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## **Dr. (Mrs.) Seema Bawa**

**Dean (Student Affairs)**

**Professor, Computer Science & Engineering**

**Thapar University, Patiala, Punjab – 147 004**

**Date of Birth:** 25.02.1970, **Nationality:** Indian  
**Marital Status:** Married  
Husband: Dr. Rajesh Kumar Bawa,  
Associate Professor & Head, Dept. of Comp Sc. & Apln  
Punjabi University, Patiala  
Son: UG Student at IIT Delhi, Comp. Sc & Engg, since July 2012

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### **Academic Qualification:**

- Ph.D. (Computer Science & Engineering), **TIET, Patiala**, 2004, Thesis topic: *Parallel & Distributed Algorithms for Test Generation*
- M.Tech. (Computer Science & Data Processing), **I.I.T. Kharagpur**, 1992, 9.32 CGPA, Recipient of institute scholarship
- M.Sc. (Statistics) , **I.I.T. Kanpur**, 1989, 8.0 CPI, Recipient of Merit scholarship

### **Employment record**

<b>Institution/ organization</b>	<b>Designation</b>	<b>Period</b>
Thapar Institute of Engineering & Technology, Patiala, Punjab	Professor	11, Oct, 2004 onwards
Thapar Institute of Engineering & Technology, Patiala, Punjab	Assistant Professor	04, May, 1999 - 10, Oct, 2004
Inde Dutch Systems (India) Ltd., Chandigarh	Sr. Software Engineer	August 98 - April, 99

SLIET, Longowal	System Analyst	June 1997 – July 1998
Inde Dutch Systems (India) Ltd., Chandigarh	Software Engineer	04, Jan, 1993 – May 1997

**Administrative Responsibilities undertaken:**

- **Dean, Student Affairs**, Sep 01, 2010 onwards.
- **Head, Department of Computer Science & Engineering**, Jan 13, 2006 – June 18, 2009.
- **Head, Department of Computer Science & Engineering**, Aug 02, 2001 – Aug 01, 2004.
- **Head, Centre for Information Super Highway**, since August 11, 2004 – Aug 2011. .
- **Network Manager**, Thapar University, July 1999 – Aug 2004.
- **President, Pratigya Society**, Thapar University, Patiala, Since Aug 2007 to Aug 2010.

**Additional responsibilities currently Undertaken:**

- **Dean (Student Affairs)**, Thapar University, Patiala, Since Sep 01, 2010
- **Member**, Vision 2030 committee constituted by the Director.
- **Chairperson**, Security cum Contractual Staff Selection Committee, since Apr 2011.
- **Member**, Stall Allocation Committee (SAC), since June 2011.
- *Convener, Seating Arrangements and Discipline Committee*, Convocation'2011, Thapar University, Patiala, to be held on Nov 08, 2011.

**Additional Administrative Works Performed:**

- *President, Pratigya Society*, Thapar University, Patiala, Aug 2007 - Aug 2010.
- *Chairperson, Enquiry Committee for prevention of Sexual Harassment*, Thapar University, Patiala, Feb 2004 – Sep 2010.
- *Convener, Dias Management Committee, Convocation'07*, Thapar University, Patiala, October 2007.
- *Chair, Reception and Registration Committee*, Punjab Science Congress, During Jan 2008, held at Thapar University, Patiala.
- *Convener, Auditorium and Dias Management Committee*, Convocation'08, Thapar University, Patiala, September 2008.
- *Chairperson & Superintendent, Evening Session*, End Semester Examination, Semester-1, 2008-2009.
- *Convener, COS and Dias Management Committee*, Convocation'09, Thapar University, Patiala, November 2009.
- *Convener, Seating Arrangements and Discipline Committee*, Convocation'2010, Thapar University, Patiala, 12 November 2010.

## **Other related experience: Research Experience**

**Two years** of experience of working in various **R&D projects**:

*1. **Numerical Weather Prediction** project, funded by DST, GOI, as Research Associate, at Department of Physics, I.I.T. Kanpur, since August 1989 – July 1990.*

The work included designing and implementing prediction tools for various weather parameters, and forecasting the same based on last ten years data available

*2. **Computer Recognition of Hand printed Devnagri Text** project, funded by DOE, GOI, as Project Associate, at Department of Computer Science & Engineering, I.I.T. Kanpur, since February 1992 – May 1992.*

The work included designing techniques for devnagri text recognition. The technique used included Freeman's encoding and elastic matching techniques for dictionary based character matching.

*3. **Stochastic Approach to Seismic Floor Spectra in Nuclear Power Plants** project, funded by DAE, GOI, as Senior Project Associate, at Department of Civil Engineering, I.I.T. Kanpur, since August 1992 – November 1992.*

The work include d simulation of joint distribution functions of peaks in stationary random functions through random data generation.

## **Professional Experience**

During my **five years professional experience** of working in a **Software Industry** as Software Engineer/ Sr. Software Engineer, I was **Project Leader of Application Software Group** for more than two years. Major projects handled during this period include:

**a. SEASAFE project for Swedish client.** I was a one out of eight core member working in the project, since January 1993 – late 1996. SEASAFE is a scientific system designed for designing ships, their interactive loading and checking balancing conditions with varying parameters. Developed earlier in FORTRAN, and further got enhanced with GUI support and other technical features in Microsoft Visual C++. It included GUI support for designing the hull, finding various cross sectional area, compartments and other interiors of the ship. Interactive modules for computation of buoyancy and gravitational forces as the ship gets loaded taking care of various internal and external forces due to ship's own structure, loading pattern, sea winds and waves. **The module developed by me was approved by Lloyd's register of shipping, a company that sets standards for shipping industry.**

**b.** Automation of Pfizer India Ltd., a pharmaceutical company. From 1994 – 1996. I was a team member.

- c. Automation of Building & Roads Construction Process, including the CSR/ ACSR documents, for Punjab State Council for Science & technology (PSCST), Chandigarh. From 1995 – 1997. I was the **Project Leader** for this project
- d. Development GUI based tool for Forecasting of Avalanche, for **Snow and Avalanche Study Establishment**, DRDO, Mohali. From 1998-1999. I was a team member.

**Consultancy and Sponsored Research Activities:**

<b>Sr. No.</b>	<b>Year</b>	<b>Organization</b>	<b>Project Title</b>	<b>Amount Sanctioned</b>	<b>Role</b>
<b>1.</b>	<b>2012 - 2016</b>	<b>Tata Consultancy Services</b>	<b>Collaborative Mobility Aware Reliable Data Dissemination in Vehicular Ad Hoc Networks</b>	<b>Approx. 14 Lacs</b>	<b>PI as one of the two research supervisors</b>
<b>2.</b>	June 2008- June 2009	AICTE	Technological Up gradation of High End Computing Lab	8 Lacs	<b>Principle Investigator</b>
3.	Apr 2005 onwards (for five years)	Ministry of Communication & Information Technology, (MoCIT), GOI, New Delhi	Special Manpower Development Project for VLSI and related software (SMDP-VLSI) Phase - II	h/w, s/w and other infrastructure for supporting the VLSI Design & CAD Lab and staff and recurring expenditures	<b>Co - Coordinator</b>

4.	July 2004 onwards	TU, Patiala	Establishing Centre of Excellence in Grid Computing	13 Lacs	I was Coordinator, Dr. Maninder Singh was Co-coordinator
5.	1997-2002	Ministry of Communication & Information Technology ( <b>MoCIT</b> ), GOI, New Delhi	IMPACT (Phase – II) Sustainability Support Scheme (SSS)	Rs. 24 Lacs over a period of 5 years, 16 Lacs were to be generated during the SSS project, to make it worth 40 Lacs.	<b>Coordinator since Aug 2002 – Dec 2003</b>
6.	Jan 1999 – March 2005, initially for five years, further extended further for next two years	Ministry of Communication & Information Technology, ( <b>MoCIT</b> ), GOI, New Delhi	Special Manpower Development Project for VLSI and related software (SMDP-VLSI) Phase- I, since 1998 (upto Dec. 2003)	Rs. 22 Lacs and h/w, s/w and other infrastructure for setting up VLSI Design & CAD Lab (worth approx 76 Lacs)	<b>Coordinator, August 1999 onwards till the completion of the project</b>
7.	November 98 – April 99.	<b>CIT, Milton Keynes, UK</b>	Software consultancy provided to offshore client of Inde Dutch Systems India Ltd, on ‘ <b>Dental Surgeon’s Clinical Workstation</b> ’ Project	N.A.	<b>Project Leader</b>

