bangalore

1984

BE Electrical Engineering

Jadavpur University, Calcutta

1982

4 Details of Employment

Professor

Department of Computer Science and Engineering

Indian Institute of Technology, Delhi

From January 2000 till date

Ministry of Urban Development Chair Professor, since November 2015.

Microsoft Chair Professor, from May 2010 to March 2013.

Naren Gupta Chair Professor, 2004-2006.

Head, Computer Services Center, from September, 2009 to August, 2012

Head, Department of Computer Science and Engineering, from September, 2004 to August, 2007.

Associate Professor

Department of Computer Science and Engineering

Indian Institute of Technology, Delhi

From August 1997 to January 2000

Assistant Professor
Department of Computer Science and Engineering
Indian Institute of Technology, Delhi
From April 1990 to August, 1997

Lecturer
Department of Computer Science and Engineering
Indian Institute of Technology, Delhi
From December 1989 to March 1990

5 Field of Specialization

Computer Vision, Pattern Recognition, Image Based Rendering and Real-time Embedded Systems.

6 Awards/Recognition

1. IIT Delhi Teaching excellence award, 2011.
2. Ministry of Urban Development Chair Professorship, Department of Computer Science and Engineering, IIT Delhi, since 2016.
3. Microsoft Chair Professorship, Department of Computer Science and Engineering, IIT Delhi, 2010-2013.
4. Naren Gupta Chair Professorship, Department of Computer Science and Engineering, IIT Delhi, 2004-2006.
5. Best paper of the year (July 94 -June 95) award for the paper “ Real Time Vision System for Collision Detection” with Alok Mittal, Aditya Vailaya and M. Balakrishnan, in Journal of Computer Science and Informatics, Special Issue on Robotics and Automation, 25(1), pp. 174-208, March 1995.
6. Young Scientist award of the Department of Atomic Energy, 1994.

7 Ph.D. guided/on-going

- Britty Baby, (ongoing)
Ego-motion based depth estimation using endoscopic cameras in neurosurgical simulation and training,
jointly with Ashish Suri (AIIMS) and Prem Kalra of Dept. CSE, IITD.
- Suvam Patra, (ongoing)
3D registration and reconstruction from multi-modal data,
jointly with Prem Kalra of Dept. CSE, IITD.
- Brojeshwar Bhowmick, (ongoing)
Dense and large scale 3D reconstruction,
jointly with Prem Kalra of Dept. CSE, IITD.

- Chetan Arora, 2013
On Graph-cut algorithms in Computer Vision,
jointly with Prem Kalra and S. N. Maheshwari of Dept. CSE, IITD.
- Tanveer Faruque, 2012
Novel Space-time Activity Modelling Techniques for Video Surveillance,
jointly with Prem Kalra of Dept. CSE, IITD.
- Ayesha Choudhary, 2011
Detection of unusual activities in Videos,
jointly with Santanu Chaudhury of Dept. EE, IITD.
- Uma Mudenagudi, 2007
Markov Random Field Models for Super Resolution in Space and Time,
jointly with Prem Kalra of Dept. CSE, IITD.
- Subhajit Sanyal, 2006
Interactive Image-Based Modeling and Walkthrough Planning,
jointly with Prem Kalra of Dept. CSE, IITD.
- Parag Chaudhuri, 2005
A Framework for View-Dependent Character Animation,
jointly with Prem Kalra of Dept. CSE, IITD.
- Shoma Chatterjee, 2002
“Vision Based Motion Image Compression”
jointly with K. K. Biswas of Dept. CSE, IITD.
- Sumantra Dutta Roy, 2000
“Active Object Recognition through Next View Planning”
jointly with Santanu Chaudhury of Dept. EE, IITD.
- Navin Rajpal, 1998 “Development of Object Recognition Systems using Invariant Feature based Indexing”
jointly with Santanu Chaudhury of Dept. EE, IITD.
- also guided the Ph. D research of G. Sudhir who completed his Ph.D from CARE, IITD in 1994, and formally was a student of Prof. K. K. Biswas, DCSE and Dr. R. Bahl, CARE. “Relaxation Algorithms for Computer Vision”.

