

**CURRICULUM VITAE**  
**DR SHAMPA CHAKRAVERTY**  
**(Professor- Computer Engineering, Netaji Subhas University of Technology)**



**A. BASIC INFORMATION**

1. **Name:** SHAMPA CHAKRAVERTY
2. **Date of Birth:** 16:02:1961
3. **Permanent Address:** B3B/ 52 A, Janak Puri, New Delhi-110058
4. **Email:** [apmahs.nsit@gmail.com](mailto:apmahs.nsit@gmail.com)
5. **Telephone:** 011-25000269 (O)      9899568694 (R)
6. **Affiliation:** Netaji Subhas University of Technology (N.S.U.T.) formerly N.S.I.T., New Delhi
7. **Current Position:** Professor, Division of Computer Engineering

**8. QUALIFICATIONS**

<b>Degree</b>	<b>Year of degree awarded</b>	<b>Subjects</b>	<b>University</b>	<b>Institution</b>	<b>Marks</b>
Ph.D.	2003 <b>Defense on held on: 23-12-2002</b>	Thesis titled “ <i>Cosynthesis of Real Time System</i> ” Under the guidance of: -Prof D. Roy Choudhary, Delhi Univ -Dr C.P. Ravikumar, IITD	Delhi University	Department of Computer Engineering, Faculty of Technology <b>FOT-DU</b>	N/A
M.Tech	1993	Integrated Electronics and Circuits	Indian Institute of Technology- Delhi	<b>I.I.T. Delhi</b>	8.88 CGPA

B.Tech	1983	Electronics and Communication	Delhi University	Delhi college of Engineering, DCE, DU	78.5%
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### 9. WORK EXPERIENCE (REVERSE CHRONOLOGICAL)

S. No	Position Held	Name of Organization	From	To	Pay Scale
1.	Professor	NSUT (formerly NSIT)	June 2007	Till Date	37400-67000 GP - 10000
2.	Associate Professor	NSIT	June 2000	June'07	12000-420-18300
3.	Sr. Lecturer	NSIT	June 1994	June'00	10000-325-15200
4.	Lecturer	NSIT	June 1988	June'94	2200-75-2800-100-4000
5.	Systems Executive	National Inst. of Information Technology Ltd. (N.I.I.T)	July 1986	May 1988	Rs 2400.00 (Consolidated)
6.	Customer Support Engineer	International Computers Indian Manufacture Ltd. (I.C.I.M.)	Aug 1984	June 1986	Rs 4000.00 (Consolidated)
7.	R & D Engineer	Genesis India Pvt Ltd:	June 1983	May 1984	Rs 2000.00 (Consolidated)

### 10. RESEARCH INTERESTS

- Computational Linguistics
- Sentiment and Emotion Analysis
- Design Exploration of Multiprocessor Architectures
- Hardware and Software Fault Tolerance
- E-Learning and Engineering Pedagogy
- Information Retrieval and Analysis
- Computer Security – Trust and Digital Watermarking

## **B. PROFESIONAL ACHIEVEMENTS**

### **I) MAJOR POSTS HELD IN NSUT (FORMERLY NSIT)**

1. Head, Computer Engineering, NSIT: 2007- 2018
2. Dean, Academic: 2008-2010
3. Member, BOG, NSIT 1999-2002

### **II) NATIONAL AWARDS**

1. Indian Society for Technical Education ***ISTE Rajaram Bapu Patil National Award for Creative Work Done in Technical Education, 2008***
2. World Educational Congress – Was conferred the ***Prof. Indira Parikh award for 50 Women-in-Education Leaders, 2018***
3. World Educational Congress – Was conferred award as ***100 Most Dedicated Professors, 2018.***

## **III) REFEREED PUBLICATIONS**

### **A) JOURNAL PUBLICATIONS**

1. Sunny Rai and Shampa Chakraverty (2020). A Survey on Computational Metaphor Processing. ACM Computing Surveys, Vol 53, No. 2, Article 24 (May 2020), 37 pages, Published by Association for Computing Machinery, NY-USA, **Indexed by SCI, Impact Factor: 10.288**, DOI: <https://doi.org/10.1145/3373265>
2. Kanika, Chakraverty, S., Chakraborty, P., & Madan, M. (2022). Effect of different grouping arrangements on students' achievement and experience in collaborative learning environment. *Interactive Learning Environments*, 1-13, Published online 15 Feb, 2022. **Indexed Scopus, IF 3.8**
3. Kanika, Chakraverty, S., & Chakraborty, P. (2021). A Peer-Assessment Based Approach for Teaching Microprogramming. *Journal of Engineering Education Transformations*, 34(4), June 2021 7-12. **Scopus indexed**, 10.16920/jeet/2021/v34i4/146148.
4. Mala Saraswat, Shampa Chakraverty, “ Emotion distribution profile for movies recommender systems,” Lecture notes in Networks and Systems (LNNS, Vol 204), 29

June 2021, pp365-373, Springer, Singapore. [https://doi.org/10.1007/978-981-16-1089-9\\_30](https://doi.org/10.1007/978-981-16-1089-9_30), **Scopus indexed.**

5. Charu Wahi, Shampa Chakraverty, Vandana Bhattacharjee, "A Trust-Based Secure AODV Routing Scheme for MANET," International Journal of Adhoc and Ubiquitous Computing, April 2021, Inderscience Publishers Ltd., **Scopus/SCIE**
6. Kanika, Shampa Chakraverty, Pinaki Chakraborty *et. Al.*, " VISTA: A teaching aid to enhance contextual teaching," Computer Applications in Engineering Education, March 2021, Wiley, **Indexed Scopus**, <http://doi.org/10.1002/cae.22407>
7. Mala Saraswat, Shampa Chakraverty, Enriching Topic Coherence on Reviews for Cross-Domain Recommendation, *The Computer Journal*, Published by Oxford Academic, May 2020, **Indexed by SCIE, JCR, Scopus.**  
Available at: <https://doi.org/10.1093/comjnl/bxaa008>
8. Kanika Tehlan, Shampa Chakraverty, Pinaki Chakraborty, Shraddha Khapra, "A genetic algorithm- based approach for making pairs and assigning exercises in a programming course." *Computer Applications in Engineering Education* 28, no. 6 (2020): 1708-1721. Wiley, **Scopus indexed**  
Available at <https://onlinelibrary.wiley.com/doi/abs/10.1002/cae.22349>
9. Kanika, Chakraverty, S., & Chakraborty, P. (2020). Tools and Techniques for Teaching Computer Programming: A Review. *Journal of Educational Technology Systems*, May 2020. <https://doi.org/10.1177/0047239520926971>. **Indexed in EBSCO: Educational Administration Abstracts, ERIC (Education Resources Information Center), ProQuest: Linguistics and Language Behavior Abstracts (LLBA)**  
**Indexed by SCI Expanded, Scopus, 2017 five year IF 0.725.**
10. Mala Saraswat, Shampa Chakraverty, "Review-Based Topic Distribution Profile for Recommender Systems," *Advances in Data Science, Security and Applications, ISDSSA 2019, Lecture Notes in Electrical Engineering*, Dec 2019, pp 433-443, DOI [https://doi.org/10.1007/978-981-15-0372-6\\_35](https://doi.org/10.1007/978-981-15-0372-6_35), **Scopus Indexed**
11. Sunny Rai, Shampa Chakraverty, Devendra Tayal, Divyanshu Sharma, Ayush Garg, "Understanding metaphors using emotions," *J. of New Generation Computing*, Springer Nature, print version: January 2019, Volume 37, Issue 1, pp 5–27 (23 pages), ISSN: 0288-3635. **Scopus, IF 1.048**  
Available at: <http://doi.org/10.1007/s00354-018-0045-3>. **Indexed by SCI Expanded, Scopus, 2017 five year IF 0.725.**
12. Anuradha Yadav, Shampa Chakraverty, Ritu Sibal, "A Framework for Classifying Trust for Online Systems," *Journal of World Wide Web, Internet and Web Information Systems*, Springer Nature, First online: 10 Aug 2018, pp 1-23 (23 pages), ISSN:1386-145X (print), 1573-1413 (Online).  
Available at: <https://doi.org/10.1007/s11280-018-0626-6>  
**Indexed by SCI Expanded, Scopus, 2018 five year IF: 1.83, H5 Index: 23.**
13. Sunny Rai, Shampa Chakraverty, Devendra K Tayal, Yash Kukreti, "A Study on Impact of Context on Metaphor Detection," *The Computer Journal*, Volume 61, Issue 11, 1 November 2018, Pages 1667–1682 (17 pages), First online: 2<sup>nd</sup> April 2018, , ISSN 0010-4620, EISSN 1460-2067,

DOI: <https://doi.org/10.1093/comjnl/bxy032>

**Indexed by SCI Expanded, Scopus, 2018 five year IF: 0.860, H5-Index 51.**

14. Vidhi Khanduja, Shampa Chakraverty, "Fragile watermarking of Decision system using Rough set theory," *Arabian Journal for Science and Engineering*, December 2018, Volume 43, Issue 12, pp 7621–7633 (13 pages), First Online: 1 March 2018, Publ. by Springer Nature.

