Detailed Curriculum Vitae

Mohamed Fazil Mohamed Firdhous
Senior Lecturer
Dept. of Information Technology
Faculty of Information Technology
University of Moratuwa
Moratuwa, 10400
Sri Lanka

Office Tel.: +94-11-2650301 - Ext 8112

Email
- firdhous@uom.lk
- firdhous@ieee.org
- mfirdhous@gmail.com

Web
- http://www.firdhous.ga/index.php
- http://www.firdhous.gq/index.php
- https://uom.lk/staff/Firdhous.MFM.php

Career Objective: Seeking an academic/research position in which, I will be able to utilize my education, skills and experience allowing for personal/professional growth and development.

Education/Certifications

- PhD (Information Technology), Universiti Utara Malaysia
- LLB Open University of Sri Lanka (Currently Pursuing – Final Level)
- Diploma in Information Systems Audit, Institute of Chartered Accountants, Sri Lanka
- MBA (Merit) University of Colombo, Sri Lanka.
- MSc Computer Engineering, Nanyang Technological University, Singapore
- BSc Eng., Electronic and Telecommunication Engineering, (1st Class Honors - equivalent to Summa Cum Laude in the US), University of Moratuwa, Sri Lanka.

Professional Qualifications/Memberships

- Member, British Computer Society (MBCS), UK
- Chartered Information Technology Professional (CITP), UK
- Member, Institute of Electrical and Electronics Engineers (MIEEE), USA
- Member, Association of Computing Machinery (MACM), USA
- Member, Institute of Electronics, Information and Communication Engineers (MIEICE), Japan
- Member, International Engineering and Technology Institute (MIETI)
- Member, International Research Institute for Economics and Management (MIRIEM)
- Member, Institute of Data Science and Artificial Intelligence (MIDSAI)
- Member, International Association of Engineers (MIAENG), Hong Kong

– Member, Institution of Engineering and Technology, London (MIET)
– Chartered Engineer (CEng.,)
– Member, Institution of Engineers, Sri Lanka (MIE)
– Member, Computer Science Teachers Association (CSTA), USA
– Microsoft Certified Professional (MCP)
– Cisco Certified Network Associate (CCNA)

Other Professional Courses Followed

– Hands On workshop on crystal Reports
– Workshop on Chip Synthesis using Synopsys conducted by Synopsys Singapore.
– Workshop on Place & Route using Avant! Apollo & Planet PL conducted by Future Techno Designs (Pte) Ltd., Singapore.
– Workshop on Programming Xilinx FPGAs.
– Introduction to Philips CPLDs.
– Backbone Internet Technology Certificate, Internet Society

Academic Honours and Awards

– Research Excellence Award – University of Moratuwa (2016, 2017, 2018 and 2019)
– Best Paper Award - Cities, People, Places 5th International Conference on Urban Design (ICCPP-2017), Colombo, Sri Lanka, October 20-22, 2017.
– Best Paper Award - Second AFAP Conference on Current and Emerging Trends in Science and Engineering (ACCETSE 2014.5) held at the Grand Darmo Suite, Surabaya, Indonesia, September 13, 2014.
– Research Assistantship – Universiti Utara Malaysia (Sep. 2011- Sept. 2013)
– Graduate Teaching Assistantship – Universiti Utara Malaysia
– Singapore Government Scholarship for MSc degree (Aug. 1997 – Aug. 1999)
– First Class Honors – BSc Engineering – University of Moratuwa (1994)
– Educational Cooperative Society Scholarship for undergraduate studies (1990 – 1994)
– Grade 5 Scholarship – Ministry of Education, Sri Lanka (1979)

Research Contributions/ Output Summary

Publications

Postgraduate Theses

1. **M.F.M Firdhous**, "Parallel Computing Techniques for Interferometric Sonar based Imaging", MSc Thesis, Nanyang Technological University, Singapore, 2000.

2. **M.F.M Firdhous**, "Analysis of the Composition of the Internet Economy and its Penetration into the National Economy of Sri Lanka", MBA Thesis, University of Colombo, 2006.

3. **M.F.M Firdhous**, An Adaptive Trust Based Service Quality Monitoring Mechanism for Cloud Computing" PhD Thesis, Universiti Utara Malaysia, Malaysia, 2016.

Monographs(Books)

1. **M.F.M Firdhous**, "Parallel Computing for Interferometric Sonar based Imaging", VDM Verlag Dr. Müller Aktiengesellschaft & Co. KG, Germany, 2009.
(ISBN: 978-3-639-18646-8)

2. **M.F.M Firdhous**, "Internet Economy - What is in it for Developing Countries?", VDM Verlag Dr. Müller Aktiengesellschaft & Co. KG, Germany, 2009.
(ISBN: 978-3-639-15153-4)

Book Chapters

1   **M.F.M. Firdhous**, "Cloud Computing for Rural ICT Implementations: Methods, Models, and Architectures". In Web Services: Concepts, Methodologies, Tools, and

Applications, Volume III, Chapter 62, Hershey, PA: IGI Global. 2019 (pp. 1189-1222). *(Republication of chapter appeared in "Delivery and Adoption of Cloud Computing Services in Contemporary Organizations." Hershey, PA: IGI Global. 2015.)*

2 **M.F.M. Firdhous**, "Strategies for Evaluating Cloud System Providers during the Transformation of Businesses". In Web Services: Concepts, Methodologies, Tools, and Applications, Volume IV, Chapter 96 Hershey, PA: IGI Global. 2019 (pp. 1863-1882). *(Republication of chapter appeared in "Web-based Services: Concepts, Methodologies, Tools, and Applications". Hershey, PA: IGI Global. 2016.)*

3 **M.F.M Firdhous**, "Information-Centric Networking". In M. Khosrow-Pour (Ed), "Encyclopedia of Information Science and Technology, Fourth Edition". Chapter 569, Hershey, PA: IGI Global. 2017.

4 **M.F.M Firdhous**, "Virtualization as the Enabling Technology of Cloud Computing". In M. Khosrow-Pour (Ed), "Encyclopedia of Information Science and Technology, Fourth Edition". Chapter 101, Hershey, PA: IGI Global. 2017.