8 Courses taught

- Introduction to Computers and Programming
- Introduction to Computer Science
- Data Structures
- Discrete Structures
- Numerical Algorithms

- Design Practices in Computer Science
- Operating Systems
- Computer Graphics
- Pattern Recognition and Image Processing
- Digital Image Analysis
- Mathematical Foundations of Computer Science
- Logic and Functional Programming
- Computer Vision
- Neural Networks and Machine Learning
- Quantum Computation and Information Theory
- Machine Learning and Data Mining
- Simultaneous localization and mapping (special module)
- Deep Learning (special module)

9 Research

9.1 Ph.D Research

‘On Stochastic Relaxation Paradigms for Computational Vision’, 1984 - 1989
Department of Electrical Engineering, Indian Institute of Science, Bangalore.
Supervisors: Prof. Y. V. Venkatesh, Prof. K. R. Ramakrishnan and Prof. P. S. Sastry.

9.2 Research at IITD

Please see

1. <http://www.cse.iitd.ac.in/~suban>
2. <http://www.cse.iitd.ac.in/vglab>
3. <http://www.cse.iitd.ac.in/~suban/students.html>

9.3 Sponsored research (2010-2015)

1. **AIIMS-IITD Centre of Excellence for Neuro-engineering.**

Coordinators: Ashish Suri (AIIMS) and Subhashis Banerjee.

Funding agency: DBT

Budget: Rs. 10,00,00,000

Duration: 2017-

2. **Four problems related to ADAS**

PI: Subhashis Banerjee.

Others: Chetan Arora (IIITD) and Uma Mudenagudi (BVBCET)

Funding agency: Continental Automotive

Budget: Rs. 30,00,000

Duration: 2016-2017.

3. Two ongoing collaborative projects (as Co-PI) with Department of Neurosurgery, AIIMS with major part of the funding at AIIMS:

- (a) Evaluation of development of neurosurgery skills by hands on skills training and interactive virtual training (Rs. 1,49,00,000).

- (b) IIT Delhi as Repository Centre for Archival transmission and Computing (Rs. 1,50,00,000).

4. **Creation of central computing infrastructure for universities.**

Chief Investigator: Huzur Saran

Co-investigator: Sorav Bansal, Subhashis Banerjee, R. S. Mani (NIC).

Funding agency: MHRD (NMEICT).

Budget: Rs. 40,00,00,000

Duration: 2012 -

5. **Research group on computer graphics and vision, Indo-German Max Planck Centre for Computer Science.**

Investigators: Prem Kalra, Subodh Kumar, Subhashis Banerjee, Hans-Peter Seidel, Michael Wand and Christian Theobalt.

Funding agency: DST, Bundesministerium für Bildung und Forschung (BMBF, Federal Ministry of Education and Research) and the Max-Planck-Gesellschaft (MPG, Max Planck Society).

Duration: 2010 -

6. **Similarity measures and their optimization for video analysis and editing.**

Chief Investigator: Subhashis Banerjee.

Co-investigator: P. J. Narayanan (IIIT Hyderabad), Shmuel Peleg (Hebrew University, Jerusalem) and Michael Werman (Hebrew University, Jerusalem).

Funding agency: DST (Indo-Israel Project).

Budget: Rs. 5,00,000

Duration: 2012 - 2014

7. **Acquisition, Representation, Processing and Display of Digital Heritage Sites.**

Chief Investigator: Prem Kalra

Co-investigator: Subodh Kumar, Subhashis Banerjee, others.

Funding agency: DST

Budget: Rs. 57,00,000

Duration: 2010 - 2013

8. **Immersive Environment for Tele-operation (Sub project No. 1 under the main project RP02346).**

Chief Investigator: Prem Kalra

Co-investigator: Subodh Kumar, Sumantra Dutta Roy, Santanu Chaudhury, Subhashis Banerjee, others.