#### **Research Interests:**

Parallel & Distributed Algorithms, VLSI Test Generation, Software Engineering, Grid Computing, Cloud Computing

**Publications in Journals/ Conference (Detailed list-name of paper, journals/conference, year of publication)**

1. **Seema Bawa**, G.K.Sharma, *A Parallel Transitive Closure Computation Algorithm for VLSI Test Generation*, LNCS 2367, Springer Verlag, Berlin-Heidelberg, June 2002, pp 243-252.
2. **Seema Bawa**, G.K.Sharma, *An Efficient Quadratic 0-1 Programming Algorithm for VLSI Test Generation*, Proceedings of IEEE Design and Diagnostics of Electronic Circuits & Systems (DDECS) Workshop, Brno. Czech Republic, April 2002, pp 262-269.
3. **Seema Bawa**, Ambrish Misra and G.K.Sharma, *A Practical Transitive Closure Based Approach for Distributed Test Generation*, 7th IEEE International Conference on Information Visualisation - IV03, 16-18 July 2003, London, UK.
4. G. K. Sharma, **Seema Bawa**, *Distributed Test Generation*, All India Seminar on Recent Trends in VLSI, IIT Roorkee, Roorkee, September 2001.
5. S.C. Saxena, **Seema Bawa**, Deepak Garg, India as leading ITES BPO hub; in International Conference Emerging Trends in IT; IIIT Allahabad, September 19-21, 2003.
6. Maninder Singh, **Seema Bawa**, Applying Military Doctrine to Network Security, Proceedings International Conference on e-Security, Cyber Crime & Law. MGSIPAP, Chandigarh, February 19-20, 2004.
7. **Seema Bawa**, G. K. Sharma, Parallel Simulated Annealing Based Test Generation in Distributed Computing Paradigms, PARA'04 State-of-the-Art in Scientific Computing, DTU, Lyngby, Denmark, June 20-23, 2004.
8. Sunidhi Bhalla, **Seema Bawa**, Parallel Transitive Closure Algorithm in a Distributed Computing Environment, Proceedings of TCTE, October 2004.
9. Meet Kamal kaur, **Seema Bawa**, A Parallel Approach for VLSI Test Generation Based on Boolean Satisfiability, Asia Pacific Conference ObComAPC, Parallel & Distributed Computing Technologies, December, 13-15, 2004.
10. Bhawna Saxena, **Seema Bawa**, Grid Portals : Usage, Availability and Development Issues, International Conference on Emerging Technologies, ICET 2004, Dec 2004.
11. **Seema Bawa**, Anil Kumar, Bio-Data Grid: A Data Grid for BioInformatics, Asia Pacific Conference ObComAPC, Parallel & Distributed Computing Technologies, December, 13-15, 2004, pp 67-79.
12. **Seema Bawa**, G.K.Sharma, Search Space Pruning for Faster Test Generation based on Parallel and Adaptive GA, 9th IEEE VLSI Design & Test Symposium: VDAT 2005, August 11-13, 2005, Bangalore, pp 444- 448.
13. Sarbjeet Singh, **Seema Bawa**, Security Policies: Key Factor for Success of Grid Services", International Conference on Challenges and Opportunities in IT Industry, ICCII-2005, held on Nov 12-13, 2005 at Punjab College of Technical Education, Ludhiana.
14. Bhawna Bansal, **Seema Bawa**, Creation of a Grid Environment and Grid Portals, IEEE Tencon 2005, Melbourne, Australia, November 21-24, 2005, pp 1925-1929.

15. **Seema Bawa**, Developments in Path Delay Fault Models for Testing VLSI Circuits, Indian Microelectronics Society: IMS Conference 2006, Kurukshetra University, Kurukshetra, February 16- 18, 2006.
16. Sarvjot Kaur, **Seema Bawa**, Mrs Shalini Batra, "Resource Discovery in Grid Environment", National Conference on Computer Science and Information Technology, NCCSIT 2006, BBSBEC, Fatehgarh Sahib, Punjab, March 18-19, 2006.
17. Meena Gupta, Vikas Mangla, **Seema Bawa**, "Resource Scheduling in Grid Environment", National Conference on Computer Science and Information Technology, NCCSIT 2006, BBSBEC, Fatehgarh Sahib, Punjab, March 18-19, 2006.
18. Anju Sharma, **Seema Bawa**, "Performance Analysis of Various Resource Discovery Approaches in Grid Computing", in Proceedings of National Conference on Recent Trends in Engineering and Computational Techniques, REACT- 2006, BGIET Sangrur, April 5-6, 2006.
19. Jagdish Kumar, **Seema Bawa**, Maninder Singh, "Authentication in Grid Environment", in Proceedings of National Conference on Recent Trends in Engineering and Computational Techniques, REACT- 2006, BGIET Sangrur, April 5-6, 2006.
20. Sarvjot Kaur, **Seema Bawa** and Shalini Batra, Resource Discovery in Grid Environment, International Conference on Grid Computing and Applications - GCA'06, Las Vegas, Nevada, USA, June 26-29, 2006 (Accepted).
21. M. Singh, **S. Bawa** and S.C. Saxena, "A Proactive Network Surveillance Framework for Improving Network Security across Information Value Chain", International Review on Computers and Software (IRECOS), A Bimonthly Peer-reviewed Journal published by Praise Worthy Prize (PWP), ISSN 1828-6003, Vol 1, N. 1, July 2006, pp 43- 51.
22. Maninder Singh, **Seema Bawa** and S.C. Saxena, Managing IT Infrastructure using Honeynets: A Proactive Network Security Technology, Apeejay Journal of Management and Technology, A Bi- Annual Journal of Apeejay Institute of management, Jalandhar, Vol. 1, No. 2, July 2006, pp 37- 41.
23. Sarbjeet Singh, **Seema Bawa**, "Design of a Framework for Handling Security Issues in Grids", 9th International Conference on Information Technology (ICIT 2006), in technical cooperation with IEEE and IEEE Computer Society, Bhubneshwar, India, Dec 18 - 21, 2006. (Accepted).
24. Sarbjeet Singh, **Seema Bawa**, "A Framework for Handling Security Problems in Grid Environment using Web Services Security Specifications", The Second International Conference on Semantics, Knowledge and Grid – SKG 2006, Guilin, China, October 30 – Nov 03, 2006, Proceedings published by IEEE Computer Society, pp 68-72.  
<http://doi.ieeecomputersociety.org/10.1109/SKG.2006.3>
25. Inderveer Chana, **Seema Bawa**, "Grid Middleware Technologies and OGSA: A Comparative Study", International Review on Computers and Software (IRECOS), A Bimonthly Peer-reviewed Journal, Praise Worthy Prize (PWP) pub., ISSN 1828-6003, Vol 1, No. 3, November 2006, pp 202 - 208.