Available at: <https://doi.org/10.1007/s13369-018-3120-7>

**Indexed by SCI Expanded, Scopus, 2017 IF: 1.092**

15. Srishti Sharma, Shampa Chakraverty, "Sarcasm Detection In Online Review Text," *ICTACT Journal on Soft Computing*, Volume 8, Issue 3, pp 1674-1679, ISSN: 2229-6956, April 2018. Available at: [DOI: 10.21917/ijsc.2018.0233](https://doi.org/10.21917/ijsc.2018.0233)

**Indexed by IET Inspec, Copernicus, ICV Index 95.63, 2015 IF .787**

16. Mala Saraswat, Shampa Chakraverty, "Cross Domain Recommendation using Vector modeling and Genre Correlations," *ICTACT Journal on Soft Computing*, Vol 8, Issue 3, pp-1649-1654, April 2018, ISSN: 2229-6956.

Available at: [DOI: 10.21917/ijsc.2018.0229](https://doi.org/10.21917/ijsc.2018.0229)

**Indexed by IET Inspec, Index Copernicus, ICV Index 95.63, 2015 IF .787**

17. Sunny Rai, Shampa Chakraverty, "Metaphor detection using fuzzy rough sets," *Intl Joint Conf. on Rough Sets*, July 3-7, 2017, Olztyń, Poland, In: Polkowski L. et al. (eds) *Rough Sets. IJCRS 2017*, vol 10313. Springer, Cham. **Lecture Notes in Computer Science LNCS -Artificial Intelligence (LNAI 10313)**, ISSN 0302-9743, ISBN 978-3-319-60837-2. Available at [DOI: 10.1007/978-3-319-60837-2](https://doi.org/10.1007/978-3-319-60837-2)

**Indexed by Scopus, EI Engineering index.**

18. Saraswat, M. and Chakraverty, S., "Leveraging Movie Recommendation Using Fuzzy Emotion Features," In *Proceedings International Conference on Recent Developments in Science, Engineering and Technology, REDSET 2017, Communication in Computer and Information Science CCIS, ISSN 18650929*, Springer, Singapore, pp 475-483.

Available at DOI: [https://doi.org/10.1007/978-981-10-8527-7\\_40](https://doi.org/10.1007/978-981-10-8527-7_40)

**Indexed by Scopus, EI Engineering index**

19. Sunny Rai, Shampa Chakraverty, Devendra K. Tayal, "Identifying metaphors using fuzzy conceptual features," *Intl Conf on Information, Communication and Computer Technology*, ICICCT-2017, vol 750, Springer Singapore, **Communications in Computer and Information Science CCIS, ISSN 18650929**

Available at: [https://doi.org/10.1007/978-981-10-6544-6\\_34](https://doi.org/10.1007/978-981-10-6544-6_34)

**Indexed by Scopus, EI Engineering index**

20. Shampa Chakraverty, Mala Saraswat, "Review based emotion profile for cross domain recommendation," *Multimedia Tools and Applications -MTAP*, (2017), Springer, ISSN 1380-7501, EISSN 1573-7721pp 1-24.

Available at: doi: <https://doi.org/10.1007/s11042-017-4767-x>

**Indexed by SCI Expanded, Scopus, 2017 IF 1.541, 2017 H5 Index: 45.**

21. Rai S., Chakraverty S, et al, “Soft Metaphor Detection using Fuzzy C-Means, “ in: Ghosh A, Pal, R, Prasath R (Eds), Mining Intelligence and Knowledge Exploration.. **MIKE 2017**, vol 10682, Springer Cham, **Lecture Notes in Computer Science LNCS – Artificial Intelligence (LNAI)**, Vol 10682, ISBN: 978-3-319-71927-6, Online ISBN 978-3-319-71928-3,  
Available at DOI: [https://doi.org/10.1007/978-3-319-71928-3\\_38](https://doi.org/10.1007/978-3-319-71928-3_38)  
**Indexed by Scopus, EI Engineering index.**
22. Srishti Sharma, Shampa Chakraverty, Anisha Jauhri (2017), “Leveraging Polarity Switches and Domain Ontologies for Sentiment Analysis in Text”, In: Computational Intelligence, Communications, and Business Analytics. CICBA 2017, vol 775, pp 84-92. Springer, Singapore. **Communications in Computer and Information Science CCIS, vol 775, ISSN 18650929, ISBN 978-981-10-6426-5.**  
Available at: [https://doi.org/10.1007/978-981-10-6427-2\\_7](https://doi.org/10.1007/978-981-10-6427-2_7)  
**Indexed by Scopus, EI Engineering index**
23. S. Chakraverty, Anuradha Yadav, Ritu Sibal, “On evaluating the effectiveness of rating similarity on implicit trust,” Journal of Social Network Analysis and Mining (2016) 6: 98. Springer Vienna, 2016, ISSN: 1869-5450, EISSN: 1869-5469.  
Available at: <https://doi.org/10.1007/s13278-016-0395-0>  
**Indexed SCOPUS, SCImago, IF 1.86, H5 Index 25.**
24. V. Khanduja, S. Chakraverty, O.P. Verma, “Enabling information recovery with ownership using robust multiple watermarks,” Elsevier Journal of Information Security and Applications, Volume 29, August 2016, Pages 80–92, ISSN 2214-2126.  
Available at: [10.1016/j.jisa.2016.03.005](https://doi.org/10.1016/j.jisa.2016.03.005).  
**Indexed by Scopus, Science Direct, Engineering index Emerging SCI. CiteScore 2.27**
25. Sushma Hans, S. Chakraverty. A Novel Evaluation Scheme using Formal Concept Analysis. Elsevier International Journal of Applied Engineering Research, Research India Publication, ISSN 0973-4562, vol 11(1), 2016, pp. 479-483.  
Available at Web link: [https://www.ripublication.com/ijaer16/ijaerv11n1\\_72.pdf](https://www.ripublication.com/ijaer16/ijaerv11n1_72.pdf)  
**Indexed by Scopus, Index Copernicus ICV: 82.67, H-Index 25**
26. Sushma Hans, S. Chakraverty, “Ability Based Collaborative Pairing and Grouping among learners,” Intl Journal of Engineering and Innovative Technology, ISSN: 2277-3754, Volume 5, Issue 8, February 2016, pp: 41-51.  
Available at: [http://www.ijeit.com/Vol%205/Issue%208/IJEIT1412201602\\_09.pdf](http://www.ijeit.com/Vol%205/Issue%208/IJEIT1412201602_09.pdf)  
**Indexed Google Scholar**
27. Sharma, S., Chakraverty, S., Sharma, A. and Kaur, J. ‘A context-based algorithm for sentiment analysis’, Indscience Intl. J. Computational Vision and Robotics, Publ Elsevier, Vol 7, No. 5, 2017, ISSN 1752-9131, EISSN 1752-914X.  
Available at DOI: [10.1504/IJCVR.2017.10005890](https://doi.org/10.1504/IJCVR.2017.10005890)  
**Indexed by Scopus.**