5 **M.F.M Firdhous**, "Security Implementations in Smart Sensor Networks". In K. K. Ravulakollu, M. A. Khan, and A. Abraham (Eds.), "Trends in Ambient Intelligent Systems: The Role of Computational Intelligence". New York, NY: Springer. 2016, pp. 187-221.

6 **M.F.M Firdhous**, "Strategies for Evaluating Cloud System Providers during the Transformation of Businesses". In M. Khosrow-Pour, S. Clarke, M.E. Jennex, A. Becker, & A.V. Anttiroiko (Eds.), "Web-based Services: Concepts, Methodologies, Tools, and Applications". Hershey, PA: IGI Global. 2016, pp. 451-470.

7 **M.F.M Firdhous**, "Cloud Computing for Rural ICT Implementations: Methods, Models, and Architectures". In M. Khosrow-Pour, S. Clarke, M.E. Jennex, A. Becker, & A.V. Anttiroiko (Eds.),"Web-based Services: Concepts, Methodologies, Tools, and Applications". Hershey, PA: IGI Global. 2016, pp. 496-527.

8 **M.F.M Firdhous**, "Cyber Espionage: How Safe Are We?" In R. Cropf, & T. Bagwell (Eds.), "Ethical Issues and Citizen Rights in the Era of Digital Government Surveillance." Hershey, PA: IGI Global. 2016, pp. 176-207.

9 **M.F.M Firdhous**, "Cloud Computing for Rural ICT Implementations: Methods, Models, and Architectures." In V. Chang, R.J. Walters, & G.B. Wills (Eds.), "Delivery and Adoption of Cloud Computing Services in Contemporary Organizations." Hershey, PA: IGI Global. 2015, pp. 166-197.

10 **M.F.M Firdhous**, "Strategies for Evaluating Cloud System Providers during the Transformation of Businesses." In F. Soliman (Ed.), "Business Transformation and Sustainability through Cloud System Implementation". Hershey, PA: IGI Global. 2015, pp. 58-77.

11 **M. Firdhous**, S. Hassan, O. Ghazali, & M. Mahmuddin, "Evaluating Cloud System Providers: How Trust Management Can Play a Role?" in "Cloud Systems in Supply Chains" Fawzy Soliman, Ed. Australia: Palgrave Macmillan, 2013.

Journal Papers

1. **M.F.M Firdhous**, M.N Aldalaien & R. Budiarto, "Cloud Computing for Small and Medium Enterprises: A Benefits Analysis Model", to be submitted to IEEE Access.

2. R. Budiarto, A. Alqarni, M.Y Alzahrani, M.F Pasha, **M.F.M Firdhous**, D. Stiawan, "User Behaviour Traffic Analysis using Simplified Memory Prediction Framework" Computers, Materials & Continua, 70(2), 2022, pp. 2679-2698. doi: http://dx.doi.org/10.32604/cmc.2022.019847

3. **M.F.M Firdhous**, B.H Sudantha, & N.A Hussien, "A Framework for IoT-enabled Environment Aware Traffic Management", International Journal of Electrical and Computer Engineering (IJECE), 11(1), 2021, pp. 518-527. doi: http://doi.org/10.11591/ijece.v11i1.pp518-527 Scopus indexed Q2 Journal.

4. N.A Hussien, S.A.A.A Alsaidi, I.K Ajlan, **M.F.M Firdhous**, T.H Haider, & S. AlRikabi, "Smart Shopping System with RFID Technology Based on Internet of Things", International Journal of Interactive Mobile Technologies (iJIM), 14(4), 2020, pp. 17-29. Scopus indexed Q3 Journal.

5. **M.F.M Firdhous**, N.A Hussien, & R. Budiarto, "Cloud-IoT Integration: Techniques, Applications and Future Directions", submitted to TELKOMNIKA.

6. **M.F.M Firdhous**, B.H Sudantha, "Smart Dry Zone Agriculture in Developing Countries – An Integrated Framework for the Application of Information and Communication Technologies" to be submitted.

7. **M.F.M Firdhous**, & B.H Sudantha, "{Cloud, IoT}-powered Smart Weather Station for Microclimate Monitoring", Indonesian Journal of Electrical Engineering and Computer Science, 17(1), 2020, pp. 508-515. Scopus indexed Q3 Journal.

8. **M.F.M Firdhous**, & P.M Karunaratne, "A Model for Enhancing the Role of Information and Communication Technologies for Improving the Resilience of Rural Communities to Disasters", Procedia Engineering, 212, 2018, pp. 707-714.

9. **M.F.M Firdhous**, "Rural Education as a Service: Leveraging Cloud Computing for Empowering Rural Youth". International Journal of Organizational and Collective Intelligence (IJOCI), 6(1), 2016, pp. 51-65.

10. S Hassan, W Elbreiki, **M Firdhous**, & A.M Monzer, "End-to-End Networks Vs Named Data Network: A Critical Evaluation", Jurnal Teknologi, vol. 72, no. 5, 2015, pp. 71-76.

11. V. Thilakarathne, **M. Firdhous**, & P. Karunaratne, "Empowering Aged - A System for the Reintegration of the Elderly into Workforce", Discovery-The International Daily Journal, vol. 47, no.218, 2015, pp. 102-108.

12. B.H Sudantha, & **M.F.M Firdhous**, "IEEE 1451 based Smart Low Cost Air Pollution Monitoring System", Discovery-The International Daily Journal, vol. 47, no. 217, 2015, pp. 43-48.

13. **M. Firdhous**, O. Ghazali, & S. Hassan, "Robust Multi-Dimensional Trust Computing Mechanism for Cloud Computing", Jurnal Teknologi, vol. 69, no. 2, 2014, pp. 1-6.

14. **M. Firdhous**, O. Ghazali, & S. Hassan, "Statistically Controlled Robust Trust Computing Mechanism for Cloud Computing", Journal of Information and Communication Technology (JICT). 13, 2014, pp. 21-36. Scopus Indexed.

15. **M. Firdhous**, S. Hassan, & O. Ghazali, "Monitoring, Tracking and Quantification of Quality of Service in Cloud Computing", International Journal of Scientific & Engineering Research (IJSER), vol. 04, no. 05, May, 2013, pp. 112-117.

16. **M. Firdhous**, S. Hassan, & O. Ghazali, "A Comprehensive Survey on Quality of Service Implementations in Cloud Computing", International Journal of Scientific & Engineering Research (IJSER), vol. 04, no. 05, May, 2013, pp. 118 – 123.

