

GAMAL A. ELSAYED, PhD.

Work Address:

Computer Department, Jamoum University College
Deanship of Academic Development and Quality
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EDUCATION:

Ph.D. in Computer Science and Engineering

May 2007

Thesis: "A High Performance Dynamic Meta-Scheduler with Migration Support for Grid Applications"
University of Connecticut, Storrs, CT

Master of Science in Electrical and Computer Engineering

March 1996

Thesis: "Real-Time Image Data Compression and Expansion"
Average Grade: Distinction. Assiut University, Assiut, Egypt

Bachelor of Science in Electrical and Computer Engineering

June 1992

Average grade: Very Good with honor's degree, and top of B.Sc 1992 class. Assiut University, Assiut, Egypt

TEACHING EXPERIENCE:

Assistant Professor

May 2013 – Current

Computer Science Department, Jamoum University College, Umm Al-Qura University, Kingdom of Saudi Arabia

Responsibility includes participating in the department effort to get accredit by ABET and teaching academic classes: Computer Organization, Computer Architecture, Operating System, Computer Networks, Parallel and Distributed Systems, Computer Security, IT Project Management (elective course), Supervising Graduation Project, and Introduction to Computer Science.

Assistant Professor of Computer Engineering

(On Leave)

October 2008 - Current

Electrical Engineering Department, Assiut University, Assiut, Egypt

Responsibility includes teaching academic classes at the electrical engineering department includes: Operating System, Advanced Operating System, Distributed Computing, Computer Networks and Data Communication, Computer Organization, Programming in C++, Microprocessors, and Computer Interfacing Circuits.

Gratis Assistant Professor-in-Residence

July 2007 – August 2008

Computer Science and Engineering, Department University of Connecticut, Storrs, CT, USA

Responsibility at Computational Medicine/Grid Computing laboratory includes investigating and studying Aspects of Visualization and the Grid in a Biomedical Context.

Instructor

June 2001– December 2005

Computer Science and Engineering Department, University of Connecticut, Storrs, CT, USA

School of Engineering Summer BRIDGE program, University of Connecticut, Storrs, CT, USA

Responsibility includes teaching academic classes at the computer science and engineering department includes: Digital Circuit Design, Computer Networks and Data Communication, Computer Architecture, and Introduction to Computing.

Teaching Assistant

January 2000 – May 2001

Computer Science and Engineering Department, University of Connecticut, Storrs, CT, USA

- Taught several laboratories at the computer science and engineering department include: Computer Architecture, Computer Organization, and Digital Circuit.
- Lead discussion and problem-solving sessions at the computer science and engineering department

Assistant Lecturer

December 1992 – June 1999

Electrical Engineering Department, Assiut University, Assiut, Egypt

- Taught undergraduate laboratories and discussion sessions includes: Computer Architecture, Computer Organization, Algorithms and Complexity, Programming Languages, Data Structure, Operating System, electronic circuits testing, and Engineering System Analysis
- Supervised Senior Projects for Client/Server and Socket programming and using Programmable Logic Controller (PLC) to design and implement controllers for industrial plant and oil pipelines.

SUPERVISORY EXPERIENCE:

- I was the major supervisor for two MSc students at Electrical Engineering Department
 - Currently I am an associate advisor for a PhD student at Computer Science program at Mathematics Department, Faculty of Science, Assiut University, Assiut, Egypt:
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RESEARCH EXPERIENCE:

I. RESEARCH INTEREST:

Grid Computing - Cloud Computing - Fault-Tolerance - Internet of Things - Wireless Sensor Networks - Add-hoc Wireless Network - Pervasive Computing - High Performance Computing - Real-Time Systems.