28. Sushma Hans, S. Chakraverty, "Learning Aim Oriented Personalized E-learning," Intl. Journal of Innovative and Emerging research in Engineering, Vol 3(2), 2016, pp. 78-85, Sage publications, ISSN 2394-5494, EISSN 2394-3343.  
Web Link:  
[http://ijiere.com/\(X\(1\)S\(fldvr2j3jg4yhld1zbswuglb\)\)/FinalPaper/FinalPaperLearning%20Aim%20Oriented%20Personalized%20System170626.pdf](http://ijiere.com/(X(1)S(fldvr2j3jg4yhld1zbswuglb))/FinalPaper/FinalPaperLearning%20Aim%20Oriented%20Personalized%20System170626.pdf)  
**Indexed by Google Scholar, Scribd, Crossref. Impact factor SJIF: 3.47**
29. V. Khanduja, S. Chakraverty, O.P. Verma, "Watermarking Categorical Data: Algorithm and Robustness Analysis," Defence Science Journal, Vol. 65, No. 3, May 2015, pp.226-232. pISSN 0011-748X, eISSN 0976-464X.  
Available at:  
<http://dx.doi.org/10.14429/dsj.65.8444>.  
**Indexed by SCI Expanded, Scopus. Impact Factor 0.5 (JSR 2016)**
30. Shampa Chakraverty, Srishti Sharma, Ikshu Bhalla, "Emotion-Location Mapping and Analysis using Twitter," Journal of Information and Knowledge Management, Vol. 14, No. 3 (2015) 1550022 (16 pages). pISSN 0219-6492, eISSN 1793-6926.  
Available at: <https://doi.org/10.1142/S0219649215500227>  
**Indexed by Scopus, 2017 SJR: .19. H Index 15.**
31. Shampa Chakraverty, Anubhav Agarwal, Broteen Kundu, Anil Kumar, "An availability model for self-test and repair processes in fault tolerant FPGA systems," *Springer Nature Journal of Electronics (China)*, August 2014, Volume 31, [Issue 4](#), pp 271-283. pISSN 0217-9822, eISSN 1993-0615.  
Available at: <http://link.springer.com/article/10.1007/s11767-014-3168-9>  
**Indexed by Scopus, EI Engineering. Research Gate Journal Impact 2014 0.26**
32. Nikhil, Nilanjana, Shampa Chakraverty, Gurmeet Singh, "Adaptive Content Based Textual Information Source Prioritization," *ICTACT Journal on Soft Computing, Special Issue on Distributed Intelligent Systems and Applications*, October 2014, volume: 05, issue: 01, pISSN 0796-6561, eISSN: 2229-6956, pp 850-859.  
Available at: [http://ictactjournals.in/paper/IJSC\\_Splissue\\_Oct2014\\_Paper\\_1\\_829\\_835.pdf](http://ictactjournals.in/paper/IJSC_Splissue_Oct2014_Paper_1_829_835.pdf)  
**Indexed by IET Inspec, Index Copernicus, ICV Index 95.63.**
33. Sushma Hans, Shampa Chakraverty, Aditya Bindal, "An adaptive aco-driven scheme for learning aim oriented personalized e-learning," *ICTACT Journal on Soft Computing, Special Issue on Distributed Intelligent Systems and Applications*, October 2014, volume: 05, issue: 01, pISSN 0796-656, eISSN: 2229-6956, pp 850-859.  
Available at: [http://ictactjournals.in/paper/IJSC\\_Splissue\\_Oct2014\\_Paper\\_4\\_850\\_859.pdf](http://ictactjournals.in/paper/IJSC_Splissue_Oct2014_Paper_4_850_859.pdf)  
**Indexed by IET Inspec, Index Copernicus, ICV Index 95.63**
34. V. Khanduja, S. Chakraverty, O.P. Verma, Neha Singh, "A Scheme for Robust Biometric Watermarking Technique in Web Databases for Ownership Proof with Identification," *Active Media Technology, 10<sup>th</sup> Intl. Conf AMT-2014*, Poland, Warsaw, Aug 11-14, 2014, Vol. 8610, 2014, pp 212-225, Springer. **Lecture Note in Computer Science LNCS, pISSN 978-3-319-09911-8, eISSN 978-3-319-09912-5.**  
Available at:[http://link.springer.com/chapter/10.1007/978-3-319-09912-5\\_18](http://link.springer.com/chapter/10.1007/978-3-319-09912-5_18)  
**Indexed by: Scopus, IET Inspec-EI.**

35. S.Chakraverty, G.Rani, A.Bardhan, “Profiling E-Governance Users using Bi clustering,” *Intl. Journal of Engineering and Innovative Technology*, vol. 3, Issue 1, July 2013, ISSN: 2277-3754

Available at: [http://ijeit.com/Vol3/Issue1/IJEIT1412201307\\_99.pdf](http://ijeit.com/Vol3/Issue1/IJEIT1412201307_99.pdf)

**Indexed Google Scholar**

36. V. Khanduja, O.P. Verma, S. Chakraverty, “Watermarking relational databases using bacteria foraging algorithm,” *SpringerLink Journal of Multimedia Tools and Applications*, Oct 2013, pISSN 1380-7501, eISSN 1573-7721

Available at: [link.springer.com/article/10.1007/s11042-013-1700-9](http://link.springer.com/article/10.1007/s11042-013-1700-9)

**Indexed by SCI Expanded, Scopus, 2017 IF 1.541, 2017 H5 Index: 45.**

37. S. Chakraverty, Anubhav Agarwal, Amogh Agarwal, Anil Kumar, Anubhav Sikri, “Design Space Exploration for High Availability drFPGA based Embedded Systems,” *Advanced Machine Learning Techniques and Applications*, - AMLTA-2012, 1<sup>st</sup> Intl. Conf. on, Cairo, Egypt, pp. 234-243, Springer, **Lecture Notes in Computer Science LNCS** , ISSN 0302-9743.

DOI: 10.1007/978-3-642-35326-0\_24. Available at:

[http://link.springer.com/chapter/10.1007/978-3-642-35326-0\\_24#](http://link.springer.com/chapter/10.1007/978-3-642-35326-0_24#)

**Indexed by: Scopus. EI Engineering**

38. Upasna Sharma and Shampa Chakraverty , “A novel approach for providing fault tolerance to FPGA-based reconfigurable systems.” *Intl. Jour. of Engg. And Technology* 2012, Vol.4, No. 6, 2012, pp 821-825, e-ISSN : 0975-4024 p-ISSN : 2319-8613. Available at DOI:

[10.7763/IJET.2012.V4.492](http://dx.doi.org/10.7763/IJET.2012.V4.492)

**Indexed by Scopus (2009-2017)**

39. G. Rani and S. Chakraverty, “Survey of E-Governance Systems with focus on Development Approaches and Interface Quality”, in *Jour. Interscience Management Review (IMR) ISSN: 2231-1513* , Vol-2, Issue-2, pp. 34, 2012,

Available at: [http://interscience.in/IMR\\_Vol2Iss2/IMR\\_paper7.pdf](http://interscience.in/IMR_Vol2Iss2/IMR_paper7.pdf)

**Indexed Google Scholar.**

40. U. Pandey and S. Chakraverty, “A Review of Text Classification Approaches for E-mail Management”, *Intl. Jour. of Engineering and Technology (UAE)*, Vol. 3 No. 2, April 2011, pp 137-144. ISSN 2227-524X

Available at: <http://www.ijetch.org/papers/212-L024.pdf>

**Indexed by SCOPUS**

41. U. Pandey, S. Chakraverty, Rahul Jain, “Context Driven Technique for Document Classification”, *Intl. Journal on Network Security*, Pages 23-27, Vol. 2, No.2, April 2011. pISSN: 1816-353X, eISSN 1816-3548,

Available at: <http://hal.archives-ouvertes.fr/docs/00/75/21/49/PDF/196.pdf>

**Indexed by EI Compendex, SCImago**

42. Pandey, S. Chakraverty, B. Juneja, A. Arora, P. Jain, “Semantic document classification using lexical chaining and fuzzy approach”, *Intl. Journal of Soft Computing and Engineering*, Volume-1, Issue-5, Pages 367-371, November 2011, ISSN: 2231-2307

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**Indexed by UGC, Index Copernicus**

43. A. Kumar, S.Chakerverty. "Fault-Tolerant Embedded System Co-design." *Journal of Computing*, 2, no. 9, pp. 132-137, Sept. 2010. eISSN: 2151-9617  
**Indexed by Google Scholar.**
44. A. Bansal, B. Gupta, G. Khandelwal, S. Chakraverty, "Offline signature verification using critical region matching," *Intl. Jour. Of Signal Processing, Image Processing and Pattern Recognition*, vol. 2, No. 1, pp 57-70, March 2009, ISSN 2005-4254, **Indexed DOAJ, SCOPUS.**
45. A. Kuma, S. Chakraverty. "A Fuzzy-based Design Exploration scheme for High Availability Heterogeneous Multiprocessor Systems." *eMinds: Jour. on Human-Computer Interaction*, vol. 1, no. 4, pp. 1-22, 2008, ISSN: 16979613, eISSN: 18873022, **Indexed by CiteFactor**
46. S. Chakraverty, A. Kumar. "A rule-based availability-driven co-synthesis scheme." *Springer Journal Design Automation for Embedded Systems (Special Issue: SystemC)*, 11, no. 2-3, pp. 193-222, Aug. 2007, pISSN: 0929-5585, eISSN 1572-8080  
**Indexed SCI Expanded, Impact Factor: 0.516**
47. S. Chakraverty, C.P. Ravikumar and D. RoyChoudhuri, "A hierarchical genetic algorithm for hardware software cosynthesis with a stochastic approach," *Indian Electronics and Telecommunication ; Engineers (IETE) Journal of Research*, vol. 48, No. 5, pp 349-360, Sept-Oct. 2002, Publ: Taylor and Francis, ISSN 0377-2063  
**Indexed SCI Expanded, Scopus. 2017 Impact Factor 0.829**
48. S. Chakraverty and C.P. Ravikumar,"A stochastic framework for cosynthesis of real-time systems," *Languages and Tools for Embedded Systems LCTES 2000, Intl Conf. on*, vol. 1985, pp.96-213, 2001, **Lecture Notes in Computer Science LNCS** , ISSN 0302-9743. Available at DOI: [http://doi.org/10.1007/3-54045245-1\\_7](http://doi.org/10.1007/3-54045245-1_7).  
**Indexed by: Scopus, EI Engineering.**
49. S. Chakraverty and C.P. Ravikumar, "VLSI implementation of a Strongly Fault Secure ALU," *Elsevier J\Jour. of Comp. Science and Eng.* Vol 3, No.5, pp 282-288, Sept.1998.pISSN 1976-4677 eISSN: 2093-8020.  
**Indexed by Scopus, Science Direct.**

## B) BOOK CHAPTERS

1. Sunny Rai, Shampa Chakraverty, Devendra Tayal, "Metaphors in Business Applications: Modelling Subjectivity Through Emotions for Metaphor Comprehension," Chapter In the, "Natural Language Processing for Global and Local Business." Editors: Fatih Pinarbasi and M. Nurdan Taskiran, pp. 134-153, IGI Global (publishers), 2021, DOI: 10.4018/978-1-7998-4240-8.ch006.
2. Mala Saraswat, Shampa Chakraverty, "Emotion distribution profile for movies recommender systems, Lecture Notes in Networks and Systems (LNNS, Volume 204), Online on June 2021 and in Proc Communication and Intelligent Ssyetms 2021, pp 365-373.
3. Sunny Rai, Shampa Chakraverty, Devendra Tayal, "Metaphor Interpretation: Understanding the role of subjectivity through emotions. Chapter In the, "Natural Language Processing for Global and Local Business." In eEditorial Discovery, IGI Global (publishers), Sept 2020.

