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Personal Details:

- **Nationality**, Egyptian
- **Marital Status**, Married
- **Languages**, Arabic and English
- **Address**, Egypt – El-Minia – Bany Mazar - El-Salam
- **Mobile**, +2 0100 86 58057
- **E-mail**, esam.halim@fci.bu.edu.eg & essam.halim@mu.edu.eg
- **Last Job Title, Lecturer**, [Sep 2015 - Present] Computer Science Department, Faculty of Computers and Information, Minia University, Egypt.

Education

- **Ph.D. in Computer Science, Jan 2012.**
Faculty of Science, Computer Science Dept, Minia University, Minia, Egypt.
Thesis title: "Studying Some Routing Problems of Mobile Ad Hoc Networks using Artificial Ant Colony".
- **M. Sc. in Computer Science, Oct 2004.**
Faculty of Science, Computer Science Dept, Minia University, Minia, Egypt.
Thesis title: "A Comparative Study of Some Algorithms for Tree Drawing".
- **B. Sc. in Computer Science, June 1997.**
Grade: Very good.
Faculty of Science, Computer Science Dept, Minia University, Minia, Egypt.

Research Experience

- **May 2006 – Jan 2012, PhD degree in the field of "Wireless Networks" and it is titled "Study of Some Routing Algorithms for Ad Hoc Networks Using Ant Colony", in Computer Science Department, Faculty of Science, Minia University, Minia, Egypt.**

1- PhD Thesis description:

This Research is preliminary aiming to:

- ❑ Preparing a survey about Ant Colony Optimization (ACO) techniques and its application to adaptive routing in telecommunication networks.
- ❑ Preparing a survey about Mobile Ad hoc Networks (MANETs).
- ❑ Studying the convergence property of a family of distributed routing algorithms based on the ant colony.
- ❑ Analyzing AntNet and proposes improvements that were implemented, comparing their performance with respect to the original AntNet and other routing algorithms.

- **Aug 1999 – Oct 2004, M. Sc. degree in the field of Graph Drawing and it is titled "A comparative Study of Some Algorithms for Tree Drawing" in Computer Science Department, Faculty of Science, Minia University, Minia, Egypt.**

2- M. Sc. Thesis description:

In this thesis, we have addressed the problem of constructing tree drawings that exhibit some of these properties, and have presented several new techniques that provide answers to these problems. The problems we have considered relate to the following drawings:

- ❑ The area requirements of visibility representation of rooted tree using **Upward Drawing**.
- ❑ The area requirements of visibility representations of rooted tree using **Leftward with Rightward Drawing**.
- ❑ The area requirements of rooted tree using **Box Drawing**.
- ❑ The area requirements of tree using **Orthogonal Drawing**.