II. FUNDED PROJECTS:

1. **Co-Pi of the project "Energy Saving Using Cloud-Based Supervisor Wireless Network Control System for Smart Environment"**, awarded (1,659,142 Saudi Riyals for 24 months) from King Abdulaziz City for Science and Technology (KACST), 2014.
2. **Co-Pi of the project "Design parallel meta-heuristics for graph domination problems"**, awarded (147,800 Saudi Riyals for 12 months) from the Institute of Scientific Research and Revival of Islamic Heritage, Umm Al-Qura University, 2014.
3. **Co-pi of the project "An online automatic system to estimate and predict the holy mosques crowd to manage potential risks"**, awarded (299,000 Saudi Riyals for 6months) from Transportation and Crowd Management Center of Research Excellence (TCMCORE), Umm Al-Qura University, 2014.
4. **Post Doctor Scholar** at the project **"Parallel Meta-Heuristics Toolbox for Continuous Global Optimization"**, Project 13-INF544-10 funded by the National Science, Technology and Innovation Plan, King Abdul-Aziz City for Science and Technology, 2013.
5. **Assiut University Team member as a part of four Egyptian Universities consortium of a Tempus Project, Code: TEMPUS-2008-EG-JPHES-ETF-JP-00544-2008**
Project Title: "Enterprise-University Partnership: Educational and Training for Technology Transfer (EUPART)". This project is funded by TEMPUS-EU. Total Funding for three years is 1,000,000 €
6. **Co-founder of Supercomputing laboratory at faculty of science, Assiut University.**
Funded by Ministry of Higher Education, Egypt for the period 2008-2010.
7. **Research Associate at Computer Science and Engineering Department, University of Connecticut, Storrs, CT, USA.**
Member of Real-Time System project "Identifying Cracks in Railway Using Ultrasonic" funded by DAPCO 2002. Responsibility includes:
 - a. Developing wavelet-denoising-based front-end system using TI320C6416 Digital Signal Processor as a tool for detecting railway cracks using ultrasonic firing technique.
 - b. Wavelet-denoising simulation study.

III. PATENTS:

1. *Smart surface-mounted hybrid sensor system, method, and apparatus for counting.* USA Patent Office, Patent Number: US9672462B2, Patent Date: June 6th,2017.
2. *Systems and methodologies for performing intelligent perception based real-time counting.* USA Patent Office, Publication Number: US20160259980A1, Publication Date: Sep 8th,2016.
3. *A Multi-Modal Detection and Tracking Framework for Crowd and Risk Management.* USA Patent Office, Provisional Application 446641US.

IV. PUBLICATIONS:

Published book chapter:

1. Ian Greenshields and Gamal El-Sayed, “Aspects of Visualization and the Grid in a Biomedical Context,” in Handbook of Research on Computational Grid Technologies for Life Sciences, Biomedicine, and Healthcare, M. Cannataro, Ed. Hershey PA: IGI Global, 2009, pp. 347-362.

List of published papers:

1. Abdel-Rahman Hedar; Rashad Ismail; Gamal El-Sayed; Khalid Khayyat, “Two Meta-Heuristics Designed to Solve the Minimum Connected Dominating Set Problem for Wireless Networks Design and Management”, Accepted for publication at Journal of Network and Systems Management, Springer, October 2018.
2. Abdel-Rahman Hedar; Gamal El-Sayed, “Parallel Genetic Algorithm with Elite and Diverse Cores for Solving the Minimum Connected Dominating Set Problem in Wireless Networks Topology Control”, Accepted for publication at ACM International Conference on Future Networks and Distributed Systems, Amman, Jordan, June 26-27, 2018.
3. Kheir Eddine Bouazza,Wael Deabes, Hesham Amin, and Gamal A. Elsayed, “Energy consumption reduction by integrating Wireless Sensors and Actuators Networks Supervisory Controller with the Cloud Computing”, in the 42nd Industrial Electronics Conference (IEEE IECON 2016), Florence, Italy, October 24 - 27, 2016.
4. Hedar, R. Ismail, G.A. El Sayed and K.M.J. Khayyat “Two Meta-Heuristics for the Minimum Connected Dominating Set Problem with an Application in Wireless Networks.” In the IEEE of 2nd ACIS International Conference on Computational Science and Intelligence (CSI 2015), 12-16 July 2015.
5. Gamal A. El-Sayed and Aaref M. Abdullah “Mailbox-based Non-Blocking Minimum-process Coordinated Checkpointing with message passing for Hierarchical Computational Grid