4. Sunny Rai, Shampa Chakraverty, "Effect of Classifiers on Type-III Metaphor Detection," *In: Towards Extensible and Adaptable Methods in Computing*, Eds: Shampa Chakraverty, Anil Goel, Sanjay Mishra, Publ: Springer Nature, pp-241-249, ISBN 978-981-13-2348-5, Dec 2018.  
Available at: <http://www.springer.com/gp/book/9789811323478>.
5. Vidhi Khanduja, S. Chakraverty and O.P. Verma, "Ownership and Tamper detection of Relational Data: Framework, Techniques and Security Analysis", Chapter in the book titled, *Embodying Intelligence in Multimedia Data Hiding* DOI: 10.15579/gcsr.vol5.ch2, GCSR Vol. 5, pp. 21-36, 2016 Pub: **Science Gate Publishing**, pISBN: 978-618-81418-8-9, eISBN: 978-618-81418-9-6.
6. A.Kumar, S. Chakraverty, "A Fuzzy Cuckoo Search driven methodology for design space exploration of distributed multiprocessor systems," Book Title "Embedded and Real Time System Development: A Software Engineering Perspective," Publ **Springer**, 2014, ISBN 978-3-642-40887-8. Available at:  
[http://link.springer.com/chapter/10.1007/978-3-642-40888-5\\_5](http://link.springer.com/chapter/10.1007/978-3-642-40888-5_5)
7. A.Kumar and S. Chakraverty, "Service Availability Driven Re-configurable Embedded System Design" *Book Chapter in Information Intelligence, Systems, Technology and Management*, S. Dua, S.Sahni and D.P. Goyal (eds), pp 265-276 and in *Proc.5th Communications in Computer and Information Science*, vol. 141, **Springer**, Berlin Heidelberg, March 2011, ISBN: 978-3-642-19423-8  
Available at:[http://link.springer.com/chapter/10.1007/978-3-642-19423-8\\_28](http://link.springer.com/chapter/10.1007/978-3-642-19423-8_28)

## C) CONFERENCE PUBLICATIONS

### (i) YEAR-WISE INTERNATIONAL CONFERENCES

#### Year 2022

1. Rahilla Khan, Shampa Chakraverty et al., " Volunteering awareness analysis with focus on online digital platforms for volunteering awareness in India," Intl conf on Artificial Intelligence and Machine Learning, 27-29 Jan 2022.
2. Divya Gupta, Shampa Chakraverty et al., "Concern levels during COVID-19: An AI-based approach for social media analysis," In Proc. of 7th Intl Conf on Intelligent Information Technology, ICICT-2022, Feb 25-27 2022 and in accepted for publication in Algorithms for Intelligent Systems AIS Springer series (<https://www.springer.com/series/16171>).

#### Year 2021

3. R. Wadhavan, Tanuj, Shubham Singh, Shampa Chakraverty, "Multi-Attributed and Structured Text-to-Face Synthesis" that is published in 2020 IEEE International Conference on Technology, Engineering, Management for Societal impact using Marketing, Entrepreneurship and Talent (TEMSMET), *rXiv - CS - Computer Vision and Pattern Recognition (IF)*, **Pub Date : 2021-08-25**, DOI: [arxiv-2108.11100](https://arxiv.org/abs/2108.11100)

#### Year 2020

1. Mohapatra, Soumya and Agnihotri, Shikhar and Garg, Apar and Shah, Praveen and Chakraverty, Shampa, Incorporating Localised Context in {W}ordnet for Indic Languages, Proceedings of the LREC 2020 Workshop on Multimodal Wordnets (MMW2020), May 2020, Marseille, France, Publ: The European Language Resources Association (ELRA), <https://www.aclweb.org/anthology/2020.mmw-1.2>, ISBN: 979-10-95546-41-2

### **Year 2019**

2. Bhatia, K., Chakraverty, S., Nagpal, S., Poddar, A., Lamba, M., “A Novel Approach for Project’s Technical and Non-Technical Skill Extraction,” In: 2019 IEEE International Conference on Computing, Power and Communication Technologies (GUCON-2019), Accepted for presentation and publishing in IEEEExplore, Delhi, India, 27-28 Sept 2019.
3. Kanika, S. Chakraverty, P. Chakraborty, S. Agnihotri, P. Bansal and S. Mohapatra, “Linking Classroom Studies with Dynamic environment,” International Conference on Computing, Power and Technologies (GUCON), Noida, India, September 27-28, 2019. Accepted for presentation and publication in IEEE Xplore)
4. Bhatia, K., Chakraverty, S., Nagpal, S., Kumar, A. “Project Portfolio Management (PPM) in Education Domain using Skill Matcher Model. In: International Conference on Emerging Trends in Information Technology (ICETIT), In Springer book series, Lecture Notes in Electrical Engineering, (LNEE), Delhi, India, 22nd June 2019, Indian Inst of Technology and Management IITM, Janak Puri, New Delhi and Springer Cham, Lecture Notes in Electrical Engineering LNEE, Vol 605, pp 509-520, Print ISBN: 978-3-030-30576-5, Online ISBN 978-3-030-30577-2, Sept. 2019.  
DOI: [https://doi.org/10.1007/978-3-030-30577-2\\_45](https://doi.org/10.1007/978-3-030-30577-2_45)
5. Mala Saraswat, Shampa Chakraverty, “Review based Topic distribution profile for Recommender Systems ”, Intl Conf on Data Sciences, Security and Applications (ICDSSA 2019), 7-8 March, 2019, (LNCS -EE – ISSN -1876-1100)
6. Kanika, S. Chakraverty, P. Chakraborty, S. Agnihotri, S. Mohapatra and P. Bansal, KELDEC: A Recommendation System for Extending Classroom Learning with Visual Environmental Cues. Proceedings of the 3rd International Conference on Natural Language Processing and Information Retrieval, Tokushima University, Tokushima, Japan. June 28-30, 2019, ACM Digital Library, pp 99-103, ISBN: 978-1-4503-6279-5 doi:[10.1145/3342827.3342849](https://doi.org/10.1145/3342827.3342849)
7. Anuradha Yadav, Shampa Chakraverty, Ritu Sibal, “Implicit Trust Propagation”, Intl Conf on Data Sciences, Security and Applications (ICDSSA 2019), 7-8 March, 2019, (LNCS -EE – ISSN -1876-1100).
8. Kanika Tehlan, Shampa Chakraverty *et al*, “Enriching WordNet with Subject Specific Out of Vocabulary Terms using Existing Ontology” Presented in Third international conference on Smart systems, innovations in computing. 22-23 January, 2019 Manipal University, Jaipur and In *Data Engineering for Smart Systems* (pp. 205-212). Springer, Singapore.

### **Year 2018**

9. Sunny Rai, Apar Garg, Shampa Chakraverty, “Understanding the role of visual features in Emoji Similarity,” Third International Conference on Intelligent Information Technologies (ICIIT 2018) College of Engineering Guindy (CEG), Anna University, Chennai, India during

December 11-14, 2018 and CCIS, Vol 941, pp 89-97, Springer Singapore, Print ISBN 978-981-13-3581-5, Online ISBN: 978-981-13-3582-2,

10. Aseem Mittal, Shampa Chakraverty, "IoT based Weather and Location Aware Recommendation System," presented in IEEE Intl Conference on Cloud Computing, Data Science and Engineering Confluence 2018, New Delhi, PP: 636 - 643.