Publications

A. Published publications

- [1] Alaa Tharwat, Essam H. Houssein, Mohammed M. Ahmed, Aboul Ella Hassanien & Thomas Gabel. **MOGOA algorithm for constrained and unconstrained multi-objective optimization problems**. Applied Intelligence Springer. 2017.
- [2] Essam H. Houssein & Yaser Maher Wazery. **Vortex Search Topology Control Algorithm for Wireless Sensor Networks**. International Journal of Intelligent Engineering and Systems (IJIES), 2017.
- [3] Essam H. Houssein. **Particle swarm optimization enhanced twin support vector regression for wind speed forecasting**. Journal of Intelligent Systems. 2017.
- [4] Abdullah, Khalid M., Essam H. Houssein, and Hala H. Zayed. "Extended SPINS Framework for Security Wireless Sensor Network." International Journal of Computer Science Issues (IJCSI) 14, no. 2 (2017): 58.
- [5] Mlgheit, J. R., Houssein, E. H., & Zayed, H. H. (2017). **Security Model for Preserving Privacy over Encrypted Cloud Computing**. Journal of Computer and Communications, 5(06), 149.
- [6] Houssein, Essam H., Moataz Kilany, and Aboul Ella Hassanien. "ECG signals classification: a review." International Journal of Intelligent Engineering Informatics 5,4 (2017): 376-396.
- [7] Said, Shereen, Abdalla Mostafa, Essam H. Houssein, Aboul Ella Hassanien, and Hesham Hefny. "Moth-flame Optimization Based Segmentation for MRI Liver Images." In International Conference on Advanced Intelligent Systems and Informatics, pp. 320-330. Springer, Cham, 2017.
- [8] Ahmed, Mohammed M., Essam H. Houssein, Aboul Ella Hassanien, Ayman Taha, and Ehab Hassanien. "Maximizing Lifetime of Wireless Sensor Networks Based on Whale Optimization Algorithm." In International Conference on Advanced Intelligent Systems and Informatics, pp. 724-733. Springer, Cham, 2017.
- [9] Hamad, Asmaa, Essam H. Houssein, Aboul Ella Hassanien, and Aly A. Fahmy. "A Hybrid EEG Signals Classification Approach Based on Grey Wolf Optimizer Enhanced SVMs for Epileptic Detection." In International Conference on Advanced Intelligent Systems and Informatics, pp. 108-117. Springer, Cham, 2017.
- [10] Ali, M. A., Houssein, E. H., Eldemerdash, N. A., & Hassanien, A. E. (2017). **Increasing the hiding capacity in image steganography using Braille code**. International Journal of Intelligent Engineering Informatics, 5(4), 327-341.
- [11] Hamad, A., Houssein, E. H., Hassanien, A. E., & Fahmy, A. A. (2016, December). **Feature extraction of epilepsy EEG using discrete wavelet transform**. In 12th International Computer Engineering Conference (ICENCO), IEEE, pp. 190-195, Dec 2016.
- [12] Houssein, E. H., Abdelminaam, D. S., & Ismaeel, A. A. **Ant-Hoc: A swarm intelligence-based routing protocol for Ad Hoc networks**. International Journal of Computer Networks and Wireless Communications (IJCNWC), ISSN: 2250-3501, Vol.6, No 1, Jan-Feb 2016.
- [13] Houssein, E. H., Ali, M. A., & Hassanien, A. E. (2016, September). **An Image Steganography Algorithm using Haar Discrete Wavelet Transform with Advanced Encryption System**. In Computer Science and Information Systems (FedCSIS), 2016 Federated Conference on (pp. 641-644). IEEE.
- [14] Jassim R. Mlgheit, Essam H. Houssein, Hala H. Zayed, "Efficient Privacy Preserving of Multi-keyword Ranked Search Model over Encrypted Cloud Computing", ICCAT'2017, cairo, Egypt, December 29th 2016.
