

# Dr. Zahoor Jan

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## EDUCATION

**National University-FAST, Islamabad, Pakistan** **June 2007 – March 2011**  
**PhD in Computer Science**  
- **Thesis Title:** Digital Perceptual shaping of a Watermark using Genetic Programming in Wavelet Domain.

**National University-FAST, Islamabad, Pakistan** **Aug 2004 – June 2007**  
**M.S. in Computer Science (with Research).**  
- **Thesis Title:** Fast Algorithms for mining interesting frequent itemsets without minimum support threshold.  
- **Major Courses:** Advance Analysis of Algorithm, Data Mining, Data warehousing, Software Process and Quality Assurance, Artificial Neural Networks, Applied Optimization Techniques.

## PROGRAMMING SKILLS

- **Programming Languages:** - C, C++, Visual C++, Matlab, Java
- **Databases:** - MS Access, ORACLE, TeraData.
- **Data Mining Tools:** - Weka, Yale, CBA.
- **Web:** - HTML. Java scripts. PHP

## EXPERIENCE

**Chairman Department of Computer Science, Abdul Wali Khan University Mardan  
Palosa Campus Charsadda**  
**Sep 2011-Present**

**Department of Computer Science, University of Peshawar, Pakistan**  
**Dec 2007-Sep 2011**  
**Lecturer Department of Computer Science**  
**Teaching Courses:** Advanced Algorithm(MS),Data Mining(MS),Analysis of Algorithms, Data Structure, Advanced Programming, Data warehousing

**National University-FAST, Islamabad, Pakistan** **Aug 2007**  
**Visiting Faculty Member, Department of Telecomm Engineering**  
**Teaching Courses:** Data Structures and Algorithms

**NWFP Agricultural University, Peshawar, Pakistan** **Feb 2007**  
**Visiting Faculty Member, Department of Computer Science**  
**Teaching Courses:** Data Warehousing and Data Mining.

**CECOS University Hayat Abad, Peshawar**  
**Visiting Faculty Member, Department of Computer Science**  
**Teaching Courses:** Advanced Algorithm(MS)

**Institute of Management Sciences (Im Sciences ) Hayat Abad, Peshawar**  
**Visiting Faculty Member, Department of Computer Science**

