Farhan bin Mohamed, PhD
Deputy Director (Brand Management & Digital Communication)
Office of Corporate Affairs, UTM

1. PERSONAL INFORMATION

Contact Address:

Office of Corporate Affairs
Level 3, Sultan Ibrahim Chancellery Building
Universiti Teknologi Malaysia
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School of Computing
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Institute of Human Centred Engineering
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Webpage: people.utm.my/farhan/

Short Biography:

Farhan Mohamed is Deputy Director (Brand Management & digital Communication) at UTM Office of Corporate Affairs.

Other roles:

Senior Lecturer – School of Computing, Faculty of Engineering, UTM
Research Fellow – Media and Games Innovation Centre of Excellence (MaGICX), Institute of Human Centred Engineering (iHumEn), UTM

He is a member of 100 ACM Global Practitioner Advisory Committee. He is a committee member for IEEE Computer Society Malaysia and trustee for ACM MyHCI-UX Malaysia. He was a 2017 fellow for CEO@faculty 2.0 attached to Huawei Malaysia . He received Royal Academy of Engineering United Kingdom, Leaders in Innovation Fellowship in 2017.

Education: He received his PhD in Computer Science (Data Visualisation) from Swansea University in 2014. Farhan received his Bachelor of Science in Computer Science from

Universiti Teknologi Malaysia with the Excellence Student Award by Juita-UTM in 2003. He has been working on Web Performance Optimization for his Master of Science study which the work has received Gold award at Malaysian Technology Expo 2006 and Gold award at the International Exhibition of Inventions, Geneva in 2006. Currently his work focuses on gamification, visualization and interaction with virtual cardiovascular system. His research interests broadened to include data visualizations, visual metaphors, nature-inspired computing, virtual environment, and procedural computer graphics.

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Affiliations:

Executive Committee Member at IEEE Computer Society Malaysia (2018)
Trustee at Association for Computing Machinery (ACM) SIGCHI Malaysia Chapter (MyHCI-UX) (2018)
CEO@Faculty 2.0 Huawei Fellow at Huawei Malaysia (2017-2018)
Committee Member at Association for Computing Machinery (ACM) Global Practitioner Advisory Committee (GPAC), US (2017-2018)
Research Fellow at UTM-IRDA Media and Games Innovation Centre of Excellence (2013-)
Deputy Director at UTM-IRDA Media and Games Innovation Centre of Excellence, UTM (2017)
Chief Technology Officer at MaGICX Sdn. Bhd. (2015-2017)
Senior Lecturer at Dept. of Software Engineering, Faculty of Computing UTM (2014-)
Lecturer at Faculty of Computing UTM (2007-2013)

Educational Background:

Level : PhD (PhD in Computer Science) – 2014
Thesis: Metaphoric Visualisation
Field of Study: Data Visualisation, Computer Science
Institution: Swansea University, United Kingdom
Supervisor: Prof. Dr. Min Chen (Oxford University)
Co-supervisor: Assoc. Prof. Dr. Phil W. Grant (Swansea University)

Level : Master's Degree (Master of Science Computer Science) – 2007
Thesis: Intelligent Web Caching Architecture
Field of Study: Web Systems and Artificial Intelligence
Institution: Universiti Teknologi Malaysia
Supervisor: Prof. Dr. Abdul Samad Ismail (UTM)
Co-supervisor: Prof. Dr. Siti Mariyam Shamsuddin (UTM)

Level : Bachelor's Degree (Bachelor of Science Computer Science) – 2003
Grade: 2nd Class Upper
Field of Study: Computer Science
Major: Computer System
Institution: Universiti Teknologi Malaysia

Certificate:
Teaching for Postgraduates, Swansea University, UK, 2009

Specialisation: Data Visualisation, Multimedia Communication, and Artificial Intelligence, Gamification
Industry: Higher Learning Education, IT

2. ACADEMIC OUTPUTS

Publications:

Journals

1. Lim, K. C., Selamat, A., Alias, R. A., Zabil, M. H. M., Puteh, F., & Mohamed, F. (2018). Measuring the Feasibility of Clustering Techniques on Usability Performance Data. Indian Journal of Science and Technology, 11(4).