26. Th. Tangkeshwar, P.K.Bansal, renu Vig, **Seema Bawa**, "Off- Line Handwritten Character Recognition of MEETEI (Manipuri) Script", Manipur Information Technology Expo 2006, Exhibition cum Seminar \_ ICT Prospects, Strategies and Security aspects in N.E. Region, Imphal, Dec 7-9, 2006, Organized by Institution of Electronics & Telecommunication Engineers, pp 33 – 39.
27. Maninder Singh, **Seema Bawa**, S.C. Saxena, "Mandatory Security Arsenal for Survival on the Internet: Techniques and Remedial Actions", Academic Open Internet Journal, ISSN 1311-4360, Volume 19, December 2006.
28. Anju Sharma and **Seema Bawa**, "An Improved Resource Discovery Approach Using P2P Model for Condor: A Grid Middleware", Transactions on Engineering, Computing and Technology, Volume 17, World Enformatika Society, ISSN 1305-5313, December 2006. pp 55 – 59.
29. Gaurav Vohra, **Seema Bawa**, "Compile Time Task Scheduling in Alchemi: A Grid Middleware", IEEE Student Chapter Conference: ELECTICA-2007, pp 25-28, February 9-11, 2007 at Punjab Engineering College, Deemed University, Chandigarh, INDIA. *Awarded the Second Best Paper Prize*
30. Ruchi Garg, **Seema Bawa**, "Grid Resource Discovery using Web Services", IEEE Student Chapter Conference: TROIKA'07, Delhi College of Engineering, Delhi, February 21, 2007.
31. Gaurav Vohra, Anurag Gothi, **Seema Bawa**, "Grid Resource Scheduling: Challenges and Feasible Solutions" National Seminar on Recent Advances in Information Technology 2007, pp 23-31, Indian School of Mines University, Dhanbad, INDIA, ISBN-81-8424-178-X.
32. Ratnesh Kumar Nath, **Seema Bawa**, Inderveer Chana "Load Balancing in Grid Environment: Strategies, Algorithms and Policies", National Symposium on Security and Soft Computing (NSSC-2007) organized by National Institute of Technology, Surat.
33. Ratnesh Kumar Nath, **Seema Bawa**, Inderveer Chana "Load Balancing Issues in Grid Environment", National Seminar on Recent Advancement in Information Technology (RAIT-2007) organized by Indian School of Mines, Dhanbad . INDIA, ISBN-81-8424-178-X. ...
34. Anju Sharma and **Seema Bawa**, "QoS Integrated Resource Discovery in a Campus Grid: A Case Study", ICISTM 2007: International Conference on Information Systems, Technology and Management, New Delhi, India, March 12-13, 2007.
35. Inderveer Chana and **Seema Bawa**, "Semantic Service Discovery in a Grid Environment", ICISTM 2007: International Conference on Information Systems, Technology and Management, Organised jointly by IMT Ghaziabad and University of Florida, USA at New Delhi, India, March 12-13, 2007, pp 62-69. .
36. Ruchi Garg, **Seema Bawa**, "Web Services based Grid Resource Discovery", ISTE sponsored National Seminar on Business Transformation Through Technological Integration, PIMT Mandi Gobindgarh, March 30, 2007.
37. Anurag Gothi, **Seema Bawa**, "Features of Grid Resource Allocation Patterns", National Seminar on Business Transformation Through Technological Integration, ISTE Sponsored, PIMT Mandi Gobindgarh, March 30, 2007.



38. Sandeep Sachdeva, P.K. Bansal, **Seema Bawa**, "Highly Fault- Tolerant Irregular Interconnection Network for Multiprocessor Systems", Journal of the CSI, Vol. 37, No. 1, Jan - March 2007, pp 54- 60.
39. Bhupinder Singh and **Seema Bawa**, "ACO Based Optimized Scheduling Algorithm for Computational Grids", The Third IASTED International Conference on Advances in Computer Science and Technology, ACST 2007, April 2-4, 2007, Phuket, Thailand, Acta Press.
40. Anurag Gothi, **Seema Bawa**, "Grid Resource Allocation: Challenges and Processes", National Conference on Information Technology: Emerging Engineering Prospective and Practices-ITEEPP'07, Thapar University Patiala, April 06-07, 2007.
41. Santosh Jaiswal, Inderveer Chana, **Seema Bawa**, "Ontology based Resource Discovery in Grid", published in National Conference on Information Technology: Emerging Engineering Perspective and Practices, ITEEPP'07 2007, Thapar University, Patiala, April 6-7, 2007 .
42. Sarbjee Singh and **Seema Bawa**, A Privacy, Trust and Policy based Authorization Framework for Services in Distributed Environments, International Journal of Computer Science, Vol 2, No. 2, 2007, ISSN 1306- 4428, pp 85- 92.
43. **Seema Bawa**, "Analysis of Computational Grid Environments", 7<sup>th</sup> International Conference on Computational and Mathematical Methods in Science & Engineering: CMMSE 07, Illinois Institute of Technology, Chicago, **Illinois**, USA, June 20 -23, 2007.
44. **Seema Bawa**, Anju Sharma, A Deadlock Detection Algorithm for Grid Resource Management, 7<sup>th</sup> International Conference on Computational and Mathematical Methods in Science & Engineering: CMMSE 07, Illinois Institute of Technology, Chicago, Illinois, USA, June 20 -23, 2007.
45. Anurag Gothi, **Seema Bawa**, "Performance Optimization Oriented Resource Allocation in Grid Computing", International Conference on Emerging Trends In High Performance Architecture, Algorithms & Computing, HiPAAC 2007 Chennai, July 11-13, 2007.
46. Santosh Jaiswal, Inderveer Chana, **Seema Bawa**, "Hybrid Approach of Resource Discovery in Grid" accepted in International Conference on Emerging Trends in High Performance Computing Architecture Algorithms and Computing, HiPAAC 2007, SSN Collage of Engineering, and Chennai 11 July, 2007.
47. Inderveer Chana and **Seema Bawa**, "Fault Tolerance in Grid Middleware: Alchemi.Net, An Enhanced Approach", International Conference on Emerging Trends in the High Performance Architectures, Algorithms and Computing, held in SSN campus, Chennai, July 11-13, 2007, Co-sponsored by HCL, IBM, IEEE Madras section, ISBN: 978-81-904438-1-4, pp 63-68.
48. Gaurav Vohra, **Seema Bawa**, "A Compile Time Task Scheduling Algorithm in Grid Computing Environment" International Conference on High Performance Computing, Networking and Communication Systems (HPCNCS-07) July 9-11, 2007, Orlando, Florida, USA.
49. Sarbjee Singh and **Seema Bawa**, A Privacy Policy Framework for Grid and Web Services, Information Technology Journal, 6 (6): 809 - 817, 2007, ISSN 1812-5638, © 2007 Asian Network for Scientific Information.

