

Dr. Addin Osman

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PERSONAL STATEMENT:

A committed, knowledgeable and capable Research Fellow. Extensively published in theoretical and experimental work, with significant expertise in computer science. Highly experienced in.

EDUCATION AND QUALIFICATION :

- **Doctor of Philosophy**, Intelligent Systems (2004 –2007), Institute of Advanced Technology, University Putra Malaysia.
Thesis Title: Bayesian networks classifiers for damage detection in engineering materials.
- **Master of Science**, Software Engineering (2001 – 2003), Computer Science Department, Faculty of Engineering, Aalborg University, Denmark.
Thesis Title: *k*-divisive hierarchical clustering algorithm.
- **One Semester in Master of Science**, Computational Engineering, Erlangen University, 01/04/2001 – 01/09/2001 (Quitted the program because of gaining a scholarship from HP in Denmark).
- **Bachelor of Science**, Computer Science (1991 – 1995), Computer Science Department, Faculty of Engineering, Istanbul University, Turkey.
Final Year Project: The rotation, scaling, and shading of 3D objects using C language

WORK EXPERIENCES :

14/10/2009 – Present	Assistant Professor , College of Computer Science and Information Systems, Najran University, Najran, Kingdom of Saudi Arabia.
01/09/2008 – 01/09/2009	Assistant Professor , Faculty of Computer Science and Business Administration, University of Medical Sciences and Technology, Khartoum, Sudan.
01/11/2007 – 31/10/2008	Assistant Professor , Faculty of Computer Science and Information Technology, University of Sciences and Technology, Khartoum, Sudan.
15/10/2006 – 15/10/2007	Assistant Professor , Department of Computer Science, Computer Man College for Computer Studies, Khartoum, Sudan.

TAUGHT COURSES:

- Object Oriented Programming (Java)
- Programming Languages (C and Visual Basic)
- Computer Graphics
- Artificial Intelligence
- Compiler Design

- Theory of Computation
- Project Management
- Software Engineering
- System Analysis and Design
- Operations Research
- Internet Technologies (M.Sc. Course)
- System Programming (M. Sc. Course)

PROFESSIONAL SKILLS:

- One-day workshop: GPU-accelerated computing and deep learning
- Introduction to Machine Learning
- Software: Windows and Linux operating systems; C/C#/C++, ROOT, LabVIEW; SigmaPlot statistical analysis and graphing software; COMSOL Multiphysics, SIMION ion optics simulation; Python: Scikit-learn, Pandas, NumPy; MATLAB; Autodesk inventor 3D computer-aided design; typesetting using LATEX; general use of office suites. Some experience of Maple and Mathematica. Limited use of VBA, Modula-2 and Pascal
- Designing, Building and Operating Complex Equipment: extensively experienced with data acquisition and control systems
- Management and Administration
- Data Collection and Analysis
- Teaching, Tutoring and Presenting
- Project supervision

PUBLICATIONS:

1. **Addin Osman**, Anwar Ali Yahya and Mohammed Basit Kamal, A Dataset of Program Educational Objectives Mapped to ABET Outcomes: Data Cleansing, Exploratory Data Analysis and Modeling, International Journal of Computer and Information Engineering, International Journal of Computer and Information Engineering, 2018.
2. Anwar Ali Yahya, **Addin Osman**, Mohammad Said El-Bashir, Rocchio algorithm-based particle initialization mechanism for effective PSO classification of high dimensional data, Swarm and Evolutionary Computation, 2016 (Web of Science – ISI Indexed, Impact Factor 2.97).
3. Anwar Ali Yahya, **Addin Osman**, and Mohamed Khairi, Mining educational data to analyze teaching effectiveness, Journal of Theoretical and Applied Information Technology 89 (1), 267-276, 2016.
4. **Addin Osman**, Particle Swarm Optimization for University Course Timetable Scheduling: Evaluation of Particle Parameters and Comparing their Effects, International Journal of Artificial Intelligence, Vol. 2, Pages, 1-10, 2015.
5. Ahmed Abdu Alattab, Sameem Abdul Kareem, Anwar Ali Yahya, **Addin Osman**, An Effective Approach Towards Content-Based Human Facial Image Detection and Retrieval, International Journal of Simulation Systems, Science & Technology, Vol. 15, No.1, Pages 33-43, 2014.
6. Anwar Ali Yahya, Zakaria Toukal, **Addin Osman**, Bloom’s Taxonomy–Based Classification for Item Bank Questions Using Support Vector Machines, Springer-Verlag Berlin Heidelberg Modern Advances in Intelligent Systems and Tools Studies in Computational Intelligence, 2012, Volume 431, 135-140, 2012.

