

Prof. Hissam Tawfik

Professor of Artificial Intelligence

Profile

An established Artificial Intelligence Professor from the UK with a PhD in Computer Engineering from the University of Manchester, UK.

Proven academic management experience of computer science programs (undergraduate, MSc and PhD levels), research management and the management and development of academic colleagues.

Leader of a wide range of academic and industry driven collaborative projects in AI for Health, Smart cities and sustainability and working extensively in international contexts with high profile collaborators from Denmark, France, USA, UAE and Spain.

1. Academic and Professional Qualifications

- 2000, PhD in Computer Engineering
University of Manchester (then UMIST), UK
[PhD sponsored by EPSRC UK research council and Lucas Aerospace]
- 1996, MSc in Control and Information Technology, University of Manchester, UK, Department of Electrical Engineering.
- 1995, BEng (Hons) in Electronic and Electrical Engineering, University of Salford, UK, Department of Electronic and Electrical Engineering.

2. Employment History

- 2015 to present date: Leeds Beckett University (UK), Professor (Artificial Intelligence)
- 2009 to 2015, Liverpool Hope University (UK), Associate Professor (Computer Science and Engineering)
- 2003 to 2009, Liverpool Hope University (UK), Assistant Professor (Computer Science and Engineering)
- 2000 to 2003, Salford University UK), Postdoctoral Research Fellow (Computer Science and Engineering)

3. Main areas of Research

- Applied Artificial Intelligence
- Big Data and Data Science
- Digital Health
- Smart Cities and Environments
- Responsible AI

4. Academic Quality Assurance and External Examination experience

- External Examiner for the Professional Engineering Doctorate Programme Liverpool John-Moores University (UK); 2020-2024.
- External Examiner to the BSc Computer Science programmes at Salford University (UK); 2017-2020.
- External Examiner for the BSc (Hons) Computer and Internet Applications Programme for the University of Bedfordshire (UK) (in Oman); 2012 - 2015.
- External Examiner for the MSc Computing programme at Staffordshire University; 2010-2014.

5. Visiting, and wider national and international roles

- Visiting Professor at Faculty of Engineering, the University of Seville (Spain).
- Senior Member of IEEE.
- Leeds City representative in 'Knowledge Society' Forum of 'EUROCITIES'.
- Member of UK Council of Professors and Head of Computing (CPHC).
- Member of the British Computer Society.

6. International Journal's Editorial roles

- Editor: Future generation Computer systems, Elsevier. (CORE Rank A; Impact Factor: 6.1) since 2016.
- Editor: Neural Computing and Applications, Springer. (CORE Rank B; Impact Factor: 4.7) since 2017.
- Editor: Reliable Intelligent Environments, Springer, since 2019.

7. Reviewer for research councils and other research funding bodies

- EPSRC (UK Research Council)
- The British Academy Research Funding.
- UAE National Research Foundation / Ministry of Education Funding.
- Cyprus Research Foundation.

10. PhD Examination and supervision Track record

PhD Examination record

1. 2020, Middlesex University, London
ADAPT: Approach to Develop context-aware solutions for personalised Asthma Management
2. 2020, University of Bradford
Machine Learning based Feature Selection and Optimisation For Clinical Decision Support Systems.
3. 2019, University of Seville
Mission-based mobility models for UAV networks.
4. 2018, Cardiff Metropolitan University
An Empirical investigation into the challenges of technical developments in the Nigerian Airlines Industry.
5. 2018, University of Northumbria
Deep Learning-based Image Description Generation with Refined Description.
6. 2018, Liverpool John Moores University
The Application of Machine Learning for the Identification of At-risk Learners in Massive Open Online Courses.
7. 2018, Leeds Beckett University
A Mixed-Resolution HEVC based Multiview Video Codec for Low Bitrate Transmission.
8. 2017, Coventry University
Heart Disease Diagnosis Using Artificial Neural Networks.
9. 2017, Liverpool John Moores University

- Adaptive Health Monitoring Using Aggregated Energy Readings from Smart Meters
10. 2016, University of Salford
An Evaluation of the Impact of Gaming Technology on Learning
 11. 2016, University of Northumbria
Intelligent Facial Expression Recognition with Unsupervised Facial Point Detection and mGA Embedded PSO Feature Optimization
 12. 2016, Leeds Beckett University
Implementation of E-Government in Kurdistan Regional Government, Iraq
 13. 2015, City University London (MPhil)
Multi-Electrode stimulation and measurement patterns versus prior information for fast 3D EIT.
 14. 2015, University of Northumbria
Adaptive 3D Facial Action Intensity Estimation and Emotion Recognition
 15. 2014, Liverpool John Moores University
Dynamic Self-Organised Neural Network Inspired by the Immune Algorithm for Time Series Prediction and Medical Data Classification
 16. 2014, University of Coventry
Statistical Modelling of IPV in Nigeria: Magnitude, Risk factors and Implications
 17. 2013, University of Liverpool
A Unified Metaheuristic and system-Theoretic framework for Petroleum Reservoir Management
 18. 2013, City University London (MPhil)
Dual Function, Split Ratio Adjustable, Vibration Insensitive Interferometric Profilometers
 19. 2011, Liverpool John Moores University
Evolutionary Environmental Modelling in Self Managing Software Systems
 20. 2011, University of Liverpool
Analysis of long range correlations in DNA sequence for phylogenetic relationship between species
 21. 2010, Coventry University
The Relationship between Culture and e-business Acceptance

Completed PhDs under my supervision

1. Thesis title: Investigating Pilot Responses to In-Flight Startle in Simulator Based General Aviation Training, Y. Abidon, Leeds Beckett University, 2020.
2. Thesis title: Cloud computing adoption in the health sector in Saudi Arabia, R. Alsufyani, Leeds Beckett University, 2020.
3. Thesis title (MRes.): The Role of Technology in Household Food Waste Management, G. Phiri, Leeds Beckett University, 2019.
4. Thesis title: Investigating the Role of Awareness for the Management of Information System Security, M. Alshehi, Leeds Beckett University, 2018.

5. Thesis title: "Neural Network design and architecture for predicting short- and medium-term exchange rate time series", K. Bucha, Leeds Beckett, 2016.
6. Thesis title: "2A culturally-aware system design approach for Health informatics", A. H. Mohamed, Liverpool Hope University, 2016.
7. Thesis Title: "Designing Context-Aware e-Health Systems for Cross-Boundary Clinical Decision Support", O. Anya, University of Liverpool, 2013.
8. Thesis Title: "An intelligent pedagogical agent to guide students in Problem-based Learning", C. Beaumont, University of Liverpool, 2012.
9. Thesis Title (MPhil): "An Affective Interface for Conveying Student Feedback", S. Abyratna, University of Liverpool, 2012.
10. Thesis Title: "Extending Association Rule Mining", M. Khan, Liverpool University, 2011.
11. Thesis Title: "Internet Flow Control and Traffic Management Algorithms for Performance and Fairness Guarantees", G. Abbass, Liverpool University, 2010.
12. Thesis Title: "Bi-directional Two-Handed Interaction in Virtual Assembly Environments ", K. Tan, University of Salford, 2007.
13. Thesis Title: "Multi-objective Intelligent Transportation system in Construction sites", A. Soltani, University of Salford, 2004.