#### **YEAR 2017**

11. Gaurav Saxena, Shampa Chakraverty, "Relation Extraction and enriching structural knowledge in wikipedia article," INDIACom – 2017, 01st - 03rd March, 2017 at Bharati Vidyapeeth, New Delhi (INDIA) and publication ISSN 0973 - 7529 and ISBN 978-93-80544-24-3 serials.
12. Mala Saraswat, Shampa Chakraverty, "Evaluation of Emotion based Recommender System," INDIACom – 2017, 01st - 03rd March, 2017 at Bharati Vidyapeeth, New Delhi (INDIA) and publication in the Pre - Conference Proceedings having ISSN 0973 - 7529 and ISBN 978-93-80544-24-3 serials

#### **Year 2016**

13. Sunny Rai, Shampa Chakraverty, Devendra Tayal, "Supervised Metaphor Detection using Conditional Random Fields," Fourth Workshop on Metaphor in Natural Language Processing, Association for Computational Linguistics, NAACL-HLT 2016 (Top ranked Conference), San Diego, California, USA, June 12-17, 2016 pages 18–27.  
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Doi: 10.1109/ICMETE.2016.33.
15. Srishti Sharma, Shampa Chakraverty, "An Approach to Track Context Switches in Sentiment Analysis", International Conference on Advanced Computing and Intelligent Engineering (ICACIE), C.V. Raman Col of Engg, Bhubaneshwar, Orissa, India, 15-16 Dec, 2016.  
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16. Saraswat, M., Chakraverty, S., Mahajan, N., and Tokas, N. (2016, October). On using reviews and comments for cross domain recommendations and decision making. In Computing for Sustainable Global Development (INDIACom), 2016 3rd International Conference on (pp. 3656-3659). IEEE.  
web link : <http://ieeexplore.ieee.org/document/7724944/>
17. Gaurav Saxena, S. Chakraverty, "Generating word clusters by graph clustering using Hearst Patterns," IEEE India Intl Conf on Information Processing, 12-14 Aug, 2016.  
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18. Sushma Hans, S. Chakraverty, "A Skill based Pairing Scheme for Effective Collaborations," IEEE India Intl Conf on Information Processing, 12-14 Aug, 2016.  
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#### **YEAR 2015**

19. Mala Saraswat, Shampa Chakraverty, "Exploiting Rich Side Information Sources of User and Items for Cross Domain Collaborative Recommendation," in Proc. of IEEE International Conference on Soft Computing Techniques and Implementations, pp, 6-10, 8-10 Oct 2015. ISBN: 978-1-4673-6792-9, Available at:  
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20. Anuradha Yadav, Shampa Chakraverty, Ritu Sibal "A Survey of Implicit Trust on Social Networks ", in Proceedings of International Conference on Green Computing and Internet of Things (ICGCIoT 2015), 8-10 Oct, 2015, pp 1511-1515, Available at:  
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#### YEAR 2014

22. Kanchan Lata, Shampa Chakraverty, "Handling Data Incompleteness using Rough Sets on Multiple Decision Systems", *IEEE Intl. Conf. on Data Mining and Intelligent Computing, ICDMIC 2014*, 5-6 August, 2014, New Delhi, IEEExplore DOI: [10.1109/ICDMIC.2014.6954243](https://doi.org/10.1109/ICDMIC.2014.6954243), pp 1-6.. Available at:  
  
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#### YEAR 2013

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26. Arjun Singh, Ashish Sachdeva, Shampa Chakraverty, "A collaborative software development model based on formal concepts analysis and stable matching," *IEEExplore Informatics, Electronics and Vision (ICIEV-2013) 2<sup>nd</sup> IEEE Intl Conf on*, Bangladesh, Pages 1-6, May 17-18, 2013, print ISBN: 978-1-4799-0397-9, DOI [10.1109/ICIEV.2013.6572676](https://doi.org/10.1109/ICIEV.2013.6572676). Available at:  
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27. Amit kumar Singh, Dhruv Bansal, Ishan Bansal, Shampa Chakraverty, "Extracting important tweets of a use: a rough set approach," *IEEEExplore Confluence-2013, The Next Generation Information Technology Summit on the theme: Mega Trends of IT (S.M.A.C) Intl. Conf. on*, 26-27 September, Amity University, NOIDA, U.P., India. Available at: <http://ieeexplore.ieee.org/xpl/login.jsp?tp=&arnumber=6832332>
28. V. Khanduja, S. Chakraverty, O.P. Verma, Sahil Goel, Rakshita Tandon, "A Robust Multiple Watermarking Technique for Information," *IEEEExplore Advanced Computing, IEEE Intl Conf. on*, pp.250,255, Feb 21-22, 2014, Gurgaon, India, doi: 10.1109/IAdCC.2014.6779329, Available at IET digital library:  
  
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29. V. Khanduja, S. Chakraverty, O.P Verma, "Robust watermarking for categorical data," *IEEE Intl Conf of Control, Computing, Communication and Materials-ICCCCM-2013*, August 3-4, 2013, UIT-Allahabad, India (Abstract).
30. S. Chakraverty, "Overlapped Concepts Pedagogy for Advanced Computer Architecture," *Springer Proceedings of IUCEE Intl Conf of Transformations in Engineering Education*, 2014, 16-18 Jan, Hubli, Karnataka, 2014.  
<http://www.springer.com/engineering/book/978-81-322-1930-9>

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31. A Kumar, S. Chakraverty, "User centric electronic design automation for automobiles electronic," *Workshop on System Level-Design of Automotive Electronics/Software, SLDAES 2012 in the 49<sup>th</sup> Design Automation Conference*, San Fransisco, 3-7 July, 2012. Computer Science Conference Rank-1 in the domain of Hardware and Abstraction.
32. S. Chakraverty, A. Kumar, I. Maheshwari, M. Goyal, A. Vadhera, "Design Exploration for Fault Tolerance on FPGA," *Intl. Workshop on System Level-Design of Automotive Electronics/Software SLDAES in the 49<sup>th</sup> Design Automation Conference -2012* in, San Fransisco, 3-7 July, 2012. Computer Science Conference Rank-1 (Hardware and Abstraction).
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34. U. Pandey, S. Chakraverty et al, "Semantic Based Category-Keyword List Enrichment for Document Classification", *Springerlink Soft Computing, Artificial Intelligence and Applications, 1<sup>st</sup> Intl. Conf. on*, Delhi, India, 25-27th May 2012. Available at:  
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35. Shampa Chakraverty, Sushma Hans, Vaibhav Mittal, "ACO-driven Personalized E-learning with Perspectives and Learning Aims," *In Proc. of 11th Intl Conf on e-Learning, e-Business, Enterprise Information Systems, and e-Government - EEE'12*: July 16-19, 2012, USA.
36. G. Rani, S. Chakraverty, D. Anand, B. Singla, "Dynamic Recommendation System for E-Governance," *In Proc. of 11th Intl Conf on e-Learning, e-Business, Enterprise Information Systems, and e-Government - EEE'12*: July 16-19, 2012, USA.

37. Charu Wahi, Sanjay Kumar Sonbhadra, Shampa Chakraverty, V.Bhattacharya, "Effect of Scalability and Mobility on On-Demand Routing protocols in a Mobile Ad-Hoc Network," *In Proc. of 3rd Intl Conf on Software and Computing Technology, ICSC2012*, Kuala Lumpur, Malaysia, December 21-22, 2012.
38. Charu Wahi, Sanjay Kumar Sonbhadra, Shampa Chakraverty, V.Bhattacharya, "Performance evaluation of MANET routing protocols for mobility using QualNet," *In Proc. Intl. Conf. on Cloud Computing and e-Governance 2012, ICCEG 2012*, Thailand, 26-18 July, 2012.

### **EARLIER THAN 2012**

39. Sushma Hans, S. Chakraverty; "Classification of e-learning on Personalization: A Survey", *In Proc. of Intl. Conference on Communication Languages and Signal Processing in Reference to 4G Technologies*, 24-25 Jan, 2012 (ICCLSP-2012).
40. G. Rani & S. Chakraverty, "Boosting User Interactivity in E-Governance" *In Proc. of Intl. Conference on Communication Languages and Signal Processing in Reference to 4G Technologies*, 24-25 Jan, 2012 (ICCLSP-2012).
41. U. Pandey, S. Chakraverty, M. Sharma, R. Jain, "Context Based Document Classification using Support Vector Machine", *In Proc. of Intl. Conference on Communication Languages and Signal Processing in Reference to 4G Technologies*, 24-25 Jan, 2012 (ICCLSP-2012).
42. A.Kumar and S Chakarverty, "Reliable hardware software codesign", *Presented in 9th Intl Conf on mobile systems, applications and services, Mobysys2011*, PhD Forum, June 28 to July 1, 2011, Washington DC USA.
43. A.Kumar, S. Chakerverty. "Fuzzy Logic based GA driven Reliable Multiprocessor System Design Optimization." *4th Workshop on Parallel Architectures and Bioinspired Algorithms PABA 2011*, Galveston Island, Texas, USA, Oct. 10-14, 2011.
44. Anil Kumar, S. Chakerverty. "Co-synthesis for graceful degradation." *Presented in IEEE Intl. Integrated Reliability Workshop (IIRW)*, Stanford Sierra Conference Center South Lake Tahoe, CA, USA, 16 Oct - 20 Oct 2011.
45. Anil Kumar and S. Chakarverty, "Design optimization for reliable embedded system using cuckoo search", *IEEEExplore Electronics Computer Technology (ICECT2011)*, *Intl. Conf. on*, Kanyakumari, India, April 8 -10, 2011. Available at:  
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51. S. Chakraverty, K. Jain and K. Sanghi "A novel fuzzy approach for providing QoS control in limited energy Real-Time systems", *Proc. of IEEE Conf. of VLSI Design, Hyderabad, India*, 3-7 Jan, 2006.
52. Alka Munjal, R. Malik and S. Chakraverty, "Advanced Forward Error Correction based steaming using RTSP and RTP," *Proc. of IEEE Advanced Intl. Conf. on Telecommunications-AICT '06*, Guadeloupe, French Caribbean Feb 19-22, 2006.
53. Alka Munjal, R. Malik and S.Chakraverty, "Offline Adaptive Forward Error Correction (AFEC)for Reliable Multicast", *Proc. IEEE Intl. Conf. on Networking, Sensing and Control-ICNC'06*, Florida, U.S.A., April 23-25, 2006.
54. S. Chakraverty, A. Batra and A. Rathi, "Directed heuristic convergence-A fast and novel approach to Steiner tree construction", *Proc. of IFIP Intl. Conf. on Very Large Scale integration VLSI-SOC 2006*, October 16-18, Nice, France, 2006.
55. S. Chakraverty, C.P. Ravikumar and D.Roychoudhuri, "Synthesis of performance critical heterogeneous computing systems using genetic algorithm under a stochastic framework," *Procs of Intl. Conf. on Intelligent Computing and VLSI*, Kalyani University, West Bengal, pp.123-128, Feb.2001.
56. S. Chakraverty, "An availability model for cosynthesis of Real time systms", *Proc. of IEEE VLSI Design and Test 2003*, I.I.Sc Bangalore India, pp 152-160, Aug 2003.
57. Chakraverty, C.P. Ravikumar and D.Roy Choudhuri," An evolutionary algorithm for cosynthesis of Real-Time systems," *Proc. of IEEE & ASP-DAC conference on VLSI Design-2002*, Bangalore, India, pp.251-259, 2002. (DAC Rank1, VLSI Design listed)
58. S.Chakraverty and C.P. Ravikumar, "A stochastic scheduling algorithm for real-time systems," *Proceedings IEEE VLSI Design and Test(VDAT-2001)*, Bangalore, pp.189-194, August 2001.
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61. S.Chakraverty, "Hardware Software cosynthesis of a multiprjocessor system for real-time applications," *Proc. of Intl Workshop on VLSI Design and Test VDAT-1998*, New Delhi,India, Aug 1998.
62. C.P Ravikumar and S.Chakraverty,"VLSI Implementattion of an FIR Filter," *Procs. of Intl. Conf. on Signal Processing and Communications SPCOM-1993*, IISc Bangalore, pp.99-102, Jan.1993.