17. **M. Firdhous**, S. Hassan, & O. Ghazali, "Statistically Enhanced Multi-Dimensional Trust Computing Mechanism for Cloud Computing", International Journal of Mobile Computing and Multimedia Communications (IJMCMC). 5(2). pp. 1-17, 2013. Scopus Indexed and Published by the IGI Global, Hershey, PA, USA.

18. **M. Firdhous**, O. Ghazali, & S. Hassan, "Trust Management in Cloud Computing – A Critical Review", International Journal on Advances in ICT for Emerging Regions (ICTer), vol. 04, no. 02, Sept. 2011, pp. 24 – 36.

19. **M.F.M Firdhous**, & R. Jayasundara, "A Decision Support Tool for Inferring Further Education Desires of Youth in Sri Lanka", International Journal of Advanced Computer Science and Applications (IJACSA), vol. 2, no 6, June 2011, pp. 28-35.

20. **M.F.M Firdhous**, "Multicasting over Overlay Networks – A Critical Review" International Journal of Advanced Computer Science and Applications (IJACSA) Vol. 2, No 3, March 2011, pp. 54-61.

21. **M. Firdhous**, "Implementation of Security in Distributed Systems – A Comparative Study", International Journal of Computer Information Systems (IJCIS), Vol. 2, No. 2, February 2011, pp-1-6.

22. **M.F.M Firdhous**, & P.M Karunaratne, "An ICT enhanced Life Quality for the Elderly in Developing Countries: Analysis study Applied to Sri Lanka" Journal of Health Informatics in Developing Countries (JHIDC) (An International Peer-Reviewed Journal), Vol. 5, No 1, 2011, pp. 47-59.

23. **M.F.M Firdhous**, "Automating Legal Research through Data Mining", International Journal of Advanced Computer Science and Applications (IJACSA) Vol. 1, No 6, December 2010, pp. 9-16.

24. **M.F.M Firdhous**, D.L Basnayake, K.H.L Kodithuwakku, N.K Hatthalla, N.W Charlin, & P.M.R.I.K Bandara, "Route Planning Made Easy – An Automated System for Sri Lanka" Bhumi: The Planning Research Journal of the University of Moratuwa, Vol. 02 No. 02, December, 2010, pp. 13-24.

Conference Papers

1. M.A.L.S.K Manchanayaka, J.P.D. Wijesekara, C.-Y Yang, C. Premachandra, **M.F.M. Firdhous** & B.H Sudantha, "Open, IoT powered Environmental Air Pollution Monitoring Framework for Traffic Management", 6th International Conference on Information Technology Research, December 1-3, 2021, Moratuwa, Sri Lanka (held Online).

2. A de Silva, T.C Sandanayaka, & **M.F.M Firdhous**, "Exploring Unorthodox Predictors of Smartphone Addiction during the COVID-19 Outbreak", 6th International Conference on Information Technology Research, December 1-3, 2021, Moratuwa, Sri Lanka (held Online).

3. A de Silva, T.C Sandanayaka, & **M.F.M Firdhous**, "An Investigation of Visually Impaired Learners Marginalized in an Online Classroom Environment", 3rd

International Conference on Research and Academic Community Services (ICRACOS), 9-10 October 2021, Universitas Negeri Surabaya, Indonesia.

4. **M.F.M Firdhous**, & J. Wijesundara, "An Internet of Things Powered Model for Controlling Vehicle Induced Pollution in Cities" 6th International Conference on Internet of Things and Connected Technologies (ICIoTCT 2021), 29-30 July 2021, Indian Institute of Technology, Patna, Bihar, India.

5. **M.F.M Firdhous**, & J. Wijesundara, "A Security Aware Lighting Control System for Public Open Spaces: An IoT Powered Approach" 3rd International Conference on Emerging Electrical Energy, Electronics, And Computing Technologies 2021 (ICE4CT 2021), 16-17 December 2021, Universiti Malaysia Perlis (UniMAP), Arau, Perlis, Malaysia.

6. **M.F.M Firdhous**, & R. Budiarto, "An Enhanced Quality of Service based Trust Model for Cloud Computing", 7th International Conference on Mathematics and Computing (ICMC 2021), March 2-5, 2021, Shibpur, India. doi: https://doi.org/10.1007/978-981-16-6890-6_39

7. **M.F.M Firdhous**, & B.N Prashanth, "A Technique for Extracting the Intention of Messengers in Social Media", 12th ITU Kaleidoscope Academic Conference, December 7-11, 2020, Ha Noi, Vietnam (held Online), pp. 65-72, doi: 10.23919/ITUK50268.2020.9303229.

8. **M.F.M Firdhous**, "IoT-enhanced Smart Laser Fence for Reducing Human Elephant Conflicts", 5th International Conference on Information Technology Research, December 2-4, 2020, Moratuwa, Sri Lanka (held Online), pp. 1-5, doi: 10.1109/ICITR51448.2020.9310854.

9. **M.F.M Firdhous**, "Building Social Resilience during Disasters: An Investigation into the Role of Online Social Media Networks", 5th International Conference on Information Technology Research, December 2-4, 2020, Moratuwa, Sri Lanka (held Online), pp. 1-6, doi: 10.1109/ICITR51448.2020.9310846.

10. **M.F.M Firdhous**, & R. Budiarto, "BTDM: A QoS-based Trust Distribution Mechanism for Cloud Computing", 5th International Conference on Information Technology Research, December 2-4, 2020, Moratuwa, Sri Lanka (held Online), pp. 1-6, doi: 10.1109/ICITR51448.2020.9310816.

11. C. Wijesiriwardana & **M.F.M. Firdhous**, "An Innovative Query Tuning Scheme for Large Databases", 5th International Conference on Data Science and Engineering, September 26-28, 2019, Patna, Bihar, India, pp. 154-159. doi: 10.1109/ICDSE47409.2019.8971483.

12. A.L.F Sajeetha, & **M.F.M Firdhous**, "Smart Transportation Systems and Technologies", 9th International Symposium of the Southeastern University of Sri Lanka, Oluvil, Sri Lanka, November 27-28, 2019, pp. 244-256.

