# Dr. Badrinath Gurappa Srinivas

**Chief Engineer,**
Advanced Technology Group,
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## Academic Qualifications

**Ph.D., Computer Science and Engineering**
Indian Institute of Technology Kanpur, India
Year: Jul, 2006 - June, 2012

**M. E., Information Technology**
Bangalore University, India
Year : Dec, 2003 - Dec, 2005
Marks : 77%

**B. E., Computer Science and Engineering**
Visveswariah Technological University, Karnataka, India
Year : July, 1999 - July, 2003
Marks : 69%

## Research

**Areas of Interest**: Biometrics, Graphical authentication, Pattern recognition, Computer Vision, Image Processing, Wireless Networks and Pervasive Computing.

I am working towards developing graphical authentication techniques and techniques for efficient biometric recognition systems. Furthermore, I am also working on retrieval and recognition of interested data from large databases.

- Graphical authentication techniques robust to shoulder surfing.
- Techniques for indexing Multi-modal and Multi-dimensional features vectors for fast retrieval and recognition.
- Feature extraction techniques to improve the Accuracy and Speed of the system.
- Feature extraction techniques to handle robustness in the context of Scale, Rotation and Occlusion.

**Academic Supervisors:**

Prof. Phalguni Gupta
Dept. of Computer Science and Engineering,
Indian Institute of Technology Kanpur, India

Prof. Sajal K. Das
Dept. of Computer Science and Engineering,
University of Texas at Arlington, USA

## Experience

- **Manager**: [Oct 01, 2013 - Till Date], Advanced Technology Group, Samsung Research Institute Noida, India
- **Chief Engineer**: [Nov, 2011 - Till Date], Advanced Technology Group, Samsung Electronics India, Noida, India
- **Research Assistant**: [June, 2010 - Oct, 2011], Multimodal Biometrics System, Indian Institute of Technology Kanpur, India

- **Teaching Assistant**: [Jan, 2010 June, 2010], Digital Watermarking and Stenography, Indian Institute of Technology Kanpur, India
- **Teaching Assistant**: [June, 2007 - Oct, 2011], Multimodal Biometrics, Indian Institute of Technology Kanpur, India
- **Teaching Assistant**: [Dec, 2003 - Dec, 2004], Data structures and Algorithms, University Visveswaraya College of Engineering, Bangalore University, Bangalore
- **Guest Faculty**: [July, 2004 - Dec, 2005], Wireless Networks, Alpha College of Engineering, Bangalore

## Recognition / Awards

- ***Second Prize***: Doctoral Colloquium, Institute for Development and Research in Banking Technology, Hyderabad, September - 2011.
- Biography selected for ***2000 Outstanding Intellectuals of 21st Century***, International Biographical Center, Cambridge, England. 2012.
- Biography selected for ***Who's Who in the Asia***, Marquis Who's Who, USA. 2012.
- Biography listed in ***Who's Who in the World***, Marquis Who's Who, USA. 2011 and 2012.
- ***Invited Paper***: Some Efficient Feature Extraction Techniques for Palmprint, International Conference on Information Processing, Bangalore, India, August - 2011.
- ***Cash Award***: For publishing papers in the journals listed by the ISI Web of Science, Indian Institute of Technology Kanpur, India, March - 2011.
- ***Invited Speaker***: Fourth International Workshop on Biometrics and its Applications in Forensic Science (IWBFS11), Kanpur University, India, Jan - 2011.
- ***Microsoft Scholarship***: Winter School on Machine Learning and Computer Vision, Indian Institute of Science Bangalore, India, Jan-2010.
- ***Travel Grant***: International Conference on Contemporary Computing, Noida, India, 2009.
- ***First Prize***: Best Open Source Technology System Award (*Biometrics Team, IIT Kanpur*): "19th SKOCH Summit 2009, India: Challenges & Policy Responses", 22-23 January 2009, Delhi, India [India?s Largest Best Practices Leadership summit]
- ***Best Paper Award (Nominated)***: Palmprint verification using SIFT features, International workshop on Image Processing Theory, Tools and Applications, Tunisia, 2008.
- ***Best Paper Award***: Lifetime Maximization of Heterogeneous Wireless AdHoc Networks, International Conference on Intelligent Sensing and Information Processing, India, 2006.

## Workshops/Summer/Winter Schools attended

- Workshop on Application of Computer Vision for Mixed and Augmented Reality, July 30, 2010, Asian Conference on Computer Vision, New Zealand.
- Workshop on Graph and Geometric Algorithms, 25 - 27th April, 2010, National Institute of Technology Rourkela, India.
- The Winter School on Machine Learning and Computer Vision, 9 - 17th January, 2010, Indian Institute of Science Bangalore, India.
- Tutorials on Biometrics: Ethics, Privacy and Security, 2 - 5th June, 2009, 3rd IAPR International Conference on Biometrics, Alghero, Italy.
- International Summer School on Document Image Processing, 2 - 12th June, 2009, Indian Institute of Science Bangalore, India.
- Third International Workshop on Recent Advances in Biometrics Systems, December, 2006, Indian Institute of Technology Kanpur, India.