## (ii) NATIONAL CONFERENCES

63. S. Chakraverty, "VLSI Education, A synergetic approach", *Proc. of ISTE Workshop on Challenges in Technical Education - 2004*, Dec 18-24, N.S.I.T. New Delhi.
64. S. Chakraverty, "Challenges in VLSI education: A survey of students' perspectives" *Proc. of National Conf. on Challenges in Technology and Management in Knowledge Millennium*, Jind, India, March 2006.
65. N. Gupta, D.Kumar, V.Sood and S. Chakraverty, "Network Traffic management using optimized caching algorithms," *Procs. of National Seminar on Intelligent Computing and Software Engineering(ICSE-2000)*, IIT-Benarus Hindu University, pp192-195,2000
66. S. Chakraverty, "Issues in Embedded System Design" *Proc. of workshop on VLSI and Embedded Systems, M.N.I.T., Jaipur*, Feb 2004.
67. S. Chakraverty and C.P Ravikumar, "Genetic Algorithm for synthesis of performance critical real-time systems," *Proc. of National Seminar on Applied Systems Engineering and soft Computing(SASESC-2000)*, Dayalbagh University, Agra, pp.281-288, Feb2000.
68. P. Malik, Y. Bhaskar, S. Chakraverty, "A neural network based application to forecast vegetable prices in regulated markets," *Proc. ISTE Conf. on Technology on Rural India: Challenges and Perspectives*, pp 35-40, New Delhi, 2008.
69. G. Pagrut and S. Chakraverty, "A Question answering system for rural development," " *Proc. ISTE Conf. on Technology on Rural India: Challenges and Perspectives*, pp 76-82, New Delhi, 2008.

#### **D) BOOKS AND CBT PACKAGES PUBLISHED**

1. S. Chakraverty, K. Bajaj, "Computer organization and assembly," Publisher: Knowledge Business Solutions, N.I.I.T. 2005
2. S. Chakraverty, "Laboratory experiments on electronic circuits," Standard Publishers, 1996, pp 1-207.
3. S. Chakraverty, "Embedded system design," EDUSAT, Delhi, 2010
4. S. Chakraverty, "Advanced computer architectures," EDUSAT, Delhi, 2010
5. S. Chakraverty, "Operating systems," Institution of Engineers, 1997
6. S. Chakraverty, "Computer graphics fundamentals," Institution of engineers, 1997

#### **IV) BOOKS EDITED**

1. Book "Towards Adaptable and Extensible Methods in Computing," Eds: Shampa Chakraverty, Sanjay Mishra, Anil Goel, Springer Nature, 2018.
2. Guest Editor for ICTACT Journal of Soft Computing Special Issue on Distributed Intelligent Systems and Applications, 2014.

#### **V) CONTRIBUTION TO MAGAZINES, NEWSPAPERS & RADIO PROGRAMS**

1. Shampa Chakraverty, Invited article "Towards Innovative Pedagogy in the Engineering Classroom" *Higher Education Review*, Invited article, Sept 2014, pp 40-41. Available at: <http://www.theher.in/magazine/>
2. All India Radio (AIR) Talk between S. Chakraverty and G.S. Tuteja, on program SANVAAD on "Developments in Higher Education," 5 Nov, 2015
3. Talk on AIR program RADIOSCOPE "Latest Developments in the field of Computer Science and Information Technology", 6 Dec, 2013
4. Shampa Chakraverty article on Artificial Intelligence, *MidDay* May 15, 2013

5. AIR Panel Discussion on ‘Science, Technology and new Innovation Policy-2013’, 19 Jan, 2013. Participants: Krishan Lal (INSA), Shampa Chakraverty (NSIT), Neeraj Sharma (DST), Vijay Kapoor, Vijay Kranti
6. Shampa Chakraverty article on New Age Engineering, Times of India May 21, 2012
7. AIR Interactive Interview on “Science and Technology” in INDRAPRASTHA channel 29 Dec, 2012.

## **VI) CONSULTANCY / INDUSTRIAL PROJECTS COMPLETED**

1. Applied for SERB-POWER project in AICTE, on IndoNormNet – a knowledge base of social norms in Digital India, Oct 2021. Awaiting result.
2. AICTE Grant of Rs 5.00 lakhs for conduct of International Conference “Towards Extensible and Adaptable Methods in Computing – TEAMC 2018,” during March 26-28, 2018.
3. NSIT project, “Development of Adaptable Online Feedback System based on Outcome Based Education for NSIT”, 2015-17. The system developed was developed and implemented successfully on Amazon Web Services and EC3 cloud computing platform. The project was developed inhouse with a rolling team of computer engineering students under my leadership. The novelty in this system was that besides fixed feedback points for teaching and learning based on the objectives of OBE, each faculty member could add questions specific to his/her own subject and pedagogical methods adopted during the semester. It incorporated adequate authentication at various levels, offered a seamless GUI and generated reports with good visualization. This feedback mechanism turned out to be a huge success and appreciated by faculty. It was later integrated into the Computer Management System of the Institute and is running successfully.
4. DST Project, “ Fault Tolerant reconfigurable computing”, Deptt of Science & Technology, Women Scientist Scheme WSS, Collaborator as Faculty Guide for PI Ms Upasna Sharma, 2009-2011. This work resulted in the publication of two research papers:
5. Principal Investigator, “Development of a Center for Multimedia”, AICTE sponsored MODROBS project, 1996-99, 12 lakhs. The Graphics Lab was upgraded with high-end state of the art SGI ONYX and O2 systems and multimedia software. As a result of these resources, several projects centred around graphics and multimedia were successfully completed. It also provided laboratory support for the relevant theoretical courses.
6. Consultancy to Vikas Publishers for the design of their publications in the area of computer science, 2009.

## **VII) INVITED/ KEYNOTE LECTURES**

1. Keynote speaker during 12th International Conference CONFLUENCE-2022, on the theme of “Cloud Computing, Data Science and Engineering” scheduled on 27<sup>th</sup> - 28<sup>th</sup> Jan 2022

