

Curriculum vitae



Personal details

Name and current position:

Profesor Ts. Dr. Jasni Bt Mohamad Zain, Senior Member IEEE
Director
Institute for Big Data Analytics and Artificial Intelligence (IBDAAI)
Kompleks Al-Khawarizmi,
Universiti Teknologi MARA (UiTM),
40450, Shah Alam,
Selangor, Malaysia.

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Home Address:

No 11 Jalan Nova U5/95D,
Laman Permai, Subang Bestari,
40150, Shah Alam,
Selangor.

Date of Birth: 23rd of March 1967

Sex: Female

Status: Married

Nationality: Malaysian

Contact No.: +60199389876

SCOPUS H-index : 24 (As of 3/12/2024)

Google Scholar : 35

IEEE member : 41474753

Education History

1986 - 1989	BSc.(Hons) Computer Science (University of Liverpool, England, UK)
1992 - 1994	PGCE Mathematics (Sheffield Hallam University, England, UK)
1996 - 1998	MEd (Hull University, England, UK)
2002 - 2005	PhD (Brunel University, West London, UK)

Employment History

1997 - 1999	Lecturer, UTM Skudai, Johor
1999 - 2002	Lecturer, UTM Kampus Pahang.
2003 - 2007	Lecturer, UMP or previously known as KUKTEM
2007 - 2009	Senior Lecturer, UMP
2009 - 2011	Associate Professor, UMP
2012 - 2016	Professor, UMP
2017 - now	Professor, UiTM

Subjects Taught / New Course

1. ITT450 Information Security
2. ITT788 Advanced Network security
3. ITT800 Incident Response and Handling
4. ENT600 Entrepreneurship
5. MCC1014 Research Methodology & Project Proposal
6. MCN1143 Information Security
7. MCT1033 Current Issues in ICT
8. DCN1013 Computer Architecture & Organization
9. BCN1043 Computer Architecture & Organization
10. BCN 3133 Computer Ethics & Policies
11. BCS 3273 Introduction to Image Processing
12. BCN 2023 Data and Network Security
13. BCS 3273 Introduction to Image Processing
14. BCNXXX Network Security Engineering
15. BCNXXX Introduction to Multimedia Networking
16. BCNXXX Mobile and Wireless Network
17. UTM1 Digital Logic
18. UTM2 Computer Architecture and Organization
19. UTM3 Operating systems
20. UTM4 Data Communications
21. UTM5 Computer Networks.

Management

1. **Director**, Institute for Big Data Analytics and Artificial Intelligence (IBDAAI), UiTM April 2021- now.
2. **Deputy Director** (Cyber Technology) Research Nexus UiTM (ReNeU), UiTM June 2020 - Mar 2021.
3. Member of JKKF FSKM, UiTM 2017-2019.
4. Honorary Major (Mejar Kehormat) PSSTUDM for Universiti Malaysia Pahang (2014-2016)
5. **Dean Faculty of computer systems & software engineering, UMP** (1 May 2008-31 Dec 2015)
6. **Director of information and communication technology centre (UMP) (effective from 1 Mar 2007-30 April 2008)**
2. Chairman of the Cendekia Bitara Night Awards 2013 & 2014

3. Quotation Committee member and Tender Board, UMP. (16 April 2012-15 April 2016)
4. Committee member of Malaysian Software Testing Curriculum Board (MSTB) in INSTITUTIONS of HIGHER LEARNING. (JPT 2011).
5. Member of the Taskforce Improvement policies related to Academic UMP. (March 2011)
6. Chairman of the IMS System Taskforce (Teaching Plan) UMP (Feb 2011)
7. Representatives of the Senate, meetings of human resources development Panel (SALARY INCREMENTS), UMP (Jan 2010-Jan 2014).
8. Chairman Of The UMP Website COMMITTEE.
9. Chairman of JK Multimedia, Night Cendekia Unique Award 2009-2012.
10. Member of the parent COMMITTEE of elections to the students ' representative Council (JIPMPP) of Universiti Malaysia Pahang 2010/2011 session.
11. Competency Assessment Panel (academic) (1 Jan 2010-31 Dec 2011).
12. Chairman of the Award COMMITTEE Multimedia, Night Cendekia Unique 2008
13. Senate member, Universiti Malaysia Pahang (effective from 1 May 2008)
14. Member Of The Standing Committee Of The Senate (V.) Curriculum, Teaching & Learning.
15. Member Of The Standing Committee Of The Senate Entry, Peperiksaan & Graduation.
16. Member Of The Standing Committee Of The Senate Research and Development members.
17. Member Of The Standing Committee Of The Senate Of Graduate Studies.
18. Property Disposal Inspector COMMITTEE member of UMP (5 Feb 2008)
19. The implementing COMMITTEE Advisor for the Convocation To Be 2 UMP, 2007.
20. Members of the parent COMMITTEE To Convocation Ceremony 2 UMP, 2007.
21. Members of the parent COMMITTEE for the unity Debate Competition and integration Between higher education institutions in 2007.
22. Quality Council meeting members of the UMP (August 2007)
23. Chairman Of The Committee Of Investigation Loss Of Equipment/Computer UMP. (27 Sep 2007)
24. A panel member for a pre grade administrative officer post interview N41 & Assistant Administrative Officer N27 grade. (21 July 2007)
25. ICT Technical COMMITTEE Chairman (effective from 1 Mar 2007)
26. Member of the Executive meetings of the University (effective from 1 Mar 2007)
27. A member of the Financial Management COMMITTEE meeting and accounts of the University (JPKA) (effective from 1 Mar 2007)
28. Member Of The ICT Management Committee (National) INSTITUTIONS Of HIGHER LEARNING
30. ICT Council Secretary of the UMP (effective from 1 Mar 2007)
31. Standing COMMITTEE Senate Research
32. COMMITTEE ' Task Force ' For the rebranding of the University and the development of the Logo of Universiti Malaysia Pahang (UMP) (effective 22 November 2006).
33. The head of the field of Expert Information Technology (IT) (effective from 17 Oct. 2006)
34. Head of Technical units, FSKKP (effective from 1 Mar 2006-28 Feb 2007)
35. Head of Graphics & Image Processing Research Group (effective from 3rd Mar 2006)
36. Research coordinator, FSKKP (effective from 15 Jan 2006)
37. Head Of The Panel System & Network Areas.
38. Permanent Postgraduate COMMITTEE FSKKP (effective from 17 Jan 2006)
39. Development COMMITTEE Of The Campus (Campus Development)
40. Technical COMMITTEE Of The University
41. New FSKKP Program COMMITTEE (effective from March 21-31 Dec 2006)
42. Member of computer architecture research group