50. Sandeep Sachdeva, P.K. Bansal, **Seema Bawa**, "Modified Augmented Shuffle Exchange Network (M\_ASEN)", Journal of the CSI, Vol. 37, No. 2, April- June 2007, pp 17- 27.
51. Anju Sharma, Seema Bawa, "Portal for the Computational Grid: TU Grid Portal", HiPAAC 2007: International Conference on Emerging Trends in High Performance Architecture Algorithms & Computing, SSN Campus, Chennai, India, July 12-13, 2007, pp 218.
52. Sarbjeet Singh, **Seema Bawa**, "Enabling Trust and Privacy Based Access for Grid Services", Journal of Computer Science (JCS) Volume 1, Issue 5: 357-365, July-August 2007.
53. Inderveer Chana and **Seema Bawa**, "Extending Autonomic Capabilities to a Campus Wide Grid", International Conference on Embedded Systems, Mobile Communication and Computing, August 3-5, 2007, PESIT, Bangalore, India.
54. Bhupinder Singh, **Seema Bawa**, "Meta- Heuristic Techniques for Grid Resource Management System", SIEMENS - SISL Journal, Vol. 1 – December 2007, pp 20- 25.
55. Anju Sharma, **Seema Bawa** "A Framework for Resource Discovery in Grid Environment", International Conference on Data Engineering and Management "ICDEM2008", Tiruchirappalli, India, pp. 195-198.
56. Inderveer Chana, **Seema Bawa**, "Incorporating Enhanced Resource Provisioning in a Grid Resource Management System", International Transactions on Systems Science and Applications, published by The Systemic and Informatics World Network (SIWN), sai: itssa.2008.01.026, Vol 3, No 4, Jan 2008 pp. 378-386.
57. Inderveer Chana, **Seema Bawa**, "Self-Managed Resource Model with Resource Provisioning Capability for a Grid Environment", Special Issue on Advances in Computing and Optimization Techniques, International Journal of Applied Mathematical Analysis and Applications, Published by Serials Publications, India, ISSN: 0973- 3868, Jan- Dec 2007, Vol 2, No. 1-2, pp 229 - 241.
58. Sandeep Kumar, P.K.Bansal and **Seema Bawa**, "Hybrid Architecture for Multistage Interconnection Networks in Multiprocessor Systems", Journal of the CSI, Vol. 37, No. 4, Oct- Dec 2007, pp 39- 50.
59. Sandeep Kumar, P.K.Bansal and **Seema Bawa**, "Modified Quad Tree Network (M\_Quad), Apeejay Journal of Management and Technology", A Bi- Annual Journal of Apeejay Institute of Management, Jalandhar, Vol. 3, No. 1, January 2008, pp 42- 52.
60. Inderveer Chana and **Seema Bawa**, "Agent based Resource Discovery for Grid Environment using Ontology", International Conference on Data Engineering and Management, February 9-10, 2008, Bishop Heber College, Trichirappalli, India, ISBN: 978-81-906267-0-5, pp 199-202.
61. Anju Sharma, **Seema Bawa**, "Optimized Resource Discovery Algorithm for Grid Computing", International Journal of Computational Science, ISSN 1992-6669 (Print) ISSN 1992-6677 (Online), @ Global Information Publisher (H.K.) Co., Ltd., 2008, Vol. 2, No. 1, pp 157 – 165.
62. Anju Sharma, **Seema Bawa**, "TUGrid Portal: A Secure and User-friendly Interface" International Transactions on Systems Science and Applications (ITSSA), ISSN 1751-1461(Print), ISSN 1751-147X (CD-ROM)© 2008, The

- Systemics and Informatics World Network, Volume 4, Number 2, May 2008, pp 188 - 193.
63. Anju Sharma, **Seema Bawa**, "Comparative Analysis of Resource Discovery Approaches in Grid Computing", Journal of Computers, Academy Publishers, Vol. 3, No. 5, May 2008, pp 60 –64.
  64. Inderveer Chana, **Seema Bawa**, "PRATHAM: A Framework for Resource Management in Grid Environment", International Journal of Advanced Computer Engineering, July-Dec 2008, ISSN: 0974-5785, Vol 1, Issue 2, pp 45- 55 .
  65. **Seema Bawa**, Kabir Oberoi, MultiAgent Based Resource Allocation in Grid Environment, National Conference on Research & Development in Hardware & Systems (CSI- RDHS 2008), June 20-21, 2008 at Science City, Kolkata, India.
  66. Shashi, **Seema Bawa**, "Securing A Grid", International Conference CGCS-2008: Cluster and Grid Computing Systems, Aug 30-September 1, 2008, Published by WASET (World Academy of Science, Engineering and Technology), Singapore, Vol 32, ISSN 2070-3740, pp 7-12.
  67. Shashi, **Seema Bawa**, "Managing Trust and Interoperability in Grid", International Conference GHC-2008 (Grace Hooper Celebration of Women in Computing), in Colorado, USA on October 1-4, 2008.
  68. Gurpreet Kaur, **Seema Bawa**, "Makespan Optimization Algorithm for Grid Environment, 12<sup>th</sup> IEEE International Workshop on Future Trends of Distributed Computing Systems (FTDCS 2008), Kunming, China, October 21-23, 2008.
  69. Bhupinder Singh, **Seema Bawa**, "Grid Resource Discovery using Natural Mobile Agents", IJCNS, International Journal of Computer Science & Network Security, Vol. 8, No. 11, November 2008, pp 411 - 415.
  70. Shashi, **Seema Bawa**, "Trust Management Systems in Grid Environments", 5th International Conference on Computer Networks and Security (ICCNS'08) by WASET (World Academy of Science, Engineering and Technology), at Bangkok, Thailand December 17-19, 2008.
  71. Shalini Batra, **Seema Bawa**, "Using LSI and its Variants in Text Classification", International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 08), December 5 - 13, 2008, Sponsored by the University of Bridgeport, Technically co-sponsored by the IEEE Computer Society, Communications Society and Education Society. (To be Published by Springer).
  72. Shashi, **Seema Bawa**, "Evaluating Trust in a Grid Environment", Accepted for presentation at Student Research Symposium at HiPC (International Conference on High Performance Computing) 2008 at Bangalore, India on December 17-20, 2008.
  73. Sandeep Kumar, P.K.Bansal and **Seema Bawa**, "Modified Quad Tree Network with Architectural Analysis (M\_Quad)", International Journal of Computer Systems Science & Engineering, CRL publishing, Vol. 24, No. 2, March 2009, pp 59- 70.
  74. Th.Tangkeshwar, P.k.Bansal, Renu Vig and **Seema Bawa**, "Off-Line Handwritten Digit Recognition of Manipuri Script Using Back propagation Neural Network", International Journal of Computer Science & Engineering Systems, IJCSES (Accepted, to be published in Vol. 4, No. 2/3 (Apr/ July 2010).

75. Shashi, **Seema Bawa**, "TUX-TMS: A Reputation based Trust System", International Journal of Security", CSC Publications, Volume (4), Issue (1), pp 1-16.
76. Shalini Batra, **Seema Bawa**, "Semantic Categorization of Web Services", International Journal of Recent Trends in Engineering, Vol. 2, No. 3, November 2009, pp 19-23.
77. Shashi, **Seema Bawa**, "Enhancing Reputation in a Trust Based System", LNCS, Springer-Verlag, Berlin, Hiedelberg, CNSA-2010, Pages 440-451.
78. Vandana Jindal, Anil Kumar Verma, **Seema Bawa**, "**COSMOS vs. Cougar**", Proceedings of International Conference on Systemics , Cybernetics, Informatics, Jan 27-30,2010. Vol (1 & 2) pp 291-294.
79. Shashi, **Seema Bawa**, Establishing and Evaluating Trust in a Grid Environment, GridCAT Workshop, in the Proceedings of the 10th International Symposium on Pervasive Systems, Algorithms, and Networks, Taiwan, December 9-11, 2009, ISBN:978-0-7695-3908-9, Pages 674-678.
80. Shalini Batra, **Seema Bawa**, "Web Service Categorization using Normalized Similarity Score", International Journal of Computer Theory and Engineering (IJCTE), published by International Association of Computer Science and Information Technology (IACSIT), Vol. 2, No. 1 February, 2010, pp 139-143.
81. Vandana Jindal, Anil Verma, **Seema Bawa**, "A Comparative Study of Various OSs for WSNs", International Conference on Informatics, Cybernetics and Computer Applications (ICICCA), GCEM Bangalore, July 19- 21, 2010.
82. Shashi, **Seema Bawa**, "TUX-INTERO: A Portal for Secure Interoperation of Grids", International Journal of Engineering Science and Technology, Volume 7, Issue 2, pp 3335 – 3343.
83. Inderveer Chana, **Seema Bawa**, "Extending self- healing in grid environment by pulse monitoring, Journal : Multiagent and Grid Systems, IOS press, Vol. 6, No. 3/ Aug 2010, pp 245-260.
84. Shalini Batra, **Seema Bawa**, Review of Machine Learning Approaches to Semantic Web Service Discovery, Journal of Advances in Information Technology, Special Issue on Advances in Ubiquitous Computing, ISSN 1798-2340, Academy Publisher Vol. 1, No. 3, August 2010, pp. 146-151.
85. Bhupinder Singh, **Seema Bawa**, "Grid Enabled Architectures for DWDM Network Design and optimization Tool", Global Journal of Computer Science & Technology, USA, Vol. 10, Issue. 9, Sep 2010, pp 64 - 67.
86. Bhupinder Singh, **Seema Bawa**, "HybridSGSA: SexualGA and Simulated Annealing based Hybrid Algorithm or Grid Scheduling", Global Journal of Computer Science & Technology, USA, Vol. 10, Issue. 9, Sep 2010, pp 78 -82.
87. Shalini Batra, **Seema Bawa**, *A Framework for Semantic Discovery of Web Services, iUBICOM '10: 5th International Workshop on Ubiquitous and Collaborative Computing, Scotland (UK), Sep. 2010. Published online with the British Computing Society (eWIC).*
88. Shalini Batra, **Seema Bawa**, "Using LSI and its Variants in Text Classification", *Advanced Techniques in Computing Sciences and Software Engineering*, Ed. Khaled Elleithy, Springer, pp. 313-316, 2010.

