

# RESUME



**Name:** Satinder Bal Gupta

**Official Address:** Associate Professor  
Department of Computer Sci. and Engg.  
Indira Gandhi University, Meerpur  
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**Email:** [satinder\\_bal@yahoo.com](mailto:satinder_bal@yahoo.com)

**Homepage:** <https://sites.google.com/view/satinderbalgupta/home>

**Academic Qualification :**  
Cleared UGC-NET in 2005.

| Exam Passed   | Univ./Board                         |
|---|-------------------------------------|
| Ph.D (Computer Science)<br><b>Topic:</b> Mobile Crawler Architectures for Efficient Crawling of Public Indexable and Hidden Web | Kurukshetra University, Kurukshetra |
| Master in Computer Applications (MCA)   | MDU, Rohtak                         |
| B.Tech (CSE)  | PTU, Jalandhar (Pb.)                |
| Diploma in Computer Programming and Application   | S.L.I.E.T, Longowal.                |

**Teaching Experience :**

| S.No. | Name of Institute                         | Period                   |
|-------|---|--------------------------|
| 1.    | Vaish College of Engineering, Rohtak      | 08/10/1999 to 31/07/2016 |
| 2.    | Indira Gandhi University, Meerpur, Rewari | 01/08/2016 to till date  |

**Ph.D Supervision:**

| <b>S.No.</b> | <b>Candidate Name</b> | <b>Title</b>  | <b>University</b>                    | <b>Status</b> |
|--------------|-----------------------|---|--------------------------------------|---------------|
| 1.           | Mrs. Sunita Mehta     | Metaheuristics for Multiprocessor Task Scheduling   | Maharshi Dayanand University ,Rohtak | Awarded       |
| 2.           | Mr. Dheer Dhewaj      | Efficient Technique for Detection and Prevention of Network Layer Attack in Mobile Adhoc Networks | Maharshi Dayanand University, Rohtak | Awarded       |
| 3.           | Mrs. Prabha Rani      | Enhanced Defense Mechanism For Wireless Sensor Networks   | Maharshi Dayanand University, Rohtak | Awarded       |

**Research Papers Published in Journals**

| <b>S.N</b> | <b>Title with Name of Authors as appearing in the Publication</b>   | <b>Journal, Volume, Year, Page Numbers</b>  | <b>ISSN</b>                     |
|------------|---|---|---------------------------------|
| <b>1</b>   | Load Reducing Techniques on the Websites and Other Resources: A comparative Study and Future Research Direction<br><br>Rajender Nath, Satinder Bal, Mahavir Singh | Journal of Advanced Research in Computer Engineering<br><br>Vol: 1; No:1;<br>Jan-Dec. 2007:<br>pp. 39-49                            | ISSN : 0974-4320                |
| <b>2</b>   | Reduction in Bandwidth Usage for Crawling Using Mobile Crawlers<br><br>Satinder Bal, Rajender Nath  | International Journal of computer Science and Knowledge Engineering (IJCSKE)<br><br>Vol: 1; No. 1 Jan-Dec. 2007-2008:<br>pp. 51-61. | ISSN : 0975-5829                |
| <b>3</b>   | To Evaluate the Performance of Metasearch Engines: A Comparative Study<br><br>Satinder Bal, Rajender Nath   | Delving-Journal of Technology & Engineering Sciences<br><br>Vol:1; No:1,<br>Jan-June 2009.<br>pp. 70-76                             | ISSN: 0975-5829                 |
| <b>4</b>   | An approach to explore the hidden Web having Multiple Fields Form Using Mobile Crawlers<br><br>Satinder Bal, Rajender Nath  | International Journal of Information Technology and Knowledge Management<br><br>Vol. 2; No. 1<br>January-June-2009<br>pp. 135-138,  | ISSN 0973-4414                  |
| <b>5</b>   | Filtering the Web Pages that are not modified at Remote Site without Downloading using Mobile Crawlers  | Information Technology Journal<br><br>Vol: 9; No. 2, 2010   | eISSN:1812-5646,<br>pISSN:1812- |