<b>Government college of commerce haripur.</b> Faculty Member, Department of Computer Science	<b>2004-2006</b>
<b>Muslim Post Graduate College of Commerce and Management Peshawar</b> <b>Lecturer Dept of Computer Science</b>	<b>Jan 2002 – Jul 2004</b>
<b>RESEARCH INTERESTS</b>	
<ul style="list-style-type: none"> <li>- Image Processing</li> <li>- Data Mining and Knowledge Discovery (Frequent Itemset Mining)</li> <li>- Medical Images Segmentation</li> <li>- Evolutionary Algorithms</li> <li>- Data Ware Housing</li> </ul>	
<b>PUBLICATIONS</b>	
<ol style="list-style-type: none"> <li>1. <b>Zahoor Jan</b> and Anwar M. Mirza "GP based Perceptual Shaping of a Digital Watermark in the Wavelet Domain using Morton scanning" Journal of the Chinese Institute of Engineers (JCIE) Vol. 35(2012), (<b>indexed by ISI Impact Factor 0.219</b>)</li> <li>2. <b>Zahoor Jan</b> and Anwar M. Mirza "Genetic Programming based Perceptual Shaping of a Digital Watermark in the Wavelet Domain" International Journal of Computer and Mathematics (IJCM), (<b>indexed by ISI Impact Factor 0.478</b>)</li> <li>3. <b>Zahoor Jan</b>, Arfan Jaffar and Anwar M. Mirza, "Intelligent Watermarking in Wavelet Domain Using Genetic Programming", International Journal of Innovative Computing, Information and Control (IJICIC) Vol.7, No.5, July 3, 2010 (<b>indexed by ISI Impact Factor 2.932</b>).</li> <li>4. <b>Zahoor Jan</b> and Anwar. M.Mirza, "Energy Based Coefficient Selection for Digital Watermarking in Wavelet Domain" International Journal of Radio Frequency Identification Technology and Applications (IJRFITA).</li> <li>5. <b>Zahoor Jan</b>, Almas Abbasi, Arfan Jafar, Anwar. M.Mirza, "Genetic Programming based Robust Image Watermarking using wavelet and Morton Order", The First International Symposium on Information and Knowledge Management (SIKM2010), special issue of International Journal of Innovative Computing, Information and Control (<b>Impact Factor 2.93</b>) and CIC Express Letters (<b>indexed by Ei Compendex, Scopus, INSPEC, etc.</b>). Dalian, China.</li> <li>6. <b>Zahoor Jan</b>, Fouzia Jabeen, Arfan Jafar, Anwar. M.Mirza, "Energy Based Coefficient Selection for Digital Watermarking in Wavelet Domain", International Conference on Information Computing and Applications (ICICA2010), <b>LNCS Springer</b>, Tangshan, China.</li> <li>7. <b>Zahoor Jan</b>, Arfan Jafar, and Anwar. M.Mirza, "Watermarking Scheme Based on Wavelet Transform, Genetic Programming and Watson Perceptual Model for JPEG2000", IEEE 6th International conference on Emerging Technologies ICET2010</li> <li>8. <b>Zahoor Jan</b>, M. sajid Iqbal, Azhar Rauf, "Self-Constructing Fragile Watermark Algorithm for Relational Database Integrity Proof", International Conference on Computer Applications and Industrial Electronics ICCAIE 2010, Kuala Lumpur, Malaysia.</li> <li>9. M. asif Khan, <b>Zahoor Jan</b>, M. amir Khan, Anwar. M. Mirza, "Performance of machine learning techniques in protein fold recognition problem", seoul korea, 2010 Indexed in IEEE-Explore.</li> <li>10. <b>Zahoor jan</b>, M shah, Azhar Rauf, M amir Khan, Saeed Mahfooz "Access Control Mechanism for web databases by using Parameterized Cursor", The 5th International Conference on Future Information Technology (futureTech2010), Busan S. Korea Indexed in IEEE-Explore, 2010</li> <li>11. M. Ishtiaq, M. A. Jaffar, M. A. Khan, <b>Z. Jan</b>, A. M. Mirza, "Robust and imperceptible watermarking of video streams for low power devices", International symposium on Signal Processing, Image Processing and Pattern Recognition (SIP), Jeju Island, Korea Dec, 2009.</li> </ol>	

12. M. Amir Khan, **Zahoor Jan**, Anwar. M. Mirza, "Selection of Accurate and Robust Classification Model for Binary Classification Problems " International Symposium on Signal Processing, Image Processing and Pattern Recognition (SIP 2009) LNCS Springer, Verlag 2009
13. Shaukat Ali, Azhar Rauf, Huma Javed, **Zahoor Jan**, Shahid Waheed, Muhammad Haleem "An Efficient Algorithm for Range and Fuzzy Match Queries over Encrypted Data in Relationa Databases", PGNet, 2009. Liverpool, UK
14. Zahoor Jan, Shariq Bashir, A. Rauf Baig", "Fast algorithm for mining interesting frequent itemsets without mining support thresholds", ELSEVIER data mining and knowledge discovery journal. **Listed on DBLP Server**
15. "Performance Analysis of Classifier Fusion Model with Minimum feature Subset and Rotation of the Dataset" 6<sup>th</sup> International Conference of Fuzzy System and Knowledge Discovery FSKD'09, Tianjin China (Indexed in IEEE Xplore) Listed on DBLP Server.
16. **Zahoor Jan**, M. Abrar, Shariq Bashir Anwar. M. Mirza, "Seasonal to Inter – annual Climate Prediction using Data Mining KNN technique" appeared in the proceedings of Springer-Verlag Germany in the Communication in computer and Information Science (CCIS) series,2008. **Listed on DBLP Server**
17. Zahoor Jan, Shariq Bashir, A. Rauf Baig, "N-MostMiner: Applying Bit-vector Projection Approach for Efficient Mining of N-most Interesting Itemset", The Third IASTED International Conference on Computational Intelligence IASTED-CI-2007 Canada (ACTA Press).
18. Shariq Bashir, Zahoor Jan and A. Rauf Baig, "Mining Top-K Closed Frequent Itemset using Bit-vector Projection Approach", 5<sup>th</sup> Machine Learning and Data Mining (MLDM07),Lecture Notes in Computer Science (LNCS, Springer Verlag) Leipzig, Germany, 2007. **Listed on DBLP Server**