Collaboration with Industry / International Partner

1. MoA with Petronas Research Sdn Bhd (2024)
2. MoU with STIKOM Tunas Bangsa, Indonesia (2023)
3. MoU with Huayin Institute of Technology, China (2022)
4. MoU with Universiti Islam Negeri, Jogjakarta (2014)
5. MoA with Muscat College, Oman for them to run two programmes (Software Engineering and Computer Network) in Muscat College (2014)
6. MoU with HP Malaysia and TEL to offer Software Testing tools short courses.
7. MoU with Universitas Sumatera Utara (USU) for academic and research activities (2011)
8. MoU with AMIK Tunas Bangsa, Pematangsiantar for academic and research activities. (2011)
9. MoU with Malaysian Software Testing Board (MSTB) to offer Software Testing course
10. The establishment of IBM Centre of Excellence at UMP
11. MoU with IBM Malaysia and Heitech Padu Bhd to offer Z-OS Mainframe as an elective course.
12. MoU with Oracle (M) and Heitech Padu Bhd

Keynote/ Talk / Lecture

1. **Guest Speaker** at the International Webinar, Universitas Sebelas Maret, Surakarta, Indonesia. (4th Dec. 2024)
2. **Adjunct Professor** lecture at Universitas Brawijaya, Malang, Indonesia. (27-30 Nov. 2024)
3. COMSTECH **Distinguished Scholars Program** to Eurasian National University, Astana, Kazakhstan. (29 April- 4 May 2024)
4. International Guest Lecture, ' Data Mining for Healthcare and Oil & Gas Industry', Institut Teknologi Sepuluh Nopember, 2 June 2023.
5. **Keynote speaker** at The 7TH INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING & COMPUTER SYSTEMS (ICSECS 2021), Online, 24-26 August 2021.
6. **Keynote Speaker** " 8 Trends of IoT in 2019 and Beyond", at The 1st ICoSNIKOM International Conference of Computer Science and Information Technology", Medan, Indonesia 23-24 November 2018.
7. **Keynote speaker** "Conceptual framework for lightweight Ciphertext Policy-Attribute Based Encryption Scheme for Internet of Thing Devices", at The 3rd International Conference of Computer, Environment, Agriculture, Social Science, Health Science, Engineering & Technology (ICEST 2018), Medan, Indonesia. 4-6 May 2018.
8. **Invited Speaker** " Boosting Learning through Virtual Reality" at BIT's 3rd Annual World congress of emerging Info Tech 2014, Dalian World Expo Centre, China, 19-21 June 2014.
9. **Keyote speaker** " Watermarking for tamper detection and recovery", at the 5th The International Conference on Information and Communication Systems (ICICS 2014), Irbid, Jordan, 1-3 April 2014.
10. **Keyote speaker** " Sustainable Quality Systems in Organizations", at the 3rd International Conference on Software Engineering and Computer Systems (ICSECS 2013), Kuantan, Malaysia, 20-22 August 2013.
11. **Keyote speaker** at the Seminar Nasional Teknologi Informasi & Komunikasi 2012 (SNASTIKOM 2012), Medan, Indonesia, 31 January – 2 February 2012.
12. **Kuliah Perdana** at AMIK Tunas Bangsa, Pematangsiantar, Sumatera Utara, 23 September 2011.
13. **Keynote speaker** at the Seminar Nasional: Teknologi Cloud Computing Dalam Menghadapi Persaingan Global, Universiti Sumatera Utara, 21 September 2011.