2. Mandala, Satria, et al. "Investigating severity of blackhole attack and its variance in wireless mobile ad hoc networks." International Journal of Embedded Systems 7.3-4 (2015): 296-305.

3. Alkawaz, M. H., Mohamad, D., Basori, A., & Mohamed, F. (2015). A crucial investigation of facial skin colour research trend and direction. International Journal of Multimedia and Ubiquitous Engineering, 10(1), 295-316.

4. Alkawaz, M. H., Basori, A. H., Mohamad, D., & Mohamed, F. (2014). Realistic Facial Expression of Virtual Human Based on Color, Sweat, and Tears Effects. The Scientific World Journal, 2014.

5. Alkawaz, M. H., Basori, A. H., Mohamad, D., & Mohamed, F. (2014). Realistic facial expression of virtual human based on color, sweat, and tears effects. The Scientific World Journal, 2014.

6. Abuhashish, F. A., Sunar, M. S., Kolivand, H., Mohamed, F., & Mohamad, D. B. (2014). Feature Extracted Classifiers Based on EEG Signals: A Survey. Life Science Journal, 11(4).

7. Yusman Azimi Yusoff, Ahmad Hoirul Basori, Farhan Mohamed, Interactive Hand and Arm Gesture Control for 2D Medical Image and 3D Volumetric Medical Visualization, Procedia – Social and Behavioral Sciences, Volume 97, 6 November 2013, Pages 723-729, ISSN 1877-0428.

8. Mohammad Riduwan, Ahmad Hoirul Basori, Farhan Mohamed, Finger-based Gestural Interaction for Exploration of 3D Heart Visualization, Procedia – Social and Behavioral Sciences, Volume 97, 6 November 2013, Pages 684-690, ISSN 1877-0428.

9. Rita Borgo, Alfie Abdul-Rahman, Farhan Mohamed, Phil W. Grant, Irene Reppa, Luciano Floridi, Min Chen, "An Empirical Study on Using Visual Embellishments in Visualization," Visualization and Computer Graphics, IEEE Transactions on , vol.18, no.12, pp.2759,2768, Dec. 2012.

10. Razib M.Othman, Safaai Deris, Rosli M.I., Hany Tahir, Rohayanti Hassan, and Farhan Mohamed, "Incorporating semantic similarity measure in genetic algorithm: an approach for searching the gene ontology terms," Int'l J. Computational Intelligence, 3(3): 257-266, ISSN 1304-2386, May 2006.

Papers

1. Siang, C. V., Isham, M. I. M., Mohamed, F., Yusoff, Y. A., Mokhtar, M. K., Tomi, B., & Selamat, A. (2017, November). Interactive holographic application using augmented reality EduCard and 3D holographic pyramid for interactive and immersive learning. In 2017 IEEE Conference on e-Learning, e-Management and e-Services (IC3e). IEEE.

2. Yusoff, Y. A., Mohamed, F., Mokhtar, M. K., Tomi, B., Siang, C. V., & Isham, M. I. M. (2017, November). Magnitude-based seed point placement for streamlines generation. In Big Data and Analytics (ICBDA), 2017 IEEE Conference on (pp. 81-86). IEEE.

3. Mokhtar M.K., Mohamed F., Sunar M.S. (2017). Real-Time Rendering Blood Flow Visualisation Using Particle Based Technique. Asian Simulation Conference (pp 645-655) Springer, Singapore.

4. Cheng, L. K., Selamat, A., Mohamed Zabil, M. H., Selamat, M. H., Alias, R. A., Puteh, F., ... & Krejcar, O. (2017). Usability prioritization using performance metrics and hierarchical agglomerative clustering in MAR-learning application. In Proceedings of the 16th International Conference, SoMeT 2017 (Vol. 297, pp. 731-744).(Frontiers in Artificial Intelligence and Applications; Vol. 297).

5. Salih, N. M., Dewi, D. E. O., Yusof, N. S. M., Noor, N. M., Yahya, A., & Mohamed, F. (2016, December). Ultrasound chest muscle characterization using 2D texture analysis. In Biomedical Engineering and Sciences (IECBES), 2016 IEEE EMBS Conference on (pp. 30-34). IEEE.