13. **M.F.M Firdhous**, "IoT-enabled Structural Health Monitoring of Historic Buildings – A Conceptual Design", International Conference on Civil Engineering and Applications, Colombo, Sri Lanka, July 25-27, 2019.

14. **M.F.M Firdhous**, & B.H Sudantha, "IoT-powered Environment Aware Traffic Management – A Conceptual Framework", International Conference on Civil Engineering and Applications, Colombo, Sri Lanka, July 25-27, 2019.

15. **M.F.M Firdhous**, "Monitoring of Historical/Heritage Sites with Internet of Things" Cities, People, Places 6th International Conference on Urban Design (ICCPP-2018), Colombo, Sri Lanka, October 5-7, 2018, pp. 19-28.

16. G.G.K.W.M.S.I.R Karunarathne, K.A.D.T Kulawansa & **M.F.M. Firdhous**, "Wireless Communication Technologies in Internet of Things: A Critical Evaluation", 2018 International Conference on Intelligent and Innovative Computing Applications (ICONIC 2018), December 6-7, 2018, Mon Tresor, Plaine Magnien, Mauritius, pp.1-5.

17. **M.F.M Firdhous**, & N.A Hussien, "Data Security Implementations in Cloud Computing: A Review", 3rd International Conference on Information Technology Research, December 5-7, 2018, Colombo, Sri Lanka, pp.1-5.

18. **M.F.M Firdhous**, "IoT-Enabled Smart Elephant Detection System for Combating Human Elephant Conflict", 3rd International Conference on Information Technology Research, December 5-7, 2018, Colombo, Sri Lanka, pp.1-6.

19. **M.F.M Firdhous**, B.H Sudantha, & P.M Karunaratne, "IoT-Powered Sustainable Dry Zone Agriculture: An Experimental Implementation", 3rd International Conference on Information Technology Research, December 5-7, 2018, Colombo, Sri Lanka, pp. 1-6.

20. N Kumaresamoorthy, & **M.F.M Firdhous**, "An Approach of Filtering the Content of Posts in Social Media", 3rd International Conference on Information Technology Research, December 5-7, 2018, Colombo, Sri Lanka, pp. 1-6.

21. S.A.D.S. Kaushalya, K.A.D.T Kulawansa & **M.F.M. Firdhous**, "Internet of Things for Epidemic Detection: A Critical Review", International Conference on Computer, Communication and Computational Sciences (IC4S2018), October 20-21, 2018, Bangkok, Thailand. (Chapter 42, Advances in Computer Communication and Computational Sciences, vol. 924, New York, NY: Springer, 2019, ISBN: 978-981-13-6860-8).

22. **M.F.M Firdhous**, B.H Sudantha, & P.M Karunaratne, "IoT Assisted Smart Dry Zone Agriculture: An Experimental Implementation", 18th International Symposium on Advanced Intelligent Systems (ISIS2017), October 11-14, 2017, Daegu, South Korea.

23. **M.F.M Firdhous**, B.H Sudantha, & P.M Karunaratne, "Cloud, IoT-powered Weather Station for Microclimate Monitoring", 18th International Symposium on Advanced Intelligent Systems (ISIS2017), October 11-14, 2017, Daegu, South Korea.

24. K.A.D.R. Kumarapeli, M.K.S.H. Priyadarshana, **M.F.M. Firdhous** and L. Ranathunga, "Detecting the Person of Interest using Agent based Video Processing", 2nd IEEE International Conference on Signal and Image Processing (ICSIP-2017), August 4-6, 2017, Singapore, pp 35-40.

25. **M.F.M Firdhous**, B.H Sudantha, & P.M Karunaratne, "IoT Enabled Proactive Indoor Air Quality Monitoring System for Sustainable Health Management", 2nd IEEE International Conference on Computing and Communication Technologies (ICCCT'17), February 23-24, 2017, Chennai, India, pp. 216-221.

26. R.K.O. Kaushalya, J.M.G.R Jayabahu, W.M.P.M Weerasinghe, A.M.C.P Herath, K.A.D.T. Kulawansa, & **M.F.M Firdhous**, "GuideMe: An Innovative Mobile Application for Guiding Tourists", 2nd IEEE International Conference on Computing and Communication Technologies (ICCCT'17), February 23-24, 2017, Chennai, India, pp. 15-20.

27. **M. Firdhous**, O. Ghazali, & S. Hassan, "Cloud Computing for Small Businesses: A Profitability Analysis", 4th International Conference on Internet Applications, Protocols and Services (NETAPPS2015), November 1-2, 2015, Kuala Lumpur, Malaysia, pp. 286-289.

28. S. Arlimatti, S. Hassan, A. Habbal, **M. Firdhous**, & M. Elshaikh, "Analysing the performance of the OpenFlow for Software Defined Networks using OMNeT++ INET Framework", 4th International Conference on Internet Applications, Protocols and Services (NETAPPS2015), November 1-2, 2015, Kuala Lumpur, Malaysia, pp. 141-146.

29. W. Elbreiki, S. Hassan, A. Habball, **M. Firdhous**, & M. Elshaikh, "A Comparative Study of Chord and Pastry for the Name Resolution System Implementation in Information Centric Networks" 4th International Conference on Internet Applications, Protocols and Services (NETAPPS2015), November 1-2, 2015, Kuala Lumpur, Malaysia, pp. 141-146.

30. **M. Firdhous**, "A Comprehensive Taxonomy for the Infrastructure as a Service in Cloud Computing", Fourth International Conference on Advances in Computing and Communications (ICACC), December 17-20, 2014, Kochi, Kerala, India, pp. 158-161.

31. **M. Firdhous**, O. Ghazali, & S. Hassan, "Fog Computing: Will it be the Future of Cloud Computing?" Third International Conference on Informatics & Applications, (ICIA2014), October 6–8, 2014, Kuala Terengganu, Malaysia, pp. 8-15.

32. **M.F.M Firdhous**, "A Taxonomy of Platform as a Service in Cloud Computing" Conference on Innovative Practices in Information Technology & Operations Management (Innovations-2014), January 17, 2014, New Delhi, India, pp. 1-7. (ISBN: 978-81-906991-9-7)

33. **M. Firdhous**, O. Ghazali, & S. Hassan, "Rural ICT Development, How Cloud Computing Can Play a Role?", Fourth International Conference on Rural ICT Development (RICTD2013), June 25 - 27, 2013, Malacca, Malaysia, pp. 153–159.