|    |  |  |                  |
|----|--|--|------------------|
|    | Satinder Bal, Rajender Nath  | pp. 376-380,   | 5638             |
| 6  | A Comparative study of Traditional Search Engines with The Metasearch Engines<br><br>Satinder Bal, Rajender Nath                                   | Journal of Ultra Scientist of Physical Sciences<br><br>Vol: 21<br>No:(2(M)),<br>May-Aug. 2009,<br>pp.597-610           | ISSN : 0970-9150 |
| 7  | A Novel Mobile Crawler System Based On Filtering Off Non-Modified Pages for Reducing Load on the Network<br><br>Rajender Nath<br>Satinder Bal,     | The International Arab Journal of Information Technology<br><br>Vol. 8(3),<br>July 2011,<br>pp. 272-279                | ISSN 1683-3198   |
| 8  | A Comparative Study of the Results Produced by Search Engines<br><br>Satinder Bal Gupta  | IJMRS's International Journal of Engineering Sciences<br><br>Vol. 1(1),<br>Jan-Mar-2012, pp. 1-4.                      | ISSN: 2277-9698  |
| 9  | The Issues and Challenges with the Web Crawlers<br><br>Satinder Bal Gupta  | International Journal of Information Technology & Systems<br><br>Vol. 1(1),<br>Jan-June-2012,<br>pp. 1-10              | ISSN: 2277-9825  |
| 10 | E-Governance in India and its Future<br><br>Satinder Bal Gupta   | IJMRS's International Journal of Management Sciences<br>Vol. 1(1),<br>Jan-Mar-2012, pp. 14-19                          | ISSN: 2277-968X  |
| 11 | Challenges in Designing a Hidden Web Crawl<br><br>Satinder Bal Gupta   | International Journal of Information Technology & Systems<br><br>Vol. 2; No. 1, Jan-June-2013,<br>pp. 117-122          | ISSN: 2277-9825  |
| 12 | A Comparative Study of Proposed Mobile Crawler Architectures (PMCS and PMC) on the Basis of Page Change Behavior<br><br>Satinder Bal Gupta         | International Journal of Information Technology & Systems<br><br>Vol. 2; No. 2,<br>July-Dec 2013<br>pp. 20-23          | ISSN: 2277-9825  |
| 13 | Comparison of Mobile Crawler Architectures (PMCS and PMC) on the basis of Load on the Network and Bandwidth Preserved<br><br>Satinder Bal Gupta    | International Journal of Innovations in Engineering and Management<br><br>Vol. 2; No. 2,<br>pp. 35-40<br>July-Dec 2013 | ISSN: 2319-3344  |
| 14 | Hybrid Gasa For Bi-Criteria Multiprocessor Task Scheduling With Precedence Constraints<br><br>Sunita Dhingra, Satinder Bal Gupta and Ranjit Biswas | Computer Applications: An International Journal (CAIJ),<br><br>Vol.1(1) , 2014<br>pp. 25-35                            | ISSN: 2393-8455  |
| 15 | Comparative analysis of heuristics   | Adv. Appl. Sci. Res.,  | ISSN: 0976-8610  |

|    |  |  |   |
|----|--|--|---|
|    | for multiprocessor task scheduling problem with homogeneous processors<br><br>Sunita Dhingra, Satinder Bal Gupta and Ranjit Biswas   | Vol 5(3):2014, pp. 280-285   |   |
| 16 | Genetic Algorithm Parameters Optimization for Bi-Criteria Multiprocessor Task Scheduling Using Design of Experiments<br><br>Sunita Dhingra, Satinder Bal Gupta and Ranjit Biswas | International Journal of Computer, Information, Systems and Control Engineering<br><br>Vol:8 No:4, 2014, pp. 628-634       | 9998710                                   |
| 17 | Hybrid Genetic Algorithm For Bi-Criteria Multiprocessor Task Scheduling With Communication Delay<br><br>Sunita Dhingra, Ashwani K. Dhingra, Satinder Bal Gupta, Ranjit Biswas    | Advanced Computational Intelligence: An International Journal (ACII),<br><br>Vol: 3, No:4, 2016, pp. 19-29                 | ISSN: 2454-3934                           |
| 18 | Improved Heuristic Algorithm Analysis for Task Scheduling in Flow Shop Environment<br><br>Dhingra Sunita; Dhingra, Ashwani K.; Gupta, Satinder Bal; Biswas, Ranjit               | IUP Journal of Computer Sciences<br><br>Vol. 9 Issue 4, pp. 21-, 2015  | ISSN: 0973-9904                           |
| 19 | Classification of Routing Protocols in Wireless Sensor Networks<br><br>Prabha Rani, S.B. Gupta, Dheer Bhawaj, Yudhvirsingh   | International Journal of Applied Science and Technology Research<br><br>Vol. 6 (2), 2016, pp. 73-81                        | ISSN 2250-2718(Print), 2250-2726(Online), |
| 20 | Investigation of Network Layer Attacks and their Impact in MANETS<br><br>Dheer Dhawaj Barak, Prabha Rani, S.B. Gupta   | International Journal of Computer Science & Information Technology Research Excellence<br><br>Vol. 6 (3), 2016 , pp. 46-55 | ISSN 2250-2734(Print), 2250-2742(Online), |
| 21 | Analysis of Network Layer Attacks on Secure Routing Protocol in Mobile Ad-hoc Network<br><br>Dheer Bhawaj , S.B. Gupta, Yudhvirsingh, Prabha Rani                                | International Journal of Computer Science & Information Technology Research Excellence<br><br>Vol. 6 (3), 2016, pp. 31-37  | ISSN 2250-2734(Print), 2250-2742(Online), |
| 22 | Performance Evaluation of Secure Routing Protocols in Mobile Adhoc Network<br><br>Dheer Dhawaj , S.B. Gupta, Yudhvirsingh, Prabha Rani   | International Journal of Applied Science and Technology Research<br><br>Vol. 6 (3), 2016, pp. 1-9                          | ISSN 2250-2718(Print), 2250-2726(Online), |