14. **Invited Speaker** at the Lokakarya Kurikulum Bidang Komputer, Universiti Sumatera Utara, 20 September 2011.
15. **Invited speaker** at The Digital Forensics Closed Session Seminar For Academicians And Researchers, Cyber Security Malaysia, Awards, Conference & Exhibition (CSM-ACE) 2010 from 25 – 29 October 2010 in Kuala Lumpur, Malaysia
16. **Invited Speaker** and **facilitator** for Bengkel Hasil Pembelajaran Kolej PSDC, Kolej PSDC Semambu, Kuantan, 1-2 Jun 2010.
17. **Speaker** for Kursus SLAB (PhD Examination), Vistana Hotel, 10 June 2010.
18. **Speaker** for Kursus Induksi Modul Khusus, UMP, September 2007.
19. Attended and presented in The 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Lyon, France, 23-26 August 2007.
20. **Chairperson for Keynote Speech in National Conference on Software Engineering and Computer Systems (NaCSES'07)**, The Legend Resort, Cherating, 20 August 2007.
21. Attended and presented in the International Conference on Electrical Engineering and Informatics (ICEEI 2007), School of Electrical Engineering and Informatics, Bandung Institute of Technology, June 17-19, 2007.
22. Speaker for Kursus Induksi Modul Khusus, UMP, Julai 2007.
23. **Invited speaker in My Edu Sec Seminar: Advances in Education Security in Malaysia** organised by Universiti Darul Iman Malaysia, 28-29 May 2007, Primula Beach Resort, Kuala Terengganu.
24. Speaker for Kursus Kaedah Penyelidikan (SLAB), 17 May 2007.
25. **Pengerusi Forum Seminar dan Cabaran Implementasi ICT di Jabatan/Agensi Negeri, Anjuran SUK Pahang**, Holiday Villa, Cherating, 14-15 Mei 2007.
26. **Pensyarah Jemputan ke CASE, UTM KL. 'Public Key Cryptography'**, 24 Februari 2007.
27. **Pensyarah Jemputan ke CASE, UTM KL. 'Steganography'**, 3 Februari 2007.
28. Attended and presented in the 3rd *International Conference on Artificial Intelligence in Engineering and Technology*, Kota Kinabalu, Malaysia, 22-24 November 2006.
29. Attended and presented in the Computer Science and Mathematics Symposium 2006 (CSMS 2006), KUSTEM Kuala Terengganu, 8-9 November 2006.
30. Given lecture for Friday Wisdom "Evergreen Stars", Dewan Majlis, 15 Sep 2006.
31. Attended and presented in the 28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, New York City, USA, 30 August- 3 Sep 2006.
32. Technical briefing for first year FSKKP students, 6 Julai 2006.
33. Panel for forum during MINDS, 4 Julai 2006.
34. MC for FSKKP Hi-Tea with industries at Crown Princess, Kuala Lumpur, 22 Jun 2006.
35. Briefing on Faculty's research activities on Cyber Security to 'Majlis Keselamatan Negara' in JPM Putrajaya. 21 June 2006
36. Speaker for Kursus Kaedah Penyelidikan (SLAB), 9 June 2006
37. Given lecture for 'Friday Wisdom' program (Pengorbanan), Dewan Majlis, KUKTEM
38. MC for MDC- The Home for Every Technopreneur seminar, Dewan Majlis, KUKTEM.

Editor/Reviewer/BoS/Audit

1. **Board of Study** (BoS) for Institut Matematik Kejuruteraan (IMK), UniMaP. (6th Dec. 2024)

2. **External Examiner and Academic Advisor** for School of Computing (SOC), UUM. (1 Nov 2024 – 31 Oct. 2026)
3. **External Advisor**, School of Data Science, Perdana University (2023-2025)
4. Penilai Luar kenaikan Pangkat ahli akademik UMT (2023-2026)
5. Pemeriksa Luar UTHM (April 2023 - Mac 2025).
6. Panel of Assessor for Provisional Accreditation Remote Audit on Master of Science in Data Science (ODL), UTP (Jan-Feb 2023)
7. **Board of Study** (BoS) member for Master of Protective Security Management (MPSM), Kulliyah of ICT, IIUM. Oct 2019-Sep 2021
8. **External Examiner** for Bachelor of Computer Science (Artificial Intelligent)Hons, Fakulti Teknologi Maklumat dan Komunikasi, UTeM. August 2019-July 2021.
9. Cyber Security Academia Malaysia (CSAM) secretariat, UiTM representative 2019-2021.
10. **Chief Editor** , Malaysian Journal of Computing (MJoC), 2017- June 2019
11. Chief Editor, International Journal of Software Engineering & Computer Systems (IJSECS). (2016)
12. International Scientific Committee for the 2nd International Conference on Soft Computing in Data Science (SCDS2016)
13. Expert Panel For Msc In Information Technology And Undergraduate Programmes For Universiti Teknologi Petronas (Feb 2016)
14. Malaysia Qualification Agency (MQA) auditor panel for self-accreditation Curtin University Sarawak (18-20 August 2015)
15. MQA auditor panel for self-accreditation University of Nottingham Malaysia Campus (9-11 June 2015).
16. MQA assessor panel for Scottish Qualifications Authority (SQA) – Higher National Diploma (HND) Computing: Software Development, 2014.
17. MQA assessor panel for Master ICT programme , Management Science University, 2011-2012.
18. **Board of Study** (BoS) panel for Master of Informatics Information Assurance and Control, Sekolah Informatiks Termaju (UTM AIS), International Campus, Kuala Lumpur. (July 2011)
19. **Reviewer** for The 32nd Annual International Conference of the IEEE Engineering in Medicine and Biology Society 2011 (1 paper titled 'Portable and Cost-effective Pixel Super-Resolution On-Chip Microscope for Telemedicine Applications') .
20. **Assessor Panel** for Malaysian Qualification Agency 2011-2014.
21. **Editorial Board** member for International Journal of Web Applications (IJWA).
22. **Reviewer** for International Conference on Modeling, Simulation And Applied Optimization (IMCAO 2011) - 19-21 April 2011, Kuala Lumpur, Malaysia. (1 paper titled 'An Image Encryption Model Based on Using Frei-Chen Bases').
23. **Reviewer** for International Journal of Computer Science & Information Technology (IJCSIT) published by AIRCC. (2 papers titled 'Path Complexity of The Class Binary Search Tree' & 'Data Transformation Technique for Protecting Private Information in Privacy Preserving Data Mining').
24. **Reviewer** for International Journal of Computer and Electrical Engineering (IJCEE) published by IACSIT. (2 papers titled 'On the use of Schur Decomposition for
25. Copyright Protection of Digital Images' & 'DC Coefficients Based Watermarking Technique for color images using Singular Value Decomposition Technique').
26. **Guest Editor** for Journal of Computer Systems, Networks and Communications, Hindawi.
27. **General Chair** for the 2nd International Conference in Software Engineering and Computer Systems 2011 (ICSECS 2011), UMP, Malaysia.
28. **Reviewer** for The 3rd International Conference on Science and Technology (ICSTIE 2010)
29. **Advisor** for 'Diploma Teknologi Komputer' program, Kolej PSDC from 15

September 2010.