34. O. Ghazali, B. Osman, A. Ahmad, A. Abas, A.R Rahmat, & **M. Firdhous**, "Cloud Powered Rural Telecenters – A Model for Sustainable Telecenters" Fourth International Conference on Rural ICT Development (RICTD2013), June 25 - 27, 2013, Malacca, Malaysia, pp. 136–142.

35. **M. Firdhous**, O. Ghazali, & S. Hassan, "Cloud Computing for Rural ICT Development: Opportunities and Challenges" International Conference on Computing, Electrical and Electronics Engineering (ICCEEE 2013), August 26–28, 2013, Khartoum, Sudan, pp. 680-685.

36. **M. Firdhous**, Junriana, S. Budiman, R.A Matridi, M.A Aziz, I.S Sharif, & N.H Ayob, "Leveraging Online Social Networks for Effective Collaborative Learning – A Students' Perspective", First International Conference on Innovation and Sustainability (ICOIS 2013), April 3-4, 2013, Kuala Lumpur, Malaysia, pp. 1–20.

37. **M. Firdhous**, S. Hassan, & O. Ghazali, "Monitoring, Tracking and Quantification of Quality of Service in Cloud Computing" 3rd Global Conference for Academic Research on Scientific and Emerging Technologies (GCARSET), March 9–11, 2013, Kuala Lumpur, Malaysia, pp. 107-112.

38. **M. Firdhous**, S. Hassan, & O. Ghazali, "Quality of Service in Cloud Computing – A Critical Review" 3rd Global Conference for Academic Research on Scientific and

Emerging Technologies (GCARSET), March 9–11, 2013, Kuala Lumpur, Malaysia, pp. 113-118.

39. M.S Sajat, S. Hassan, A.A Ahmad, A.Y Daud, A. Ahmad, & **M. Firdhous**, "Implementing a Secure Academic Grid System – A Malaysian Case", 10th Australian Information Security Management Conference, December 3 – 5, 2012. Perth, WA, Australia, pp. 60-66.

40. **M. Firdhous**, S. Hassan, & O. Ghazali, "Hysteresis based Trust Computing Mechanism for Cloud Computing" 2012 IEEE Region 10 Conference (TENCON 2012), 19th – 22nd November 2012, Cebu, Philippines, pp. 796-801.

41. **M. Firdhous**, S. Hassan, O. Ghazali, & M. Mahmuddin, "Bio Inspired Trust Management in Distributed Systems - A Critical Review", 2012 IEEE Conference on Open Systems (ICOS2012), Kuala Lumpur, Malaysia.

42. **M. Firdhous**, S. Hassan, & O. Ghazali, "Multi-Dimensional Trust Computing Mechanism for Cloud Computing" 3rd International Conference on Network Applications, protocols and services (NetAPPS2012), September 19-20, Sintok, Kedah Darul Aman, Malaysia.

43. **M. Firdhous**, O. Ghazali, & S. Hassan, "A Memoryless Trust Computing Mechanism for Cloud Computing", The Fourth International Conference on Networked Digital Technologies (NDT'2012), April 24-26, 2012- Dubai, UAE, pp.174-185, published in Communications in Computer and Information Science (CCIS), R. Benlamri, Ed., Berlin Heidelberg, Germany: Springer-Verlag, 2012, Vol. 293, pp. 174–185. (DOI: 10.1007/978-3-642-30507-8.)

44. **M. Firdhous**, O. Ghazali, & S. Hassan, "Applying Bees Algorithm for Trust Management in Cloud Computing", 6th International ICST Conference on Bio-Inspired Models of Network, Information, and Computing Systems (BIONETICS 2011), December 5th - 7th, 2011 - York, England, published in Lecture Notes on ICST (LNICST) E. Hart et al. Eds., Berlin Heidelberg, Germany: Springer-Verlag, 2012, Vol. 103, pp. 224–229.

45. J. Kadir, O. Ghazali, **M. Firdhous**, & S. Hassan, "Probability based method for node selection in MANET", 2nd International Engineering Education Conference 2011 (IEEC2011), December 25–27, 2011, Madinah Al Munawarah, Saudi Arabia.

46. J. Kadir, O. Ghazali, **M. Firdhous**, & S. Hassan, "Node selection based on energy consumption in MANET", The 12th International Arab Conference on Information Technology (ACIT), December 11-14, 2011, Riyadh, Saudi Arabia.

47. **M. Firdhous**, O. Ghazali, & S. Hassan, "A trust computing mechanism for cloud computing with multilevel thresholding", Sixth IEEE International Conference on Industrial & Information Systems (ICIIS2011), August 16-19, 2011, Kandy, Sri Lanka, pp. 457-461.

48. **M. Firdhous**, O. Ghazali, & S. Hassan, "A trust computing mechanism for cloud computing", 4th ITU Kaleidoscope Academic Conference, December 12–14, 2011, Cape Town, South Africa, pp. 199-205.

49. **M. Firdhous**, O. Ghazali, & S. Hassan, "Modeling of cloud system using Erlang formulas", 17th Asia-Pacific Conference on Communications (APCC2011) October 3-5, 2011, Kota Kinabalu, Sabah, Malaysia, pp. 411 – 416.

50. **M. Firdhous**, O. Ghazali, S. Hassan, N.Z Harun, & A. Abas, "Honey Bee Based Trust Management System for Cloud Computing", 3rd International Conference on Computing and Informatics (ICOCI 2011), June 8-9, 2011 Bandung, Indonesia, pp. 327-332.

51. **M.F.M Firdhous**, A.D.L.S Rupasinghe, K.T Herath, A.G.A Lakmal, A.O Weerapperuma, & H.M.I.G.A.B Wijekoon, "Overlay Network for the Distribution of Streaming Media", 7th IEEE and IFIP International Conference on Wireless and Optical Communications Networks (WOCN2010), Colombo, Sri Lanka, September 2010, pp. 1-5.