- (MNMCCP)", in the IEEE proceedings of the 2nd International Conference on Advances in Computational Tools for Engineering Applications ACTEA'12, Lebanon, December 12-15, 2012.
6. Gamal A. El-Sayed and Khadra Housny "A Distributed Counter-based Non-Blocking Coordinated Checkpoint Algorithm for Grid Computing Applications", in the IEEE proceedings of the 2nd International Conference on Advances in Computational Tools for Engineering Applications ACTEA'12, Lebanon, December 12-15, 2012.
 7. Gamal A. El-Sayed and Aaref M. Abdullah "Non-Blocking Minimum Processes Coordinated Checkpointing for Hierarchical Computational Grid", in 8th International Conference on Electrical Engineering ICEENG 2012, Cairo, Egypt May29-31, 2012.
 8. Gamal A. El-Sayed and Aaref M. Abdullah "Fault-Tolerant Scalable Hierarchical Scheduling in Grid Computing", in 8th International Conference on Electrical Engineering ICEENG 2012, Cairo, Egypt May29-31, 2012.
 9. Gamal A. El-Sayed, "A Transparent Non-Blocking Coordinated Checkpointing Algorithm for Parallel Inter-Communicating Tasks in Grid Environment", 1st International Conference on Advanced Computing and Communications (ACC-2010), Orlando, FL, USA, September 15-17, 2010.
 10. Gamal A. El-Sayed, Ian R. Greenshields, "Low FM: A Robust Non-Blocking Low Frequency Messaging Checkpoint for Parallel/Grid Applications", Journal of Computers and Their Applications 2008: 154-158.
 11. Gamal A. El-Sayed and Ian Greenshields, "A New Non-Blocking Counter-Based Coordinated Checkpointing Algorithm as a Migration Tool in a High Performance Dynamic Grid Scheduler", The International Multiconference in Computer Science & Computer Engineering, Las Vegas, Nevada, USA, June 21-24, 2004.
 12. Gamal A. El-Sayed and Ian Greenshields, "A High Performance Dynamic Scheduler for Grid Applications", High Performance Computing Symposium 2003 (HPC 2003), Orlando, FL, March 30th - April 3rd, 2003.
 13. Gamal A. El-Sayed and Ian Greenshields, "Migrating Dependent/Messaging Tasks in a High Performance Dynamic scheduler for Grid Applications", in proceedings of the 2nd IEEE International Symposium on Signal Processing and Information Technology "ISSPIT 2002", December 18-21, 2002, Marrakesh, Morocco.
 14. Gamal A. El-Sayed and Yousef Mahdy, "Image Sequence Coding Using D-Compressed Quadtree", the 4th International Conference on Artificial Intelligence Applications, Cairo, Egypt, January 1996.
 15. Gamal A. El-Sayed and Yousef Mahdy, "Operations on DS-Compressed Quadtree Encoded Image", the Second International Conference on Engineering Research (ICER'95), Port Saeed, Egypt.
 16. Gamal A. El-Sayed and Yousef Mahdy, "D-Compressed Quadtree", 20th International Conference of Computer Science and its Scientific Applications, Cairo, Egypt, 1995.
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PROFESSIONAL EXPERIENCE:

Academic Development Consultant

March 2014 to Current

Deanship for University Development and Quality, Umm Al-Qura University, Kingdom of Saudi Arabia
Member of Accreditation Committee for NCAAA Standard 3, and international accreditation committee at Umm Al-Qura university.

