Nael Abu-halaweh

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EDUCATION

PhD. Degree in Computer Science (May, 2010)
Georgia State University, Atlanta, GA
Advisor: Dr. Robert Harrison
Dissertation: Integrating Information Theory Measures and a Novel Rule-Set-Reduction Technique to Improve Fuzzy Decision Tree Induction Algorithms.
Developed a Fuzzy decision induction tool that produced classification results comparable to those produced by state-of-art Machine learning tools including SVM and Random Forests.

MS. Degree in Computer Science (Aug, 2009)
Georgia State University, Atlanta, GA
Advisor: Dr. Robert Harrison
Thesis: Fuzzy Decision Trees

MS. Degree in Information Systems (Dec, 2004)
Kennesaw State University, Kennesaw, GA

BSc. Degree in Electronics Engineering (Feb, 1996)
Al-Quds University, Jerusalem

FELLOWSHIPS AND HONORS

- Fall/2009: Georgia State University Molecular Basis of Disease Initiative (MBD) fellowship for the academic year 2009/2010.
- Fall/2008: Georgia State University Molecular Basis of Disease Initiative (MBD) fellowship for the academic year 2008/2009.
- Placed on Deans' Honor List for all the semesters of my undergraduate study.

TEACHING EXPERIENCE (UNIVERSITY LEVEL)

Combined Strong theoretical background with extensive practical experience to produce an exciting classroom experience.

Part-time Faculty, Georgia Gwinnett College, Lawrenceville, GA   (Spring 2013)
Courses: Introduction to Computing.

Assistant Professor and Head of CIS department, Al-Quds Open University, Ramallah
(1/2012-12/ 2012)
Courses: Operating Systems, Web Technology, Information Security, and Internetwork Programming using Java.

Part-time Faculty, Georgia Gwinnett College, Lawrenceville, GA   (8/2010 – 12/2011)
Courses: Introduction to Computing.

Instructor, Georgia State University, Atlanta, GA   (2005 – 2010)
Courses: Programming for Bioinformatics II, Operating Systems, Computer Networks, Principles of Computer Programming I (Java), and Principles of Computer Programming II (C++).

Teaching Assistant, Georgia State University, Atlanta, GA   (2005 – 2010)
Courses: Data Security, Computer Architecture, Computer Networks, Advanced Computer Architecture, and Discrete Math.

Teaching Assistant (Lab Assistant), Kennesaw State University, Kennesaw, GA (2003-2004)
Courses: Java and Data Communications.

TEACHING EXPERIENCE (TECHNICAL CLASSES)

Al-Quds Open University (Palestinian Territories)   (11/2012)
Courses: Configuring, Managing and Troubleshooting Microsoft Exchange Server 2010 SP2.

Arab American University (Palestinian Territories)   (2002)
Courses: Windows 2000 Server MCSE Track (the MCSE track includes 6 courses).

RESEARCH AND PUBLICATIONS

Research Interests:

Machine Learning Techniques and their applications. Information Security. Computer Networks, Network Security, Bioinformatics, Innovative Teaching Techniques and E-learning.

Publications

My Research is multidisciplinary. I have publications in Machine Learning, Computer Networks, and Bioinformatics. Below is a list of my publications:

- Abu-halaweh Na'el, Sabnis Amit, Harrison Robert W," **Prediction of regulatory sRNAs in prokaryotes using machine learning tools**". Proceedings of Bioinformatics 2011, International Conference on Bioinformatics Models, Methods and Algorithms (BIOINFORMATICSSciTePress (2011), p. 75-81.). Rome, Italy, Jan 2011.
- Abu-halaweh Na'el, Harrison Robert W., "**FDT 1.0: An Improved Fuzzy Decision Tree Induction Tool**", Proceedings of NAFIPS, 2010, p.p. 1-5.
- A. Reyaz-Ahmed, N. Abu-halaweh, R. W. Harrison and Y.-Q. Zhang, "**Protein Model Assessment via Improved Fuzzy Decision Tree**", Proc. of BIOCOMP 2010, Las Vegas, July 12-15, 2010
- Abu-halaweh Na'el, Harrison Robert W., "**Identifying the Essential Features for the Classification of Real and Pseudo MicroRNAs Precursors Using Fuzzy Decision Trees**", Proceedings of the IEEE Conference in Bioinformatics and Computational Biology (CIBCB 2010). Montreal, Canada.
- Abu-halaweh N., Harrison R. W., "**Prediction and Classification of Real and Pseudo MicroRNA Precursors via Data Fuzzification and Fuzzy Decision Trees**", Proceedings of ISBRA, pages 323-334, 2009.
- Abu-halaweh N., Harrison R. W., "**Rule Set Reduction in Fuzzy Decision Trees**", Proceedings of NAFIPS, 2009, p.p. 1-4.
- Abu-halaweh N., Harrison R. W., "**Practical Fuzzy Decision Trees**", Proceeding of IEEE Symposium on Computational Intelligence and Data Mining (CIDM09), 2009, p.p. 211-216.
- Clincy, Victor, Saeda Mustafa, and Nael Abu Halaweh, "**Effect of TCP Window Scaling on TCP Performance**", Las Vegas, Nevada [International Conference on Internet Computing (ICOMP07)], June 25-28, 2007
- Clincy, Victor, and Nael Abu Halaweh, "**Analysis of the Internetworking Protocol Version 6**", Las Vegas, Nevada [International Conference on Internet Computing (ICOMP07)], June 25-28, 2007
- Clincy, Victor and Nael Abu-Halaweh, "**A Taxonomy of Free Network Sniffers for Teaching and Research**", The Journal of Computing Sciences in Colleges, Volume 21, Number 1, October 2005
- Clincy, Victor, and Nael Abu-Halaweh "**Adaptive Traffic Engineering Effect on Router Delay Using MPLS**", Honolulu, Hawaii [International Association of Science and Technology for Development (IASTED) Internet & Multimedia Systems & Applications International Conference], August 15-17, 2005
- Clincy, Victor, Nael Abu-Halaweh and Padmaja Mudiraj, "**Traffic Analysis of a Multimedia Network**", Honolulu, Hawaii [International Association of Science and Technology for Development (IASTED) Internet & Multimedia Systems & Applications International Conference], August 15-17, 2005
- Clincy, Victor and Nael Abu-Halaweh, "**Performance Evaluation of IPv6 versus IPv4**", Las Vegas, Nevada [6th International Conference on Communications in Computing (CIC05)], June 27-30, 2005
- Clincy, Victor and Nael Abu-Halaweh, "**Voice Over MPLS (VoMPLS) – A Case Study**", Las Vegas, Nevada [5th International Conference on Communications in Computing (CIC04)], June 21-24, 2004

PROFESSIONAL AND CONFERENCE PRESENTATIONS

- **Invited Talk,** "*Modern Techniques to Remotely Proctor E-Exams*", 1st Workshop on Center of E-learning Staff capacity building, Al-Quds Open University, Ramallah
- **Invited talk,** "Intelligent Transport Systems in Palestine: Promoters and Challenges", The 6th Information and communication Technology Day, Al-Quds Open University, Ramallah
- **Invited Talk,** "The Role of Document Management Systems in Improving the Efficiency of Business Processes", American Pan and Engineering Annual Seminar titled "Going Green", American Pan and Engineering Headquarters, Palmetto, GA.

- **Invited Talk**, "Classification of Real and Pseudo MicroRNA Precursors Using Fuzzy Decision Trees". Molecular Basis of Disease Research Day, Georgia State University, Atlanta, GA.
- **Paper**, "Prediction and Classification of Real and Pseudo MicroRNA Precursors via Data Fuzzification and Fuzzy Decision Trees". 5th International Symposium on Bioinformatics Research and Applications, Ft. Lauderdale, FL.
- **Paper**, "Rule Set Reduction in Fuzzy Decision Trees". The 28th North American Fuzzy Information Processing Society Annual Conference. Cincinnati, OH
- **Paper**, " Practical Fuzzy Decision Trees". IEEE Symposium on Computational Intelligence and Data Mining, Nashville, TN.
- **Paper**, "Effect of TCP Window Scaling on TCP Performance". International Conference on Internet Computing (ICOMP07), Las Vegas, Nevada
- **Paper**, "Analysis of the Internetworking Protocol Version 6". International Conference on Internet Computing (ICOMP07), Las Vegas, Nevada

PROFESSIONAL EXPERIENCE

Al-Quds Open University, Ramallah
Head of CIS Department, Head of ICT Research Unit, Jan, 2012 – Dec, 2012
Taught a number of undergraduate courses. Participated in curriculum assessment and development. Participated in planning for the establishment of a national research center. Provided consultation in the field of E-Learning, Computer Networks, and Network Security.