Ongoing PhD Research Supervision

1. O. BabaJide: Machine learning application for weight and diet management.
2. B. Singh: Artificial Intelligence solutions for obesity risk prediction.
3. L. Shaw: Machine Learning driven solutions for the early diagnosis of dementia.
4. N. Aningo: AI for Micro Grid based Residential Home Energy Management.

11. Funded Research and Innovation Projects

- Co-Principal Investigator: CODES- The Control of District-heating Efficiency through Smart data-driven models, (£490, 000) Innovate UK funding, 2020 – 2022.
- Academic Leader/PI: KTP project (£128,000) with 'The Label Makers'; 2018-2020 (Predictive Analytics for Business Improvement).
- Academic Leader/PI: KTP project (£115,000) with 'Bob Business'; 2017-2019 (Data Analytics for Usability improvement).
- Principal Investigator: Mobile Applications for Assessment of Risk of Dementia, HEIF Project, 2014-2015 (£17,500).
- Principal Investigator: Biostatistical and Bioinformatics Approaches to Unravel Genetic Risk Markers for Common Cancers, HEIF Project, 2014-2015 (£15,000).
- Principal Investigator: Context-Aware Multimedia Information System for e-Health Decision Support, 2009-2011, British Council funded Collaborative project with the British University in Dubai (£35,000).

- Principal Investigator: Facial Expressions for Communicating User Feedback, 2008-2010, of HEIF funded Project (£50,000).
- Principal Investigator: Advanced E-commerce solutions for West Coast Sound and Vision (Blackpool), 2010, Innovation Voucher Scheme (£3000).
- Work-package leader:
DiverCity: *Distributed virtual workspace for enhancing communication within the construction industry* (Funded under: FP5-IST, EU Funding) – Leader for the "Constructability" simulation and Site Analysis work-packages. Virtual Reality Centre - the University of Salford (2000-2003).

12. Invited Guest lectures

- Lecture title: AI and data Science for Weight Management, London (Middx. University), December 2019.
- Lecture title: AI for Health and Wellbeing, Istanbul (Yildiz University) May 2019.
- Inaugural Professional Lecture: **Biologically Inspired Computing for Big Data Science**, February 2017.
Weblink: <https://www.youtube.com/watch?v=F9n35fbG6xg>
- Lecture title: Genetic Algorithms and Intelligent Systems Applications; Seville, Spain; 25th March 2015.
- Lecture title: User-Centred Information Systems for E-Health; University of Wollongong in Dubai, UAE; 23rd June 2012.
- Lecture title: Financial Literacy Modelling with Artificial Neural Networks, British University in Dubai, UAE; 21st November 2007.

13. Conference Chair/Co-chair

1. FGCom 2020 (General Chair), International Conference on Future Computing and Technology Innovations, Liverpool, July 2020.
2. DESSERT 2019, International IEEE Conf. Dependable Systems, Services and Technologies), Leeds, June 2019.
3. DESE'19 International Conference on Developments in eSystems Engineering, Kazan (Russia), October 2019.
4. DESE'18 International Conference on Developments in eSystems Engineering, Cambridge, September 2018.
5. DESE'16 International Conference on *Developments in eSystems Engineering*, Liverpool/Leeds, August 2016.
6. DESE'15 International Conference on *Developments in eSystems Engineering*, Dubai, UAE, 13th - 14th December 2015.
7. The 2014 Symposium on *Health Informatics for Active aging and People with Dementia*, Liverpool, July 2014.
8. The 2013 International Conference on *Engineering and Medical Informatics* (EMI2013), Liverpool UK, May 2013.

9. DESE'13 International Conference on *Developments in eSystems Engineering*, Abu Dhabi, UAE, December 2013.
10. DESE'11 International Conference on *Developments in eSystems Engineering*, Dubai, UAE, 6th - 8th December 2011.
11. DESE'10 International Conference on *Developments in eSystems Engineering*, London, UK, September 2010.
12. ICMS2010 International Conference on *Intelligent Systems, Modelling and Simulation*, Liverpool, UK, January 2010.
13. DESE'09 International Conference on *Developments in eSystems Engineering*, DeSE09, Abu Dhabi, UAE, December 2009.
14. EMS2008 *European Modelling Symposium*, Liverpool, UK, September 2008.

14. Organiser of Conference and Symposia sessions and Tracks

- Special Session organiser: 'Artificial Intelligence in Health and Medicine: from Theory to Applications'; The International Joint Conference on Neural Networks IJCNN 2019 (Hungary).
- Special session organiser: 'Computational Intelligence for Data Engineering and its Applications to Real-World Problems', for 2018 IEEE World Congress on Computational Intelligence, Rio de Janeiro, Brazil, July 2018 (www.ieee-wcci.org)
- Special session organiser: 'IoT and Smart Data' for the 2018 International Conference on Intelligent Computing, August 15-18 ,2018, Wuhan, China (<http://ic-ic.tongji.edu.cn/2018/>)
- Competition Chair: *Neural Network based Weather Prediction Competition*; International Joint Conference on Neural Networks (IJCNN2015), Killarney, Ireland, July 2015.
- Co-organiser/Chair: Special Session on *Time Series Forecasting and Analysis Using Artificial Neural Networks*, 2014 International Conference on Intelligent Computing (ICIC 2014), August, 2014, Taiyuan, China.
- The *Mobile E-Health Research Workshop*, National Research Foundation (UAE), December 2013.
- The 2013 International Conference on *Engineering and Medical Informatics* (EMI2013), May 2013, Liverpool, UK.
- The '*User-centered E-Health*' special session for the Innovations'11 International Conference, Abu Dhabi, April 2011.
- The *Health Informatics* Symposium at the British University in Dubai, May 2010.
- The '*E-Science*' Session for UKSIM 2009 conference, Cambridge, March 2009.
- The '*Intelligent Systems and Informatics*' session. The European Modelling Symposium, University College London, 12th September, 2006.

15. Reviewer for some of the Top International Journals in the field

- The IEEE Transactions on Man, Machine and Cybernetics.
- The IEEE International Journal on Internet Of Things (IoT).
- The International Journal of Neurocomputing (Elsevier).