30. **External Examiner** for Diploma Program for KIPSAS, 18 May 2010.
31. **External Examiner** for Diploma in Information Technology (CT102) for Kolej Polytech MARA (KPTM), Kuantan, 2010.
32. **International Program** committee for The Second International Conference on 'Networked Digital Technologies' (NDT 2010), Prague, Czech Republic.
33. **International Program** committee for International Conference on Business and Digital Enterprises (ICBDE 2010), Bangalore, India.
34. Chair, International Conference in Software Engineering and Computer Systems 2009 (ICSECS 2009).
35. **Reviewer** for The 31st Annual International Conference of the IEEE Engineering in Medicine and Biology Society (2010).
36. Editorial Board for International Journal of Computer and Electrical Engineering(IJCEE).
37. Reviewer for Knowledge Management International Conference (KMICE 2010).
38. Reviewer for International Symposium on Information Technology 2010 (ITSIM 2010).
39. **Reviewer** for The 30th Annual International Conference of the IEEE Engineering in Medicine and Biology Society (2009).
40. **Reviewer** for The 2nd International Conference on The Applications of Digital Information and Web Technologies (ICADIWT 2009).
41. **Judge** for IIUM's Faculty of Science Research Award 2008, 6 February 2008.
42. **Reviewer** for Computer Methods and Programs in Biomedicine by Elsevier. (Paper title 'Protecting Medical Images Using Dual Watermarks').
43. Participated in Pameran Dunia Melayu Dunia Islam di Dataran Pahlawan, Melaka, 14-16 November 2007.
44. Participated in the International Trade Fair 'Ideas-Inventions-New Products' IENA 2007 , Nuremberg, Germany, 1-4 November 2007.
45. Participated in Pameran Penyelidikan PECIPTA 2007, KLCC.
46. **Reviewer** for The 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society.
47. Reviewer for the journal ELEKTRIKA.
48. Candidate for inclusion in the Who's Who in Science and Engineering 2007.
49. Participated in Pameran Penyelidikan ITEX, KL Convention Centre, 17-21 May 2007.
50. Participated in Pameran Penyelidikan MTE di PWTC, KL
51. Appointed as Session Chair in the 3rd *International Conference on Artificial Intelligence in Engineering and Technology*, Kota Kinabalu, Malaysia, 22-24 November 2006.

Publications

Journal Publications

1. Hai T., Zhou J., Li M., Zain J.M., Wang D., Zheng M. (2024). Investigation of the effects of various nanoparticles on improvement of hydrogen production rate in a solar energy driven alkaline electrolyzer. *International Journal of Hydrogen Energy*, 67, pp. 818 - 828.
2. Mojahid H.Z., Zain J.M., Basit A., Yusoff M., Ali M. (2024). A REVIEW ON EXTENSIVELY USED MACHINE LEARNING TECHNIQUES FOR THE PREDICTION OF COVID-19. *Suranaree Journal of Science and Technology*, 31 (1), pp. 030167-1 - 030167-13

3. Haryanto T., Suhartanto H., Murni A., Kusmardi, Yusoff M., Zain J.M. (2024). SCOV-CNN: A Simple CNN Architecture for COVID-19 Identification Based on the CT Images, *International Journal on Informatics Visualization*, 8 (1), pp. 175 - 182
4. Ma J., Zain J.M., Wang D., Shi J. (2024). A cross-item defect prediction method using adversarial learning, *Journal of Autonomous Intelligence*, 7 (4), art. no. 641.
5. Cai Y., Ma J., Zain J.M., Wang Y., Zheng M.(2024). Blockchain-based early warning system for infectious diseases: Integrating risk metrics for complex networks, *Journal of Autonomous Intelligence*, 7 (4), art. no. 651.
6. Hai T., Zhou J., Zain J.M., Jamali F. (2023). Joint scheduling optimization of a microgrid with integration of renewable energy sources and electric vehicles considering energy and reserve minimization, *Energy Science and Engineering*, 11 (8), pp. 2966 - 2984.
7. Hai T., Abidi A., Sajadi S.M., Zain J.M., Malekshah E.H., Aybar H.Ş. (2023) Simultaneous cooling of plate and cylindrical batteries in an air-cooled lithium battery thermal management system, by changing the distances of the batteries from each other and the pack wall, *Journal of the Taiwan Institute of Chemical Engineers*, 148, art. no. 104931.
8. Azrag M.A.K., Zain J.M., Kadir T.A.A., Yusoff M., Hai T. (2023). Review: machine and deep learning methods in Malaysia for COVID-19, *Indonesian Journal of Electrical Engineering and Computer Science*, 31 (1), pp. 514 - 520.
9. Hai T., Awad O.I., Li S., Zain J.M., Bash A.A.H.K.(2023). The impact of using a turbulator at the nanofluid flow inlet to cool a solar panel in the presence of phase change materials using artificial intelligence, *Engineering Analysis with Boundary Elements*, 152, pp. 301 - 310.
10. Hai T., Liu Y., Zhou J., Li S., Zain J.M., Yusoff M., Ben Moussa S., Abd El-Gawad H.H. (2023). Transient performance simulation and technoeconomic assessment of a smart building energy plant driven by solar energy coupled to a reversible heat pump, *Journal of Cleaner Production*, 405, art. no. 136946
11. Tao H., Hameed M.M., Marhoon H.A., Zounemat-Kermani M., Heddam S., Sungwon K., Sulaiman S.O., Tan M.L., Sa'adi Z., Mehr A.D., Allawi M.F., Abba S.I., Zain J.M., Falah M.W., Jamei M., Bokde N.D., Bayatvarkeshi M., Al-Mukhtar M., Bhagat S.K., Tiyyasha T., Khedher K.M., Al-Ansari N., Shahid S., Yaseen Z.M. (2022). Groundwater level prediction using machine learning models: A comprehensive review. *Neurocomputing*, 489, pp. 271 – 308.
12. Hai T., Sajadi S.M., Zain J.M., El-Shafay A.S., Sharifpur M. (2022). The effect of using tubes filled with phase change materials in the air conditioning system of a residential building. *Journal of Building Engineering*, 49, art. no. 104079
13. Tao, H., Wang, J., Yaseen, Z. M., Mohammed, M. N., & Zain, J. M. (2021). Shrewd vehicle framework model with a streamlined informed approach for green transportation in smart cities. *Environmental Impact Assessment Review*, 87 doi:10.1016/j.eiar.2020.106542
14. Jing, W., Tao, H., Rahman, M. A., Kabir, M. N., Yafeng, L., Zhang, R., . . . Zain, J. M. (2021). RERS-CC: Robotic facial recognition system for improving the accuracy of human face identification using HRI. *Work*, 68(3), 923-934. doi:10.3233/WOR-203426