American Pan and Engineering, Palmetto, GA
IT manager and Systems Administrator, May, 2005 – Feb, 2012
Analyzed business needs and recommended Hardware and Software solutions. Managed the Company paperless initiative Project. Managed the company's biometric sign-in application. Installed, administered and maintained the company's WAN and LANs (3 Locations). Installed and administered the company's windows-based network (2000/2003/2008), services included DNS, DHCP, IIS and others. Provided desktop and end-user applications support. Installed and supported Microsoft SQL Server 2003 and the company's database applications. Configured and maintained Firewalls, Wireless Access Points, Switches, DVR and VPN, Designed and maintained the company's website.

Al-Quds Open University, Ramallah
Network Administrator, Sep, 1999 – Jan, 2003
Played a key role in IT Planning. Provided technical support for a group of twenty three network administrators. Taught many technical classes including A+, MSCE track, CNA, CCNA and others. Involved in Software development and analysis. Designed and implemented the university WAN (23 sites connected via frame relay, leased lines and E1 communication lines). Performed network administration (Operating systems including NT4.0, Windows 2000, SCO & Digital Unix). Maintained Servers, PCs and laptops (Software and hardware). Administered and maintained Server applications including Proxy Server 2.0, Microsoft Exchange 5.5 and Microsoft Exchange 2000. Installed and configured Cisco Routers. Provided support & maintenance for the university's various department information systems including desktop O.S and applications. Performed network performance analysis and tuning.

Ministry of Education, Ramallah
Head of Technical Support Section and Network Administrator, Dec, 1996 – Jan, 2003
Designed, implemented and Provided network technical support (Novell Netware 4.11 and NT4.0, Server hardware and software, PCs hardware, desktop OS and applications, printers, hubs, switches and routers). Participated in the application development process (Applications: Human Resources Management System, Inventory management System, Question Bank database and others). Involved in hardware and software specification (PCs, Hubs, Routers… etc). Represented the ministry in many technical meetings & conferences. Organized and conducted basic computer training classes for end users.

Al-Barq, Ramallah
Computer technician, Feb, 1996 – Dec, 1996
Provided support & maintenance for PC's, OS and desktop applications. Supported an accounting application developed by the company. Performed network administration (Windows 3.11 Peer to peer networks and Novell Netware 4.11 based networks).

Microlink Information Systems, Ramallah
Technical Consultant, May, 1999 – Jan, 2001
Provided technical solutions and studies. Prepared training materials and implemented networks. Taught the following training courses: A+, Dos, Windows (95,98,Me, 2000), MCSE (Windows NT 4.0 Server & Workstation, Windows 2000 Server & Professional, Exchange 5.5 & 2000,

Proxy Server 2.0, TCP/IP, Securing Windows 2000… etc), Novell Netware CNA (4.11,5.0), Cisco IOS (CCNA).

Independent Technical Consultant, 2001 – 2003
Provided expertise in the field of Information Systems for some organizations and companies including The Palestinian Ministry of Education, The Palestinian Ministry of Social Affairs, The Arab Technology systems Company ATS-Palestine (Oracle Distributer), Jerusalem Electricity Co.-Palestine and The National Insurance Company-Palestine.

SERVICES

- Member of the ACM Student Chapter at Georgia State University until December, 2010.
- Publicity officer of the ACM Student Chapter at Georgia State university for the academic year 2008/2009.
- Reviewer for several conferences and journals
- Al-Quds University: Established and supervised the Open Electronics Lab and provided volunteer tutoring for Math, general chemistry and general physics classes.

REFERENCES

1. **Dr. Robert W. Harrison, Professor**
   Georgia State University, Department of Computer Science
   34 Peachtree Street, Suite 1440, Atlanta, GA 30303
   Phone : 404-413-5724 Fax : 404-413-5717
   E-mail : rharrison@cs.gsu.edu

2. **Dr. Rajshekhar Sunderraman, Professor**
   Georgia State University, Department of Computer Science
   34 Peachtree Street, Suite 1452, Atlanta, GA 30303
   Phone : 404-413-5726 Fax : 404-413-5717
   E-mail : raj@cs.gsu.edu

3. **Dr. Yi Pan, Professor**
   Georgia State University, Department of Computer Science
   34 Peachtree Street, Suite 1442, Atlanta, Ga 30303
   Phone : 404-413-5719 Fax : 404-463-9912
   E-mail : pan@cs.gsu.edu