16. List of Publications

16.1 Refereed Journal Papers

D. Mahoro Ntwari, D. Gutierrez-Reina, S. Toral, H. Tawfik.
Time Efficient Unmanned Aircraft Systems Deployment in Disaster Scenarios Using Clustering Methods and a Set Cover Approach, *Electronics (MDPI)*, 10(4), 422, 2021

AR Javed, M Sarwar, M Beg, M Asim, T Baker, H Tawfik
A collaborative healthcare framework for shared healthcare plan with ambient intelligence. *Human-centric Computing and Information Sciences*, Springer, V10, No.40, 2020.

H Alaskar, AJ Hussain, W Khan, H Tawfik, P Trevorrow, P Liatsis, Z Sbaï
A Data Science Approach for Reliable Classification of Neuro-degenerative Diseases using Gait Patterns; *Reliable Intelligent Environment*, Springer, 2020.

M Khalaf, H Alaskar, AJ Hussain, T Baker, Z Maamar, R Buyya, P Liatsis, H Tawfik
IoT-Enabled Flood Severity Prediction via Ensemble Machine Learning Models
IEEE Access 8, pp 70375-70386, 2020.

A Alsadhan, AJ Hussain, P Liatsis, M Alani, H Tawfik, P Kendrick, H Francis
Locally weighted classifiers for detection of neighbour discovery protocol distributed denial-of-service and replayed attacks. *Transactions on Emerging Telecommunications Technologies*; 2019.

Y Kotb, I Al Ridhawi I; M Aloqaily, T Baker, Y Jararweh, H Tawfik
Cloud-Based Multi-Agent Cooperation for IoT Devices Using Workflow-Nets.
Grid Computing; Pp 1-26; June 2019.

O Anya, H Tawfik, M Alani, J Hu
Cybersecurity design considerations for cross-boundary clinical decision support.
Reliable Intelligent Environments, Vol. 5(2), Pp 91-103. 2019

DG Reina, H Tawfik, SL Toral
Multi-subpopulation evolutionary algorithms for coverage deployment of UAV-networks. *Ad Hoc Networks* Vol.68, pp16-32, Elsevier, 2018.

D Tian, J Deng, G Vinod, T Santhosh, H Tawfik
A Constraint-based Genetic Algorithm for Optimizing Neural Network Architectures for Detection of Loss of Coolant Accidents of Nuclear Power Plants, *Neurocomputing*, Vol. 322, pp102-119, Elsevier, 2018.

AJ Hussain, P Liatsis, M Khalaf, H Tawfik, H Al-Asker
A Dynamic Neural Network Architecture with Immunology Inspired Optimization for Weather Data Forecasting. *Big Data Research*, Elsevier, Vol. 14, Pp81-92, 2018.

T Baker, B Aldawsari, M Asim, H Tawfik, Z Maamar, R Buyya
Cloud-SEnergy: A Bin-Packing Based Multi-Cloud Service Broker for Energy Efficient Composition and Execution of Data-intensive Applications. *Sustainable Computing: Informatics and Systems*, Elsevier, Vol. 19, Pp 242-252 2018.

T. Baker, M. Asim, H. Tawfik, B. Aldawsari and R. Buyya. "An Energy-aware Service Composition Algorithm for Multiple Cloud based IoT Applications". *Journal of Network and Computer Applications*, Elsevier, 2017.

O. Anya and H. Tawfik. "Designing for Practice-based Context-awareness in Ubiquitous e-Health Environments". *Journal of Computers and Electrical Engineering*, Elsevier, 11[4], 1-15, 2016.

O. Anya and H. Tawfik. "A model of medical practice for contextual knowledge sharing in collaborative healthcare", *Int. Journal of Medical Engineering and Informatics*, Inderscience, 2016.

T. Baker, B. Al-Dawsari, Y. Ngoko, H. Tawfik, and D.Reid. "GreeDi: Energy Efficient Routing Algorithm for Big Data on Cloud". *AD HOC Networks Journal*, Elsevier, Volume 35, Pages 83–96, 2015.

H Tawfik and O. Anya, "Evaluating Practice-centred Awareness in Cross-boundary TeleHealth Decision Support Systems", *Telematics and Informatics Journal*, Elsevier, Volume 32, pp. 486-503, 2015.

Reid D, Hussain AJ, Tawfik H, "Financial Time Series Prediction Using Spiking Neural Networks", *PLoS ONE* 9(8): e103656, 2014.

K. Shaalan, M. Al-Mansoori, H. Tawfik, "An Awareness-Raising E-Learning Approach for Children Living in High Diabetic Population", *Journal of Informatics for Health and Social Care*, Inform Healthcare, Volume 39, No 2, P81-103, 2014.

H Tawfik, O. Anya, and A. K. Nagar, "Understanding Clinical Work Practices for Cross-boundary Decision Support in e-Health", *IEEE Transactions on Information Technology in BioMedicine*", Volume 16, issue 4, pp530-41, July 2012.

Q.T. Nguyen, R.N.G. Naguib, H. Tawfik and N. H. Phuong, "Strategic Challenges Facing User- and Patient-Centred e-Health in Vietnam", *International Journal of Healthcare Technology and Management (IJHTM)*, InderScience, Volume 13, Number 5/6, Inderscience 2012.

O. Anya, H. Tawfik and A. K. Nagar, "Practice-centred work analysis: towards ontology-based decision support in cross-boundary e-health", *International Journal of Healthcare Technology and Management (IJHTM)*, InderScience, Pages: 304-320. Volume 13, Number 5/6, Inderscience 2012.

G. Abbas, A. K. Nagar, and H. Tawfik, "On Unified QoS Resource Allocation Scheme with Fair and Scalable Traffic Management for Multiclass Internet Services", *IET Communications*, Volume 5, Issue 16, p.2371–2385, 2011.

O. Anya, A. Nagar and H. Tawfik, *Building Adaptive Systems for Collaborative E-Work: The e-Workbench Approach*, *International Journal of Intelligent Decision Technologies*, Vol. 5 No. 1, IOS Press, pp.83-100, 2011.

M. Sulaiman Khan, M. Muyeba, F Conenen, D. Reid and H. Tawfik, "Finding Associations in Composite Data Sets: The CFARM Algorithm", *International Journal of Data Warehousing and Mining (IJDWM)*, Volume 7, Issue 3, IGI Global, 2011.

G. Abbas, A. Nagar, H. Tawfik and J. Goulermas, Pricing and Un-Responsive flows purging for Global rate Enhancement, *Journal of Electrical and Computer Engineering*, Vol.10, doi:10.1155/2010/379652, pp.1-10.Hindawi Publishing, 2010.