## MS THESIS SUPERVISED

1. An Investigation of Web Applications Vulnerabilities.
2. Evaluation of Query Expansion Techniques for Recall Oriented Documents Retrieval.
3. Top-K Frequent Closed Itemsets Mining using Projected Bit Regions
4. CP-KNN: Seasonal to Inter – annual Climate Prediction using Data Mining KNN technique
5. Imperceptible and Robust Digital Watermarking in Wavelet Domain.
6. Token based unstructured data cleansing for Data ware House.
7. Digital watermarking using Watson's Perceptual Model of JPEG2000.
8. Performance Evaluation of Data warehouse with Denormalization.
9. Digital watermarking using Ranklet domain
10. Digital watermarking using multi-level wavelet transform and JND.

## PROJECTS

1. Data Warehouse for a Multi-Campus University containing 1million records and handling all of its issues.  
Tool: Tera Data.
2. An application to find cliques in a graph using Genetic Algorithm
3. Net Work Optimization by finding the shortest path.  
Tool: Matlab
4. An application to read data from a user given input file and find clusters in the data using correlation matrix
5. Developed a downloading engine that automatically download the climatic data from weather underground website, and then parse it (extract useful information form the data).
6. Added a new scheduling policy,GWRR (Group Weighted Round Robin) scheduling, in Linux to support fair-share scheduling. GWRR uses fair-share scheduling based on each process's UNIX group identification.  
Tools: User Mode Linux (UML)
7. An application to read data from a user given input file, mutate the data and to recover the clusters using Signature technique

8. Implementation of semaphore operations as four new system calls in the Linux kernel. Demonstrating the usage and correctness of semaphores by, Implementing user-level mutexes or locks based entirely on semaphores.  
Tools: User Mode Linux (UML)
9. Implementation of a flexible access control list scheme, with an additional set of permissions, for additional users and groups.  
Tools: User Mode Linux (UML)
10. An Application to do clustering on an input data through a text file using clustering by density technique.  
Tool: C#
11. Application to Find factorial of a number and Pascal triangle using dynamic programming and divide and conquer techniques and comparison of there performance  
Tool: C#
12. A Client Server application developed on the concept of resource sharing using Dining Philosopher Problem  
Tool: C#
13. An Application to draw visual representation of graphs by taking number of vertices and density as an input.  
Tool: C#
14. Cluster Detection Application Using KMeans Technique  
Tool: C++
15. Develop a Project for computerization of driving license N-W.F.P traffic police.
16. Develop a Project for computerization of registration section for BTE.

## AWARDS

- Awarded for a Travel Grant of **191,747 Rupees**, By the Higher Education Commission (HEC) to present my research paper in 5<sup>th</sup> International Conference on Future Information Technology FutureTech2010, South Korea held on 21-23.05.2010.
- Awarded for a Travel Grant of **183,000 Rupees**, By the Higher Education Commission (HEC) to present my research paper in 3<sup>rd</sup> international INTERNATIONAL ASSOCIATION OF SCIENCE AND TECHNOLOGY FOR DEVELOPMENT (IASTED)-2007 Computational Intelligence Conference, Canada.

## REFERENCES

- **Dr. Anwar M. Mirza**:- Professor and Head of Department (Department of Computer Science), National University of Computer and Emerging Science A. K. Brohi Road, Sector H-11/4, Islamabad 44000, PAKISTAN, [anwar.m.mirza@nu.edu.pk](mailto:anwar.m.mirza@nu.edu.pk)
- **Dr. Saeed Mahfooz**:- Associate Professor Department of computer science University of Peshawar. [saeedmahfooz@upesh.edu.pk](mailto:saeedmahfooz@upesh.edu.pk)
- **Dr. Shah Khusro**:- Assistant Professor Department of computer science University of Peshawar. [shah\\_khusro@yahoo.com](mailto:shah_khusro@yahoo.com)
- **Dr. Azhar Rauf**:- Assistant Professor Department of computer science University of Peshawar. [rauf\\_azhar@yahoo.com](mailto:rauf_azhar@yahoo.com)