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|----|---|--|---|
| 23 | IDS approach based Defense Mechanism for Wireless Sensor Networks<br><br>Prabha Rani, Satinder Bal Gupta  | International Journal of Computer Science & Information Technology Research Excellence<br><br>Vol. 6 (6), 2016,<br>pp. 29-34 | ISSN 2250-2734(Print), 2250-2742(Online)                |
| 24 | Sybil Attacks In Wireless Sensor Networks<br><br>S.B. Gupta, Prabha Rani,   | International Journal of Computer Science & Information Technology Research Excellence<br><br>Vol. 6 (6), 2016,<br>pp. 35-38 | ISSN 2250-2734(Print), 2250-2742(Online)                |
| 25 | National Academic Depository: A Step Towards Digital India Vision<br><br>Satinder Bal Gupta & Monika Gupta                                      | Indian J.Sci.Res.<br><br>Vol.13 (1): 2017,<br>pp. 204-207  | ISSN: 0976-2876 (Print)<br><br>ISSN: 2250-0138 (Online) |
| 26 | Dynamic Coupling Based Performance Analysis of Object Oriented Systems<br><br>Brij Mohan Goel, Satinder Bal Gupta                               | International Journal of Advanced Research in Computer Science<br><br>Vol. 8(5), May-June 2017<br>pp. 112-115                | ISSN: 0976-5697   |
| 27 | Growing Impact of ICT on Indian Politics<br><br>Satinder Bal Gupta, Pink Prabha, Parul  | Our Heritage Journal,<br>Vol. 68, Issue 30,<br>pp. 2258-2263 Feb. 2020,  | ISSN 0474-9030.<br>UGC CARE.                            |
| 28 | Study of Growing Popularity of Payment Apps in India<br><br>Satinder Bal Gupta, Raj Kumar Yadav, Shivani  | Test Engineering & Management, Vol. 82,<br>pp. 16110-16119,<br>Jan-Feb, 2020.  | ISSN: 0193-4120,<br>Scopus Indexed.                     |
| 29 | Technology and E-Learning in Higher Education<br><br>Satinder Bal Gupta, Monika Gupta.  | International Journal of Advanced Science and Technology, Vol. 29, No.4, pp. 1320-1325, 2020.                                | ISSN: 2005-4238.<br>Scopus Indexed.                     |
| 30 | Tools of ICT for Learning and Teaching Mathematics<br><br>Madhu Aggarwal, Satinder Bal Gupta  | Journal of Mechanics of Continua and Mathematical Sciences, Vol. 15, No. 4, pp. 1-12, April, 2020                            | ISSN (P):0973-8975, ISSN (O):2454-7190.<br>SCI Indexed, |
| 31 | Honeynet based Defensive mechanism Against DDoS Attacks<br><br>AbhinavDahiya, Kamaldeep Joshi, Rainu Nandal, Rajkumar Yadav, Satinder Bal Gupta | INTERNATIONAL JOURNAL OF INFORMATION SECURITY SCIENCE, Vol.9, No.3, Pp.140-153, June 2020.                                   | ISSN: 2147-0030,<br>UGC CARE                            |
| 32 | Analysis of Popular Techniques Used in Educational Data Mining<br><br>Satinder Bal Gupta, Raj Kumar Yadav, Shivani,                             | International Journal of Next-Generation Computing, Vol. 11, No. 2, July 2020.   | ISSN 0976-5034.<br>SCI Indexed and UGC CARE             |
| 33 | Different Phase Retrieval   | International Journal of Future Generation   | ISSN: 2233-7857,  |