M. Katebi, H. Tawfik, and S. D. Katebi. *Limit Cycle Prediction Based on Evolutionary Multiobjective Formulation*, *Mathematical Problems in Engineering*, Volume (2009), Hindawi Publishing, 2009.

H. Tawfik, R. Huang, M. Samy, and A.K. Nagar (2009). On the Use of Intelligent Systems for the Modeling of Financial Literacy Parameters, *Journal of Information Technology Research*, Vol. 2, Issue 4, pp. 17-35, 2009.

A. Hussain, P. Liatsis, H. Tawfik and A. Nagar, Physical Time Series Prediction Using Recurrent PI-Sigma Neural Networks , *International Journal of Artificial Intelligence and Soft Computing (IJAISC)*, pp. 130-145, InderScience, 2008.

Samy M., Tawfik, H., Huang, R and Nagar, A.T. (2008) "Financial Literacy of Youth. A sensitivity analysis of the determinants." *The International Journal of Economic Sciences and Applied Research*, Volume 1. Issue 1.

H. Tawfik and P. Liatsis. An intelligent systems framework for prototyping tactical driving decisions. *International Journal of Intelligent Systems Technologies and Applications*. InderScience publishers; Volume 5, No 1/2, pp. 20-48, 2008.

R. Ghazali, , A. Hussain, , P. Liatsis, H. Tawfik, The application of ridge polynomial neural network to multi-step ahead financial time series prediction; *Neural Computing & Applications*, Vol. 17, No. 3., pp. 311-323, June 2008.

H. Tawfik, A.K. Nagar and T. Fernando, Multi Criteria Spatial Analysis of Building Layouts, *Issues in Informing Science and Information Technology (JIISIT)*, vol. 4, pp. 781-789; June 2007.

A.K. Nagar and H. Tawfik, A Multi-Criteria Based Approach to Prototyping Urban Road Networks, *Issues in Informing Science and Information Technology (JIISIT)*, vol. 4, pp. 749-756; June 2007.

A.K. Nagar, G. Abbas, and H. Tawfik, Online State Estimation of Communication Networks, *International Journal of Computer Science and Network Security*, Vol. 6, No.5B, pp. 49-60, ISSN 1738-7906, May 2006.

A. R Soltani, H Tawfik, JY Goulermas & T Fernando. Path planning in construction sites: performance evaluation of the Dijkstra, A* and GA search. *Advanced Engineering Informatics*, Elsevier, vol.16 (4), pp. 291-303, 2002.

P. Liatsis and H. Tawfik. Two-dimensional road shape optimisation using genetic algorithms, *Mathematics and Computers in Simulation*, Elsevier, Vol. 5, pp. 19-31, 1999.

16.2 Books

Applications of Big Data Analytics

MM Alani, H Tawfik, M Saeed, O Anya; Springer, 2018

16.2 Editorship of Special Journal Issues

KKF Yuen, JS Leu, A Ishizaka, H Tawfik, F Coenen

Special Issue on 'Expert Decision Making for Data Analytics with Applications'
Applied Soft Computing (Scheduled for publication in 2021)

H Tawfik, J Hu, KKF Yuen, MM Alani, N Georgalas

Special issue on 'Security, usability and sustainability of smart cities'
Journal of Reliable Intelligent Environments, 2020

A. Hussain, D. Al-Jumeily, H. Tawfik and P. Liatsis; Special issue on "Data Science and Internet of Everything (IoE)"; Journal of Sensors, MDPI, 2019

H. Tawfik and D. Bruno (Special section), E-Health Applications for Active Ageing and Dementia, the International Journal of Medical Informatics, Elsevier, Volume 91, July 2016.

H. Tawfik and S. Zhou, User-centred Health Informatics, Special Issue of the International Journal of Healthcare Technology and Management (IJHTM), InderScience, Volume 13, Number 5/6, Inderscience 2012.

A. K. Nagar and H. Tawfik, Advances in Intelligent Systems for Applied Simulation and Prototyping, Special Issue of the International journal on Intelligent Systems Technologies and Applications, Volume 5, No 1/2, InderScience, ISBN: 1740 8865, 2008.

16.4 Editorship of Conference Proceedings

Proceedings of the 11th Int. Conference on Developments in eSystems Engineering (DeSE 2018); Cambridge, UK, Sept. 2018. IEEE, ISBN 978-1-5386-6712-5.

D. Al-Jumaily A. Hussain, H. Tawfik, and A. MacDermott, Proceeding of 8th International Conference on *Developments in eSystems Engineering*, Dubai, UAE, December 2015, IEEE Computer Society, ISBN: 978-1-5090-1860-4.

A. Hussain, D. Al-Jumaily, N Radi, H. Tawfik, and R. Radvan, Proceeding of 6th International Conference on *Developments in eSystems Engineering*, Abu Dhabi, UAE, December 2013, IEEE Computer Society, ISBN: 978-1-4799-5264-9.

A. Hussain A, H. Tawfik, D. Al-Jumaily, A.K. Nagar, and O. Abulmaatti, Proceeding of 4th International Conference on *Developments in eSystems Engineering*, Dubai, UAE, December 2011, IEEE Computer Society, ISBN: 978-0-7695-4593-9.

H. Tawfik, A. Hussain, D. Al-Jumaily, A.K. Nagar, and P. Liatsis, Proceeding of 3rd International Conference on *Developments in eSystems Engineering*, London, UK, September 2010, IEEE Computer Society, ISBN: 978-0-7695-4160-0.

D. Al-Dabass, A. Pantelous, H. Tawfik, A. Abraham, Proceedings of The 2010 International Conference on *Intelligent Systems, Modelling and Simulation*, January 2010, Liverpool, U.K, IEEE, ISBN: 978-0-7695-3973-7/10.

D. Al-Jumaily, A.K. Nagar, H. Tawfik, A. Hussain and P. Lisbea, Proceeding of The 2nd International Conference on *Developments in eSystems Engineering*, Abu Dhabi, UAE, December 2009, IEEE Computer Society, ISBN: 978-0-7695-3912-6

D. Al-Dabass, A. Abraham, A. Nagar, H. Tawfik, and R. Zobel, Proceedings of the *European Modelling Symposium*, Liverpool, U.K., 8th -10th September 2008, IEEE Computer Society, ISBN 978-0-7695-3325-4.