## Professional Activities

### Reviewer for Journals:

- IEEE Transaction on Systems, Man and Cybernetics Society, Part-C - IEEE
- IEEE Communications Letters - IEEE
- Neurocomputing - Elsevier Science
- Journal of Network and Computer Applications - Elsevier Science
- Journal of the Network and Systems Management - Springer
- Journal of Telecommunication Systems - Springer
- Journal of Frontiers of Computer Science - Springer
- Journal of Signal and Information Processing (JSIP)- Scientific Research Publishing

### Programme Committee Member:

- International Conference on Signal Processing and Integrate Networks (SPIN), Feb 2014, India.
- International Conference on Advanced Computing, Networking and Informatics, June 2013, India. *Advisory Committee*
- IEEE International Conference on Parallel, Distributed and Grid Computing (PDGC), December 2012, Solan, India.
- Biometric Technologies and Systems (BTS), December, 2010, Bali, Indonesia.
- Real Time Biometric Solutions for Networked Society (RT-Bios), July, 2010, Charles University, Prague, Czech Republic.

## Publications

### Patents:

1. Sendilramkumar Devar, Neminath Hubballi and **Badrinath G. Srinvas**: "Authentication based on non-deterministic multiple gesture-operations on multi-object-values", June 2013, (*Filing done*).
2. **Badrinath G. Srinvas** and Saurabh Tyagi: "Multi-characteristics wheel for choosing music les based on multiple characteristics at user desired levels", June 2013, (*Filing done*).
3. **Badrinath G. Srinvas** and Saurabh Tyagi: "Graphical Authentication System Robust to Shoulder Surfing based on Private-Key Partner Location ", Mar 2013, (*Filing done*).
4. **Badrinath G. Srinivas**, Shashi Bhanwar, Debi P. Dogra, Shefali Singhal and Saurabh Tyagi: "Gesture using Multi-tier Multi-class Objects for Authentication", Oct 2012, (*Filing done*).

### Refereed Journals:

1. **G. S. Badrinath**, Phalguni Gupta, Hunny Mehrotra: Score Level Fusion of Voting Strategy of Geometric Hashing and SURF for an Efficient Palmprint based Identification, *Journal of Real-Time Image Processing*, (*Springer*), (In Press), 2011.
2. Kamlesh Tiwari, **Badrinath G. S.**, Devendra Arya and Phalguni Gupta: Palmprint based Recognition System using Local Structure Tensor and Force Field Transformation, *Neurocomputing*, (*Elsevier*), (In Press), 2011.
3. **Badrinath G. S.** and Phalguni Gupta: Palm-print based Recognition System using Phase-Difference Information, *Future Generation Computer Systems*, (*Elsevier*), Vol. 28, Issue 1, Pages 287?305, January 2012.

4. **Badrinath G. S.** and Phalguni Gupta: Stockwell Transform based Palm-print Recognition, *International Journal of Applied Soft Computing*, (*Elsevier*), Vol. 11, Issue 7, Pages 4267?4281, October 2011.
5. **Badrinath G. S.**, Naresh K. Kachi and Phalguni Gupta: Palmprint based verification System Robust to Occlusion using Low-order Zernike Moments of Sub-images, "Special Issue of Biometrics Systems and Applications" of "International Journal of Telecommunication Systems", (Springer), Vol. 47, No. 3 - 4, pages. 275-290, (2011).
6. Shivaprakash T., **Badrinath G. S.** , Chandrakanth N., Venugopal K. R., and Patnaik L. M.: Energy Efficient Routing in Static Wireless AdHoc Networks, *International Journal on Information Processing*, vol.1., no. 2, pp. 26-39, April 2007.
7. **Badrinath G. S.**, Kamlesh Tiwari, and Phalguni Gupta: An Efficient Palmprint based Recognition System using 1D-DCT Features, *Expert Systems with Applications*, (*Elsevier*), 2012. [*Corresponded*]

