C. V.

Personal Information

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Education

Aug 2017	: MBA from Cardiff Metropolitan University, Excellent with distinction, Wales, UK.
Jun 2003	: PhD in Computer Engineering, University of Strathclyde, Glasgow, UK.
Sep 1997	: MSc in Systems Engineering, Mansoura University, Computer and Systems Department, Egypt.
June 1994	: BSc in Computer Engineering and Systems, average degree 83.14% Very Good with honour degree, the first, Mansoura University, Computer and Systems Department, Egypt.

Employment

Feb 2021 – Present	: Professor in Computer and Systems Department (AI Specialization), Mansoura University, Egypt.
June 2014 – Jan 2021	: Associate professor in Computer and Systems Department, Mansoura University, Egypt.
Dec. 2017- Sep. 2019	: Post Doctor Researcher in D. I. Mendeleyev Institute for Metrology, Saint Petersburg, Russia.
Jan. 2014-Present	: A consultant for the Egyptian Cabinet – The Egyptian Government Private Cloud Security-Information and Decision Support Centre, Egypt.
Dec. 2009-Nov. 2010	: Post Doctor Research in Idaho State University, Idaho, USA.
Nov. 2003 – June 2014	: Assistant professor in Computer and Systems Department, Mansoura University, Egypt.
Feb 2005 – May 2007	: A computer technical committee member for the Egyptian Ministry of Higher Education
Dec 2002 – Feb 2003	: Teaching assistant in the University of Strathclyde, Glasgow, UK.
Sep 2002 – Nov 2002	: Consulting Engineer in Vertron Limited, Milngavie, Glasgow, UK.
Sep 1997 -Aug 1998	: Assistant lecturer in Computer and Systems Department, Mansoura University, Egypt.
Oct 1994 -Aug 1997	: Teaching assistant in Computer and Systems Department, Mansoura University, Egypt.
Jul 1992 -Jun 1998	: Computer graphics designer and computer maintenance Engineer in a number of private companies in Cairo.

Awards

The ORS award (Overseas Research Studentship given to only 50 overseas students in UK each year) for the years 1999-2002, The Strathclyde University Scholarship (given to only 10 students in the university each year) for the years 1999-2002, The International Scholarship for the year 1998.

Business Skills

In the MBA Marketing, Accounting for Decision makers, Management of Finance, Strategic Management, Operations Management, People and organizations, Buyer behaviour and relationship marketing, were studied and a graduation project in online shopping behaviour and the effect of social media on customer purchase has been done.

Activities

Steering committee member in the International organization for Measurements and Instrumentations, Scottish International Resource Program associate, International Organisation for Artificial Organs member, Institute of Engineering and Technology member, Institute of Electrical and Electronics Engineers member, International Functional Electrical Stimulation Society member

Background

Business Intelligence, Cloud Computing, Big Data, Data Science, Machine Learning, Modelling, image and signal processing, Genetic Algorithms, Neural Networks, Fuzzy Logic, System Dynamics, and Wavelet Analysis.

Computer Skills

Hadoop, OpenStack, Power BI, Tableau, LabVIEW, MATLAB, c#, Java, R, PHP, node.js, Python, Ruby, Scala, Groovy, iclone, Director, Flash, Dreamweaver, UML and others.

Publications

34 Journal papers
9 Conference papers
3 Books

Selected Publications

1: E. -S. M. El-kenawy, A. Ibrahim, S. Mirjalili, M. M. Eid and S. E. Hussein, "Novel Feature Selection and Voting Classifier Algorithms for COVID-19 Classification in CT Images," in IEEE Access, doi: 10.1109/ACCESS.2020.3028012 (Q1 Web of Science).

2: A. Ibrahim, S. Mohammed, H. A. Ali and S. E. Hussein, "Breast Cancer Segmentation From Thermal Images Based on Chaotic Salp Swarm Algorithm," in IEEE Access, vol. 8, pp. 122121-122134, 2020, doi: 10.1109/ACCESS.2020.3007336 (Q1 Web of Science).

3: A. A. Nasser, M. Z. Rashad and S. E. Hussein, "A Two-Layer Water Demand Prediction System in Urban Areas Based on Micro-Services and LSTM Neural Networks," in IEEE Access, vol. 8, pp. 147647-147661, 2020, doi: 10.1109/ACCESS.2020.3015655 (Q1 Web of Science)

4: Ahmed, A., & Hussein, S. (2020). Leaf identification using radial basis function neural networks and SSA based support vector machine. PLOS ONE, 15(8), e0237645. doi: 10.1371/journal.pone.0237645 (Q2 Web of Science)

5: Essa, E., Aldesouky, D., Hussein, S., & Rashad, M. (2020). Neuro-fuzzy patch-wise R-CNN for multiple sclerosis segmentation. Medical & Biological Engineering & Computing, 58(9), 2161-2175. doi: 10.1007/s11517-020-02225-6 (Q2 Web of Science)