89. Shashi, **Seema Bawa**, "Interoperability: Bridging the Gap", *International Journal of Computer Applications*, Foundation of Computer Science (FCS), USA, Volume 7 No. 12, 2010, pp. 15-21.
90. Seemu Sharma, **Seema Bawa**, Hitashi Lomash, "Ethical Issues in Social Networking Sites", *International Conference on Business Ethics and Human Values*, University Business School, Punjab University Chandigarh, 22-23 December, 2010.
91. Vandana Jindal, Anil Kumar Verma, **Seema Bawa**, "Query processing", *Proceedings of International Conference on Computer Applications –Database Systems (ICCA 2010)*, 24-27 Dec. 2010, pages 221-226.
92. **Anju Sharma**, Seema Bawa, "Resource Discovery Algorithm with Graph Theoretical Approach in Grid Environment" in the proceeding of 3rd International IEEE Conference on Machine Learning and Computing (ICMLC 2011), Volume 1, pp. 258-262, Singapore, Feb. 26-28, 2011
93. Ajay Kumar, **Seema Bawa**, "Efficient Idleness Data Storage Management in Grid Environments" *International Conference ETCSIT-2011*, GGI, Khanna, Punjab, Feb 26, 2011.
94. **Seema Bawa**, Ajay Kumar, Vishnu Sharma, *Dynamic and Scalable Data Storage Management in Grid environments*, National Conference on Emerging trend in Engineering and Sciences at Samrat Ashok Technological Institute, MP, Sponsored by AICTE New Delhi, Nov 29, 2010.
95. Vandana Jindal, Anil Kumar Verma, **Seema Bawa**, "Middleware – A necessary evil for WSNs", *IEEE International Conference on Advances in Computing and Communications (ICACC'11)*, 8-10 Apr, 2011.
96. Vandana Jindal, Anil Kumar Verma, **Seema Bawa**, "Query Processing", *International Journal of Computer Science and Information Technology*, Academy and Industrial Research Collaboration Centre (AIRCC), ISSN:0975-3826(online); 0975-4660 (Print), June 2011. (Impact Factor 0.267).
97. Shatrughan Modi, **Seema Bawa**, *Automated Coin Recognition - Approaches and Techniques*, *International Conference on Issues & Challenges in Networking, Intelligence & Computing Technologies*, Sep 2-3, Krishna Institute of Engineering and Technology (KIET), Ghaziabad, INDIA in association with Computer Society of India (CSI) Ghaziabad Chapter 2011.
98. Shatrughan Modi, **Seema Bawa**, *Automated Coin Recognition System using ANN*, *International Journal of Computer Applications (IJCA)*, July 2011. (Impact Factor 0.835).
99. Shalini Batra, **Seema Bawa**, *Semantic Discovery of Web Services using Principal Component Analysis*, *International Journal of Physical Sciences*. (SCI Indexed Journal; Impact Factor: 0.554). Vol. 6(18), pp. 4466-4472, September, 2011.
100. Ajay Kumar, **Seema Bawa**, *Network Security : Goals, Services and Mechanisms in Grid Computing Environments*, *International Journal of Computer Applications IJCA Special Issue on CCNS 2011*, Dec 2011. (Impact Factor 0.835)..

101. Shashi, Seema Bawa. Pluggable, interoperable and extensible (PIE): A grid portal for interoperability. International Journal of Physical Sciences. Volume 22, Issue 6 (2011). Pages 5329 – 5344.
102. Hari Singh, **Seema Bawa**, *Evolution of Grid GIS Systems*, International Journal of Computer Science and Telecommunications, Volume 3, Issue 3, March 2012.
103. Sitender, **Seema Bawa**, *A Survey of Indian Machine Translation Systems*, International Journal of Computer Science and Technology, Vol. 3, Issue.1, Jan - Mar, 2012, ISSN : 0976-8491 (online), 2229-4333 (Print).
104. Ajay Kumar, **Seema Bawa**, *Virtualization of Large-Scale Data Storage System to Achieve Dynamicity and Scalability in Grid Computing*, Advances in Intelligent and Soft Computing, ISSN: 1867-5662, Springer, 233 SPRING STREET, NEW YORK, USA, NY, 10013. Springer, Vol. 167, page 323-331.
105. Ajay Kumar, **Seema Bawa**, Software metrics data collection and store in terms of faults, failures and changes problems, Archives Des Sciences Journal. (SCI Indexed, IF:0.435), Publisher, ADS (Accepted).

### Honors and Awards

- Recipient of institute scholarship during M.Tech. at I.I.T.Kharagpur
- Recipient of merit scholarship during M. Sc. at I.I.T.Kanpur
- 12<sup>th</sup> in the merit list of the Kanpur University during B.Sc.
- Member of Software Engineering Peer Review Group, at ABV-IIITM Gwalior.
- Delivered an **invited talk** on *Distributed Test Generation* at IIT Roorkee during All India Seminar on Recent Trends in VLSI in September 2001.
- Acted as Resource person in **Curriculum Development Workshop** at Department of Computer Science and Applications Punjab University, Chandigarh on May 20, 2004.
- Delivered an Invited talk on “Future of IT in India”, at Patel Memorial National College, Rajpura, in Dec 2002.
- Delivered a talk on **Web Based Education**, during a short term course on Adoption of Technological changes in Engineering Education, at Department of Mechanical Engineering, TIET during June 21, – July, 02, 2004.
- Delivered talks on **E-Education Series** of Seminars to promote Web based Teaching, for All faculty members of Thapar Institute of Engineering & Technology on July 30, 2004 and August 28, 2004.
- Delivered an Invited talk on **Information Revolution in Scientific Computing**, during 8<sup>th</sup> Punjab Science Congress, at Punjabi University, Patiala on February 08, 2005.
- Chaired a session on “**Soft Computing & Evolutionary Computing**”, at National Conference on BioInformatics: NCBC’05, organised by Department of Computer Science & Engineering, Thapar institute of Engineering & Technology, Patiala, during March 18- 19, 2005.
- Delivered an expert lecture on “**VLSI Design Automation**” during a Short Term Course on Design of High Level VLSI Circuits”, during March 30-31, 2005, Organized by: Centre of Excellence in VLSI Design & CAD, Department of

Electronics & Communication Engineering and Department of Computer Science & Engineering, Thapar institute of Engineering & Technology, Patiala.