15. Tao, H., Rahman, M. A., Al-Saffar, A., Zhang, R., Salih, S. Q., Zain, J. M., & Al-Hajri, A. -. M. (2021). Security robot for the prevention of workplace violence using the non-linear adaptive heuristic mathematical model. *Work*, 68(3), 853-861. doi:10.3233/WOR-203419
16. Li, J., Tao, H., Shuhong, L., Zain J.M., Vivekananda, G.N., Thanjaivadel, M. (2020) Internet of things assisted condition-based support for smart manufacturing industry using learning techniques. *Computational Intelligence*, 2020, 36(4), pp. 1737-1754.
17. Naim, M.H., Zain, J.M., Jalil, K.A., ...Hamid, M.H.A., Basiron, H. (2020). An analysis of standardized data for fog computing storage capacity using non-relational databases. *International Journal of Advanced Trends in Computer Science and Engineering*. 9(1.3 Special Issue), pp. 43-49, 7
18. Muhammad, N., & Mohamad Zain, J. (2019). Conceptual Framework for Lightweight Ciphertext Policy-Attribute Based Encryption Scheme for Internet of Things Devices. *Malaysian Journal of Computing*, 4(1), 237-245.
19. Tao, H., Bhuiyan, M.Z.A., Abdalla, A.N., Hassan, M.M., Zain, J.M., Hayajneh, T. Secured Data Collection with Hardware-based Ciphers for IoT-based Healthcare(2019) *IEEE Internet of Things Journal*, 6(1), pp 410-420.
20. Ali, M., Zolkipli, M.F., Zain, J.M., Anwar, S. Mobile Cloud Computing with SOAP and REST Web Services (2018) *Journal of Physics: Conference Series*, 1018 (1), art. No. 012005, .
21. Ernawan, F., Kabir, M.N., Zain, J.M. Bit allocation strategy based on Psychovisual threshold in image compression(2018) *Multimedia Tools and Applications*, 77 (11), pp. 13923-13946.
22. Muhammad, N., Zain, J.M., Mohamad, M. Current issues in Ciphertext Policy-Attribute based scheme for cloud computing: A survey (2018) *International Journal of Engineering and Technology(UAE)*, 7 (2), pp. 64-67.
23. Anwar, S., Zolkipli, M.F., Inayat, Z., Odili, J., Ali, M., Zain, J.M., Android botnets: A serious threat to android devices, (2018) *Pertanika Journal of Science and Technology*, 26 (1), pp. 37-70.
24. HY Muhammad, JM Zain. Visualizing Web Server Logs Insights With Elastic Stack– A Case Study Of UMMail's Access Logs, (2018) *Malaysian Journal of Computing*, 3 (1), pp. 37-53.
25. HUHA Wahab, JM Zain. Windows Privilege Escalation Through Network Backdoor And Information Mining Using USB Hacktool (2018) *Malaysian Journal of Computing*, 3 (1), 12-27
26. K Adam, MA Majid, MAI Fakherldin, JM Zain, A Big Data Prediction Framework for Weather Forecast Using MapReduce Algorithm, (2017) *Advanced Science Letters* 23 (11), pages 11138-11143.
27. Anwar, S., Inayat, Z., Zolkipli, M.F., Zain, J.M., Gani, A., Anuar, N.B., Khan, M.K., Chang, V., Cross-VM cache-based side channel attacks and proposed

prevention mechanisms: A survey, (2017) *Journal of Network and Computer Applications*, 93, pp. 259-279. DOI: 10.1016/j.jnca.2017.06.001