Funding agency: BRNS, DAE

Budget: Rs. 1,53,34,000

Duration: 2010 - 2015

9. **Vision-Guided Control of a Robot Manipulator (Sub project No. 3 under the main project RP02346).**

Chief Investigator: Sumantra Dutta Roy

Co-investigator: Santanu Chaudhury, Prem Kalra, Sudipto Mukherjee, Subhashis Banerjee, others.

Funding agency: BRNS, DAE

Budget: Rs. 1,44,34,000

Duration: 2010 - 2015.

10. **Large scale data processing and visualization**

Chief Investigator: Subodh Kumar

Co-investigators: Subhashis Banerjee, Prem Kalra, Niloy J Mitra, Kolin Paul, Sandeep Sen, Santanu Chaudhury (EE), Rajinder Bahl (CARE), Sanjeev Sanghi (AM), Om P Sharma (CAS)

Funding agency: Naval Research Board

Budget: Rs. 39,74,100

Duration: 2008-2010

11. **Visual enhancement, manipulation and retargeting of videos**

Chief Investigator: Subhashis Banerjee

Co-investigators: P J Narayanan (IIIT Hyderabad), Uma Mudenagudi (BVB College, Hubli) and Prem Kalra

Funding agency: Naval Research Board

Budget: Rs. 25,40,000 (Rs. 8,00,000 for IITD)

Duration: 2008-2010

10 Other Academic and Professional Activities

1. On the editorial board of the *International Journal of Computer Vision*, Springer, 2004-2014.
2. On the editorial board of the *Computers and Graphics*, Elsevier, from 2007 - 2010.
3. Mentor and on Board of Directors of Kritikal Solutions Private Limited, a TBIU start-up company of IIT Delhi.
4. Helped Kritikal Solutions Pvt. Ltd. develop two successful products - *Vehicle underside scanner* (deployed at the Rashtrapati bhavan, Hyderabad airport and over 30 other installations) and *Automatic license plate reader* (to be deployed at several toll plazas across the country and possibly by the Delhi traffic department).
5. Regular review work for International Conference on Computer Vision (ICCV), Computer Vision and Pattern Recognition (CVPR), European Conference on Computer Vision (ECCV), International Journal of Computer Vision (IJCV), Journal of Image and Vision Computing, IEEE Transactions PAMI and SMC, and others.
6. Served on faculty selection committees of IITs at Delhi, Bombay, Kharagpur, Kanpur, Madras, Guwahati, Mandi, Ropar, Patna, Gandhinagar, Indore and Rajasthan; IISc Bangalore; IIIT Delhi, BHU; ISI Kolkata, Delhi University, Viswa Bharati and several others.
7. Invited speaker at the Workshops on *Graphs and Geometry* organised by TIFR and BHM at IIT BHU, IIT Guwahati, NIT Rourkela, Thapar Institute Patiala and BESU Shibpur, WB, Kashmir University and Sikkim University in the period 2010 - 2015.
8. Invited talk on *Graph cut algorithms in Computer Vision* at the Digital Video Processing Workshop at IIT Madras, December 2012.
9. Invited talk on *Projective Geometry in Computer Vision* at the Centenary Workshop of Department Electrical Engineering, IISc Bangalore, 2011.
10. Invited talks at IIT Bombay, IIT Kharagpur, IIT Kanpur, IISc Bangalore, Jadavpur University, ISI Kolkata, JNU, MPI-Informatik, Saar Bruecken and Microsoft Research (Redmond) between 2010-2016.

11 Publications (since 2000):

Books

- *View-dependent Character Animation*. Parag Chaudhuri, Prem Kalra and Subhashis Banerjee. Springer Research Monograph (ISBN: 1846285917), 2006.