52. **M.F.M Firdhous**, D.L Basnayake, K.H.L Kodithuwakku, N.K Hatthalla, N.W Charlin, & P.M.R.I.K Bandara, "Route Advising in a Dynamic Environment – A High-Tech Approach", in Proceedings of the International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 09), Bridgeport, CT, USA, December 2009, published in Innovations in Computing Sciences and Software Engineering (CSSE), T. Sobh and K. Elleithy, Eds., Heidelberg, Germany: Springer Science+Business 4 Media B.V, 2010, pp. 249-254. (DOI: 10.1007/978-90-481-9112-3_2)

53. **M.F.M Firdhous**, & S.A Fernando, "Intellectual Property in Information Technology – a Sri Lankan Case", in Proceedings of the 11th International Conference on Humans and Computers HC-2008, Nagaoka, Japan, November 2008.

54. Z.M Kamran, A.R Leyman, **M.F.M Firdhous**, & S.A.D Dias, "Blind Source Separation for Wireless Communications," in Proceedings of the International Information Technology Conference (IITC99), Sri Lanka, October 1999.

55. **M.F.M Firdhous**, & P.G.V Dias, "The Introduction of Internet in Sri Lanka." In Proceedings of the 15th National Computer Conference, September 1996, pp. 150-154.

Technical Reports

1. **M. Firdhous**, O. Ghazali, & S. Hassan, "Trust and Trust Management in Cloud Computing – A Survey," InterNetworks Research Group, Universiti Utara Malaysia, Technical Report UUM/CAS/InterNetWorks/TR2011-01, 2011. Available at: http://www.internetworks.my/pubs/techrep/TR2011-01.pdf

Member of the Editorial Board/ Reviewer

1. Member of the Technical Programme Committee, 2021 2nd International Conference on Information Technology and Internet of Things, Chengdu, China on April 23-26, 2021.

2. International Journal of Engineering Research & Technology (IJERT) – ISSN: 2278-0181 – https://www.ijert.org/

3. International Journal of Managing Information Technology (IJMIT) – ISSN: 0975-5586(Online) 0975-5926(Print) – http://airccse.org/journal/ijmit/editorialboard.html

4. The World of Computer Science and Information Technology Journal (WSCIT), ISSN: 2221-0741 – http://www.wcsit.org/reviewers.htm

5. International Journal of Computer Science and Security (IJCSS) – ISSN: 1985-1553 – http://www.cscjournals.org/csc/reviewer_board.php?JCode=IJCSS

6. Journal of Engineering Science and Technology (JESTEC) – ISSN: 1823-4690 – http://jestec.taylors.edu.my/ (Journal Indexed by Scopus).

7. International Joint Conferences on Computer, Information, and Systems Sciences, and Engineering (CISSE 09), Bridgeport, CT, USA.

8. 17th Asia-Pacific Conference on Communications (APCC2011), Kota Kinabalu, Sabah, Malaysia

9. 2012 IEEE Symposium on Business, Engineering & Industrial Applications (ISBEIA2012), 23-26 September 2012, Bandung, Indonesia.

10. 3rd International Conference on Network Applications, Protocols & Services (NetAPPS2012), 19-21 September 2012, Kuala Lumpur, Malaysia.

Research Supervision

Ongoing

1. A. Kumaraguruparan, "A Model for Assessing the Physical Comfort and Safety of Public Streets: A Case of Colombo City in Sri Lanka", PhD, Faculty of Architecture, University of Moratuwa, Sri Lanka, Registered in 2021.

2. G.H.B.A. de Silva, "A Framework for Enhancing Livelihood of Gen Z of Economically Marginal Communities through Technology Enhanced Learning", PhD, Faculty of Information Technology, University of Moratuwa, Sri Lanka, Registered in 2019.

Completed

1. D. L. Hewage, "Vendor Neutral Interface for Network Device Configuration", MSc (IT), Faculty of Information Technology, University of Moratuwa, Sri Lanka, 2020.

2. M.M. Razmy, "An Improved Adhoc On Demand Distance Vector Protocol for Mobile Adhoc Network", MSc (IT), Faculty of Information Technology, University of Moratuwa, Sri Lanka, 2019.

3. K. Kesavan, "Design and Development of Efficient and Secure Lightweight Protocol for Wireless Sensor Network", MSc (IT), Faculty of Information Technology, University of Moratuwa, Sri Lanka, 2016.

4. M.A.D.T.R. Nayanananda, "Smart Vessel Monitoring System", MSc (IT), Faculty of Information Technology, University of Moratuwa, Sri Lanka, 2015.

5. T.N.W. Rathnayaka. "Developing an Automated Solution to Address the Issues of Prevailing Home Based Security and Safety Concerns in Sri Lanka", MSc (IT), Faculty of Information Technology, University of Moratuwa, Sri Lanka, 2015.

6. G.I. Thalagala, "Reputation System for Decentralized Unstructured Peer to Peer Networks", MSc (IT), Sri Lanka Institute of Information Technology, Sri Lanka, 2011.

7. O.S.R Perera, "Building a model for crafting IT savvy lawyers in Sri Lanka: stepping towards an effective prosecution of cyber forensics cases", MSc (IT), Sri Lanka Institute of Information Technology, Sri Lanka, 2011.

8. D.R.T Jayasundara, "Data Mining Analysis of Educational Objectives of the Youth in Sri Lanka", MSc (Operations Research), Department of mathematics, Faculty of Engineering, University of Moratuwa, Sri Lanka, 2010.

9. P.I Kohombanwickrama, "Development of a Framework for Legal Research", MSc (IT), Sri Lanka Institute of Information Technology, Sri Lanka, 2008.

10. K.M Inoshini, "Developing a Data Mining Framework for the Prediction of Student Performance at Higher Educational Institutes", MSc (IT), Sri Lanka Institute of Information Technology, Sri Lanka, 2008.

11. K.S Munasinghe "Data Mining System for Ceylon Petroleum Corporation", MSc (IT), Sri Lanka Institute of Information Technology, Sri Lanka, 2008.

Professional Skills

Software Skills
Computer Languages and Special Packages
Java, C, C++ Visual Basic, Crystal Reports, ProActiveNet, Concord, ViewLogic, Synopsys, Avant! Planet PL & Apollo, AHDL (Alterra Hardware Description Language).