2. Keynote speaker, 3<sup>rd</sup> IEEE ICAC3N-21 (Intl Conf on Advances in Computing, Communication, Control and Networking) 17-18 Dec 2021.
3. Delivered lectures as Resource Person in AICTE Training and Learning (ATAL) Academy Online Elementary FDP on "Research Trends in Computer Vision and Natural Language Processing" from 19/07/2021 to 23/07/2021 at The NorthCap University
4. Webinar on "Rough Set Theory – A paradigm for approximate computing", 20 June 2020, open audience on Youtube
5. Keynote Lecture on "New Paradigms of Computing" during National Conference on Innovative Computing 20 April, 2019 in IMS Engineering College, Gaziabad.
6. Invited Lecture, "Pedagogical Innovations in Engineering Education," Higher Education Summit, Confederation of Indian Industries (CII), 18 Dec 2018.
7. Keynote address "Machine Learning techniques for Metaphor Processing" Department of Computer Science and Engineering, at Manav Rachna International Institute of Research & Studies, Faridabad, 15th Feb, 2019 during IEEE International Conference on Machine Learning, Big Data, Cloud and Parallel Computing: Trends, Perspectives and Prospects, Com-IT-Con 2019
8. Invited Lecture on, "Perspectives in Pedagogy" Indian Society of Training and Development, during conference on *Smart Learning for Sustainable Entrepreneurship*, 8-9 Feb, 2019
9. Invited lecture in FDP, "Machine Learning techniques for NLP" Jaypee Institute of Technology, NOIDA, 27 April, 2018
10. Chairperson, Panel Discussion on "Opportunities in Education for B2B model," Startup India, 19 Jan 2018
11. Invited lecture on "Natural Language Processing," Amity University, 18 April 2018
12. Lecture on "Hidden Markov Models and Metaphor Detection", 13th June, 2017, Expert Lecture during FDP on Machine Learning and Data Analytics, IMS Engineering College, Gaziabad
13. Lecture, IPR Laws, Technia Inst of Adv Studies, 26 Feb, 2016. Technical session chair, National Conference on "Cyber Security Issues and Challenges" on 26th Feb, 2016.
14. Lecture on "Technological Protection Measures and Anti-Circumvention Laws" IPR Awareness workshop, 22-23 Jan, NSIT
15. Keynote speaker on "Legal aspects of Digital Watermarking" Intl Conf on Global Information and Business Strategies , 16-19 Dec 2016, Track" Information Technology" Geetarattan
16. "Digital Watermarking of Databases", FDP on Digital Image Processing and Data Science, ABES Engg college, Dept of Computer Engg, 9-10Jan 2017
17. "Reconfigurable FPGA as a paradigm for parallel processing", FDP ABES Engineering college, Dept of IT, 6-10 Feb on "High Performance Computing"

18. "Computational Complexity of Parallel Algorithms" 3 sessions. (7 hours) FDP in "Computational Complexity".20-15 Feb, 2017, in Rajkumar Goel Inst of Tech and Management, Gaziabad.
19. *Design Patterns*, Expert Talk in United Institute of Technology, Allahabad, 4 August, 2013.
20. *Rough Sets based Information Systems*, Invited lecture scheduled for Faculty Development Program for Bhartiya Vidyapeeth College of Engg., on March 1, 2013.
21. *Artificial Intelligence and Networks*, keynote address in Intl Conf on "Extropianism – Convergence of human values and technology", Ansal University, New Delhi, 19 Jan, 2013.
22. *Nature Driven Heuristics for High Level Synthesis and Co-synthesis*, Keynote address in AMLTA-2012, Cairo, Egypt, Dec 9, 2012
23. *Design exploration for High Performance Multiprocessor Systems on FPGAs*, Workshop on VLSI and Embedded Systems, Northern India Engineering College, Feb 2012.
24. *Current Research in Reconfigurable Computing*, Invited Lecture in Special Development Program for faculty, Ambedkar Inst of Technology, New Delhi, Jan 2012.
25. *Innovation and Entrepreneurship: Trends in India*, Inaugural session of ISTE chapter, Amity Institute of Technology, New Delhi, June 2011.
26. *Introduction to Field Programmable Gate Arrays*, Intl conf MERICET New Delhi, Sept 24, 2011
27. *Embedded system design*, Workshop on Embedded Systems, Sri Ganpati Institute of Technology, U.P., 2010
28. *Comparison of modern computing platforms: ASICs, ASIPs, GPPs and FPGAs:* Workshop on Embedded Systems, Guru Tegh Bahadur Institute of Technology, 2010.
29. *Discrete event simulation tools and techniques*, Indian Society for Technical Education STTP course for faculty on Modeling and Simulation, Dec 2006.
30. *CAD of VLSI Systems*, Indian Society for Technical Education STTP course for faculty on CAD and Optimization, Nov 2006.
31. *Stochastic Scheduling for multiprocessor systems*, Workshop on VLSI systems for Embedded Systems, MNIT Jaipur, 2003.
32. *Programming with IV Gen languages*, Technical staff training program, Industrial Research and Development cell, NSIT 2004.
33. *A synergetic approach towards a syllabus for UG course on Information Technology*, Workshop for Development of draft syllabus for B.E. Information Technology, N.S.I.T, Faculty of Technology, Delhi University, June 2002.
34. *Hardware-software infrastructure for Real Time Systems Lab*, Workshop for Development of Laboratories at NSIT, 18-19 NSIT, New Delhi, June2000.
35. *Windows Programming*, Continuing Education Program course,NSIT, 1997.

36. *Development of a digitized library*, workshop on Library automation, NSIT, May 1997.
37. *Programmable devices*, Workshop on development of Computer Technology Lab and Software Lab, IIT- Delhi, Nov 18-19,1994.
38. *Fault Tolerant ALU design*, Workshop for Fault Tolerant Computing at Electrical Engg Dept, IIT Delhi,1992.

## VIII) ORGANIZATION OF INTERNATIONAL AND NATIONAL CONFERENCES

### a) WITHIN INDIA IN OWN ORGANIZATION - NSIT

1. Session Chair, DELCON 2022, 11-13 Feb 2022
2. General Chair, International Conference on “Towards Extensible and Adaptable Methods in Computing – TEAMC 2018, 26-28 March 2018, NSIT, New Delhi
3. Chairperson HACKEAM-2018, a 3-phase all-India hackathon during Nov-Feb 2017 with final hackathon held during 10-11 Feb 2018 at NSIT, New Delhi,
4. Chairperson and speaker, Workshop on “Project to Paper, How to write a Scientific paper,” 4 Nov, 2017
5. Chairperson and speaker, workshop on “Research Methodologies and Scientific Writing,” March 15-17, 2017
6. Coordinator, Workshop on Blockchain Technologies, 28-29 October, 2017
7. Chairperson and speaker, Short Term Course on “Information Security and Digital Forensics”, 5-7 June, 2017
8. Chairperson and Speaker, Short Term Course on “Intellectual Property Rights”, 23-24 Jan, 2016
9. Conference Secretary, National Conference on “Technology for Rural India: Challenges and Perspectives” , Indian Society for Technical Education (ISTE) Day Conference-2008, May 31 and June 1, 2008.
10. Convener, Industry-Inst. Workshop on “Strengthening Technical Education through Institute-Industry Partnership”, Delhi Secretariat, Jointly by Netaji Subhas Institute of Technology and Deptt. Of Training and Technical Education, Govt Of India, 24th May, 2007.
11. Faculty Coordinator, British Council’s Springboard Women’s Development program Workshop, 13/12/2005,17/1/2006, 2/2/2001 and 21/2/2006
12. Faculty coordinator and speaker, Indian Society for Technical Education (ISTE) Short Term Training Program on “Modeling and Simulation”, Dec 4-15,2006.
13. Faculty coordinator and speaker, ISTE Short Term Training Program on “CAD and Optimization”, Nov 20-1Dec, 2006.
14. Faculty Coordinator, National Workshop Xilinx University Program (XUP) on “FPGA Design and Embedded Systems Design,” NSIT, May 3-6.2005.

15. Convener, Workshop Series on “Course contents the B.Tech, IT Course ”,2001 by Faculty of Technology, Delhi University. The workshop resulted in initiation of the BE (IT)course of Delhi University.
16. Program Chair, Workshop “Development of laboratories in the computer Engineering Division of NSIT”, June 18-19, 2000.
17. Coordinator, Multimedia-96 exhibition Confederation of Indian Industries CII, Hotel Taj Palace, and Tech Bazar, 1995 exhibition Confederation of Indian Industries CII, Hotel Taj Palace.

**b) WITH OTHER COUNTRIES**

1. Invited Member, Technical Committee, Natural Language Processing and Information Retrieval, NLPPIR 2019.
2. Invited as special Reviewer for Projects submitted to Chilean National Science and Technology Commission (CONICYT) Chile, 2018
3. Expert for Indo-French Center for Promotion of Advanced Research (IFCPAR) / CEFIPRA Raman Cherpak Fellowship, final selection of candidates in Engineering sciences and Mathematics and computation, 22 August, 2017
4. Member, Expert Committee for evaluation of proposals submitted to Centre National de la Recherche Scientifique (CNRS) France, Institut National de Recherche en Informatique et en Automatique (INRIA) France and Department of Science and Technology (DST) India, initiated targeted program in Information and Communication Science and Technology, 20 December, 2016
5. Expert for Indo-French Center for Promotion of Advanced Research (IFCPAR) CEFIPRA Raman Cherpak Fellowship, final selection of candidates in Engineering sciences and Mathematics and computation, 24 August, 2016
6. Expert member in Indo-French CEFIPRA-Airbus Group Aerospace Programme Joint Selection Committee Meeting For Evaluation of Full Proposals. 3rd June, 2016
7. PC member, Session Chair in IEEE,ACM,WIC Active Media Technologies, 2014
8. Invited Speaker, PC member and Track Chair, Special session on Reconfigurable Computing, Advanced Machine Learning Technologies and Applications, AMLTA 2012, Egypt
9. Member, Program Committee, Soft Computing for Industrial and Environmental Applications, SOCO-2012, Track: Social Network and Graph Analysis with Soft Computing, Ostrava, Czech Republic, 2012