Manuscripts

1. Suvam Patra, Kartikeya Gupta, Faran Ahmad, Chetan Arora, Subhashis Banerjee. *Batch based Monocular SLAM for Egocentric Videos*, March 2017. ([arXiv, July 2017](#)).

Journals

1. Brojeshwar Bhowmick, Suvam Patra, Avishek Chatterjee, Venu Madhav Govindu, Subhashis Banerjee. *Divide and Conquer: A Hierarchical Approach to Large-scale Structure-from-Motion*. Computer Vision and Image Understanding (CVIU), Volume 157, pp. 190-205, April 2017.
2. Chetan Arora, Subhashis Banerjee, Prem Kalra and S. N. Maheshwari. *Generalized Flows for Optimal Inference in Higher Order MRF-MAP*. IEEE Transactions on Pattern Analysis and Machine Intelligence, Volume: 37, Issue: 7, pp. 1323 - 1335, July 2015.
3. M Tripathi, R. C. Deo, A. Suri, V. Srivastav, B Baby, S. Kumar, P. Kalra, S. Banerjee, T. S. Roy, S. Lalwani. *Quantitative Analysis of Kawase's Triangle versus Modified Dolenc Kawase Rhomboid Approach for Middle Cranial Fossa Lesions with Variable Antero-posterior Extension*, Journal of Neurosurgery, 2015.
4. M Tripathi, R. C. Deo, A. Suri, V. Srivastav, B Baby, S. Kumar, P. Kalra, S. Banerjee, T. S. Roy, S. Lalwani. *Quantitative Analysis of Variable Extent of Anterior Clinoidectomy with Intradural and Extradural Approaches: 3-Dimensional Analysis and Cadaver Dissection*, Neurosurgery, March 2015, Suppl 2:147-61.
5. P. Jotwani, V. Srivastav, M. Tripathi, R. C. Deo, B. Baby, N. Damodaran, R. Singh, A. Suri, M. Bettag, T. S. Roy, C. Busert, M. Mehlitz, S. Lalwani, K. Garg, K. Paul, S. Prasad, S. Banerjee, P. Kalra, S. Kumar, B. S. Sharma, A. K. Mahapatra. *Free-access Open-source e-Learning in Comprehensive Neurosurgery Skills Training*, Neurol India 2014 July-August 62 (4): 352-61.
6. A. Suri, M. Bettag, M. Tripathi, R. C. Deo, T. S. Roy, S. Lalwani, C. Busert, M. Mehlitz, B. Baby, V. Srivastav, R. Singh, S. Kumar, P. Kalra, S. Banerjee, K. Paul, S. Prasad. *Simulation in Neurosurgery in India-NETS*. CNS Quarterly 2014;3:23-26.
7. Tanveer A. Faruque, Subhashis Banerjee, Prem K. Kalra. *Unsupervised discovery of activity correlations using latent topic models*, The Visual Computer 27(12): 1071-1082 (2011). (selected from among the best papers of ICVGIP 2010).
8. Uma Mudenagudi, Subhashis Banerjee and Prem Kalra. *Space-time Super-Resolution Using Graph-cut Optimization*. IEEE Transactions on Pattern Analysis and Machine Intelligence. , Vol. 33 No. 5, pp. 995-1008, May 2011
Pre-print: <http://www.computer.org/portal/web/csdl/doi/10.1109/TPAMI.2010.167>. August, 2010.
9. Parag Chaudhuri, Prem Kalra and Subhashis Banerjee. *Reusing View-Dependent Animation*. The Visual Computer, Vol. 23, No. (9-11), pp. 707-719, September, 2007.
10. Subhajit Sanyal, Prem Kalra and Subhashis Banerjee. *Designing Quality Walkthroughs*. Computer Animation and Virtual Worlds, Vol. 18, No. 4-5, pp. 527-538, September, 2007.
11. Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Recognizing Large Isolated 3-D Objects through Next View Planning using Inner Camera Invariants*. IEEE Transactions on Systems, Man and Cybernetics, Part B: Cybernetics, Vol. 35, No. 2, pp. 282 - 292, April, 2005.