- [15] Khalid M. Abdullah, Essam H. Houssein, Hala H. Zayed, "New Security Protocol using Hybrid Cryptography Algorithm for WSN", ICCAT'2017, Cairo, Egypt, December 29th 2016.
- [16] Houssein, Essam H., Moataz Kilany, Aboul Ella Hassanien, and Vaclav Snasel. "A Two-Stage Feature Extraction Approach for ECG Signals." In International Afro-European Conference for Industrial Advancement, pp. 299-310. Springer, Cham, 2016.
- [17] Ismaeel, Alaa AK, Ammar Yassir, Tarek Mahmoud, Abdelmegied Aly, and Essam H. Houssein. "Area bounds of hierarchical graphs straightline grid drawing." In Information Technology and Computer Applications Congress (WCITCA), 2015 World Congress on, pp. 1-5. IEEE, 2015.
- [18] Houssein, Essam H., and A. A. Ismaeel. "Ant Colony Optimization based Hybrid Routing Protocol for MANETs." Journal of Emerging Trends in Computing and Information Sciences 6, no. 11 (2015).
- [19] T. M. Mahmoud, E. H. Houssein and Alaa A. K. Ismaeel, "New Adaptive Routing Protocol for Mobile Ad hoc Networks", International Journal of Networking and Communication (IJNC), Vol.1, Issue 1, 2014.
- [20] T. M. Mahmoud, E. H. Houssein and Alaa A. K. Ismaeel, "New Hybrid Routing Protocol for MANETs", International Conference on Network & Wireless Technology and Applications, Tunisia, ICNWT'2014.
- [21] A. A. A. Radwan, T. M. Mahmoud and E. H. Houssein, "HOPPRP: Hybrid Ant Colony Optimization Proactive Routing Protocol for Mobile Ad hoc Networks", 5th International Conference on Intelligent Computing and Information Systems, Faculty of Computer & Information Science, Ain Shams University, Egypt, 30 June - 3July, 2011.
- [22] A. A. A. Radwan, T. M. Mahmoud and E. H. Houssein, "AntNet-RSLR: A Proposed Ant Routing Protocol for MANETs", The first Saudi International Electronics, Communications and Electronics Conference (SIECPC'11) and IEEE Explore Digital Library, Riyadh, Saudi Arabia, <http://www.kacst-siecpc.org>, April 23-26, 2011.
- [23] A. A. A. Radwan, T. M. Mahmoud and E. H. Houssein, "Performance Comparison of AODV, DSR and LAR Routing Protocols for MANETs", 5th International Conference on Intelligent Computing and Information Systems, Faculty of Computer & Information Science, Ain Shams University, Egypt, 30 June - 3July, 2011.
- [24] A. A. A. Radwan, T. M. Mahmoud and E. H. Houssein, "Evaluation Comparison of Some Ad Hoc Networks Routing Protocols", El Sevier, Egyptian Informatics Journal (EIJ), Volume 12, issue2, July 2011.
- [25] A. A. Radwan, T. M. Mahmoud and E. H. Houssein, "Performance Measurement of Some Mobile Ad Hoc Network Routing Protocols", International Journal of Computer Science Issues(IJCSI), Vol.8, Issue 1, Jan. 2011.
- [26] A. A. A. Radwan and E. H. Houssein, "A new Algorithm for Compact Box-Drawing of Trees", International Journal of Intelligent Computing & Information Sciences, Volume 4, Number 2, PP: 21-31, 2004.
- [27] A. A. A. Radwan, M. R. Girgis and E. H. Houssein, "Techniques for Determining the Area Requirement of Visibility Representations of Rooted Trees", International Journal of Intelligent Computing & Information Sciences, Volume 2, Number 2, PP: 69-79, 2002b.