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|----|--|--|---|
|    | Algorithms: A Review<br>Himanshu, Satinder Bal Gupta, Raj Kumar Yadav, Vikas Popli                         | Communication and Networking, Vol. 13, No. 4,<br>pp. 1978-1989, Nov. 2020. | SCI Indexed,  |
| 34 | A Systematic Comparative Analysis of Clustering Techniques<br>Satinder Bal Gupta, Raj Kumar Yadav, Shivani | Applied Computer Systems<br>Vol. 25, no. 2, pp. 87–104,<br>December 2020,  | ISSN 2255-8691<br>(online) ISSN<br>2255-8683 (print)<br>(SCI Indexed) |

## RESEARCH PAPERS PUBLISHED IN CONFERENCE PROCEEDINGS

| S.N . | Title with Name of Authors as appearing in the Publication   | Journal, Volume, Year, Page Numbers   |
|-------|--|---|
| 1     | E-Governance in India and its Future<br>Rajiv Sharma, Satinder Bal, Richa, Divya Bhardvaj  | National Conference on E-governance for Rural Development, SRM University, Modinagar<br>6-7, Oct. 2009, pp. 190-193   |
| 2     | E-Governance in Municipalities and Urban Areas: Challenges and Roadmap to Success<br>Rajiv Sharma, Satinder Bal, Richa, Divya Bhardvaj | National Conference on E-governance for Rural Development, SRM University, Modinagar<br>6-7, Oct. 2009, pp. 194-199   |
| 3     | Comparative Analysis of First Order Optimization Algorithms<br>Nitin Yadav, Satinder Bal Gupta, and Raj Kumar Yadav                    | Proceedings of 2 <sup>nd</sup> International Conference on Artificial Intelligence and Speech Technology (AIST- 2020), Indira Gandhi Delhi Technical University for Women, Delhi. Nov., 19-20, 2020.<br>ISBN: 9781003150664 (eISBN)<br>Published by Taylor & Francis Group, London and New York |
| 4     | Comparative Study of Various Stable and Unstable Sorting Algorithms<br>Ravi Yadav, Rajkumar Yadav, and Satinder Bal Gupta              | Proceedings of 2 <sup>nd</sup> International Conference on Artificial Intelligence and Speech Technology (AIST- 2020), Indira Gandhi Delhi Technical University for Women, Delhi. Nov., 19-20, 2020.<br>ISBN: 9781003150664 (eISBN)<br>Published by Taylor & Francis Group, London and New York |

## RESEARCH PAPERS PRESENTED IN CONFERENCES

| S. No. | Title of the Paper presented                         | Title of the Conference / Seminar etc and organizer  | Dates of the event |
|--------|--|--|--------------------|
| 1.     | Mobile Agent Systems: A study for present and Future | First National Conference On Emerging Trends in Comm. & Information Technology, RIE&IT, Nawansher (Pb.), | Feb. 24-25, 2007.  |