6. Cheng, L. K., Selamat, A., Alias, R. A., Puteh, F., & bin Mohamed, F. (2016, November). InterviewME: A Comparative Pilot Study on M-Learning and MAR-Learning Prototypes in Malaysian English Language Teaching. In International Conference on Computational Intelligence in Information System (pp. 219-234). Springer International Publishing.

7. Ghazali, M., Okamura, T., Abdullah, T., Sunar, M. S., Mohamed, F., & Ismail, N. (2016, May). In the Quest of Defining Smart Digital City in Medini Iskandar Malaysia, Iskandar Puteri, Malaysia. In *Proceedings of the SEACHI 2016 on Smart Cities for Better Living with HCI and UX* (pp. 19-23). ACM.

8. Mohamed, F., Mong, W. S., & Yusoff, Y. A. (2015, December). Quaternion Based Freehand 3D Baby Phantom Reconstruction Using 2D Ultrasound Probe and Game Controller Motion and Positioning Sensors. In International Conference for Innovation in Biomedical Engineering and Life Sciences (pp. 272-278). Springer Singapore.

9. Mohamed, F., Tong, S. C. C., Tomi, B., Mokhtar, M. K., & Yusoff, Y. A. (2015, December). Heart Care Augmented Reality Mobile Simulation (heARt). In 2015 4th International Conference on Interactive Digital Media (ICIDM) (pp. 1-6). IEEE.

10. Cheng, L. K., Puteh, F., Selamat, A., & bin Mohamed, F. (2015, August). A review of recent methodologies in English language content delivery. In e-Learning, e-Management and e-Services (IC3e), 2015 IEEE Conference on (pp. 169-174). IEEE.

11. Farhan Mohamed, Phil W. Grant, Min Chen, "A bottom-up approach for visualisation system development using Game Engine", Frontiers in Artificial Intelligence and Applications, Volume 265: New Trends in Software Methodologies, Tools and Techniques. 2014.

12. Farhan Mohamed, Min Chen, and Phil W. Grant, "From Tabular Data to Metaphoric Landscape Visualisation – A Template-based approach", Eurographics UK, Theory and Practice of Computer Graphics 2010. 2010.

13. Fadni Forkan, Sarina Sulaiman, and Farhan Mohamed, "Artificial Life and Artificial Neural Network – A Comparison Study", 3rd Information and Communication Technology Seminar, Indonesia. September 2007

14. Farhan Mohamed, Abdul Samad Ismail, and Siti Mariyam Shamsuddin, "Environment Data Collector", Postgraduate Annual Research Seminar, Universiti Teknologi Malaysia. May 2006.

15. Farhan Mohamed, Siti Mariyam Shamsuddin, and Abdul Samad Ismail, "Smart Web Cache Prefetching with Multi Layer Perceptron (MLP) network", IMT-GT Regional Conference on Mathematics, Statistics, and Applications. Lake Toba, Indonesia. May 2005.

16. Farhan M., Abdul Samad Ismail, and Siti Mariyam Shamsuddin, "Web caching and prefetching: Techniques and analysis in World Wide Web", Postgraduate Annual Research Seminar, Universiti Teknologi Malaysia. May 2005.

17. Farhan Mohamed, Zulkarnain Jamali, and Siti Mariyam Shamsuddin, Abdul Samad Ismail, "Smart Web Caching With Structured Neural Networks", 2nd National Conference on Computer Graphics & Multimedia. Kuala Lumpur. December 2004.

Book Chapters

1. Yusoff, Y. A., Mohamed, F., Sunar, M. S., & Chand, S. J. H. (2015). State of the Art in the 3D Cardiovascular Visualization. In Medical Imaging Technology (pp. 143-168). Springer Singapore.

2. Mokhtar, M. K., Mohamed, F., Zamri, M. N., Sunar, M. S., & Chand, S. J. H. (2015). A Review on Fluid Simulation Method for Blood Flow Representation. In Medical Imaging Technology (pp. 129-141). Springer Singapore.