12. Puneet Sharma, Angshuman Parashar, Subhashis Banerjee and Prem Kalra. *An Uncalibrated Lightfield Acquisition System*. Journal of Image and Vision Computing, Vol. 22, No. 14, pp. 1197-1202, December, 2004.
13. Parag Chaudhuri, Prem Kalra and Subhashis Banerjee. *A System for View-Dependent Animation*. Computer Graphics Forum, Vol. 23, No. 3, pp. 411 - 420, September, 2004.
14. Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Active Object Recognition through Next View Planning: A Survey*. Pattern Recognition, Vol. 37, No. 3, pp. 429-446, March, 2004.
15. Aditya Ramamoorthy, Namrata Vaswani, Santanu Chaudhury and Subhashis Banerjee. *Recognition of dynamic hand gestures*. Pattern Recognition, Vol. 36, No. 9, pp. 2069-2081, September, 2003.
16. Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Aspect Graph Construction with Noisy Feature Detectors*. IEEE Transactions Systems, Man and Cybernetics - Part B: Cybernetics, Vol. 33, No. 2, pp. 340-351, April, 2003.
17. Namita Gupta, Pooja Mittal, Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Developing a Gesture-based Interface*. IETE Journal of Research: Special Issue on Visual Media Processing, Vol. 48, No. 3 and 4, pp. 237-244, August, 2002.
18. Rohit Jaivant Kate, Prem Kalra and Subhashis Banerjee. *Towards an Automatic Approach for View Dependent Geometry*. International Journal of Image and Graphics, Vol. 2, No. 3, pp. 413-423, July, 2002.
19. Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Aspect Graph based Modeling and Recognition with an Active Sensor: A Robust Approach*. Proc. Indian National Science Academy, Part A, Special Issue on Image Processing, Vision and Pattern Recognition, Vol. 67, No. 2, pp. 187-206, March, 2001.
20. Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Isolated 3D Object Recognition using Next View Planning*. IEEE Transactions Systems, Man and Cybernetics - part A, Vol. 30, No. 1, pp. 67-76, January, 2000.

Conferences

20. Shashank Yadav, Suvam Patra, Chetan Arora, Subhashis Banerjee, *Deep CNN with Color Lines model for unmarked road segmentation*, IEEE International Conference on Image Processing (ICIP 2017), Beijing, September 2017.
21. Suvam Patra, Himanshu Aggarwal, Himani Arora, Chetan Arora, Subhashis Banerjee. *Computing Egomotion with Local Loop Closures for Egocentric Videos*. IEEE Winter Conference on Applications of Computer Vision (WACV), March 2017.
22. Brojeshwar Bhowmick, Suvam Patra, Avishek Chatterjee, Venu Madhav Govindu, Subhashis Banerjee. *Divide and Conquer: Efficient large-scale structure from motion using graph partitioning*. ACCV. November 2014, Singapore.
23. Chetan Arora, Subhashis Banerjee, Prem Kumar Kalra, S. N. Maheshwari. *Fast Approximate Inference in Higher Order MRF-MAP Labeling Problems*. CVPR 2014: 1338-1345.