6: Zaki, J., Ali-Eldin, A., Hussein, S., Saraya, S., & Areed, F. (2019). Traffic congestion prediction based on Hidden Markov Models and contrast measure. Ain Shams Engineering Journal. doi: 10.1016/j.asej.2019.10.006 (Q2 Web of Science)

7: Sapozhnikova, K., Hussein, S., Taymanov, R., & Baksheyeva, I. (2019). Music and growl of a lion: anything in common? Measurement model optimized with the help of artificial intelligence will answer. Journal Of Physics: Conference Series, 1379, 012055. doi: 10.1088/1742-6596/1379/1/012055 (Q3 SJR)

8: FW Zaki, J., Ali-Eldin, A., Hussein, S., Saraya, S., & Areed, F. (2019). Time Aware Hybrid Hidden Markov Models for Traffic Congestion Prediction. International Journal On Electrical Engineering And Informatics, 11(1), 1-17. doi: 10.15676/ijeei.2019.11.1.1 (Q3 SJR)

9: K Sapozhnikova, S Hussein, Iu Baksheeva and R Taymanov, "Application of neural networks in the instrument for measuring expected listener's emotions": Journal of Physics: Conf. Series 1065 (2018) 072041 IOP Publishing, doi:10.1088/1742-6596/1065/7/072041 (Q3 SJR)

10: Abdelhameed Ibrahim, Ali Ahmed, Sherif Hussein, Aboul Ella Hassanien, "Fish Image Segmentation Using Salp Swarm Algorithm," International Conference on Advanced Machine Learning Technologies and Applications, pp. 42-51, 2018. (SCOPUS)

11: Ali Ahmed, Abdelhameed Ibrahim, Sherif Hussein, "Detection of Palm Tree Pests using Thermal Imaging: A Review," In book: Machine Learning Paradigms: Theory and Applications, Editors: Hassanien, Aboul Ella (Ed.), https://doi.org/10.1007/978-3-030-02357-7_12, pp. 253-270, 2019 (SCOPUS)

12: Title: Applying DNA Computing using Graph Theory for Data Storage and Retrieval, Authors: W. H. Kaleel, S. E. Hussein, M. Z. Rashad, Publication: International Journal of Intelligent Computing and Information Sciences, Publications, Vol. 16, No. 2, April 2016. (SCOPUS)

13: Title: Cloud Based Public Collaboration System in Developing Countries, Authors: Sherif M. Badr, Sherif E Hussein, Publication: International Journal of Advanced Computer Science and Applications, Publications, Vol. 5, No. 9, pp. 1-9, 2014, New York, USA. (SCOPUS)

14: Title: Multi-Agent Based Chaotic Traffic Simulation for Cairo Ring Road, Authors: Sherif E Hussein, Sarwat Zahwi. Publication: Key Engineering Materials, Vol. 613, pp 363-373, Trans Tech, Publications, 2014, Switzerland. (Q3 SJR)

15: Title: Assessment of the potential iridology for diagnosing kidney disease using wavelet analysis and neural networks, Authors: Sherif E Hussein, Osama A. Hassan, Malcolm H. Granat, Publication: Biomedical Signal Processing and Control, Elsevier, Volume 8, Issue 6, November 2013, pp. 534–541. (Q1 Web of Science)

16: Title: Resources Allocation in Higher Education based on System Dynamics and Genetic Algorithms. Authors: Sherif E Hussein and Mahmoud Abo El-Nasr. Publication: International Journal of Computer Applications 77(10):40-48, September 2013. Published by Foundation of Computer Science, New York, USA. (SCOPUS)

17: Title: Healthcare Cloud Integration using Distributed Cloud Storage and Hybrid Image Compression. Authors: Sherif E Hussein and Sherif M. Badr. Publication: International Journal of Computer Applications, 80(3):9-15, October 2013. Published by Foundation of Computer Science, New York, USA. (SCOPUS)

18: Title: An Open Cloud Model for Expanding Healthcare Infrastructure, Authors: Sherif E Hussein, Hesham Arafat, Publication: International Journal of Advanced Computer Science and Applications, Publications, Vol. 4, No. 9, pp. 84-91, 2013, New York, USA. (SCOPUS)

19: Title: Intelligent Assessment for Pathological Gait Analysis, Author: Sherif E Hussein, Publication: Key Engineering Materials, Vol. 437, pp 334-338, Trans Tech, Publications, 2010, Switzerland. (Q3 SJR)

20: Title: Health Care Personnel Allocation using Multi-Agent Systems, Author: Sherif E Hussein, Publication: International Journal of Simulation, Systems, Science and Technology IJSSST, Vol. 9, No. 3, 2008, UK. (SCOPUS)