16.5 Book Chapters/Lecture Notes Computer Science

B Singh and H Tawfik

Machine Learning Approach for the Early Prediction of the Risk of Overweight and Obesity in Young People, International Conference on Computational Science, LNCC 523-535, 2020

- O Anya, H Tawfik
Toward a Cognitive Middleware for Context-Aware Interaction in Smart Homes
Technology for Smart Futures, 41-54, 2018.
- DG Reina, T Camp, A Munjal, SL Toral, H Tawfik
Evolutionary Deployment and Hill Climbing-Based Movements of Multi-UAV Networks
in Disaster Scenarios, Applications of Big Data Analytics, 63-95, 2018.
- O Anya, H Tawfik, RNG Naguib
Applying the Practice Theoretical Perspective to Healthcare Knowledge Management
Theories to Inform Health Informatics Research and Practice, 375-390, 2018.
- D Tian, J Deng, G Vinod, TV Santhosh, H Tawfik
A Neural Networks Design Methodology for Detecting Loss of Coolant Accidents in
Nuclear Power Plants, Applications of Big Data Analytics, 43-61, 2018
- O. Anya and H. Tawfik, Leveraging Big Data Analytics for Personalised Elderly Care:
Opportunities and Challenges. Applied Computing in Medicine and Health: Emerging
Topics in Computer Science and Applied Computing, Elsevier, 2016.
- R Huang, H Tawfik, A J Hussain, H Al-Askar. The Application of Artificial Immune
Systems for the Prediction of Premature Delivery. Intelligent Computing
Methodologies. Lecture Notes in Computer Science Volume 8589, pp 825-833, 2014.
- D Reid, A J Hussain, H Tawfik, R Ghazali. Prediction of Physical Time Series Using
Spiking Neural Networks; Intelligent Computing Methodologies; Lecture Notes in
Computer Science, Volume 8589, pp 816-824, 2014,.
- H Alaskar, A J Hussain, P Fergus, D Al-Jumeily, H Tawfik, H Hamdan, Feature Analysis
of Uterine Electrohystography Signal Using Dynamic Self-organised Multilayer Network
Inspired by the Immune Algorithm; Intelligent Computing Methodologies; Lecture
Notes in Computer Science, Volume 8588, pp 206-212, 2014.
- R. Huang, H. Tawfik, and A. Nagar, Towards an Artificial Immune System for Online
Fraud Detection, Lecture Notes in Computer Science (LNCS), 6825 Springer 2011
(Proceedings of The 10th International Conference on Artificial Immune Systems
(ICARIS 2011), Cambridge, UK).
- O. Anya, H. Tawfik, A. Nagar and C. Westaby, An Ethics-Informed Approach to the
Development of Social Robotics, In D. Weir and N. Sultan (eds.) From Critique to
Action: The Practical Ethics of the Organizational World, England: Cambridge Scholars,
2011
- R. Huang, H. Tawfik, and A. Nagar, Electronic Fraud Detection for Video-on-Demand
System Using Hybrid Immunology-Inspired Algorithms, , Lecture Notes in Computer
Science (LNCS), Springer, pp. 290-303 (Proceedings of The 9th International
Conference on Artificial Immune Systems (ICARIS 2010), Edinburgh, UK, July 2010).
- O. Anya, H. Tawfik, A. Nagar and S. Amin, Context-Aware Decision Support in
Knowledge-Intensive Collaborative E-Work, Proceedings of International Conference
on Computational Intelligence, Lecture Notes in Computer Science, Amsterdam, The
Netherlands, 31 May - 2 June 2010
- H. Tawfik and O. Anya. A Context-Driven Approach to Route Planning, Lecture Notes
in Computer Science, Springer, Part 3\2, No 5102, pp. 622-629, (Proceedings of
ICCS2008 International Conference on Computational Science Krakow, Poland, June
2008).

R. Huang, H. Tawfik, and A. Nagar. Licence Plate Character Recognition Using Artificial Immune Technique, Lecture Notes in Computer Science, Springer Part 1. No 5102, .823-832, (Proceedings of ICCS2008 International Conference on Computational Science, Krakow, Poland, June 2008).

O. Anya, A. Nagar and H. Tawfik, An Approach for Enriching Information for Supporting Collaborative e-Work, ICCS08 International Conference on Computational Intelligence, Lecture Notes in Computer Science, Springer Publications, Part III, No 5103, pp. 419-428, June 2008

O. Anya, A. Nagar, and H. Tawfik, On Acquiring Knowledge to Support Decision Making in Collaborative e-Work, In Ellis et al. (Eds.) Applications and Innovations in Intelligent Systems XV, Springer, pp. 345-350, 2007

A.K. Nagar, D.S. Sokhi, and H. Tawfik, An Intrinsic Technique Based on Discrete Wavelet Decomposition for Analysing Phylogeny, Knowledge-Based Intelligent Information and Engineering Systems, LNAI 4251, Part 1 , pp. 1051-1058, Springer-Verlag, November 2006.

J. Yao, T. Fernando, H. Tawfik, R. Armtiage and I. Billing, Towards a Collaborative Urban Planning Environment. in Computer Supported Cooperative Work in Design II Springer-Verlag publication, LNCS 3865, pp. 554-562, 2006.

A.K. Nagar, G. Abbas, and H. Tawfik, State Estimation of Congested TCP Traffic Networks, 6th International Conference on Computational Science, LNCS 3991, Part 1, pp. 802-805, Reading, May 2006.

H. Tawfik and P. Liatsis. Modelling tactical driving manoeuvres with GA-INTACT. In Computational Science (Lecture Notes in Computer Science series), Springer-Verlag publications, LNCS 3993, Part 3, pp. 767-774, (Proceedings of ICCS2006 International Conference on Computational Science, UK, May 2006).

J. Yao, H. Tawfik and T. Fernando. A GIS based virtual urban simulation environment. In Computational Science (Lecture Notes in Computer Science series), Springer-Verlag publication, LNCS 3993, Part 3, pp. 60-68, May 2006.

16.6 Refereed Conference Papers

1. AB Yusuf, AL Kor, H Tawfik. A Simulation Environment for investigating In-Flight Startle in General Aviation. 10th International Conference on Dependable Systems, Services and Technologies (DESSERT), IEEEExplore, Pages 180-185, 2019.
2. O Babajide, H Tawfik, A Palczewska, A Gorbenko, A Astrup, JA Martinez, JM Oppert, T Sørensen. Application of unsupervised learning in weight-loss categorisation for weight management programs, 10th International Conference on Dependable Systems, Services and Technologies (DESSERT), IEEEExplore, Pages 94-101, 2019.
3. B Singh, H Tawfik, A Machine Learning Approach for Predicting Weight Gain Risks in Young Adults, 10th International Conference on Dependable Systems, Services and Technologies (DESSERT), IEEEExplore, Pages 231-234, 2019.
4. D Reid, A Hussain, H Tawfik, R Ghazali, D. Al-Jumeily
Forecasting Natural Events using Axonal Delay
Proceedings of the IEEE Congress on Evolutionary Computation (CEC), 2018