|     |   |  |                       |
|-----|---|--|-----------------------|
|     |   | India,   |                       |
| 2.  | Searching The Web: The Meta Search Engine Way   | Second National Conference On Innovative Developments in Engineering Applications (IDEA-2007), BGIET, Sangrur (Pb.), India,  | March 2-3, 2007.      |
| 3.  | Quality of Results in Search Engines  | First National Conference on Total Quality Management, VCE, Rohtak (Hr.), India  | 10 March, 2007.       |
| 4.  | The Essence of the Essence from the Web: The Metasearch Engine  | First International Conference On Information Technology, (INTL-INFOTECH 2007), Haldia (WB), India,  | 19-21 March, 2007.    |
| 5.  | Crawling the Hidden Web using Mobile Crawlers   | 3rd International conference on Advanced Computing & Communication Technologies (ICACCT2008), APIIT, Panipat (Haryana).  | November 08-09, 2008. |
| 6.  | Filtering the Non-modified pages at remote site during crawling using Mobile Crawlers                                 | IEEE International Advance Computing Conference (IACC'09), TIET, Patiala (Punjab).   | March 08-09, 2009.    |
| 7.  | A Framework to Explore the Hidden Web Having Single Field Form Using Mobile Crawlers.                                 | National Conference (NCACNIT-09), GJU, Hisar (Haryana).  | March 24-25, 2009     |
| 8.  | A Novel Approach to Filter Non-Modified Pages at Remote Site without Downloading during Crawling                      | IEEE International Conference on Advances in Recent Technologies in Communication and Computing, 2009 (ARTCOM'09), Kottayam (Kerala).  | 27-28 OCT., 2009.     |
| 9.  | National Academic depository: A step towards digital enablement of the Education records and the Digital India Vision | National seminar on Citizen centric governance and Administration: Issues and Challenges", MDU, Rohtak   | Nov. 10-11, 2016      |
| 10. | Women Entrepreneurship in India : Problems and Prospects  | International conference on Startup India Recipe for Inclusive Entrepreneurship and Innovation: Issues and Challenges,, IMSAR, MDU, Rohtak                                     | March 2-3, 2017       |
| 11. | Issues and Challenges with Ad-hoc networks  | International Conference on Current Trends for Sustainable Development in Engineering, Science and Management, Ganga Institute of Technology and Management, Kablana, Jhajjar. | May,12, 2018          |
| 12. | Issues and Challenges towards skill Development in India.   | National seminar on Skill India-A great Vision for 21 <sup>st</sup> century Progressive India, F.C. College for Women, Hisar.  | Oct. 20, 2018.        |
| 13. | Improvement in Road Safety Using Artificial Intelligence,   | National Seminar on Road Safety in India: Better late than Never, Vaish College of Education, Rohtak.  | Oct. 24, 2018.        |
| 14. | A hybrid approach Towards Information Hiding for Covert Communication   | 106 <sup>th</sup> Indian Science Congress, Lovely Professional University, Phagwara, Jalandhar.  | January 3-7, 2019,    |
| 15. | Analysis of Impact of Faults on Object Oriented Software systems  | 106 <sup>th</sup> Indian Science Congress, Lovely Professional University, Phagwara,   | January 3-7, 2019.    |

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|-----|--|---|---------------------|
|     | Using Univariate Regression Analysis   | Jalandhar.  |                     |
| 16. | Energy Preserving Remote Supervised Room   | National Conference on Emerging Trends in Smart Computing, MDU, Rohtak.   | March 27, 2019.     |
| 17. | Comparative Analysis of Various Urban VaNET Routing Protocols in Chandigarh City Scenario, | International Conference on Recent Trends in Computer Applications and Information Technology (RTCAIT'19), M.M. University, Mullana, Ambala.  | April, 19-20, 2019. |
| 18. | Issues and Challenges in Intellectual Property Rights,                                     | International Conference on Prospects of IPR in Innovative Practices, MDU, Rohtak.  | Aug. 29, 2019,      |
| 19. | E-commerce & its Future in India.  | National Seminar on Emerging Issues and Challenges in Commerce and Management, SKGC, Kanwali, Rewari.   | Jan 17, 2020.       |
| 20. | The security Issues with Social Networking Websites  | National Seminar on Issues and Challenges in Security and Privacy in Social Networks, Jan SKGC, Kanwali, Rewari.  | 18, 2020.           |
| 21. | PowerPoint Presentation as a Tool to Encourage Active Learning                             | National Seminar on ICT in Education Sector: Implications and Challenges, Government College, Narnaul   | Feb., 18, 2020.     |
| 22. | The Role of AI to Fight Covid-19: Future Research Directions                               | Ist Online International Conference on Rebuilding Bharat with Artificial Intelligence Interventions after Covid-19 Pandemic: Opportunity and Challenges, (A2ICP:2020), Gautam Buddha University, Greater Noida, UP. | May 02-03, 2020,    |
| 23. | Improving the Performance of the Students Using Artificial Neural Network,                 | Online International Conference on Advances in Computing, Communication and Control" (ICA3C-2020), School of Computer Science and Applications, IIMT University, Meerut, Uttar Pradesh, India.                      | June 16, 2020.      |
| 24. | Study of Various Artificial Intelligence Techniques in the Service of Human Being,         | Online International Conference on New Normal - Corporate and Self-Management in Current Scenario, School of Management, Gautam Buddha University, Greater Noida.   | June 17-18, 2020.   |
| 25. | Big Data Analytics Methods and Tools: A Review   | 5 <sup>th</sup> International Conference on Bioenergy Environment and sustainable Technologies (BEST2021), Arunai Engineering College, Tiruvannamalai, Tamilnadu  | Jan., 29-30, 2021   |
| 26. | A Review of Soft Computing Techniques and Applications                                     | International Conference on Recent Advances in Deep Learning (ICRADI-2021), Deptt. of CSE, Shri Vishnu Engineering College for Women, Andhra Pradesh  | Jan, 29-31, 2021    |