7. **Addin Osman**, Adlan Balola, Anwar Ali Yahya and Yahya Ali Abdelrahman, Survey on University Courses Timetable Scheduling Problem, Journal of Computing, Volume 3, Issue 9, pp. 85-90, USA, 2011.
8. Anwar Ali Yahya, Addin Osman, Abd Rahman Ramli, Adlan Balola, Feature Selection for High Dimensional Data: An Evolutionary Filter Approach, *Journal of Computer Science*, 7(5), pp. 800-820, USA, 2011.
9. **O. Addin**, S. M. Sapuan, M. Othman and B. A. Ahmed Ali, Comparison of Naïve bayes Classifier with Back Propagation Neural Network Classifier Based on f - folds Feature Extraction Algorithm for Ball Bearing Fault Diagnostic System, *International Journal of the Physical Sciences*, Vol. 6(13), pp. 3181-3188, July, 2011.
10. Adil Ali Abdelaziz, Wan Wan M N Kadir and **Addin Osman**, Comparative Analysis of Software Performance Prediction Approaches in Context of Component-based **System**, *International Journal of Computer Applications*, Volume 23, No. 3, pp. 15-22, Hong Kong, June 2011.
11. Adil Ali, **Addin Osman**, دراسة و مقارنة حول اساليب توقع الاداء للنظم المؤسسة على المكونات, *Communications of the Arab Computer Society*, Vol. 4, No.1, 2011.
12. **O. Addin**, S.M. Sapuan, E. Mahdi, M. Othman, A Naive bayes classifier and f-Folds feature selection for damage detection in engineering materials, *International Journal of Mechanical and Materials Engineering (IJMME)*, Vol. 2 (2007), No. 1, 55-62 (Web of Science – ISI Indexed).
13. **O. Addin**, S.M. Sapuan, E. Mahdi, M. Othman, A Naive bayes classifier for damage detection in engineering materials, *Materials and Design*, Elsevier, UK, 2006 (Web of Science – ISI Indexed – Impact Factor 4.364).
14. **A. O. Addin**, S. M. Sapuan, E. Mahdi, M. Osman, Prediction and detection of failures in composite materials using neural networks ---- review, *Polymer and Polymer Composites*, Volume 14, No. 4, pp.433-441, RAPRA, UK, 2006.

CONFERENCES:

1. Anwar Ali Yahya and **Addin Osman**, Using Data Mining Techniques to Guide Academic Programs Design and Assessment, 16th International Learning & Technology Conference, Jeddah, Saudi Arabia, March 03 -04, 2019.
2. **Addin Osman**, Anwar Ali Yahya and Mohammed Basit Kamal, A Dataset of Program Educational Objectives Mapped to ABET Outcomes: Data Cleansing, Exploratory Data Analysis and Modeling, *ICDMBDDDS 2018 : 20th International Conference on Data Mining, Big Data, Database and Data System* Toronto, Canada, June 21 - 22, 2018.
3. **Addin Osman**, Anwar Ali Yahya and Mohammed Basit Kamal, A Benchmark Collection for Mapping Program Educational Objectives to ABET Student Outcomes: Accreditation, 5th International Symposium on Data Mining Applications, Prince Sultan University, Riyadh, Saudi Arabia, Springer International Publishing AG, part of Springer Nature, pp. 46–60, 21-22, March, 2018.
4. **Addin Osman** and Anwar Ali Yahya, Classification of Exam Questions Using Linguistically-Motivated Features: A Case Study Based on Bloom’s Taxonomy, The Third International Arab Conference on Quality Assurance in Higher Education (IACQA'2016), Sudan University of Science and Technology, Khartoum, Sudan, February 09-11, 2016.

5. Anwar Ali Yahya, **Addin Osman**, Swarm Intelligence in Educational Data Mining, Machine Learning and Data Analysis Symposium, Doha, Qatar, March 3-4, 2014.
6. Anwar Ali Yahya, **Addin Osman** and Ahmed Alattab, Educational Data Mining: A Case Study of Teacher's Classroom Questions, Thirteenth International Conference on Intelligent Systems Design and Applications (ISDA 2013), University Putra Malaysia, Malaysia, December 08-10, 2013.
7. Anwar Ali Yahya, **Addin Osman**, Ahmad Taleb , Ahmed Abdu Alattab, Analyzing the cognitive level of classroom questions using machine learning techniques, The 9th International Conference on Cognitive Science, ScienceDirect, ELSEVIER, Kuching, Sarawak, Malaysia, 27-30/08/2013.
8. Anwar Ali Yahya, **Addin Osman**, Automatic Classification of Questions into Bloom's Cognitive Levels Using Support Vector Machines, The 12th International Arab Conference on Information Technology, Naif Arab University of Security Sciences, Part I , 302-307, 11-14 December 2011.
9. **A. O. Addin**, S. M. Sapuan, E. Mahdi, M. Osman, N. Ismail, Bayesian network approach to classify damages and *f*-folds feature extraction algorithm in engineering materials, International Conference on Composite Materials and Nano-Structures, Shah Alam, Malaysia, 2006.
10. **A. O. Addin**, S. M. Sapuan, E. Mahdi, M. Osman, *f*-*FFE* : f-Folds feature extraction for structural health monitoring systems, A Series of Seminar and Frontier Science and Advanced Technology, Institute of Advanced Technology, University Putra Malaysia, Malaysia, 2006.
11. **A. O. Addin**, S. M. Sapuan, E. Mahdi, M. Osman, An intelligent system for failure prediction in *LCMs* using Bayesian networks, A Series of Seminar and Frontier Science and Advanced Technology, Institute of Advanced Technology, University Putra Malaysia, Malaysia, 2005.
12. **O. Addin**, S. M. Sapuan, E. Mahdi, M. Osman, Bayesian network approach to classify damages and *f*-folds feature subset selection method in laminated composite materials, International Conference on Intelligent Systems and Robotics iCISAR2005, Putrajaya, Malaysia, 59, 2005.