- Acted as **Resource person** in UGC refresher course on “Computer Networks: Present & Future”, Organized by Computer Center, Thapar institute of Engineering & Technology, Patiala during December 05-24, 2005.
- Member Referee Panel for GYAN – An International Bi- Annual Referred Journal of Management & Technology.
- Member Program Committee: ICISTM 2007, International Conference on Information Systems, Technology and Management, New Delhi India, March 12-13, 2007.
- Member International Program committee, The Third IASTED International Conference on Advances in Computer Science and Technology , ACST 2007, April 2–4, 2007, Phuket, Thailand.
- Judge for the IEEE Computer Society History Competition (CHC60) which included a web-based competition to celebrate the 60th anniversary of the IEEE Computer Society.
- Delivered Keynote address at a National Seminar on “Emerging Trends in ICT Enabled Services”, on October 26, 2006, Organised by Punjab Institute of Management & Technology, Mandi Gobindgarh.
- Conducted two- day long session on Software Project Management, in UGC sponsored refresher course on “Automated Software Development”, Organized by School of Mathematics & Computer Applications, Thapar institute of Engineering & Technology, Patiala during December 04-22, 2006.
- Delivered expert lecture on WiFi Networks, in UGC sponsored refresher course on “Advanced Signal Processing Techniques in Wireless Communications”, Organized by Department of Electronics & Communication Engineering, Thapar institute of Engineering & Technology, Patiala during December 04-23, 2006.
- Delivered Invited Talk and chaired a session during National Conference on Innovative developments in Engineering Applications: IDEA – 07, March 2-3, 2007. BGIET Sangrur, Punjab.
- Member Advisory Committee and Keynote Speaker, National Conference on Computer Applications, March 06, 2007, Haryana College of Technology & Management, Kaithal, Haryana.
- Member, Technical Advisory Committee, National Conference on Advance Data Computing, Communication & Security: NCADCCS – 07, July 14- 15, 2007, S V Institute of Computer Studies, Kadi, in Association with CSI Student Branch, Gujrat.
- Member Advisory Committee and Keynote Speaker, National Conference on Challenges and Opportunities in Information Technology; COIT-07, March 23, 2007, RIMT Institute of Engineering & Technology, Mandi Gobindgarh, Punjab.
- Delivered a keynote address, “Towards IT Driven Knowledge Management”, at ISTE sponsored National Seminar on Business Transformation through Technological integration, March 30, 2007, at Punjab Institute of Management & Technology, Mandi Gobindgarh, Punjab.
- Delivered Invited Talk on “Research Opportunities in Grid Computing” at Asian Institute of Technology, Bangkok, Thailand, April 05, 2007.

- **Track Chair** for Information Technology, in ICISTM 2008, held on March 6-8, 2008 at Dubai organized by IMT Ghaziabad in collaboration with IMT Dubai and University of Florida.
- Ph.D. thesis examiner of Mr. OM Prakash, GNDU Amritsar, Dec 2007.
- Reviewer for the paper entitled "A Kerberos Security Architecture for Web Services based Grids with Delay Sensitive Requirements" for the special issue on Grid Resource Management in the IEEE Systems Journal.
- Delivered an Invited talk during one day Seminar on "Knowledge Management – A Key to Competitive Advantage", held on March 12, 2008, at University Business School, Punjab University, Chandigarh.
- Delivered Invited talk on "Open Source Software" and Chaired a technical session during a two days national Conference on Advancements in Computer Engineering, at BBSB Engineering College, FatehGarh Sahib, April 03-04, 2008.
- Received performance incentive under Performance Incentive Scheme for the year 2006-2007 for significant contribution in the growth of university through teaching, research and other activities.
- Delivered Invited Talk and Chaired technical session on Software Agents and Internet Computing in the AICTE sponsored National Seminar on Enterprise Information Systems, at Apeejay Institute of Management, Jalandhar, May 24 2008.
- Serving as **Expert member, National Board of Accreditation; nominated by All India Council for Technical Education (AICTE)** since February 2008.
- Appointed as Subject Expert on the Board of Control in Computer Science & Engineering, for the term 1.7.2008 to 30.06.2009 and then from 01.07.2009 to 30.06.2010 at Guru Nanak Dev University, Amritsar.
- Nominated member of Advisory Council for Swami Vivekanand Institute of Engineering & Technology, Chandigarh-Rajpura Road, Banur.
- Associate Editor, for 11 International Journals published by CiiT Research Institute, Coimbatore, TN since Feb 2009.
- Ph.D. thesis examiner of Ms. Sudesh Rani, topic "*Algebraic Query Processing and Parallelism in Databases*", Kurukshetra University, Kurukshetra, October 2009.
- Member, Program Committee and Reviewer - ISPAN2009 : The 10<sup>th</sup> International Symposium on Pervasive Systems, Algorithms and Networks, to be held during December 14-16, 2009 at Kaohsiung, Taiwan.
- Delivered expert lectures as resource person on "Cloud Computing : An Emerging Infrastructure for Computing", in UGC sponsored refresher course on "Trends in Computing", Organized by Department of Computer Science, Guru Nanak Dev University, Amritsar during September 22- October 10, 2009.
- Reviewed a Book on Programming in C++, 2/e by Dr. Ravichandran, Tata McGraw Hill.
- Delivered an invited lectures on "Parallel, Distributed and Grid Computing", during One day seminar on "Parallel and Distributed Computing", Organized by Post Graduate Department of Computer Science & Applications, Khalsa College, Amritsar on November 20, 2009.
- **UGC nominee** on Advisory Committee of KLEF University, Vijayawada, Nov 2009.



- Member of Internal Quality Assurance Cell (IQAC) established as per UGC guidelines, nominated by Director TU.
- Delivered an invited lectures on “Advanced Computing and Communication Technologies and Trends”, during Faculty Development Program at Gurukul Vidyapeeth, Rajpura on December 17, 2009.
- **Member of Expert Committee constituted by UGC** for assessing the performance of Xth plan and evaluate the requirements for XIth plan, in Feb 2010.
- Honored with India’s most coveted institutional and globally reputed presentation of “**Shiksha Rattan Puraskar**” along with *Certificate of Excellence* by India International Friendship Society (IIFS) on April 07, 2010.
- Keynote Speaker at National Conference on “Convergence of Technologies A Futuristic Approach: NCCT-2010, Delivered the talk on “*Cultural Computing: Need of the Hour*”, at Gurukul Vidyapeeth Institute of Engineering and Technology, June11, 2010.
- Ph.D. thesis examiner of Mr. Ashish Jolly, topic “Design of Simulators for Managing Software Projects”, Kurukshetra University, Kurukshetra, June 17, 2010.
- Recipient of “**Best Citizen of India**” award bestowed upon by Best Citizen Publishing House in June 2010.
- Reviewer for International Conference on Computer and Communication Technology (ICCCT 2010), to be Organized by .Department of Computer Science and Engineering, MotiLal Nehru National Institute of Technology, Allahabad.
- Reviewer for International Conference on Parallel, Distributed and Grid Computing ([PGDC-2010](#)) at Jaypee University of Information Technology , Wanknaghat, to be held during 28th -30th October 2010.
- **Invited talk on “Cultural Computing”** at Surya World, Rajpura, August 15, 2010.
- **Guest of Honor at National Conference on “E Commerce**, Delivered the talk on “**From Social Computing towards Cultural Computing**”, at Gurukul Vidyapeeth Institute of Engineering and Technology, Mohali Campus, August 21, 2010.
- **Resource person and Chief Guest** for Valedictory function for three weeks course at Kurukshetra University Kurukshetra on July 04, 2011.
- **Board Member, North Eastern Regional Institute of Science & Technology (NERIST)**, Nirjuli, Arunachal Pradesh since August 2011.
- **Member, Research Advisory Board**, Chitkara University, Baddi, Himanchal Pradesh. since Dec 2011.
- **Member, Advisory Panel**, “*International Conference on Advances in Computing and Artificial Intelligence (ACAI-2012)e*”, organized by Chitkara University, Punjab.
- **Reviewer**, International Journal of Computer Science, Engineering and Information Technology (**IJCSEIT**), ISSN : 2249 - 0175 ( Online ); 2249 - 2682 (Print).
- **Guest of Honor**, at "Sampuran Kranti", a Drug- De-addiction campaign organized by an NGO "Yuva Parivar Sewa Samiti, Patiala" and Divya Jyoti Jagriti Sansthan at Thapar University Auditorium, on Feb 18, 2012. *Chief Guest on the occasion was Mr. Vikas Garg, IAS, Deputy Commissioner, Patiala.*
- **Resource person** for 22nd Refresher Course on Computer Applications & IT (Inter-disciplinary), at Punjabi University Patiala on February, 21, 2012.