3. Basori, A. H., Kadir, M. R. B. D. A., Ali, R. M., Mohamed, F., & Kadiman, S. (2014). Kinect-based Gesture Recognition in Volumetric Visualisation of Heart from Cardiac Magnetic Resonance (CMR) Imaging. In Virtual, Augmented Reality and Serious Games for Healthcare 1 (pp. 79-92). Springer Berlin Heidelberg.

Filled IP

1. **Utility Innovation: UI 2014700292** - A Method Of Determining A Three-Dimensional Blood Flow Visualisation For A Cardiac
2. **Patent**: **PI 2015003067** – Detachable Freehand Position Tracker System and Method for 2D to 3D Ultrasound Imaging
3. **Patent: PI 2016704559** – Online Image Retrieval Method Based On Sketch Board Mining

3. COMMERICAL AND RESEARCH PROJECTS

Research Highlights:

1. Farhan Mohamed, Arham Abdullah, Fakhrul Zaman Rokhani, Mohd Sobri Don @ A. Wahab, Bonaventure Boniface, Mohamad Nazim Jambli, Lam Shu Shiung, University Consortia, SMECorp-Huawei Digitalisation Whitepaper, 2018.

2. Farhan Mohamed, Mohd Shahrizal Sunar, Eko Supriyanto, Dyah Ekashanti Octorina Dewi, Unsteady Blood Flow Visualization for Abdominal Aortic Aneurysm. E-Science MOSTI 2017 -2018.

3. Farhan Mohamed, Mohd Shahrizal Sunar, Norhaida Mohd Suaib, Rosli Kumoi, Physical Play Games for Mobile Devices Using Tangible Object And Augmented Reality For Kids. PRGS 2017 -2018.

4. Farhan Mohamed, Ahmad 'Athif Mohd Faudzif, Cik Suhaimi Yusof, Dyah Ekashanti Octorina Dewi, Framework of Mobile Interaction For Post-Trauma Aphasia Naming Therapy Rehabilitation, GUP Tier 1 2016-2017.

5. Farhan Mohamed, Mohd Shahrizal Sunar, Eko Supriyanto, Muhamad Najib Zamri, "Novel Interactive Fluid Model for Blood Flow Simulation in Multiple Branches of Vasculature", FRGS 2014-2016.

6. Farhan Mohamed, Mohamed Rafiq Abdul Kadir, Mohd Shahrizal Sunar, Eko Suprianto, "Dynamic Cardiovascular Visualization based on Myocardium functions using Deformable Geometric Surfaces", GUP 2014.

7. Farhan Mohamed, Mohamed Rafiq Abdul Kadir, Mohd Shahrizal Sunar, Habibollah Haron, Ahmad Hoirul Basori, "Three-Dimensional Particle Trace Visualisation for Review of Cardiovascular Blood Flow", GUP 2013.

8. Siti M.S., Farhan M., Abdul S. I., Siti Z. H., "Bio-Cache : Bio-Inspired Caching", (**Awards:** Gold - Geneva 2006; Gold - Malaysia Technology Expo 2006).

9. Siti M. S. Siti Z. H, Roselina S., Razana A., Bariah Y., Farhan M, "As-hum Forecaster: Rough Set Predictor (RSP) For Stock Market Returns", (**Awards:** Gold - International Technology Exibition 2005, KL; Silver - IENA 2005, Germany).

10. Harihodin S., Siti M.S., Farhan M., Zulkarnain J., Fadni F., "Rapid Development Tools" "Rapid Development Tools" (Industrial Collaboration with 3ntity Sdn. Bhd. 2003-2005).