Assiut University Knowledge Transfer Office KTO, Associate Director

January 2012 – May 2013

KTO Assiut University, Assiut, Egypt (www.aun.edu.eg/kto)

Assiut University Knowledge Transfer Office KTO is responsible for the transfer of innovations/technologies from the university to the industrial sector. KTO protects and manages the intellectual property developed by faculty members, students, and other researchers. KTO helps with the whole transfer process, starting from IP protection, passing by business planning, market analysis, negotiations with the interested parties in the industry, and ending by revenue sharing and deals closure. I work as an associate director of the office which has been established and funded by an EU TEMPUS grant Code: TEMPUS-2008-EG-JPHES-ETF-JP-00544-2008. I am one of Assiut University team members of that TEMPUS project.

Egyptian Cloud Computing Center (EC³), Consultant

January 2011 – May 2013

Information Technology Institute (ITI), Ministry of Communications and Information Tech, Egypt

I am a member of panel of expert of the first academic cloud computing center at Egyptian University. The center was established and funded by ministry of communications and information technology in Egypt. My responsibilities include drafting strategic planes for research directions and academic applications of cloud computing center at Assiut University.

Computer Programmer/Analyst 2

November 2005 – August 2008

University of Connecticut, Storrs, CT, USA

Working on full-time bases at Enterprise Administrative Systems unit at University of Connecticut Information Technology Services (UITS). Responsibility at Enterprise Administrative Systems unit includes monitoring, writing administrative scripts and programs for WebCT Vista enterprise system.

Software Engineer - Internship

June 1991 – October 1991

ABB Process Industries GmbH, Drives Division, Lampertheim / Hessen, Germany

Testing the software of the motor driver circuits and testing electronic switch circuits

Electrical Engineer - Internship

June 1990 – October 1990

Asea Brown Boveri ABB AG, Mannheim, Germany

Testing power transformers (the design Department and the test room)

TRAININGS, WORKSHOPS AND AWARDS:

I. TRAININGS AND CERTIFICATES

1. External Reviewers Training, NCAAA and the British Council, Jeddah KSA, 13-16 December 2015.
2. Strategic Planning workshops II, Dr. Ahmed Ibrahim Almoghazi, Organized by Umm Al-Qura University, Makkah, KSA, 3-5 May 2015.
3. Strategic Planning workshops I, Dr. Stephen Chadwick, Organized by Umm Al-Qura University, Jeddah, KSA, 14-16 April 2015
4. Institutional Accreditation, Dr. Wael Fathy, Umm Al-Qura University, Makkah, KSA, 28-29 January 2015
5. Invited by International Labor Organization (ILO) to teach one full day of “business plan preparation”, for trainers who are SFD staff and NGOs trainers. Venue: Minya Governorate, Egypt, 17th of March 2013.
6. ToT certified by World Labor Organization – United Nation, “Know About Business KAB”. Venue: South Valley University, Hurghada campus, organized by ILO and Higher Education Pathways. Date: August 26th – September 9th, 2012.
7. Referee-committee member: refereeing entrepreneurship projects by Upper Egypt Universities students. Assiut University, Assiut, Egypt, March 28th, 2013.

II. WORKSHOPS

1. Attended a Training workshop on “Know About Business KAB”. Venue: South Valley University, Hurghada campus, organized by ILO and Higher Education Pathways. Date: August 26th – September 9th, 2012.
2. Attended a workshop on “Entrepreneurship and Technology/Knowledge Transfer”. Venue: Free University of Berlin, Berlin, Germany. Date: July 16th – July 18th, 2012.
3. Attended a workshop on “Entrepreneurship and Innovation @ I3P, Politecnico di Torino”. Venue: Politecnico di Torino, Turin, Italy. Date: June 25th – June 29th, 2012.

III. AWARDS:

1. Awarded Computer Science and Engineering, University of Connecticut summer fellowship 04.
2. Awarded Computer Science and Engineering, University of Connecticut summer fellowship 02.
3. Awarded Computer Science and Engineering, University of Connecticut summer fellowship 01.
4. Awarded Govt. of Egypt Scholarship for the academic years 98/99--02/03.

5. Top of the B.S. graduating class of Assiut University in the academic year 91/92.
 6. Awarded Govt. of Egypt National Merit Scholarship for the academic years 86/87--91/92.
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REFERENCES:

Available upon request