24. Tanveer A. Faruquie, Subhashis Banerjee, Prem Kumar Kalra. *Unsupervised Discovery of Activities and Their Temporal Behaviour*. AVSS 2012: 100-105.
25. Ayesha Choudhary, Tanveer A. Faruquie, Subhashis Banerjee, Santanu Chaudhury. *Discovering Activities and Their Temporal Significance*. AVSS 2012: 240-245.
26. Chetan Arora, Subhashis Banerjee, Prem Kalra, S. N. Maheshwari. *Generic Cuts: An Efficient Algorithm for Optimal Inference in Higher Order MRF-MAP*. ECCV (5) 2012: 17-30.
27. Dakshita Khurana, Surabhi Sankhla, Abhinav Shukla, Richa Varshney, Prem Kalra, Subhashis Banerjee. *A grammar-based GUI for single view reconstruction*. ICVGIP 2012: 14.
28. Suvam Patra, Brojeshwar Bhowmick, Subhashis Banerjee, Prem Kalra: *High Resolution Point Cloud Generation from Kinect and HD Cameras using Graph Cut*. VISAPP (2) 2012: 311-316.
29. Abhishek Gupta, Jatin Kumar, Daniel J. Mathew, Sorav Bansal, Subhashis Banerjee, Huzur Saran. *Design and Implementation of the Workflow of an Academic Cloud*. DNIS 2011: 16-25.
30. Tanveer A. Faruquie, Subhashis Banerjee, Prem K. Kalra. *Unsupervised discovery of activity correlations using latent topic models*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2010). December, 2010.
31. Ayesha Choudhary, Santanu Chaudhury, Subhashis Banerjee. *Distributed framework for composite event recognition in a calibrated pan-tilt camera network*. ICVGIP 2010: 140-147.
32. Chetan Arora, Subhashis Banerjee, Prem Kalra and S. N. Maheshwari. *An Efficient Graph Cut Algorithm for Computer Vision Problems*. European Conference on Computer Vision (ECCV 2010). pp. 552–565, September, 2010.
33. Tanveer Faruquie, Prem Kalra and Subhashis Banerjee. *Time based Activity Inference using Latent Dirichlet Allocation*. British Machine Vision Conference (BMVC). September, 2009.
34. Ayesha Choudhary, Santanu Chaudhury, Subhashis Banerjee. *A Framework for Analysis of Surveillance Videos*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2008). December, 2008.
35. Ayesha Choudhary, Manish Pal, Subhashis Banerjee, Santanu Chaudhury. *Unusual Activity Analysis using Video Epitomes and pLSA*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2008). December, 2008.
36. Uma Mudenagudi, Subhashis Banerjee, Prem Kalra. *On improving space-time super resolution using a small set of video inputs*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2008). December, 2008.
37. Uma Mudenagudi, Ankit Gupta, Lakshya Goel, Avanish Kushal, Prem Kalra, and Subhashis Banerjee. *Super Resolution of images of 3D scenes*. ACCV 2007, Tokyo, Japan, Nov. 18-22, 2007. November, 2007.