28. Anwar, S., Zain, J.M., Zolkipli, M.F., Inayat, Z., Khan, S., Anthony, B., Chang, V., From intrusion detection to an intrusion response system: Fundamentals, requirements, and future directions, (2017) *Algorithms*, 10 (2), art. No. 39. DOI: 10.3390/a10020039
29. Khor, H.L., Liew, S.-C., Zain, J.M., Region of Interest-Based Tamper Detection and Lossless Recovery Watermarking Scheme (ROI-DR) on Ultrasound Medical Images, *Journal of Digital Imaging*, 30(3), pages 328-349, 2017. DOI: 10.1007/s10278-016-9930-9
30. Saiful Azad, Musfiq Rahman, M. S. A. Noman Ranak, B. M. F. Kamal Ruhee, N. Nourin Nisa, Nazrul Kabir, Arafatur Rahman, Jasni Mohamad Zain, VAP code: A secure graphical password for smart devices, *Computers & Electrical Engineering*, 59, pages 99-109, 2017, ISSN 0045-7906, <http://dx.doi.org/10.1016/j.compeleceng.2016.12.007>.
31. Syifak Izhar Hisham, Afifah Nailah Muhammad, Gran Badshah, Nasrul Hadi Johari, Jasni Mohamad Zain, Numbering with spiral pattern to prove authenticity and integrity in medical images. *Pattern Analysis and Applications*, 20(4), pages 1129-1144, 2017. DOI: 10.1007/s10044-016-0552-0.
32. Indrajit Mukherjee, Jasni M Zain, PK Mahanti, An Automated Real-Time System for Opinion Mining using a Hybrid Approach, *I.J. Intelligent Systems and Applications*, 2016, 7, pages 55-64. DOI: 10.5815/ijisa.2016.07.06
33. Ardhi W Santoso, Luhur Bayuaji, Tien Sze Lim, Lateh Habibah, Jasni Mohamad Zain, Comparison of Various Speckle Noise Reduction Filters on Synthetic Aperture Radar Image. *International Journal of Applied Engineering Research (IJAER)*, 11(15), pages 8760-8767, 2016.
34. Santoso, Ardhi W. and Bayuaji, Luhur and Pebrianti, Dwi and Suryanti, Awang and Lim, Tien Sze and Habibah, Lateh and Jasni, Mohamad Zain (2016) A Fuzzy Approach for Speckle Noise Reduction in SAR Images. *International Journal of Advanced and Applied Sciences*, 3 (5). Pp. 33-38. ISSN 0973-4562 (Print); 0973-9769 (Online)
35. Khor, H.L., Liew, S.-C., Zain, J.M., Parallel Digital Watermarking Process on Ultrasound Medical Images in Multicores Environment. *International Journal of Biomedical Imaging*, pages 1-14, 2016. DOI: 10.1155/2016/9583727
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26. **Jasni Mohamad Zain** and Afifah Nailah Mohamad, "Using Spiral Scan Technique for Medical Image Watermarking with Tamper Detection and Recovery", *Proceedings of The International Conference On Software Engineering and Computer Systems (ICSECS 09)*, 19-21 Oct. 2009, Kuantan, Pahang, Malaysia.
27. Abbas Saliimi Lokman and **Jasni Mohamad Zain** , "Designing A Chatbot For Diabetic Patients ", *Proceedings of The International Conference On Software Engineering and Computer Systems (ICSECS 09)*, 19-21 Oct. 2009, Kuantan, Pahang, Malaysia.
28. Liew Siau Chuin and **Jasni Mohamad Zain**, "A Review of Medical Image Watermarking Schemes ", *Proceedings of The International Conference On Software Engineering and Computer Systems (ICSECS 09)*, 19-21 Oct. 2009, Kuantan, Pahang, Malaysia.
29. Nik Kamariah Nik Ismail and **Jasni Mohamad Zain**, "A Review of External Wood Defect Detection ", *Proceedings of The International Conference On Software Engineering and Computer Systems (ICSECS 09)*, 19-21 Oct. 2009, Kuantan, Pahang, Malaysia.
30. Santi Wulan Purnami, Abdullah Embong, **Jasni Mohamad Zain**, S. P. Rahayu, " A Comparison of Smoothing Functions In Smooth Support vector Machine", *Proceedings of The International Conference On Software Engineering and Computer Systems (ICSECS 09)*, 19-21 Oct. 2009, Kuantan, Pahang, Malaysia.
31. Abbas Saliimi Lokman and **Jasni Mohamad Zain**, "An Architectural Design of Virtual Dietitian (ViDi) for diabetic patients", *The 2nd IEEE International Conference on*

Computer Science and Information Technology (ICCSIT) 2009, 8-11 August 2009, Beijing, China.