- **Chief Guest**, National Science Day Celebration with School Children, Organised by Paryavaran Welfare Society (PWS) with Indian Youth Climate Network (IYCN), at Thapar University Auditorium, on February 28, 2012.
- **Member, Advisory Board, Keynote Speaker and Session Chair**, "*International Conference of Emerging Dimensions in IT and its Application in Industry*", during March 02-03, 2012, organized by Department of Computer Science and Engineering, Global Institute of Management & Emerging Technologies, March 02, Amritsar, 2012.
- **Resource person** for Refresher Course in the area of Information Technology (Interdisciplinary) , at GND University, Amritsar, March 03, 2012.
- **Guest of Honour** at annual prize distribution function, organized by Dedicated Brothers Group (DBG), presided by Sh. S. R. Ladhar, IAS, Commissioner, Patiala Division, Patiala, at Bhasha Bhavan, Patiala, on March 04, 2012.
- **Award recipient** on the occasion of **International Women's Day**, by Deputy Commissioner, Patiala, for meritorious and exemplary services provided to the society, organized by **Association of NGOs** Patiala in collaboration with Mahatma Gandhi State Institute of Public Administration, Punjab (MGSIPAP), Patiala, on March 07, 2012.
- **Guest of Honour** at **International Women's day celebration by Brahma Kumaries**, Chief Guest was Ms. Rajinder Kaur (IRS) Deputy Commissioner Patiala, March 08, 2012.
- **Guest of Honor on International Women's day celebrations**, Organised by Kala Kriti (Regd.) Patiala, presided by Ms. Anindita Mitra (IAS), Additional Deputy Commissioner, at Municipal Corporation Auditorium, Patiala, on March 10, 2012
- **Chief Guest** during a seminar organized with theme **Sanskar and Sanskriti**, to observe International Women's day celebrations, Organised by Nari Shakti Jagran Samiti with Divya Jyoti Jagriti Sansthan at Municipal Corporation Auditorium, Patiala, on March 18, 2012
- **Invited Speaker and Session Chair**, Technical Session on Distributed Computing, Neural Networks and Fuzzy Logic, during National Conference on Emerging trends in Computer Engineering and Information Technology, at NITTR Chandigarh, March 22-23, 2012.
- Released a book on Environmental Conservation Awareness, compiled by Paryawaran Welfare Society, Thapar University, April 27, 2012.
- Delivered Keynote address to ECO club member teachers representing around 200 government .schools in Punjab, at Govt School, Civil Lines, Patiala, 28 – 29 April, 2012.
- Guest of Honor, during the event organized for specially able children: *Smiling Future*, Organized by Youth United, TU Chapter, May 01, 2012.
- Inaugurated and initiated Rally on World Environment Day to create awareness about Environment Conservation. June 05, 2012.
- Inaugurated a drive to keep Water Pots for birds in University campus in hot summer, June 21, 2012.
- Member, Advisory and Review Committee, International Conference on Advancements in Computer Applications and Software Engineering CASE 2012,

held during 21- 22, Dec 2012, Organised by Dept of Computer Applications, Mewar University, Chittorgarh, Rajasthan.

- Ph.D. thesis examiner of Mr. Shahnawaj, topic “English to Urdu Machine Translation”, I.I.T. BHU, Varanasi, April 1, 2013.

### **Visits Abroad:**

1. CIT, Milton Keynes, **U.K.** during Nov 21, 98 – Jan, 06, 99 for consultancy project.
2. Helsinki, **Finland**: During June 2002, to present paper in PARA’02 conference.
3. Phuket, **Thailand**; During April 2007, as International Program Committee member in Third IASTED International Conference on Advances in Computer Science and Technology , ACST 2007, during April 2–4, 2007.

*Availed full financial grant from AICTE for attending this conference.*

4. Bangkok, **Thailand**, Asian Institute of Technology; During April 2007, to deliver an invited talk and explore the possibilities of collaborations.
5. **Illinois, USA**, Illinois Institute of Technology, Illinois, during June 21 – July 24, to present my research paper in CMMSE 2007.

**No. of Ph.D., M. Phil, M.Tech. Guided (details including name of student, year of passing and thesis topic)**

### **Ph.D. Supervised: 08**

1. Maninder Singh, **A Proactive Network Surveillance Framework**, March 2007 with Dr. S.C. Saxena, Director, I.I.T.Roorkee, Roorkee.
2. Inderveer Chana, **A Framework for Resource Management in Grid Environment**, June 2009.
3. Anju Sharma, **Efficient Resource Discovery in Grid Environments**, June 2009.
4. Sarabjit Singh, **A Security Policy Framework for Grid Services**, July 2009.
5. Bhupinder Singh, **Meta Heuristic Techniques for Grid Resource Management**. July 30, 2010.
6. Sandeep Sachdeva, **Performance Improvement of Multistage Interconnection Network for Multi Processor System**. Nov 10, 2010.
7. Shalini Batra, **A Framework for Semantic Web Services Discovery**, April 2012.
8. Shashi, **Interoperability and Trust Management for Establishing Secure Grids**, May 2012.

**Ph.D. Thesis submitted: 01**

- 1 Th. Tangkeshwar Singh, **Off-line Handwritten Character Recognition of Manipuri Script**. (Co supervisor with Dr. P. K. Bansal and Dr. Renu Vig). (Thesis submitted Sep 2010, under considerations at DoRSP office).

**Ph.D. in progress: 09**

1. Vandana Jindal, **A Framework for Efficient Query Processing in Wireless Sensor Networks**. (Co supervisor with Dr. Anil Verma)
2. Seemu Sharma, **Creating Digital Cultural Archives and Using Social Computing for its effective dissemination**, URB held on July 22, 2010 (Co supervisor with Dr. Hitashi Lomash).
3. Vikas Jindal, **A Framework for Information Retrieval on Semantic Web**, URB held on Aug 2010. (Co supervisor with Dr. Shalini Batra)
4. Ajay Kumar, **Dynamic and Scalable Data Access and Integration Services for Cloud Computing Environment**, Jan 2011.
5. Hari Singh, **Efficient Grid GIS Framework for Spatial Data**, URB held on Sep 07 2011.

Sitender Malik, Sanskrit Language Enconvesion to Universal Networking Language, URB held on Sep 07 2011. (Not registered after July 2012)

6. Sudhir Goyal Malik, **Energy Efficient Resource Scheduling Algorithms for Cloud Computing**, URB held on Nov 2011. (Co supervisor with Dr. Bhupinder Singh).
7. Amit Dua, URB Proposal submitted on **Efficient Data Dissemination on Vehicular Adhoc Networks**, Admitted in July 2012. (Co supervisor with Dr. Neeraj Kumar)
8. Lohit Kapoor, URB Proposal submitted on **An Efficient and Secure InterCloud framework**, Admitted in July 2012. (Co supervisor with Dr. Ankur Gupta)
9. Neenu Garg, URB proposal submitted on **A Framework for Data Integrity Checking in Cloud Computing**, Admitted in July 2012..