38. Ayesha Choudhary, Santanu Chaudhury, Subhashis Banerjee. *Unusual Activity Analysis in Video Sequences*. RSFDGrC 2007, LNCS 4482. pp. 443-450, August, 2007.
39. Subhajit Sanyal, Prem Kalra and Subhashis Banerjee. *Designing Quality Walkthroughs*. Computer Animation and Social Agents, (CASA 2007), Hasselt University, Belgium, June 2007.
40. Parag Chaudhuri, Prem Kalra and Subhashis Banerjee. *Reusing View-Dependent Animation*. Computer Graphics International (CGI 2007), Petropolis, Brazil, May 2007.
41. Uma Mudenagudi, Ram Singla, Prem Kalra and Subhashis Banerjee. *Super-resolution using Graph Cut*. ACCV 2006, LNCS 3852. pp. 385-394, January, 2006.
42. Ankit Mathur, Mayank Agarwal, Soumyadeb Mitra, Anup Gangwar, M. Balakrishnan, and Subhashis Banerjee. *SMPS: An FPGA-based Prototyping Environment for Multiprocessor Embedded Systems*. IEEE/ACM International Symposium on Field-Programmable Gate Arrays (FPGA 2005), Monterey, California. February, 2005.
43. Parag Chaudhuri, Ashwani Jindal, Prem Kalra and Subhashis Banerjee. *Stylistic Reuse of View-Dependent Animations*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2004). December, 2004.
44. Subhajit Sanyal, Mayank Bansal, Prem Kalra and Subhashis Banerjee. *On Learning Shapes from Shades*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2004). December, 2004.
45. Dhruv Mahajan, Nipun Kwatra, Sumit Jain, Prem Kalra and Subhashis Banerjee. *A Framework for Activity Recognition and Detection of Unusual Activities*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP 2004). December, 2004.
46. N. Gupta, P. Mittal, K. S. Patwardhan, S. Dutta Roy, S. Chaudhury, and S. Banerjee. *On-line Predictive Appearance-based Tracking*. IEEE International Conference on Image Processing (ICIP), Singapore. October, 2004.
47. Subhajit Sanyal, Mayank Bansal, Subhashis Banerjee, and Prem K Kalra. *Modeling of Free-Form Surfaces and Shape from Shading*. 2nd International Symposium on 3D Data Processing, Visualization, and Transmission 3DPVT'04, Thessaloniki, Greece. September, 2004.
48. Akash M Kushal, Gaurav Chanda, Kanishka Shrivastava, Mohit Gupta, Subhajit Sanyal, T.V.N. Sri Ram, Prem Kalra and Subhashis Banerjee. *Multilevel modelling and rendering of architectural scenes*. Eurographics, Granada (Spain). September, 2003.
49. Namita Gupta, Pooja Mittal, Sumantra Dutta Roy, Santanu Chaudhury, Subhashis Banerjee. *CONDENSATION-based Predictive EigenTracking*. Indian Conference on Computer Vision, Graphics and Image Processing (ICVGIP2002). December, 2002.
50. Puneet Sharma, Angshuman Parashar, Subhashis Banerjee and Prem Kalra. *An Uncalibrated Lightfield Acquisition System*. Indian Conference on Vision, Graphics and Image Processing (ICVGIP2002). December, 2002.

51. Akash M Kushal, Vikas Bansal and Subhashis Banerjee. *A simple method for interactive 3D reconstruction and camera calibration from a single view*. Indian Conference on Vision, Graphics and Image Processing (ICVGIP2002). December, 2002.
52. Gaurav Agarwal, Dinesh Rathi, Prem Kalra and Subhashis Banerjee. *A System for Image Based Rendering of Walk-Throughs*. Computer Graphics International (CGI2002), Bradford, UK. July, 2002.
53. N. Gupta, P. Mittal, S. Dutta Roy, S. Chaudhury, S. Banerjee. *A Predictive Scheme for Appearance-based Hand Tracking*. Proc. National Conference on Communications (NCC). pp. 513 - 522, January, 2002.
54. Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Recognizing Large 3-D Objects through Next View Planning using an Uncalibrated Camera*. IEEE International Conference on Computer Vision (ICCV), Vancouver, BC, Canada. pp. II: 276-281, July, 2001.
55. Shoma Chatterjee, Subhashis Banerjee and K. K. Biswas. *View Morphing based Facial Video Compression*. Proc. Indian Conference on Computer Vision, Graphics and Image-Processing (ICVGIP'2000), Bangalore, India. December, 2000.
56. Sumantra Dutta Roy, Santanu Chaudhury and Subhashis Banerjee. *Part-based Isolated 3-D Object Recognition through Next View Planning using Inner Camera Invariants*. Proc. Indian Conference on Computer Vision, Graphics and ImageProcessing (ICVGIP'2000), Bangalore, India. December, 2000.
57. Shoma Chatterjee, Subhashis Banerjee and K. K. Biswas.. *Reconstruction of Local Features for Facial Video Compression*. IEEE ICIP'2000, Vancouver, BC, Canada. pp. TA07.02, September, 2000.
58. Michael Werman, Subhashis Banerjee, Sumantra Dutta Roy and Maolin Qiu. *Robot Localization using Uncalibrated Camera Invariants*. IEEE Conf. Computer Vision and Pattern Recognition (CVPR'99), Fort Collins, Colorado. pp. II:353-359, June, 1999.