- [28] A. A. Radwan, M. R. Girgis and E. H. Houssein, "Comparing Area of Different Visibility Representations of Rooted Trees", International Journal of Intelligent Computing & Information Sciences, Volume 2, Number 1, PP: 68-77, 2002a.

B. Accepted publications (Not published yet):

- [29] Essam H. Houssein, Aboul Ella Hassanien, Alaa A. K. Ismaeel, "EEG Signals Classification for Epileptic Detection: A review", Second International Conference on Internet of Things Data, and Cloud Computing Venue: Churchill College, Cambridge, United Kingdom, 22-23 March 2017.
- [30] Sarah Osama, Essam H. Houssein, Aboul Ella Hassanien and Aly A. Fahmy, "Forecast of Wind Speed Based on Whale Optimization Algorithm", International Conference on Internet of Things and Machine Learning (IML 2017) Venue: Liverpool John Moores University October 17 – 18, 2017 Liverpool city, United Kingdom.
- [31] Moataz kilany, Essam H Houssein, and Amr Badr, "Hybrid of Water Wave Optimization and Support Vector Machine to Improve EMG Signal Classification for Neurogenic Disorders", 12th IEEE International Conference on Computer Engineering and Systems (ICCES 2017), Cairo, Egypt, December 19-20, 2017.
- [32] Essam H Houssein, Abdelazim G. Hussien, Aboul Ella Hassanien, "A binary whale optimization algorithm with hyperbolic tangent fitness function for feature selection", 12th IEEE International Conference on Computer Engineering and Systems (ICCES 2017), Cairo, Egypt, December 19-20, 2017.
- [33] Essam H. Houssein, Abdelazim G. Hussien, Aboul Ella Hassanien, "A binary whale optimization algorithm with hyperbolic tangent fitness function for feature Selection", 12th IEEE International Conference on Computer Engineering and Systems (ICCES 2017), Cairo, Egypt, December 19-20, 2017.
- [34] Sarah Osama, Ashraf Darwish, Essam H. Houssein, Aboul Ella Hassanien, Aly A. Fahmy, and Ayman Mahrous2, "Forecast of Long Term Wind Speed based on Optimized Support Vector Regression", 8th IEEE International Conference on Intelligent Computing and Information Systems (ICICIS 2017). Faculty of computer and information sciences, Ain Shams University, Egypt.
- [35] Abdelazim G. Hussien, Essam H. Houssein, Aboul Ella Hassanien and Mohamed Amin "Salp Swarm Algorithm for Predicting Chemical Activity", 8th IEEE International Conference on Intelligent Computing and Information Systems (ICICIS 2017). Faculty of computer and information sciences, Ain Shams University, Egypt.
- [36] Abdelazim G. Hussien, Aboul Ella Hassanien, Essam H. Houssein, Siddhartha Bhattacharyya and Mohamed Amin , "S-Shaped binary whale optimization algorithm for feature selection", First International Symposium on Signal and Image Processing (ISSIP 2017) to be held at RCC Institute of Information Technology, Kolkata, India during November 01-02, 2017.
- [37] Asmaa Hamad, Essam Houssein, Aboul Ella Hassanien and Aly A. Fahmy , "Hybrid grasshopper optimization algorithm and support vector machines for automatic seizure detection in EEG Signals ", 3rd International Conference on Advanced Machine Learning Technologies and Applications (AMLT2018) to be held at Cairo, during November 22-24 February 2018.
- [38] Ahmed Abdeldaim, Essam Houssein and Aboul Ella Hassanien. "Color Image Segmentation of Fishes with Complex Background in Water", 3rd International Conference on Advanced Machine Learning Technologies and Applications (AMLT2018) to be held at Cairo, during November 22-24 February 2018.
- [39] Essam H. Houssein, & Mona A. S. Ali. A hybrid lion optimization with SVM for epileptic seizure detection. International Journal of Advancements in Computing Technology. In Press.
- [40] Essam H. Houssein. & Mohamed Abd-ELfattah. Multi-objective Modified Flower Pollination Algorithm for Maximizing Lifetime in Wireless Sensor Networks. International Journal of Systems Signal Control and Engineering Application. In Press.
- [41] Essam H. Houssein. & Mohamed Abd-ELfattah. The Decisional Visualized Toolkit for Crises Management based on Information Visualization. International Journal of Soft Computing. In Press.

C. Accepted Book Chapters (Not published yet):

- [42] Abdalla Mostafa, Hesham Hefny, Essam H. Houssein and Moataz Kilany, Aboul Ella Hassanien , "A Computer-Aided Diagnostic System to Characterize CT Focal Liver Lesions based on Lion Optimization Algorithm and Support Vector Machines", HMRA 2018: Hybrid Metaheuristics: Research and Applications RCC Institute of Information Technology Kolkata, India, April 10, 2018.
- [43] Asmaa Hamad, Essam H. Houssein, Aboul Ella Hassanien, Aly A. Fahmy, Siddhartha Bhattacharyya, "A Hybrid Grey Wolf Optimization and Support Vector Machines for Detection of Epileptic Seizure", HMRA 2018: Hybrid Metaheuristics: Research and Applications RCC Institute of Information Technology Kolkata, India, April 10, 2018.
- [44] Sarah Osama, Essam H. Houssein, Ashraf Darwish, Aboul Ella Hassanien, Aly A. Fahmy, "Support Vector Regression and Whale Optimization Algorithm for Long Term Wind Speed Prediction", HMRA 2018: Hybrid Metaheuristics: Research and Applications RCC Institute of Information Technology Kolkata, India, April 10, 2018.
- [45] Abdalla Mostafa, Essam H. Houssein, Mohamed Houseni, Aboul Ella Hassanien, Hesham Hefny, "Evaluating Swarm Optimization Algorithms for Segmentation of Liver Images", Studies in Computational Intelligence, Volume 730, Springer International Publishing, 2018. DOI: 10.1007/978-3-319-63754-9.