**M.E. supervised : 41 ; Completed as per details given below:**

1. Yogesh Chaba, **Artificial Neural Networks for Text Recognition**, 1998.
2. Kailash Chander, **Object Oriented Approach for VLSI Test Generation**, June 2000.
3. Maninder Singh, **A Virtual Network Model for Peer to Peer Networks**, September 2002.
4. Shailja Kanwar, **'Voice Over IP – An Implementation'**, July 2002.
5. Anil Kumar, **Data Grid for Bioinformatics**, December 2002
6. Bhawana Saxena, **Development of a Grid Portal**, December 2002.
7. Shaveta Datta, **A CAD tool for VLSI Test Generation in a Distributed Computing Environment**, 2003- 2004

8. Sunidhi Bhalla, **Multiprocessor Implementation of Transitive Closure**, 2003 – 2004
9. MeetKamal Kaur, **Parallelized Boolean Satisfiability Approach for VLSI Test Generation**, 2003- 2004.
10. Rajwant Kaur Ahuja, **Implementing Secured Grid service using Globus Toolkit**, 2004-2005.
11. Bhawna Bansal, **Design and Development of Grid Portal**, 2004-2005.
12. Anju Singla, **Portlets: User-Interface components to Grid**, 2004-2005.
13. Gurleen Kaur, **Development of TIET Grid Portal using Web Services**, 2005-2006.
14. Jagdish Kumar, **Transport Level Security in Grid Environment**, 2005-2006 (Guided with Maninder Singh).
15. Meena Kumari, **Grid Middlewares: Interface between Grid Resources and Applications**, 2005-2006.
16. Sarvjot Kaur, **A Hybrid Approach for Resource Discovery in Grid Environment**, 2005-2006 (Guided with Shalini Batra) .
17. Vikas Mangla, **Performance Evaluation using Nimrod G: A Grid Resource Broker**, 2005-2006.
18. Amit Bhardwaj, **Vulnerability Analysis of Alchemi .NET Grid Middleware**, Dec 2006. (Guided with Dr. Maninder Singh) .
19. Anurag Gothi, **Distributed Algorithms for Grid Resource Allocation**, 2006-2007.
20. Gaurav Vohra, *Resource Scheduling in Grid Environment*, 2006-2007.
21. Ruchi, *Resource Discovery using Web Services in Grid Environment*, 2006-2007.
22. Ratnesh Kumar Nath, *Load Balancing and Deadlock issues in Grid Environment*, **2006-2007**. (Guided with Inderveer Chana) .
23. Santosh Kumar, *Ontology Based Semantic Resource Discovery In a Grid Environmen*, 2006-2007. (Guided with Inderveer Chana).
24. Gurpreet Kaur, *Makespan Optimization Algorithm for Scheduling in Grids*, 2007-2008.
25. Kabeer Oberoi, *MultiAgent Based Grid Resource Allocation*, 2007-2008.
26. Neha Sood, *Design and Implementation of Grid Based Application for Wireless Devices*, 2007-2008.
27. Shilpi Gupta, *Performance Optimization of SUN N1 Grid Engine using DRMAA*, 2007-2008.
28. Shini Sachdeva, *e-CRM & Multimedia Application Processor*, 2007- 2008 (Guided with Dr. Ravi Kiran).
29. Karan Salhotra, *CRM and Mobile Technology*, 2007-2008. (Guided with Dr. Ravi Kiran).
30. Pankaj Kumar, **Design and Development of a Software Process Improvement Model (SPIM)**, 2008- 2009.
31. Ajay Kumar, **Dynamic and Scalable Storage Management (DSSM) in Grid Environment**, 2009-2010.
32. Pinki Chaudhuary, **Measuring Efficiency of Web Presence of Cultural information**, 2009-2010. (Supervised with Dr. Hitashi Lomash)

33. Simarpreet Kaur Gill, **Application Development on Cloud Environment**, 2009-2010.
34. Shatrughan Modi, **Automated Coin recognition System using ANN**, 2010-2011.
35. Vijay S. Thakur, **Design and Implementation of Cultural Portal and Promotion through Social Networks**, 2010- 2011.
36. Sumit Mittal, **A Novel Full Reference Metric for Image Quality Assessment Based on Human Vision System**, 2010- 2011.
37. Komal Saluja, **A Novel Approach in Ontology Mapping**, 2010- 2011. (Supervised with Ms. Shalini Batra).
38. Harkiran Kaur, **Enhancing Online Access to Sikh Cultural Heritage**, 2011-2012.
39. Prince Bhanwra, **Efficient Semantic Search Using Microformats**, 2011- 2012.
40. Akansha Upadhyaya, **Extending Utility of Language Grid through language Grid Toolbox**, (With Dr. Hitashi Lomash), 2011- 2012.
41. Amita Srivastava, **Time and Accuracy Analysis of relational vs. RDF Databases**, (With Dr. Shalini Batra), 2011- 2012.

**M.Phil. Guided:**

42. Vandana Jindal, **Secure, Stable & Secure Data Centre**, 2007-2008.

**M.E. in progress: 03**

Nimisha Singla

Gurkiran kaur

Amandeep kaur Bakshi

**List of Conferences, Events etc. organized**

**Major Events Organized:**

55<sup>th</sup> and 56<sup>th</sup> Annual Sports meet of Thapar University, Patiala.  
 Aranya, a technical festival in 2010, 2011 and 2012 as Chairperson.  
 Saturnalia, a cultural festival in 2011, 2012 and 2013 as Chairperson.

**Conference(s) Organized:**

1. Chairperson: **National Conference on Software Engineering Principles & Practices - SEPP'04**, March 5-6 2004, at Thapar Institute of Engineering & Technology, Patiala.  
*Major innovation during the conference was active participation and involvement of PG students and extensive interaction with industry professionals.*
2. Chair, Technical Committee & Member, Local Steering Committee: **National Conference on BioInformatics Computing - NCBC'05**, March 18-19 2005, at Thapar Institute of Engineering & Technology, Patiala.
3. Member, **National Conference on Emerging Engineering Perspectives & Practices - ITEEPP'07**, February 09-10 2007, at Thapar Institute of Engineering & Technology, Patiala.

## **Workshops/ Seminars Organized**

2. **Troubleshooting your network problems**, at Department of Computer Science and Engineering, Patiala on 2<sup>nd</sup> February, 2001.
3. **Leverage the Internet**, Department of Computer Science and Engineering, TIET Patiala, July 17, 2000.
4. Workshop on **Object Oriented Modeling and Design**, Department of Computer Science and Engineering, TIET Patiala, December 13, 1999.
5. One day Workshop on **Object Oriented Analysis & Design using OMT**, Inde-Dutch Systems India Limited, Chandigarh, April 1997. Targeted participants from industry in and around Chandigarh.
6. One day Workshop on **Object Oriented Modeling & Design: Relevance in Industry**, Inde- Dutch Systems India Limited, Chandigarh, May 1996. Targetted participants from industry in and around Chandigarh.
7. Half day Workshop on “Linux: To Promote Open Source Move”, during Saturnalia: A Technical and cultural event, organized at TIET, Patiala, during March, 23- 26, 2006.
8. Computing and Communications: Technological Trends, GNDU Amritsar, May, 06, 2006.
9. Technological Trends for Effective Computations, SLIET Longowal, May 24, 2006.

## **Short Term Courses/ Trainings Organized:**

7. **Advanced JAVA programming**, AICTE-ISTE sponsored Short Term Course, TIET, Patiala, June 3-14, 2002.
8. **Visual C++**, Short Term Course, TIET Patiala, June 17-28, 2002.
9. Co-coordinator in **Computer Awareness in Educational Institution**, Six weeks Short Term Course, SLIET Longowal, June – July 1997.
10. One week **Computer Awareness program for TIET staff**, during June 14- 20, 2004.
11. One week extensive training on **Rational Test Suite**, during August 06-11, 2004.
12. Two weeks - **Specialized course on Object Oriented Programming, Data Structures and Algorithm Analysis & Design**, for students from University of Waterloo, during March 2006.
13. Six Weeks summer Course on **Java : The Internet Language**, for students of TIET and from within Punjab, during June 05 – July 15, 2006.

## **Membership of Academic bodies**

**Nominated member of Planning & Monitoring Board for Special Knowledge** by the Director, for a period of **three years**, Jan 1, 2000 – December 31, 2002.

**Nominated member of Academic Senate** by the Director, in September 1999 for remaining period of the year up to December 31, 1999.

**Member Academic Council** for the year 2000- 2001.

Co-opted member of **Academic Senate** for the period, January 1, 2000, to December 31, 2000 and a regular member till date by designation.

Member **Monitoring Committee for ISO Implementation**

Member **Quality Advisory Committee** (QAC) since December 2003.

Member **M.C.A. Admission Committee** in the year 2000-2001, 2001-2002.

And member of various committees like **DAAC, BOS, Academic Senate, Planning & Monitoring Board, Library Advisory Committee** etc. as Head, CSED during entire period of six and half years.