## Refereed Conferences:

1. **Badrinath G. S.**, Aditya Nigam and Phalguni Gupta: An Efficient Finger-knuckle-print based Recognition System Fusing SIFT and SURF Matching Scores, *13th International Conference on Information and Communications Security* (*ICICS*), pp. 374 - 387 , China, November, 2011.
2. **Badrinath G. S.** and Phalguni Gupta: Some Efficient Feature Extraction Techniques for Palmprint, *International Conference on Information Processing* (*ICIP*), Aug - 2011 (Invited)
3. Raghav Agrawal, **Badrinath G. S.** and Phalguni Gupta: Image Enhancement Algorithm for Ink-on-paper Fingerprints, *International Conference on Intelligent Computing* (*ICIC*), pp. 311-318, China, Aug - 2011.
4. **Badrinath G. S.** and Phalguni Gupta: A Novel Representation of Palm-print for Recognition, *Asian Conference on Computer Vision* (*ACCV*), Vol. II, pp. 321-333, New Zealand, Nov 2010.
5. Hunny Mehrotra, **Badrinath G. S.**, Banshidhar Majhi and Phalguni Gupta: Bit Plane Slicing Technique for IRIS based Biometric System, *International Conference on Parallel, Distributed and Grid Computing* (*PDGC*), pp. 350 ? 355, India, October 2010.
6. **Badrinath G. S.** and Phalguni Gupta: Palmprint based verification System Robust to Rotation, Scale and Occlusion, *International Conference on Computer and Information Technology* (*ICCIT*), pp. 408 - 413, Bangladesh, December 2009.
7. Hunny Mehrotra, **Badrinath G. S.**, Banshidhar Majhi and Phalguni Gupta: A Efficient Iris Recognition using Local Feature Descriptor, *International Conference on Image Processing* (*ICIP*), pp. 1957-1960, Egypt, November 2009.
8. **Badrinath G. S.**, Naresh K. Kachi and Phalguni Gupta: Palmprint based verification System Robust to Occlusion using Low-order Zernike Moments of Sub-images, *British Machine Vision Conference* (*BMVC*), UK, September 2009.
9. **Badrinath G. S.** and Phalguni Gupta: Palmprint based Verification System Using SURF Features, *International Conference on Contemporary Computing* (*IC3*), pp. 250-262, India, August 2009.
10. Hunny Mehrotra, **Badrinath G. S.**, Banshidhar Majhi and Phalguni Gupta: Indexing Iris Biometric Database using Energy Histogram of DCT Subbands, *International Conference on Contemporary Computing* (*IC3*), pp. 194-204, India, August 2009.
11. **Badrinath G. S.** and Phalguni Gupta: Robust Biometric System using Palmprint for personal Verification. *International Conference on Biometrics* (*ICB*), pp. 554-565, Sassari, Italy, June 2009.
12. Hunny Mehrotra, **Badrinath G. S.**, Banshidhar Majhi and Phalguni Gupta: An Efficient Dual Stage Approach for IRIS Feature Extraction using Interest Point Pairing, *IEEE Workshop on Computational Intelligence in Biometrics* (*CIB*), pp. 59 - 62 , USA, April, 2009.

13. **Badrinath G. S.** and Phalguni Gupta: Feature Level-Fused Ear Biometric System, *International Conference on Advances in Pattern Recognition* (*ICAPR*), pp. 197-200, India, February, 2009.
14. **Badrinath G. S.** and Phalguni Gupta: Palmprint verification using SIFT features, *International workshop on Image Processing Theory, Tools and Applications* (*IPTA*), pp. 1-8, Tunisia, November, 2008.
15. **Badrinath G. S.** and Phalguni Gupta: Efficient Multi-algorithmic Fusion System based on Palmprint for Personnel Identification, *International Conference on Advanced Computing* (*ADCOM*), pp. 759 ? 764, India, December, 2007
16. **Badrinath G. S.**, Phalguni Gupta and Sajal K Das: Maximum Lifetime Tree Construction for Wireless Sensor Networks. *International Conference on Distributed Computing and Internet Technology* (*ICDCIT*), Bangalore, India, December, 2007.
17. Shivaprakash T., **Badrinath G. S.** , Chandrakanth N., Venugopal K. R. and Patnaik L. M.: Energy Efficient Broadcast Routing in Static Wireless AdHoc Networks, *Asian Applied Computing Conference*, Nepal, June, 2007.
18. Shivaprakash T., **Badrinath G. S.**, Venugopal K. R. and Patnaik L. M.: Global Incremental Power Model For Life Maximization in Ad-hoc Networks, *International Asian Mobile Computing Conference* (*AMOC*), Kolkata, India, 2007.
19. Shivaprakash T., **Badrinath G. S.**, Venugopal K. R. and Patnaik L. M.: Lifetime Maximization of Heterogeneous Wireless AdHoc Networks, *International Conference on Intelligent Sensing and Information Processing* (*ICISIP*), Bangalore, India 2006.
20. Shivaprakash T., **Badrinath G. S.**, Venugopal K. R. and Patnaik L. M.: Energy Aware Topology Management in Adhoc Wireless Networks, *International Conference on Systems and Networks Communication*, French Polynesia, November, 2006.
21. Shivaprakash T., **Badrinath G. S.**, Venugopal K. R. and Patnaik L. M.: Energy Aware Topology Control in Adhoc Wireless Networks, *International Conference on Distributed Computing and Networking* (*ICDCN*), India, December 2006.