## Books Published

| S.N. | Book Published by International Publishers/National Level Publishers or State and Central Govt. Publications with ISSN/ISBN | Title with Name of Authors as appearing in the Publication                           | Book Title, Editor, Publisher year, Page Numbers                                   | ISSN/ISBN No., if any   |
|------|---|--|--|-------------------------|
| 1    | National Level Publisher  | Discrete Mathematics and Structures<br><br>Satinder Bal Gupta                        | Laxmi Publications (P) LTD, 2006,<br><b>3<sup>rd</sup> Edition</b><br>pages:358    | ISBN: 978-81-700-8918-6 |
| 2    | International Edition, by National Level Publisher  | Discrete Mathematics and Structures<br><br>Satinder Bal Gupta                        | University Science Press, 2008,<br><br>pages:358                                   | ISBN: 978-81-318-0352-3 |
| 3    | National Level Publishers   | Topics in Discrete Mathematics<br><br>Satinder Bal Gupta, P.N.Gupta                  | Laxmi Publications (P) LTD, 2006,<br><br>Pages: 317                                | ISBN:81-7008-952-2      |
| 4    | National Level Publishers   | Introduction to Data Base Management System<br><br>Satinder Bal Gupta, Aditya Mittal | University Science Press, 2009,<br><br><b>1st Edition</b><br>pages:288             | ISBN: 978-81-318-0724-8 |
| 5    | National Level Publishers   | Discrete Mathematics and Structures<br><br>Satinder Bal Gupta                        | University Science Press, 2014,<br><b>6<sup>th</sup> Edition</b><br>Pages: 600     | ISBN: 978-81-318-0452-0 |
| 6    | National Level Publishers   | Optical Communication Systems<br><br>Satinder Bal Gupta, Ashish Goel                 | University Science Press, 2008,<br><br><b>2<sup>nd</sup> Edition</b><br>pages: 270 | ISBN: 978-81-318-0439-1 |
| 7    | National Level Publishers   | Discrete Structures<br><br>Satinder Bal Gupta, C.P. Gandhi                           | University Science Press, 2009,<br><br><b>1st Edition</b><br>Pages: 537            | ISBN:978-81-318-0580-0  |
| 8    | National Level Publishers   | Introduction to Data Base Management System<br><br>Satinder Bal Gupta, Aditya Mittal | University Science Press, 2012,<br><br><b>Revised Edition</b><br>pages:288         | ISBN: 978-93-81159-31-6 |
| 9    | National Level Publishers   | Discrete Structures<br><br>Satinder Bal Gupta, C.P. Gandhi                           | University Science Press, 2014,<br><br><b>4th Edition</b><br>Pages: 724            | ISBN:978-93-80386-35-5  |
| 10   | Local Publishers  | Computer Fundamentals and Programming in C   | Shree Mahavir Book Publishers 2009,  | ISBN: 978-93-80266-12-1 |