21: Title: Picture Archiving and Communication System Analysis and Deployment, Author: Sherif E Hussein, Publication: EUROSIM/UKSim 2009, Cambridge, UK, Mar. 15-17, 2009. (SCOPUS)

22: Hussein, S. (2008). An Intelligent Design for Foot Orthoses. Key Engineering Materials, 381-382, 607-610. doi: 10.4028/www.scientific.net/kem.381-382.607. (Q3 SJR)

23: Title: Intention detection using neuro-fuzzy EMG classifier, Authors: Sherif E Hussein and Malcolm H Granat, Publication: IEEE Engineering in Medicine and Biology Magazine, Nov./Dec., 2002. (Q1 Web of Science)

24: Title: Adaptive fuzzy controller for standing up and sitting down, Authors: Sherif E Hussein and Malcolm H Granat, Publication: 7th Vienna International Workshop on Functional Electrostimulation, Vienna, Austria, Sept. 12-15, 2001. (SCOPUS)

25: Title: A neuro-genetic model for standing up and sitting down in paraplegia, Authors: Sherif E Hussein and Malcolm H Granat, Publication: The 6th Annual Conference for the International FES Society, 17-20 June 2001, Cleveland, USA. (SCOPUS)

Scientific Interests

I was working during my MSc degree research in robotics, adaptive and intelligent control systems. In UK, I have worked as a consultant in Industrial Solutions using LabVIEW to develop advanced measurement and control systems. I worked as well on the different measurement and control systems in Bioengineering Unit in Strathclyde University during my PhD research. Beside those projects, I worked on Biomechanics, medical image and signal processing, biological modelling and artificial intelligence. During my position in Idaho State University, VNIIM and Mansoura University as an assistant professor, I worked intensively on cloud computing and its role in providing high performance computation resources. I investigated how to design, simulate and program high performance cloud applications and how to perform Business analytics using R and Python languages.

During the Interim government of Al-Beblawi I worked as a consultant for both the ministry cabinet and the minister of education for planning futuristic strategies using System Dynamics and Genetic Algorithms.

When I received the associate professor post in Mansoura University, I continued my research in cloud computing, Big Data, Data Science, Internet of Things, Systems Dynamics, and Intelligent Modelling techniques. However, my current research focus is targeting Fog and Cloud Computing, Blockchain, Big Data and Business Intelligence, Data Science and Modelling.

In conclusion, I work in general on basic principles as well as novel theories and methods in modelling and optimization techniques. Topics of my interest include but are not limited to design and control of complex systems like multi-agent systems and system dynamics, networks and machines; methods for analysis, visualization and management of large data sets; use of cloud computing, Hadoop and R language for modelling complex systems; digital signal processing; and tools and software solutions for different scientific and technological purposes. Besides, I concentrate on novel theories and practical solutions that, by overcoming the limitations of traditional methods such as AI techniques, may successfully address modern scientific challenges, thus allow for scientific and technological up-to-date applications.

Students' supervision Experience

I shared in the first year of MSc programme by teaching courses and supervising small research projects to give guidance about the nature of research and the standard expected, planning of the research, relevant literature and sources, research methods and instrumental techniques, research data management and to direct students to particular training programmes and modules. The first year of MSc programme makes the student aware of relevant regulations and legal issues, including but not limited to plagiarism, copyright, data protection, health and safety, and any ethical issues that might arise in the course of research. During the MSc and PhD programmes, I give detailed advice on the necessary completion dates of successive stages of research in order to ensure that a thesis is submitted within the time allowed by the regulations. In addition, I write yearly reports that explain the progress of each student in his or her research.

Current supervision:
Six MSc students in Computer engineering, computer science and biomedical engineering.
Three PhD students in computer engineering, computer science and business administration.

Reviews

Title: LabVIEW: Data Acquisition and Analysis for the Movement Sciences, 1/e, Author: Andrew McDonough, Publisher: Prentice Hall, ISBN: 0-13-012847-3

Session Chair

Session No.: OS5-7, Session Name: Signal processing & algorithms II, Conference Name: ISMTII 2007, 8th International Symposium on Measurement, Technology and Intelligent Instruments, Sendai, Japan.

Session Name: Material properties' characterization, Conference Name: ISMTII 2013, 11th International Symposium on Measurement, Technology and Intelligent Instruments, Aachen, Germany

Books

"The Design of an Intelligent Active Orthosis for Lower Limbs", Sherif Hussein, ISBN 978-3-639-24398-7, 2010.

"Education Quality Control Based on System Dynamics and Evolutionary Computation" written by Sherif E. Hussein published in the book "Modelling, Simulation and Optimization ", ISBN 978-953-7619-36-7, 2010. (Book chapter)

References

1) Prof. Mahmoud Mohamed Mahmoud Abo El-Nasr
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3) Prof. Malcolm Granat
   Professor in Health and Rehabilitation Sciences,
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   Email: m.h.granat@salford.ac.uk