Operating Systems
UNIX, Linux, Windows NT 4 Workstation and Server, Windows 20xx Professional and Server, and MS-DOS

Databases
MS SQL, MS Access, Oracle, MySQL

System Planning, Designing and Administration Skills

Have extensive skills and experience along with the theoretical knowledge in planning, designing and implementing in in-house and cloud based information systems and networking architecture using and mixing different technologies.

Research Skills
Have an excellent record of research supported by extensive publications in leading journal and conferences.

Specific skills include:
- understanding and developing research problems
- designing experiments and collecting data using multiple techniques including survey, focus group discussions/interviews, modelling and simulation, and test bedding
- analysis of data using specialised computer applications,
- preparing reports and papers
- presenting the results orally to large audiences

Teaching Skills
I have more than 15 years of teaching experience at tertiary levels. I am capable delivering lectures in multiple languages to suit the need of the students. At the University of Moratuwa, I have taught both technical and non-technical subjects at both undergraduate and postgraduate courses. Well experienced in teaching non native English speaking students in the English language.

Language Skills
Has excellent command of English, Sinhala and Tamil languages. I am able to read, understand, converse and prepare professional documents in all these three languages.

Management Skills

Have experience in managing large and small groups of professionals in both academia and non-academia.

Other Soft Skills

- Good team player and leader
- An excellent command of multiple languages
- A good communicator and listener
- Excellent presentation skills in multiple languages
- Excellent writer of professional reports and academic papers
- An excellent problem solver (has been a senior student councillor for more than 15 years)
- An excellent time manager with the ability to meet deadlines

Professional Experience

Asian Development Bank
TA Consultant (During Sabbatical Leave from UoM)   **Sept. 2019 – Sept. 2020**

Work being carried out
- Developing the project websites for both ministries and upload all initial relevant information.
- Assisting in incorporating the details of the projects in the websites of both the ministries.
- Training the relevant project staff to update both the project and ministry websites
- Studying the IT initiatives of both the ministries in (i) functioning of their offices; (ii) project implementation; and (iii) and in local authorities and suggest improvement to them
- Assisting both the ministries in implementation of the front office-based initiatives in project local authorities of both the ministries;
- Developing software for computerized accounting system for Project Management Unit (PMU) of both the ministries and implement them in both the PMUs with the required training to relevant officers;
- Supporting local authorities in establishing e-governance platforms based on agreed institutional reforms supported by the ministries and ADB;
- Studying other computerization requirements of the project and local authorities and develop software for the same, install and train the relevant staff; and
- Estimating the hardware requirement for implementation of the software and provide specifications and assist to procure the same.

University of Moratuwa, Faculty of Information Technology
Senior Lecturer   **July 2004-todate**
Director, Postgraduate Studies   **Sept. 2013-Sept. 2019**
Head/Department of Interdisciplinary Studies   **Mar. 2006-Apr. 2007**

Administrative Duties
Member of the Faculty Board – Faculty of Information Technology
Member of the Higher Degrees Committee – Faculty of Information Technology
Member of the University Senate (Jan. 2006 – Apr. 07 and Sept. 2013-Sept. 2019)
Lecturer in Charge – Laboratories, Faculty of Information Technology
Lecturer in Charge – Information Systems and Networks, Faculty of Information Technology

Other Duties
- Conducting lecturers for undergraduates and postgraduate students.
- Subjects taught includes – Computer Networks, Database Management Systems, Network Programming, Web Technologies, Internetworking, Data Warehousing and Data Mining, IT for Financial Mathematics, Management Information Systems, etc.,
- Supervising undergraduate and postgraduate projects.
- Managing departmental UNIX servers.

- Setup and managing the Windows network with Windows advanced server and windows 2000 & windows XP clients at the Faculty of Information Technology.
- Setup total security for the windows and UNIX networks for student and staff use at the Faculty of Information Technology.

Consultancies Carried Out (Part time basis)
Sri Lanka Tea Board
National Agriculture Development Programme
National Lotteries Board
Moratuwa Municipal Council
Sri Jayewardenepura General Hospital
Ceylon Petroleum Corporation
Disaster Management Center
Medical Supplies Division – Ministry of Healthcare and Nutrition
People's Bank
State Mortgage and Investment Bank
Dept. of Motor Traffic – Ministry of Transport
Parliament of Sri Lanka
Sri Lanka Bureau of Foreign Employment
National Savings Bank
Sri Lanka Telecom – Internet Division
Information and Communication Technology Agency – ePopulation Project
Department of Inland Revenue

Visiting Lecturer
Dept. of Electrical Engineering, University of Moratuwa
- Teaching computer networks to MSc (Electrical Engineering) and MSc (Automation) students.

Dept. of Mathematics, University of Moratuwa
- Teaching Information Management Systems for MSc (Operations Research) and Information Technology for Finance and Investment Analysis for MSc (Financial Mathematics) students.
- Thesis (research) supervision of MSc students.

Sri Lanka Institute of Information Technology
- Teaching Data Mining and Data Warehousing for MSc (IT) and MSc (IS) students.
- Thesis (research) supervision of MSc students.

University of Moratuwa   **Aug/2002-June/2004**
Dept. of Computer Science & Engineering
Senior Lecturer

- Teaching computer networks, internet programming and database management systems for undergraduate and web technologies for postgraduate students.

American International Group   **Apr/2000-Aug/2002**
(SanVision Technology Inc., New York, NY, USA)
IT Consultant

- Coordinated the expansion of the Wide Area Network to accommodate new offices.
- Coordinated the installation of WAN links to offshore sites.
- Monitored all the WAN links for any network degradation and took necessary remedial actions to rectify problems proactively.
- Setup the laboratory for testing applications and simulate the network issues.
- Responsible for managing the Local Area Network.
- Responsible for creating Perl and Shell scripts for monitoring applications for the Application Support Group of the American International Group.
- Created the database on MS SQL for maintaining the Application and Application contact information and relevant web pages and ASP scripts for accessing them.
- Installed and maintained the Seagate Crystal Info Server and created the necessary reports for the Application Support Group.
- Managed the entire SVT's windows network with Windows NT server with Windows NT, Windows 2000 and windows 98 clients.
- Managed the Domestic Brokerage Group (DBG) of AIG's internal mail system based on the Microsoft exchange with clients spread throughout the USA.
- Managed the client side of the Windows NT network of the Domestic Brokerage Group (DBG) of the AIG.
- Managed the IIS based web server for the Application Support Group of the DBG for internal information dissemination.