|    |                  |   |   |                         |
|----|------------------|---|---|-------------------------|
|    |                  | Satinder Bal Gupta, Amit Singla   | Pages: 438  |                         |
| 11 | Local Publishers | Basic Electronics<br>Manish Goel, Satinder Bal Gupta, Rajiv Sharma                | Shree Mahavir Book Publishers 2009,<br>Pages: 306       | ISBN: 978-93-80266-13-8 |
| 12 | Local Publishers | Digital and Analog Communication<br>Ashish Goel, Satinder Bal Gupta, Rajiv Sharma | Shree Mahavir Book Depot, New Delhi, 2009,<br>Pages:312 | ISBN: 978-93-80266-14-5 |
| 13 | Local Publishers | Computer Network and Internet<br>Satinder Bal Gupta                               | Shree Mahavir Book Publishers 2010,<br>Pages: 232       | ISBN: 978-93-80266-47-3 |
| 14 | Local Publishers | Data Base Management System<br>Satinder Bal Gupta                                 | Shree Mahavir Book Publishers 2009-10,<br>Pages: 223    | ISBN: 978-93-80266-01-5 |
| 15 | Local Publishers | Introduction to Information Technology<br>Satinder Bal Gupta                      | Shree Mahavir Book Publishers 2010,<br>Pages:232        | ISBN: 978-93-80266-32-9 |
| 16 | Local Publishers | Software Engineering<br>Satinder Bal Gupta  | Shree Mahavir Book Publishers 2012-13,<br>pages:200     | ISBN: 978-93-81580-39-4 |
| 17 | Local Publishers | Computer Applications in Management<br>Satinder Bal Gupta                         | Shree Mahavir Book Publishers, 2015-16<br>Pages:232     | ISBN: 978-93-84285-04-3 |
| 18 | Local Publishers | Artificial Intelligence<br>Satinder Bal Gupta                                     | Shree Mahavir Book Publishers,<br>2015-16<br>Pages: 222 | ISBN: 978-93-84285-11-1 |
| 19 | Local Publishers | Web Design<br>Satinder Bal Gupta and Brij Mohan Goel                              | Shree Mahavir Book Publishers,<br>2015<br>Pages: 213    | ISBN: 978-93-81580-93-6 |
| 20 | Local Publishers | Introductory concepts of Information Technology<br>Satinder Bal Gupta             | Shree Mahavir Book Publishers, 2015-16<br>Pages:304     | ISBN: 978-93-84285-31-9 |
| 21 | Local Publishers | Basics of Information Technology<br>Satinder Bal Gupta                            | Shree Mahavir Book Publishers,<br>2014<br>Pages: 262    | ISBN: 978-93-84285-62-3 |
| 22 | Local Publishers | Statistical Analysis with MS-Excel<br>Satinder Bal Gupta and Monika Gupta         | Shree Mahavir Book Publishers,<br>2016<br>Pages: 260    | ISBN: 978-93-84285-78-4 |
| 23 | Local Publishers | Introduction to Computer<br>Satinder Bal Gupta                                    | Shree Mahavir Book Publishers, 2015<br>Pages: 346       | ISBN: 978-93-84285-48-7 |
| 24 | Local Publishers | IT and E-Commerce   | Shree Mahavir Book                                      | ISBN: 978-93-           |

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|----|---------------------------|--|-------------------------------------|-------------------------|
|    |                           | Satinder Bal Gupta   | Publishers, 2015-16<br>Pages:203    | 84285-09-8              |
| 25 | International Edition     | Discrete Mathematics and Structures<br><br>Satinder Bal Gupta                  | Infinity Press, 2016,<br>pages:620  | ISBN: 978-93-859-3547-3 |
| 26 | International Edition     | Optical Communication Systems<br><br>Satinder Bal Gupta, Ashish Goel           | Infinity Press, 2016,<br>pages: 276 | ISBN: 978-93-859-3544-2 |
| 27 | International Edition     | Topics in Discrete Mathematics<br><br>Satinder Bal Gupta, P.N.Gupta            | Infinity Press, 2016,<br>Pages: 332 | ISBN: 978-93-859-3575-6 |
| 28 | National Level Publishers | A text Book of Engineering Mathematics<br><br>Manish Goyal, Satinder Bal Gupta | University Science Press, New Delhi | ISBN: 978-93-5274-554-8 |

## Short Term Training Courses/Faculty Development Programmes Attended

| Program                                    | Duration | Organised by      |
|--|----------|-------------------|
| Web Page Design                            | One Week | NITTR, Chandigarh |
| Operating System                           | One Week | NITTR, Chandigarh |
| ORACLE                                     | One Week | NITTR, Chandigarh |
| Electronics Service                        | One Week | NITTR, Chandigarh |
| Mission 10X                                | One Week | Wipro & ISTE      |
| Induction Training Programme through ICT   | One Week | NITTR, Chandigarh |
| Cyber Crime and Forensic Tools through ICT | One Week | NITTR, Chandigarh |