**c) WITHIN INDIA - OTHER ORGANIZATIONS**

1. NSIT faculty guide of NSIT for SMART INDIA HACKATHON -2019.
2. Delhi-Gov NSIT coordinator, NSIT faculty guide and Judge, AICTE Smart India Hackathon 2018
3. Program Chair, International Conference on Information, Communication and Computing Technology ICCT-2017, 13 May, 2017
4. Member, Program Committee, Computational Intelligence and Communication Networks, CICN-2012

5. Member, Program Committee, Communication Systems and Network Technologies, CSNT-2012
6. PC member, IEEE Intl Cong on Data Mining and Intelligent Computing, 2014
7. PC member, Session Chair, Intl Conf on Control, Computing, Communication and Materials-ICCCCM-2013 conference, UIT Allahabad.
8. Keynote Speaker and Session Chair, Intl Conference “Extropianism – Convergence of Human Values and Technology”

## IX) MEMBERSHIP OF PROFESSIONAL BODIES

1. ISTE: Life Member LM 50493
2. ACM Society: Membership No 4748880
3. IEEE Society: membership No.: 9207573

## X) DOCTORAL STUDENTS

1. Ms Sushma Hans, *Enhancing the quality of e-learning systems*, **Awarded**, 2018
  2. Ms. Geeta Rani, *Web User Profiling and Recommender System*, **Awarded**, 2017
  3. Ms. Vidhi Khanduja, *Design and Analysis of Watermarking Techniques for Web Databases to Enhance Robustness and Fragility*, **Awarded 2017**
  4. Ms Upasana Pandey, *Context based document classification and analysis*, registered April 2010, **Awarded March, 2014**
  5. Mr Anil Kumar, *Codesign of reliable embedded systems*, **Awarded 2012**
  6. Ms Srishti, *Sentiment and Affect Analysis on Social Media*, **submitted 2018**.
  7. Ms Sunny Rai, *Computational Metaphor Processing for English Language*, **Submitted 2018**
  8. Ms Mala Saraswat, *Investigating Qualitative Behavior in Cross domain Recommendation Systems*, registration Nov 2013, Awarded Dec 2020.
  9. Ms Charu Wahi, *Secure Routing Protocol for mobile ad-hoc networks*, Co-supervised, Submitted July 2019.
  10. Ms Anuradha Yadav, *Trust in social networks*, registration 2015, nearing completion
  11. Ms Kanika Trehan, *Improving the Quality of Learning in Dynamic Environments*, registration 2017
  12. Ms Divya Gupta, *Computational methods for tracking and analysing the impact of disaster on community psychology*, NSUT 2019
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13. Ms Rahila Khan, *Recommender System approaches for decentralized volunteering management*, NSUT 2019

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## **XI) SUBJECTS TAUGHT**

### **(a) UG level:**

1. Soft Computing
2. Advanced computer architecture
3. Computer system organization
4. Real time systems
5. CAD of VLSI
6. Operating systems
7. Digital system design
8. Advanced Digital circuits and systems
9. Computer graphics
10. Introduction to Programming

### **(b) PG Level:**

1. Architectural & Design Patterns
2. Emerging trends in information technology
3. Rough Set Theory
4. Advances in information systems
5. Rule based computing
6. Computational Models

## **XII) RECENT B.E. AND MTECH PROJECTS (2017-18)**

1. Blockchain in retail marketing, Sankalp Kalia, 2022
2. Story Rendering using emotions in Generative adversarial networks, Anurag Sharma, 2021
3. Automated Essay grading: statistical classification, Tajinder Singh, MTech 2020
4. Spam Detection on Twitter, Jasleen Kaur, MTech IS, 2018
5. IoT Based Weather and Location Aware Recommendation System, Aseem Mittal, MTech IS, 2017
6. Handling Data Incompleteness using Rough Sets, Kanchan Lata, MTech IS, 2014
7. Audio source separation in instrumental musical pieces, Abhishek Dideja and Ayush Mahajan, 2020
8. Using genetic algorithm to solve multi-objective SARS-CoV-2 optimization problem, Disha Bansal, Shreya Yadav, Trishla Verma, Pranav Rastagi
9. Augmenting cultural dimensions for Indic languages, Soumya Mahopatra, Shikhar, Praveen, Apar

10. Face synthesis using descriptions extracted from unstructured text, Rohan Wadhavan, Tanuj, Shubham
11. Tracking Lifecycle of Object from video based on object detection, Roll nos 1539, 1560, 1561, 2019
12. Analysis of Musical Track through Machine Learning and implementation of rating system, Aditya Agarwal, Akshansk, Dhananjay, 2019
13. Instructional Video Segmentation, Roll nos 1694, 1695, 2577, 2019
14. Incorporating Localized context in wordnet for Indic language, 1633, 1644, 1673, 2019
15. Measuring Impact and Quality of Trailers, Anubhav Gupta, Jaikiran Sandhu, 2019
16. Stock Trend Prediction using web news and technical indicators, Sakshi Bhasin, Sijal Bhatnagar, Pulkit Mehta, 2018
17. Amazon Question Answering, Ankush Babbar, Anshul Gupta, 2018
18. Image Captioning using NLP and Convolutional Neural Networks, Amar Malik, Akash Gupta, Hemant Jadon, 2018.
19. Speech to code conversion, Vineet Goyal, Vikas Goswamy, 2018
20. Recommender System for suggesting Ideal Course, Jitender Chauhanm Mohit Pant, Nikhil Kumar, 20018
21. Stories worth reading - Emotion Analysis based Story Recommendation System, Kislaya Ranjan, Mohit Munjal, Arpit Jain, 2018
22. Anonymity in bitcoin, Pulkit, Sakshi, Sijal, 2018
23. Scanned Text to Audio Conversion, Rishabh Singh, Robin Ratan, Rohan Acharya, 2018
24. Hybrid GAN-Autoencoder Deep Learning Model for Lossy Image Compression, Rahul Madiwale, Prateek Gupta, Peeyush Taneja, 2017
25. Spoken Language Identification using Neural Network, Aditya Jain, Anmol Pandey, Anmol Varshney, 2017
26. Video Recognition for Crime Detection, Lavanya Mangal, Mantavya Kumar, Puru Anand, 2017
27. Lip Reading System Using Convolutional Neural Networks for the Hearing Impaired, Pratyush Singh, 2016

### **XIII) WORK EXPERIENCE IN EARLIER JOBS (Chronologically)**

#### **(1) GENESIS INDIA PVT LTD: 1983-1984.**

**Post:** R & D Engineer.

**Experience:** Design and development of electronic equipment related to telecommunication and consumer electronics. Developed a gate array-based STD Barring Equipment.

#### **(2) I.C.I.M. (Indian Computer International Manufacture Ltd.) – 1984-1986.**

**Post:** Customer Support Engineer

**Experience:**

- Chief Customer support engineer for Oberoi Intercontinental and Hyatt Regency.

- Conducted workshop on “Customer training on ICIM 101 Midi-frame: System environment ”, 2 weeks training on for users of ICIM 101 computer.
- Developed diagnostic software for ICIM 101 midi-frame

**(3) N.I.I.T (National Institute of Information Technology): 1986-1988**

**Post: Systems Executive**

**Experience:**

- Team leader for Development of software package for SRI Ltd., It was a Commercial Accounting Package that gave a good experience on software development life cycle, quality and testing..
  - Conducted workshop on “Local Area Networking”, for executives of ONGC Dehradun, 1986.
  - Conducted workshop on “IV Gen Languages”, for executives of Indian Oil Corporation IOCL, Chandigarh, 1987.
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## **C. VISION STATEMENT AND PROFESSIONAL OUTLOOK**

### **I. Vision Statement for Indira Gandhi Delhi Technical University (IGDTU)**

My vision of IGDTU is to create an enriching educational environment with the best pedagogical practices, research initiatives at all levels, an all-pervading spirit of entrepreneurship and wholesome personal development. The motivating goal is to achieve a transformative impact on our budding women engineers, faculty and society at large.

#### **Mission**

- To lay deep focus on the pedagogy of higher education that espouses technology appreciation and its thoughtful application, deep learning of subjects, research, interpersonal skills and general well-being of our future women engineers and technocrats.
- To cultivate an inspired and transformative university community with diverse talent committed to (a) attracting the best faculty from within and outside the country (b) sustaining a wholesome relationship with the industry with free exchange of knowledge and skills (c) creating an interactive and collaborative environment in which ideas, research and creative endeavors flourish freely.
- To make a visible impact on society at the local, regional, national and international levels by (a) proactively engaging students with all stakeholders through creative communication channels (b) empowering women as well-educated, responsible and compassionate citizens motivated to solve the problems in society and steer forward the nation as a world leader in science and technology.

#### **Strategic Planning**

IGDTU is on its path of rapid evolution and has already earned a redoubtable reputation among premier engineering institutions of the country. A strategic planning statement from 2019 to 2030 will consolidate past gains and propel IGDTU forward as a sophisticated research and entrepreneurship-oriented university with solid bearings of higher education, as envisaged in the vision statement.

A panel of eminent scholars would make strategic plans on strengthening the three main pillars of the University: faculty, students, infrastructural and administrative support. A well thought out system of incentives and performance monitoring, continuous curriculum enhancement and strong industry linkages will promote long term excellence.

## **II)**

Interviews taken

UGC, 2021

PhD, 2021