32. Abbas Saliimi Lokman and **Jasni Mohamad Zain**, "Sequence Words Deleted (SWD) Technique For Pattern Matching in Chatbot" *Proceedings of Malaysian Technical Universities Conference on Engineering and Technology, June 20-22, 2009, MS Garden, Kuantan, Pahang, Malaysia (MUCEET2009).*
33. Liew Siau Chuin and **Jasni Mohamad Zain**, "A Review of Medical Image Watermarking and Its Implementations", *Proceedings of Malaysian Technical Universities Conference on Engineering and Technology, June 20-22, 2009, MS Garden, Kuantan, Pahang, Malaysia (MUCEET2009).*
34. **Jasni M Zain** and Abbas Saliimi Lokman, "Developing multimedia content for Diabetes education (in English and Malay language): A first prototype in developing content to educate, motivate and monitor (public and diabetic)", *The 1st Makassar International Conference on Electrical Engineering & Informatics (MICEEI) 2008, 13-14 November, Makassar, Indonesia.*
35. **Jasni Mohamad Zain** and A R Mohammed Fauzi "Expectation and feasibility of a computer aided education in diabetes in an urban area in alaysia: views from patients, healthcare staff and hospital administrators", *International Conference of Education, Research and Innovation (ICERI 2008), 17-19th November 2008, Madrid, Spain.*
36. Wan Maseri Wan Mohd, Abdullah Embong and **Jasni Mohamad Zain** "A Knowledge-based Digital Dashboard for Higher Learning Institutions", *The European Conference on Machine Learning and Principles and Practice of Knowledge Discovery in Databases (ECML PKDD), 15-19th September 2008, Antwerp, Belgium.*
37. **Jasni Mohamad Zain** and Tey Meng Kar, "Using Aesthetics Measurement Application (AMA) to Measure Aesthetics of Web Page Interfaces" (Accepted) *The 4th International Conference on Natural Computation (ICNC'08) 18-21 October 2008, Jinan, China.*
38. Wan Maseri Wan Mohd, Abdullah Embong and **Jasni Mohamad Zain**, "Visual and Interactive Data Mining: A Framework for an Interactive Web-based Dashboard", (accepted) *Malaysia-Japan International Symposium on Advanced Technology 2007 (MJISAT 2007) Seri Pacific Hotel, Kuala Lumpur, Malaysia. 12-14, November 2007.*
39. Wan Maseri Wan Mohd, Abdullah Embong and **Jasni Mohamad Zain**, "Enhancing Knowledge Codification Through Integration of Tacit-Explicit Knowledge Codification, Transfer Mechanism and Visualization Dashboard: A Holistic Model for Higher Learning Institutions", (accepted) *Malaysia-Japan International Symposium on Advanced Technology 2007 (MJISAT 2007) Seri Pacific Hotel, Kuala Lumpur, Malaysia. 12-14, November 2007.*
40. Wan Maseri Wan Mohd, Abdullah Embong and **Jasni Mohamad Zain**, "Parameterless K-Means: Auto-generation of Centroids and Initial Number of

Cluster", (accepted) *Malaysia-Japan International Symposium on Advanced Technology 2007 (MJISAT 2007)* Seri Pacific Hotel, Kuala Lumpur, Malaysia. 12-14, November 2007.

41. Nor Amizam Jusoh, **Jasni Mohamad Zain**, Nik Kamariah Nik Ismail "Clarifying Objects' Structure using Morphological Operations: an Experimental Comparison of Car Plate Recognition", (accepted) *Malaysia-Japan International Symposium on Advanced Technology 2007 (MJISAT 2007)* Seri Pacific Hotel, Kuala Lumpur, Malaysia. 12-14, November 2007.

42. **Jasni M Zain** and Abdul R M Fauzi, "Evaluation of Medical Image Watermarking with Tamper Detection and Recovery", in *The Proceedings of The 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Lyon, France, 23-26 August 2007. **IF 0.072**

43. Wan Maseri Wan Mohd, Abdullah Embong and **Jasni Mohamad Zain**, " Improve Knowledge Visualization through an Interactive Graph-based Dashboard System with Key Performance Indicator: A Case Study of University Dashboard for Higher Education", *National Conference on Computer Systems and Software Engineering 2007 (NaCSES'07)*, The Legend Resort, Cherating, 21-22 August 2007.

44. Mohd Fairuz Ramli, Abdullah Embong, **Jasni Mohamad Zain**, " Dual Watermarking Framework for Industrial Digital Images", *National Conference on Computer Systems and Software Engineering 2007 (NaCSES'07)*, The Legend Resort, Cherating, 21-22 August 2007.

45. Azma Abdullah, Nik Kamariah Nik Ismail and **Jasni Mohamad Zain**, " Sistem Kenalpasti Gred Kayu Gaharu Menggunakan Pemprosesan Gambar", *National Conference on Computer Systems and Software Engineering 2007 (NaCSES'07)*, The Legend Resort, Cherating, 21-22 August 2007.

46. Afifah Nailah Muhammad and **Jasni Mohamad Zain**, "Using Spiral Scan Technique for Medical Watermarking with Tamper Detection and Recovery", (accepted) *National Conference on Computer Systems and Software Engineering 2007 (NaCSES'07)*, The Legend Resort, Cherating, 21-22 August 2007.

47. Tey Meng Kar, Goh Ying Soon and **Jasni Mohamad Zain**, "Measuring Aesthetics of Mandarin Learning Web Pages: Are Users' Perceptions Congruent with Aesthetics-Measurement Application (AMA)?" (in submission) *National Conference on Computer Systems and Software Engineering 2007 (NaCSES'07)*, The Legend Resort, Cherating, 21-22 August 2007.

48. N. Muda, N. K. Nik Ismail, S. A. Abu Bakar, **J. Mohamad Zain**, "Optical Character Recognition By Using Template Matching" *National Conference on Computer Systems and Software Engineering 2007 (NaCSES'07)*, The Legend Resort, Cherating, 21-22 August 2007.

49. Azma Abdullah, Nik Kamariah Nik Ismail, Tuty Asmawaty Abdul Kadir, Nor Amizam Jusoh, Noorlin Mohd Ali, **Jasni Mohamad Zain**, "Agar Wood Detection and Grade Determination System Using Image Processing Technique", *International Conference on Electrical Engineering and Informatics (ICEEI 2007)*, School of Electrical Engineering and Informatics, Bandung Institute of Technology, June 17-19, 2007.

50. **Jasni Mohamad Zain** and Afifah Nailah Muhamad, "Authentication Watermarking With Tamper Detection and Recovery (AW-TDR)", *International Conference on Electrical Engineering and Informatics (ICEEI 2007)*, School of Electrical Engineering and Informatics, Bandung Institute of Technology, June 17-19, 2007.

51. Nor Amizam Jusoh, **Jasni Md Zain**, "Comparison between Techniques in Feature Extraction", *International Conference on Electrical Engineering and Informatics (ICEEI 2007)*, School of Electrical Engineering and Informatics, Bandung Institute of Technology, June 17-19, 2007.