5. A Mario Arzamendia, D Gutierrez, S Toral, D Gregor Derlis, H Tawfik
Evolutionary Computation for Path Planning of Autonomous Surface Vehicles using Eulerian Graphs (Proceedings of the IEEE Congress on Evolutionary Computation (CEC), 2018
6. O Anya, H Tawfik,
An "Awareness" Environment for Clinical Decision Support in e-Health
Int. Conference on Bioinformatics and Biomedical Engineering, 456-467, 2018.
7. T Baker, JM García-Campos, DG Reina, S Toral, H Tawfik, D Al-Jumeily
GreeAODV: An Energy Efficient Routing Protocol for Vehicular Ad Hoc Networks
International Conference on Intelligent Computing, 670-681, 2018.
8. O. Anya, H. Tawfik and E. Secco, A Context-Aware Architecture for Personalized Elderly Care in Smart Environments, Proc. of 1st EAI International Conference on Smart Grid Inspired Future Technologies SmartGIFT, Liverpool, UK, May 2016.
9. O. Anya, H. Tawfik, and D. Al-Jumeily, Context-Aware Clinical Knowledge Sharing in Cross-Boundary E-Health: A Conceptual Model, IEEE International Conference on Computer and Information Technology, pp. 589-595, UK, 2015
10. D. Al-Jumeily, A. Hussain, Á. MacDermott, H. Tawfik and J. Murphy, Improving the Barrier of Communication Between Healthcare Professionals and their Patients Through the Development of a Prescription Tracking System, Proceedings of 2015 International Conference on Developments in eSystems Engineering, Dubai, UAE, December 2015.
11. D. Al-Jumeily, A. Hussain, Á. MacDermott, J. Lunn, Seeckts and H. Tawfik, Analysis of Methods and Techniques to Support the Development of Fraud Detection Systems, Proceedings of 2015 International Conference on Developments in eSystems Engineering, Dubai, UAE, December 2015.
12. O. Anya and H. Tawfik, Supporting Practice-centered Awareness in Computer-Mediated Collaboration across Communities of Practice. Proc. of the 2014 International Conference on Collaboration Technologies and Systems (CTS 2014), IEEEExplore, Minnesota, USA, May 2014.
13. D Reid, A. Hussain, and H. Tawfik. A Spiking Neural Network for Financial Prediction. Proceedings of IJCCN International Joint Conference on Neural Networks, IEEE, Dallas, USA, August 2013.
14. O. Anya, H. Tawfik, A. Nagar and K. Lootah, A Framework for Practice-Centred Awareness and Decision Support in Pervasive E-Health, Proceedings of IEEE-EMBS International Conference on Biomedical and Health Informatics, Hong Kong, Shenzhen, 5-7 January 2012.
15. A. H. M. Mohamed, H. Tawfik, L. Norton and D. Al-Jumeily, Does e-Health technology design affect m-Health informatics acceptance? A case study, Proceedings of IEEE-EMBS International Conference on Biomedical and Health Informatics, Hong Kong, Shenzhen, 5-7 January 2012.
16. D. Al-Jumeily, A. Hussain and H Tawfik. Investigating the factors that affect peoples' acceptance of E-Learning Systems and Websites. Proceedings of 2012 International Conference on Education and e-Learning Innovations (ICEELI), IEEEExplore, Tunisia, July 2012.

17. A.J Hussain, S. Morgan, D. Al-Jumeily and H Tawfik. Can ICT Improve teachings and Learning Within Schools? Proceedings of 2012 International Conference on Education and e-Learning Innovations (ICEELI), IEEEExplore, Tunisia, July 2012.
18. K. Lootah, J. Massey, S. Amin and H. Tawfik, National Health Framework: The UAE Vision, Proceedings of the 4th e-Health Conference in the Middle East, 30th Jan-2nd Feb 2012, Dubai, UAE.
19. K. Shaalan, M. Al-Mansoori, H. Tawfik, A. H. M., Evaluation of an E-Learning Diabetes Awareness Prototype, Proceedings of 2011 International Conference on Developments in eSystems Engineering, pp. 74-80, Dubai, UAE, Dec 2011
20. O. Anya, H. Tawfik, A. K. Nagar, and A. H. M. Mohamed, CaDHealth: Designing and Prototyping for Cross-Boundary Decision Support in E-Health, Proceedings of 2011 International Conference on Developments in eSystems Engineering, pp. 111-116, Dubai, UAE, December 2011
21. H. M. Mohamed, H. Tawfik, D. Al-Jumeily, and L. Norton, MoHTAM: A Technology Acceptance Model for Mobile Health Applications, Proceedings of The 2011 International Conference on Developments in eSystems Engineering, pp. 13-18, Dubai, UAE, December 2011.
22. M. Al-Mansoori, K. Shaalan and H. Tawfik, Using E-learning for helping children with diabetes, Proceedings of (Innovations'11) International Conference on Innovations in Information Technology, Abu Dhabi, United Arab Emirates, pp. 145-149, April 2011.
23. H. Mohamed, H. Tawfik, L. Norton and D. Al-Jumeily, e-HTAM: A Technology Acceptance Model for electronic health, Proceedings of International Conference on Innovations in Information Technology (IIT), Abu Dhabi, United Arab Emirates, pp. 134-138, April 2011.
24. O. Anya, H. Tawfik and A. Nagar, Cross-boundary knowledge-based decision support in e-health, Proceedings of International Conference on Innovations in Information Technology (IIT), Abu Dhabi, United Arab Emirates, pp. 150-155, April 2011.
25. O. Anya, H. Tawfik and A. Nagar, Information Enrichment for Decision Support in Virtual Collaboration, Proceedings of E-Science and E-Engineering Workshop of the Second International Conference on Developments in eSystems Engineering, DeSE10, London, UK, 6th - 8th September 2010.
26. R. Huang, H. Tawfik, and A. Nagar. On the use of innate and adaptive parts of artificial immune systems for online fraud detection. Proceedings of 2010 IEEE Fifth International Conference on Bio-Inspired Computing: Theories and Applications (BIC-TA), pp. 1669 - 1676, Liverpool, UK
27. O. Anya, H. Tawfik, A. Nagar, S. Amin and K. Shaalan, Context-Aware Knowledge Modelling for Decision Support in E-Health, Proceedings of The IEEE World Congress on Computational Intelligence, Barcelona, Spain, 18-23 July 2010.
28. R. Huang, H. Tawfik, A. Nagar, A Novel Hybrid Artificial Immune Inspired Approach for Online Break-in Fraud Detection, Proceedings of International Conference on Computational Intelligence, Elsevier, Amsterdam, The Netherlands, 31 May - 2 June 2010.
29. S. Abeyratna, G. Paramej, H. Tawfik, and R. Huang. An Affective Interface for Conveying User Feedback. Proceedings of the UKSim2010 International Conference on Computer Modelling and Simulation, IEEE Computer Society Press, Cambridge, UK, March 2010.
30. O. Anya, H. Tawfik and A. Nagar, Task-Centred Knowledge Sharing in e-Collaboration, Proceedings of the Second International Conference on Developments in eSystems Engineering, DeSE09, IEEE Computer Society, ISBN: 978-0-7695-3912-6, pp. 403-408, Abu Dhabi, UAE, December 2009.
31. R. Huang, H. Tawfik, A.K. Nagar, and G. Abbas (2009). A Novel Hybrid QoS Multicast Routing Based on Clonal Selection and Artificial Fish Swarm Algorithms, Proceeding of 2nd International Conference on Developments in eSystems

