Curriculum Vitae

Dr. Arjan Singh

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Present Position:

Assistant Professor (Computer Science)

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Education:

- Ph.D. (Computer Science & Engineering) Faculty of Engineering & Technology from Guru Nanak Dev University, Amritsar, Punjab, India in 2014.
- M.Tech. (Computer Science & Engineering) from the Department of Computer Science & Engineering, Punjabi University, Patiala, Punjab, India in 2003.
- M.Sc. (Mathematics) from the Department of Mathematics, Punjabi University, Patiala, Punjab, India in 2000.

Research Areas:

- Meta-heuristic Optimization Techniques
- Distributed Databases Design

Teaching Experience:

- Working as an Assistant Professor (Computer Science) in the Department of Mathematics, Punjabi University, Patiala, Punjab, India since November 11, 2011.
- Worked as an Assistant Professor in the Department of Computer Science & Engineering, Baba Banda Singh Bahdur Engineering College, Fatehgarh Sahib, Punjab, India from July 02,2007 to November 11, 2011
- Worked as a Lecturer in the Department of Computer Science & Engineering, Guru Nanak Dev University, Amritsar, Punjab, India from July, 2003 to May, 2007.

Publications:

1. **Arjan Singh**, K.S. Kahlon, Jaswinder Singh, Rajinder Singh, Sandeep Sharma, and Daljeet Kaur, "*Mapping Relational Database Schema to Object-Oriented Database Schema*", Transaction On Engineering , Computing And Technology V1, December 2004, pp. 153-155.
2. Jaswinder Singh, Hardeep Singh, Daljeet Kaur, **Arjan Singh** and Sandeep Sharma, "*Restructuring Legacy Software Systems"*, Transaction On Engineering , Computing And Technology V1, December 2004, pp. 32-33.
3. Rajinder Singh, **Arjan Singh**, Dr. Kawaljit Singh, and Varinder Pannu, "*Using Heuristics for Optimizing a Distributed Database Query*", Proceedings of National Conference on Information Technology, March 13-14, 2004.
4. Daljeet Kaur, **Arjan Singh**, Sandeep Sharma and Jaswinder Singh, *"Violation of Human Rights by Cybercrime"*, Proceedings of International Conference on Human Rights in the Age of Globalization, November 19-21, 2004.
5. Karanjeet Singh Kahlon, Gurvinder Singh, and **Arjan Singh**, "*Network Based High Performance Computing*", International Journal of Information Technology, Vol. 3, No. 1, pp. 7-11 (2006).
6. Baljit Singh, **Arjan Singh** and Akashdeep "*Havrda and Charvat Entropy Based Genetic Algorithm for Traveling Salesman Problem*" IJCSNS International Journal of Computer Science and Network Security, VOL.8 No.5, May 2008, pp. 312-319.
7. Akash deep, Baljit Singh, **Arjan Singh**, Jatinder Singh, "*A Simple Efficient Circuit Partitioning by Genetic Algorithm*" IJCSNS International Journal of Computer Science and Network Security, Vol. 9 No. 4, April 2009 pp. 272-276.

8. **Arjan Singh** and K.S. Kahlon, "*Non-replicated Dynamic Data Allocation in Distributed Database Systems*" IJCSNS International Journal of Computer Science and Network Security, VOL.9 No.9, September 2009, pp. 176-180.
9. Manisha Kaushal, **Arjan Singh** and Baljit Singh, "*Adaptive Thresholding for Edge Detection in Gray Scale Image*" International Journal of Engineering Science and Technology Vol. 2(6), 2010, pp.2077-2082.
10. Gurpinder Kaur and **Arjan Singh**, "*Rule Based Age Detection System*" International Journal of Computer Science & Communication Vol. 1, No. 2, July-December 2010, pp. 91-95.
11. Brahmleen Kaur Sidhu, **Arjan Singh**, Vishal Goyal, "*Identification of proverbs in Hindi Text Corpus and their translation in Punjabi*", JCSE, Vol. 2(1), July 2010, pp. 32-37.
12. **Arjan Singh**, "*Cyber Crime: An Indian Prospective*" Proceedings of International Conference on Advancements in Computing and Communication February 23-25, 2012.
13. Amandeep Kaur, **Arjan Singh**, Baljit Singh, "*Design of Hybrid Neural Network Model for Quality Evaluation of Object Oriented Software Modules*" International Journal of Engineering Research and Development, Volume 2, Issue 5, pp. 78-82, July 2012.
14. **Arjan Singh,** *"A Review of Static and Dynamic Data Allocation Techniques for Distributed Database Design"* International Journal of Engineering Research and Management Technology, September-2014 Volume-1, Issue-5
15. **Arjan Singh**, Karanjeet Singh Kahlon and Rajinder Singh Virk, "*Replicated Static Allocation of Fragments in Distributed Database Design using Biogeography-based Optimization*" Proceedings of International Conference on Advances in Communication, Network, and Computing, CNC 2014 (Elsevier).
16. **Arjan Singh**, Karanjeet Singh Kahlon and Rajinder Singh Virk, "Nonreplicated Static Data Allocation in Distributed Databases Using Biogeography-Based Optimization" Chinese Journal of Engineering, Volume 2014 (2014), Article ID 785321, 9 pages.
17. Baljit Singh Khehra, **Arjan Singh**, Amar Partap Singh Pharwaha and Parmeet Kaur, "*Image Segmentation Using Two-Dimensional Renyi Entropy*", Advances in Intelligent Systems and Computing, Volume 438, 2016.
18. **Arjan Singh**, "*Empirical Evaluation of Threshold and Time Constraint Algorithm for Non-replicated Dynamic Data Allocation in Distributed Database Systems*", Advances in Intelligent Systems and Computing, Volume 439, 2016.
19. Harmandeep Singh Gil, Baljit Singh Khehra, **Arjan Singh** and Lovepreet Kaur, "*Teaching-learning-base Optimization Algorithm to Minimized Cross Entropy for Selecting Multilevel*