Neutec Corporation, Frederica, Delaware, USA   **Sept/1999 – Mar/2000**
Senior Systems Engineer
Responsible for the design, implementation and integration of client server and LAN/WAN infrastructure.

- Design and develop systems based on UNIX and Microsoft Windows.
- Set up wide area networks including configuration of routers, dial-in servers, modems and other network products.
- Managed the local windows network based on Windows NT servers and clients.

Nanyang Technological University - Singapore   **Aug/1997 – Sept/1999**
Research Scholar

- For the MSc (Computer Engineering) degree, carried out research on Parallel Computing Techniques for Interferrometric Sonar Systems. Devised a novel method for phase unwrapping in sonar systems using the residue number system (RNS). This method replaces the usual time consuming sequential phase unwrapping methods with fast parallel fast phase unwrapping process.

- The Phase unwrapping algorithm was initially coded on C++ and MatLab and tested with data acquired using the Sonar system designed using ultrasonic detectors and data acquisition unit with LabView.
- The phase unwrapping algorithm was coded in VHDL and committed to a Xilinx FPGA and tested for performance where the wrapped phase delays were represented by numbers.
- The total phase unwrapping unit including phase detection unit was designed using VHDL and functionally simulated using ViewLogic. Later the design was synthesized using Synopsys for timing and area analysis.

University of Moratuwa   **Mar/1996 – Aug/1997**
Lecturer

Responsibilities
- Teaching electronics and microprocessor based systems for associate degree students and tutoring and Lab instructions in electronics, telecommunications and computer systems for undergraduates.
- Systems administrations for department containing server based Novell network & PCs.
- Worked for Lanka Educational And Research Network (LEARN), a project carried out to inter-connect all the universities and research institutions in Sri Lanka for data communications and then to connect this network to the Internet. My responsibilities include configuring and maintaining all the Wide Area Networking equipment and to develop communication software.
- Installing Linux servers and configuring them as Internet gateways and servers.
- Installing Internet Firewalls on Linux servers.
- Maintaining the mail and other servers at the LEARN.
- Configured the LEARN main router, dial in server and the TACACS user authenticating server.
- Installed Internet servers on Linux, Novell and Windows NT platforms for various institutes
- Connected several universities and research institutions to internet via 64 kbps lines

Dynacom Engineering (Pte.) Ltd.,   **Jan/1996 – Mar/1996**
Systems Engineer
Started and managed the networking division of the Dynacom engineering (Pte) Ltd.

Projects carried out at Dynacom engineering (Pte) Ltd.
- Provided Network Solutions using Motorola products
- Interconnected two LANs, which were 20 km apart using Vanguard 100 routers and Motorola Codex Modems using a dial line for IPX routing.

Lanka Internet Services Ltd.,   **Feb/1995 – Dec/1995**
Systems Engineer

Actively participated in setting up the Lanka Internet Services, Ltd., the first Internet Service Provider in Sri Lanka. An active member in the technical team that set up the international data link to the Internet backbone. Later responsible for setting up and maintaining radio networks for data communications.

Projects carried out at Lanka Internet Services, Ltd.
- Established and maintained radio networks for data communications
- Connected the Ministry of Foreign Affairs to Internet via 64kbps radio link using Cylink radio modems and Cisco 2501 routers through Lanka Internet (2km apart).
- Connected the EDS software services to Internet via 64 kbps radio link using Cylink radio modems and Cisco 2501 routers through Lanka Internet (2km apart).
- Interconnected three different LAN segments belonging to Asiacapital Ltd. in a triangular architecture using Cisco Routers and landline leased circuits.
- Interconnected two Ethernet LAN sites of Unilever Sri Lanka using 64 kbps Cylink Radio modems and Cisco 2501 routers (9 km apart).

Trainings Underwent (Undergraduate Industrial Training)
Sri Lanka Telecom Ltd.,   **July/1993 – Sept/1993**
- Underwent training in the areas of telecommunication switching (analog & digital), satellite communications, under sea communications and ship to shore communications.

Ceylon Electricity Board   **Aug/1991 – Nov/1991**
- Underwent training in the areas of generation, transmission, and distribution of electricity.

References

Mr. B.H Sudantha,
Dean,
Faculty of Information Technology,
University of Moratuwa,
Moratuwa 10400,
Sri Lanka.

Phone: +94-11-2650922 (Office)
Email: sudanthabh@uom.lk,
        bh.sudantha@gmail.com

Dr. Priyantha DC Wijayatunga,
Director,
South Asia Energy Division,
Asian Development Bank,
6 ADB Avenue,
Mandaluyong City 1550,
Metro Manila, Philippines

Phone: +63 2 632 4444
Email: pwijayatunga@adb.org

Prof. Dr. Suhaidi Hassan,
Chair, InterNetWorks Research Laboratory,
School of Computing,
UUM College of Arts and Sciences,
Universiti Utara Malaysia,
06010 UUM Sintok,
Kedah Darul Aman
Malaysia.

Phone: +60-4-928 5293 (Office)
        +60-19-442 0321 (Mobile)
Email: suhaidi@uum.edu.my

Associate Prof. Dr. Osman Ghazali,
Deputy Dean,
School of Computing,
UUM College of Arts and Sciences,
Universiti Utara Malaysia,
06010 UUM Sintok,
Kedah Darul Aman
Malaysia.

Phone: +60-4-928 5052 (Office)
        +60-12- 442 2747 (Mobile)
Email: osman@uum.edu.my

Prof. Dr. Rahmat Budiarto
Professor
College of Computer Science and Information Technology
Al-Baha University
Al Baha
Saudi Arabia

Phone: +966 55 345 1317
        +966 53 713 7818
Email: rahmat@bu.edu.sa

Prof. P.K.S. Mahanama
Deputy Vice Chancellor
University of Moratuwa
Moratuwa 10400
Sri Lanka

Phone: +94-11- 313 9398 (Office)
Email: dvc@uom.lk,
        mahanama@uom.lk

Prof. KKCK Perera
Secretary,
Ministry of Education,
Isurupaya,
Battaramulla 10120,
Sri Lanka.

Phone: +94-71-4472789 (Mobile)
Email: kapila@uom.lk