- Engineering, Abu Dhabi, UAE, IEEE Computer Society, ISBN: 978-0-7695-3912-6, pp. 48-53, December 2009.
32. G. Abbas, A. K. Nagar, H. Tawfik, and J. Y. Goulermas "Estimation based Distributed QoS Pricing and Scheduling for Elastic Internet Services" 2nd IEEE International Conference on Developments in eSystems Engineering, DeSE09, Abu Dhabi, December 14-16 2009.
 33. G. Abbas, A. K. Nagar, H. Tawfik, and J. Y. Goulermas "Welfare Maximization in Nonconvex Rate Utility Problem of Multimedia e-Communication Systems", 2nd IEEE International Conference on Developments in eSystems Engineering, DeSE09, Abu Dhabi, December 14-16 2009.
 34. R. Huang, H. Tawfik, and A.K. Nagar (2009). Artificial Dendritic Cells Algorithm for Online Break-in Fraud Detection, Proceeding of 2nd International Conference on Developments in eSystems Engineering, IEEE Computer Society, ISBN: 978-0-7695-3912-6, Abu Dhabi, UAE, pp. 185-193, December 2009.
 35. O. Anya, H. Tawfik and A. Nagar, Designing Context-Awareness into Decision Support Systems for E-Collaboration, Proceedings of the Second International Conference on Developments in eSystems Engineering, DeSE09, IEEE Computer Society, ISBN: 978-0-7695-3912-6, pp. 53-58, Abu Dhabi, UAE, December 2009.
 36. G. Abbas, A. K. Nagar, H. Tawfik, and J. Y. Goulermas "Quality of Service Issues and Nonconvex Network Utility Maximization for Inelastic Services in the Internet", 17th IEEE/ACM International Symposium on Modelling, Analysis & Simulation of Computer and Telecommunication Systems, MASCOTS09, London, Sep 21-24, 2009, pp. 537-547.
 37. G. Abbas, A. K. Nagar, H. Tawfik, and J. Y. Goulermas "Extended Adaptive Rate Allocation for Distributed Flow Control of Multiclass Services in the Next Generation Networks", 3rd IEEE International Conference & Exhibition on Next Generation Mobile Applications, Services, and Technologies, NGMAST09, pp. 285- 291, Cardiff, September, 2009,.
 38. O. Anya, H. Tawfik, A. Nagar and S. Amin, e-Workbench: A Model of Knowledge-Oriented Interaction for e-Collaboration, Proceedings of the 13th International Conference on Human-Computer Interaction, pp. 498-502, San Diego, USA, July 2009.
 39. O. Anya, H. Tawfik, A. K. Nagar and S. Amin. e-Workbench: A Case for Collaborative Decision Support in e-Health, Proceedings of the UKSIM2009 International Conference on Computer Modelling and Simulation, Cambridge, March 2009.
 40. R. Huang, Martin Samy, H. Tawfik, and A.K. Nagar. Licence Plate Character Recognition based on Support Vector Machines with Artificial Immune and Fish Swarm Algorithms. Proceedings of the UKSIM2009 International Conference on Computer Modelling and Simulation, Cambridge, March 2009.
 41. H. Tawfik, R. Huang, M. Samy and A. K. Nagar. Analysing Financial Literacy Determinants with Computational Intelligence Models. Proceeding of the IEEE Innovations in Information Technology Conference (Innovations'08), pp. 74-78, UAE, December 2008.
 42. Abbas, G., Nagar, A. K., Tawfik, H. and J. Y. Goulermas. A State Estimation based Framework for Control and Management of Data Communication. Proceedings of the International Conference on Distributed Frameworks and Applications, DFmA-2008, pp194-199, Penang, Malaysia, October 2008.
 43. R. Huang, Martin Samy, H. Tawfik, and A.K. Nagar. Application of Support Vector Machines in Financial Literacy Modelling. Proceedings of the European Modelling Symposium (EMS 2008), IEEE Computer Society Press, pp.311-316, Liverpool, UK, September 2008.
 44. J. Chakraborty, A. Konar, A. Nagar, and H. Tawfik. A Multi-Objective Pareto-Optimal Solution to the Box-Pushing Problem by Mobile Robots. Proceedings of the European Modelling Symposium (EMS 2008), IEEE Computer Society Press, pp.70-75, Liverpool, UK, September 2008.