Threshold Values" Egyptian Informatics Journal (Elsevier), Volume 20, Issue 1, pp. 11-25, 2019.

20. B. S. Khehra, **Arjan Singh**, G. S. Hura and L. Kaur, "*Fuzzy 2-Partition Kapur Entropy for Image Segmentation Using Teaching-Learning-Based Optimization Algorithm*," 2018 IEEE International Conference on Image Processing, Applications and Systems (IPAS), 2018, pp. 198-203, doi: 10.1109/IPAS.2018.8708902.
21. **Arjan Singh**, Baljit Singh Khehra and Gursheen Kaur Kohli, "*Differential Huffman Coding Approach for Lossless Compression of Medical Images*" Advances in Intelligent Systems and Computing, Volume 1034, 2020 (Springer).
22. Sandeep Kaur, **Arjan Singh**, and Navpreet Singh Noorie, "*Applications of Soft Dense Sets to Soft Continuity*" Advances in Mathematics: Scientific Journal, Vol. 9, No. Y, pp. 1–8, 2020.
23. **Arjan Singh**," *SBBO Based Replicated Data Allocation Approach for Distributed Database Design*" International Journal of Engineering Research and Technology. Volume 13, Number 9, pp. 2461-2473, 2020
24. Sahilpreet Singh, **Arjan Singh**, and Vishal Goyal, "*Cloud of Things: A Systematic Review on Issues and Challenges in Integration of Cloud Computing and Internet of Things*" Lecture Notes in Electrical Engineering Volume 701, 2021 (Springer).
25. **Arjan Singh**, B. S. Khehra and B. S. Mavi, "*Simplified-BBO for Non-redundant Allocation of Data in Distributed Database Design*," 2021 IEEE International Midwest Symposium on Circuits and Systems (MWSCAS), 2021, pp. 544-548, doi: 10.1109/MWSCAS47672.2021.9531836.
26. Baljit Singh Khehra, **Arjan Singh** and Gurdeep Singh Hura, "*Performance Evaluation of Shannon and Non-Shannon Fuzzy 2-Partition Entropies for Image Segmentation Using Teaching-Learning-Based Optimisation*", Int. J. Computational Vision and Robotics, Vol. 12, No. 3, pp. 250-298, 2022.
27. Baljit Singh Khehra, **Arjan Singh** and Lovepreet Kaur, "*M. Masi Entropy and Grey Wolf Optimizer Based Multilevel Thresholding Approach for Image Segmentation*", Journal of Institution of Engineering India Ser. B (2022). https://doi.org/10.1007/s40031-022-00740-8.
28. B. S. Khehra, **Arjan Singh** and M. Lovepreet Kaur, "*Whale Optimization Algorithm for Color Image Segmentation using Supra-Extensive Entropy*," 2022 IEEE Canadian Conference on Electrical and Computer Engineering (CCECE), Halifax, NS, Canada, 2022, pp. 395-401, doi: 10.1109/CCECE49351.2022.9918354.
29. Baljit Singh Khehra, **Arjan Singh**, and Lovepreet Kaur, "*Design and Performance Evaluation of Objective Functions Based on Various Measures of Fuzzy Entropies for Image*

Segmentation Using Grey Wolf Optimization" In: Mohamed, A., Oliva, D., Suganthan, P.N. (eds) Handbook of Nature-Inspired Optimization Algorithms: The State of the Art. Studies in Systems, Decision and Control, vol 212, pp. 31-89, 2022, Springer. https://doi.org/10.1007/978-3-031-07512-4_2

30. Lovepreet Kaur, Baljit Singh Khehra and **Arjan Singh**, "Sharma-Mittal Entropy and Whale Optimization Algorithm Based Multilevel Thresholding Approach for Image Segmentation" In: Pandit, M., Gaur, M.K., Rana, P.S., Tiwari, A. (eds) Artificial Intelligence and Sustainable Computing. Algorithms for Intelligent Systems, pp. 451-467, 2022, Springer. https://doi.org/10.1007/978-981-19-1653-3_34
31. Kirandeep Kaur, **Arjan Singh**, Anju Sharma, "*A systematic review on resource provisioning in fog computing*" Transactions of Emerging Telecommunications Technologies, 2023;e4731. doi: 10.1002/ett.4731