Consultation Projects Completed:

Project Name: Malaysia Academia Industry Network (MyAIN) Phase 2.
Client: Ministry of Higher Education Malaysia.
Duration: 2 year, 2015-2016
Role: Technology Consultant

Project Name: Web system development for Public Private Research Network (PPRN) System Phase 2.
Client: Ministry of Higher Education Malaysia.
Duration: 1 year, 2016
Role: Technical Consultant

Project Name: Augmented Reality content development for MOSTI interactive and AR system
Client: Minisitry of Science, Technology and Innovation (MOSTI) Malaysia.
Duration: 4 months, 2015
Role: Technology consultant

Project Name: Web System development for Public Private Research Network (PPRN) System.
Client: Ministry of Higher Education Malaysia.
Duration: 1 year, 2015
Role: Technical Consultant

Project Name: Interactive Information System for MOSTI Lobby
Client: Ministry of Science and Technology (MOSTI).
Duration: 1 year, 2014
Role: Technical Consultant

Project Name: Malaysia Academia Industry Network (MyAIN)
Collaborator: Department of Higher Education, Ministry of Education.
Duration: 2 year, 2014-2015
Role: Technology Consultant

Project Name: Rapid Development Tools.
Collaborator: 3ntity Sdn. Bhd. Cyberjaya, Malaysia.
Duration: June 2003 – December 2004
Role: Researcher / Head Programmer (UTM ends)
Team size: 4
Software and Platform: .Net Framework, SQL Server, IIS, FrontPage, Microsoft Visio, Rational Rose, Mircrosoft WAS tool. COM, C++.NET, VB.NET, ASP.NET, SQL, UML
The project is a collaborative research project between leading industry player and research institution on web application tools for online software/web development. The research product enhances the process of application development via online programming and online compilations. It enables of easy upgrading for web applications for big institutions/corporate profiles which has a need in daily/fast updates on the business processes within their web application.

4. HIGHLIGHTS

Membership:

IEEE – Institute of Electrical and Electronics Engineers – Member

IEEE Computer Society - Member
ACM – Association for Computing Machinery – Member

Other professional activities:

- **CEO@Faculty 2.0 Fellow (at Huawei Malaysia)** for Ministry of Higher Education Malaysia 2017-2018.
- **International Committee** for ACM Global Practitioner Advisory Committee (GPAC), 2017.
- **Leaders in Innovation Fellowship award** at Royal Academy of Engineering United Kingdom, 2017.
- **Invited Speaker** at SIEMENS-UTM Advanced Cardiovascular Imaging Symposium 2015 on "Towards Virtual CV Imaging Visualzation and Interaction System", September 2015.
- **Keynote Speaker** at HitlabNZ, Cantebury University, New Zealand for HITLabNZ-UTM-IRDA Digital Media Centre Seminar on Digital Media on "Visualising Cardiovascular Bloodflow", 2015.
- **MaGIC Stanford FTF Technology Venture Programme Fellow** at Stanford University, USA. March 2015.
- **Principal Investigator** at Institut Jantung Negara (IJN), Project on "Development of 3D Particle Trace Method for Cardiovascular Blood Flow Visualization" 2014.
- **Speaker** at MCMC KLConverge Kuala Lumpur, "Coaching Game Innovation", 2014.
- **Invited Speaker** at Universiti Malaysia of Computer Science and Engineering, "Emerging Technology in Computer Graphics", February 2014.
- **Keynote Speaker** at Kyutech-UTM on International Seminar on Digital Media and Games Innovation, Japan, April 2014.
- **Technical Chair** for 2nd International Conference on Interactive Digital Media 2013.
- **Publication Chair** for 3rd International Conference on Interactive Digital Media 2014.
- **Keynote Speaker** at Seminar on Recent Trends in Computing 2013, Brunei Darussalam.
- **Vice President** Malaysia Association Swansea University, UK 2008.
- **Head of Publicity and Multimedia Unit**, Postgraduate Annual Research Seminar (PARS) Universiti Teknologi Malaysia. 2007.
- **Head of Technical & Logistic** of the conference, SIGGRAPH International Conference on Computer Graphics and Interactive Techniques in Australasia and South-East Asia (GRAPHITE) 2006.
- Research Product exhibitions - (**co-inventor**)
  - Innovation and Technology Exhibition 2004 Universiti Teknologi Malaysia.
  - International Technology Exhibition (ITEX) 2005. Kuala Lumpur.
  - Higher Education Expo (IPT Expo) 2005. Kuala Lumpur.
  - Malaysia Technology Expo (MTE) 2006 - PWTC. Kuala Lumpur.