45. G. Abbas, A. K. Nagar, H Tawfik, and J Y. Goulermas (2008). A Novel Approach to Distributed Network Utility Maximization for a Low-Loss Low-Delay Rate Control. Proceedings of the European Modelling Symposium (EMS 2008), IEEE Computer Society Press, pp.530-535, Liverpool, UK, September 2008.
46. O. Anya and H. Tawfik. Towards Multi-Perspective Intelligent Layout Design for Context-Driven Route Navigation. Proceedings of the European Modelling Symposium (EMS 2008), IEEE Computer Society Press, pp.400-405, Liverpool, UK, September 2008.
47. Anya, A. Nagar, and H. Tawfik. An Approach for Enriching Information for Supporting Collaborative e-Work. ICCS2008 International Conference on Computational Science, Lecture Notes in Computer Science, Springer Part 3, No 5103, pp. 419-428, Krakow, Poland, June 2008.
48. O. Anya, A. K. Nagar, and H. Tawfik. On Acquiring Knowledge to Support Decision Making in Collaborative e-Work. Proceedings of the 27th SGAI International Conference on Artificial Intelligence, Springer-Verlag, Cambridge, England December 2007.
49. R. Huang, H. Tawfik, A. Nagar. Clonal Selection for Licence Plate Character Recognition. Proceedings of the 27th SGAI International Conference on Artificial Intelligence, Springer-Verlag, Cambridge, England, December 2007.
50. H. Tawfik, M. Samy, R. Huang and A. Nagar. Neural Networks for Financial Literacy Modelling. Proceedings of the 27th SGAI International Conference on Artificial Intelligence, Springer-Verlag, Cambridge, England, December 2007.
51. R. Huang, H. Tawfik, M. Samy and A Nagar. Financial Literacy Simulation Model using Neural Networks, the Proceedings of the 4th International Conference on Innovations in Information Technology, IEEE Computer Society, Dubai, UAE, November 2007.
52. O. Anya, H. Tawfik, and A.K. Nagar, A Conceptual Design of an Adaptive and Collaborative E-work Environment, First Asia International Conference on Modelling & Simulation (AMS2007), pp. 148-154, Thailand, March 2007.
53. Bashir, A.K. Nagar and H. Tawfik, MSIS: Meta-scheduler Information Service for Resource Performance Predictors, The Second IEEE/Create-Net/ICST International Conference on Communication System Software and Middleware (COMSWARE), Bangalore, India, January 2007.
54. Y. Zhang, H. Tawfik, A Collaborative Virtual Prototyping System for Multi-Perspective Engineering Design Assessment, European Modelling Symposium (EMS 06); pp. 108-112, Sept. 2006.
55. A. Khan, S. Dasari, H. Tawfik, A.K. Nagar, A Case Study Based Investigation for Multi-Criteria Spatial Layout Analysis, European Modelling Symposium (EMS 06); pp. 113-119, Sept. 2006.
56. O. Anya, A.K. Nagar, H. Tawfik, A Framework for Adaptive Collaborative Web-based Knowledge Workbench, European Modelling Symposium (EMS 06); pp. 126-132, Sept. 2006.
57. H. Tawfik, T. Fernando, and A.K. Nagar. A Multicriteria approach to construction site spatial analysis and simulation. Proceedings of the 15th IASTED International Conference on Applied Modelling and Simulation (ASC2005), pp. 423-427, Greece, June 2006.
58. A.K. Nagar, G. Abbas, and H. Tawfik, Simulation and State Estimation of TCP/IP Traffic Networks, in: The 9th International Conference on Computer Modelling and Simulation, Oriel College, pp. 152-157, Oxford, England, April 2006.
59. A.K. Nagar, S. Purushothaman, H. Tawfik, Evaluation and Fuzzy Classification of Gene Finding Programs on Human Genome Sequences, in Fuzzy Systems and Knowledge Discovery (Lecture Notes in Computer Science series) Springer-Verlag publication, pp. 821-829. ISBN: 3-540-28331-5, September 2005.
60. H. Tawfik, A.K. Nagar and A. Khan, Positioning temporary facilities using multi-subpopulation evolution. Proceedings of the 9th IASTED International Conference on Artificial Intelligence and Soft Computing (ASC2005), pp. 36-42. ISBN: 0-88986-536-1, Spain, September 2005.

61. J. Yao, T. Fernando and H. Tawfik, A Geo-spatial information based collaborative virtual environment. Emerging Trends and Technologies for Collaborative work, The International Telework Conference, Liverpool Hope University, Liverpool, August 2005.
62. A.K. Nagar, D. Sokhi, H. Tawfik, S. Purushothaman, M. Muyebe, On mining gene patterns using wavelet transforms, Proceedings of the Algorithms for Approximation V (A4A5) conference, Chester College, July 2005.
63. J. Yao, T. Fernando, H. Tawfik, R. Armitage, I. Billing. A VR-Centred Workspace for Supporting Collaborative Urban Planning. Proceedings of the 9th International Conference on Computer Supported Cooperative Work in Design. pp 564-569. ISBN: 1-84600-002-5, Coventry, May 2004.
64. J. Yao, T. Fernando and H. Tawfik. U-Plan: A Collaborative Urban Planning Environment. Proceedings of 10th International Conference on Concurrent Enterprising, pp41-49, ISBN 0 85358 128 2, Seville, Spain, June 2004.
65. J. Yao, H. Tawfik and T. Fernando. Supporting urban planning with GIS and Virtual reality, Proceedings of the GIS research UK conference, pp 330-333, City University, London, April 2003.
66. N. Patel, T. Fernando, H. Tawfik and R. Aspin. Towards and IT tool for conceptual building layout, Proceedings of the (CONVR2003) conference on Construction Applications of Virtual Reality. Virginia USA, September 2003.
67. K. Wu, T. Fernando and H. Tawfik. FreeSculptor: A Computer-aided Freeform Design Environment, Proceedings of the International Conference on Geometric Modelling & Graphics (GMAG'03), London, July 2003.
68. R. Aspin, H. Tawfik and T. Fernando. An interactive 3D visualisation and analysis application for the development and communication of abstract conceptual building design, Proceedings of the 3rd International conference on decision making in urban & civil engineering, London, November 2002.
69. A. Soltani, H. Tawfik, and T. Fernando. Evaluating paths in construction sites using multiple objectives, Proceedings of the 3rd International conference on decision making in urban & civil engineering, London, November 2002.
70. H. Tawfik, T. Fernando and R Aspin. A simulation tool for multi-perspective site layout analysis, Proceedings of the ECPPM2002 European conference on product and process modelling, Swets & Zeitlinger Publishers, pp. 193-197, ISBN 905809507X, Slovenia, September 2002.
71. A. Soltani, H. Tawfik and T. Fernando. A multi-criteria based path finding application for construction site layouts, Proceedings of the 6th International Conference on Information Visualisation, IEEE Computer Society, pp. 779-784, ISBN 0-7695-1656-4, London, July 2002.
72. T. Fernando, K Kahkonen, N. Murrey and H. Tawfik. Facilitation of collaborative communication for building construction with virtual reality technology. Conference on Applied Virtual Reality in Engineering, Goteborg, Sweden October 2001.
73. H. Tawfik and T. Fernando. A parallel genetic algorithm for optimising construction site layouts. Proceedings of the IASTED International Conference on Applied Simulation and Modelling, pp. 250-255, Spain, ISBN 0-88986-311-3, September 2001.
74. H. Tawfik and T. Fernando. A simulation environment for construction site planning, Proceedings of the 5th International Conference on Information Visualisation, IEEE Computer Society, pp. 199-203, London, July 2001.
75. H. Tawfik and P. Liatsis. Simulation of geometric road alignment, Proceedings of the IASTED International conference on Modelling and Simulation, Philadelphia, USA, pp. 570-574. May 1999.
76. H. Tawfik and P. Liatsis. An interactive virtual environment for simulation of traffic scenes, Proceeding of the International Workshop on signal and image processing, pp. 231-234, Zagreb, Croatia, May 1998.
77. H. Tawfik and P. Liatsis. Prediction of non-linear time-series using Higher-Order Neural Networks, Proceeding of the International Workshop on signal and image processing, Poznan, Poland, May 1997.