Teaching Experience

- [Sep 2015 - Present], **Lecturer**, Computer Science Department, Faculty of Computers and Information, Minia University, Egypt.
- [Jan 2012 – Sep 2015], **Lecturer**, Computer Science Department, Faculty of Computers and Informatics, Benha University, Egypt.
- [Feb 2010 - 2011], **Lecturer Assistant**, Computer Science Department, Faculty of Computers and Informatics, Benha University, Egypt.
- [Feb 2008 – Jan 2010], **Lecturer Assistant** in Computer Science Department, Thebes Higher Institute for Computer and Management Science, Thebes Academy, Cairo, Egypt.
- 1999 - 2007, **Teaching Assistant** in Computer Science Department, Faculty of Science, Minia University, Minia, Egypt.

Specialized Courses	Data Structures - Neural Networks - Operating System - Computer Networking - OOP – Structural Programming - Database - Logic Design – Management Information Systems
Programming	JAVA - C++ - HTML - JavaScript - SQL - Oracle 10g.
Applications	Windows – Linux - MS Office - FrontPage - Dream Weaver - Flash.

Work Experience

- **Director, Quality Assurance & Accreditation Unit**, [April 2011 – September 2015], Faculty of Computers and Informatics, Benha University, Egypt.
- **Director, IT Unit**, [Sep 2012 - Present], Faculty of Computers and Informatics, Benha University, Egypt.
- **Executive director, Continuous Improvement and Quality for Accreditation Project (8th CIQAP)**, Faculty of Computers and Informatics, Benha University, Egypt.

Training Courses

- **ORASCOM Training & Technology (OTT)**
 - Linux Basics/Administration
 - Oracle 10g: JAVA Programming
 - Oracle 10g: Build J2EE Applications
 - Oracle Application Server 10g: Administration I
 - Oracle Application Server 10g: Administration II
 - Oracle JDeveloper 10g: Build Applications with ADF
 - Oracle AS Portal 10g: Build Corporate Portals
 - Oracle AS Portal 10g: Build Portal with JAVA
- **Career Development and Consultation Academy**
 - Communication Skills and Presentation Skills
 - Technical Business Writing
 - Teamwork
 - Problem Solving and Decision Making
 - Customer Service
 - Basic Sales and Marketing Skills
- **CCNA instructor**
- **Information Storage and Management (ISM), EMC, 2 Feb 2014.**
- **Cloud Infrastructure and Services (CIS), EMC, 16:20 Feb 2014.**
- **Information and Communication Technology Project (ICTP), Minia University, Minia, Egypt**
- **NAQAAE (National Authority for Quality Assurance and Accreditation of Education)**
 - Course in good practices for institutions of higher education
 - Course in active learning
 - Course in evaluating the learning outcomes
- **FLDC (Faculty of Leadership Development Center)**
 - Using the Technology in the Teaching
 - Quality Assurance in the Teaching Process
 - Scientific Research Ethic

Student Project

- **Car in Touch: The main idea of our project is protecting the car from theft by using Android application, web service and Raspberry pi. Our project not only help you to protect your car but in the worst case (if the car has been stolen), you can track your car and you can easily find the car place. In general you can open camera for video stream or tracking not only the theft case.**



Journal Reviewer

- International Association of Scientific Innovation and Research (IASIR).
- Aloy Journal of Soft Computing and Applications (AJSCA).
- International Journal of Computer Science Issues (IJCSI).
- Walailak Journal of Science and Technology (WJST).

Projects

- ORASCOM Training & Technology (OTT)

Project Abstract:

1. Design Electronic Site for Computer Store.
2. Display a list contains Computers Products and each Product contains a list of Categories.
3. Costumers full a registration form and they select the Product Type and its Category and they choose the Buy Way.
4. The Company Deliver the Products and its Categories to the Costumers by the selected Delivery Way.

- ✓ Oracle Certified Associate in *Database 10g Administration I*

All transcripts are available upon request.