52. Azma Abdullah and **Jasni Mohamad Zain**, " Software Development Approach in Software Engineering Curriculum Development", *International Conference on Electrical Engineering and Informatics (ICEEI 2007)*, School of Electrical Engineering and Informatics, Bandung Institute of Technology, June 17-19, 2007.

53. Nor Amizam Jusoh, **Jasni Mohamad Zain**, Tuty Asmawaty Abd Kadir, "Enhancing Thinning Method for Malaysian Car Plates Recognition", *The Second International Conference on Innovative Computing, Information and Control* September 5 – 7, 2007 Kumamoto City International Center, Kumamoto, Japan.

54. Goh Ying Soon, Tey Meng Kar, **Jasni Mohamad Zain**, "Using E-Portfolio to Supplement the Teaching of Mandarin as a Foreign Language" , in *Proceedings of 5th International Conference on IT in ASIA 2007 (CITA 07)*, 10-12 July 2007, Kuching, Sarawak, pp. 117-123.

55. Wan Maseri Wan Mohd, **Jasni Mohamad Zain**, Abdullah Embong, "Increase Knowledge Data Visualization and Interactivity through Interactive Web-based Dash-Board System based on Graph-based technique: A Framework of Interactive Dashboard Knowledge Visualization System for Higher Education", *2nd International Symposium on Knowledge Communication and Conferences (KCC)* in the International Conference on Knowledge Generation, Communication and Management (KGCM 2007) Orlando, USA, July 8-11, 2007

56. Wan Maseri Wan Mohd, **Jasni Mohamad Zain**, Abdullah Embong, "Parameterless K-means: Auto-generation of Initial Number of Cluster and Centroid using Distance of Data Points", *5th International Conference on Machine Learning and Data Mining (MLDM 2007)* July 18 – 20, 2007, Leipzig/Germany.

57. Tey Meng Kar, **Jasni Mohamad Zain**, Goh Ying Soon," Aesthetics of Multi Screen Interface and Its Relevance with Mandarin Learning", *3rd International Conference on Open and Online Learning (ICOOL 2007)*, 11-14 June 2007, Hotel Equatorial,

Penang, Malaysia.

58. **Jasni Mohamad Zain** and Mohd Fairuz Ramli, "The Use of E-mail and Memo: A Case Study by Gender ", (in submission) 5th International Conference on IT in ASIA 2007 (CITA 07), 10-12 July 2007, Kuching, Sarawak.
59. Mohd Fairuz Ramli and **Jasni Mohamad Zain**, " JPEG2000 For Industry's Digital Images", Computer Science and Mathematics Symposium 2006 (CSMS 2006), Kolej Universiti Sains & Teknologi Malaysia (KUSTEM), 8-9 November 2006.
60. Tey Meng Kar and **Jasni Mohamad Zain**, "Measuring Aesthetic Value of GUI Interface by Object Using Fuzzy Logic", Computer Science and Mathematics Symposium 2006 (CSMS 2006), Kolej Universiti Sains & Teknologi Malaysia (KUSTEM), 8-9 November 2006.
61. Azma Abdullah and **Jasni Mohamad Zain**, " Pendekatan Proses Perisian (Software Process) Dalam Pembangunan Kurikulum Kejuruteraan Perisian", Konvensyen Teknologi Pendidikan ke 19, Awana Porto Malai, Langkawi, Kedah, 9-10 September 2006.
62. Mazlina Abdul Majid, **Jasni Mohamad Zain** and Syahnizam Abdullah Sani, "Building Young Entrepreneurs by Integrating a Course into Undergraduate Curriculum", Konvensyen Teknologi Pendidikan ke 19, Awana Porto Malai, Langkawi, Kedah, 9-10 September 2006.
63. Noorhuzaimi@Karimah bt Mohd Noor, Mohamed Ariff Ameen, Mazlina Abdul Majid, **Jasni Mohamad Zain**, Roslina Abd Hamid, "Penggunaan Rangkaian Tanpa Wayar Dalam Proses Pembelajaran: Kajian Kes (KUKTEM E-Learning)", Konvensyen Teknologi Pendidikan ke 19, Awana Porto Malai, Langkawi, Kedah, 9-10 September 2006.
64. Noorhuzaimi@Karimah bt Mohd Noor, Suryanti Awang, Mohamed Ariff Ameen, **Jasni Mohamad Zain**, Mazlina Abdul Majid, "Kestabilan Rangkaian Komputer Dalam Proses Pembelajaran E-Learning: Kajian Kes (Kuktem E-learning)", Konvensyen Teknologi Pendidikan ke 19, Awana Porto Malai, Langkawi, Kedah, 9-10 September 2006.
65. **Jasni M Zain** and Abdul R M Fauzi, " Medical Image Watermarking With Tamper Detection and Recovery", *The 28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, New York, USA, 1-4 September 2006.
66. **Jasni M Zain**, Abdul R M Fauzi and Azian Aziz, " Clinical Evaluation on Watermarked Medical Images", *The 28th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, New York, USA, 1-4 September 2006.
67. **Jasni Mohamad Zain** and Nor Amizam Jusoh, " Fragile image watermarking for

Medical Images", (accepted) *3rd International Conference on Artificial Intelligence in Engineering and Technology*, Kota Kinabalu, Malaysia, 22-24 November 2006.

68. **Jasni Mohamad Zain** and Azma Abdullah, "Fingerprint Watermarking with Tamper Detection", (accepted) *3rd International Conference on Artificial Intelligence in Engineering and Technology*, Kota Kinabalu, Malaysia, 22-24 November 2006.
69. Wan Muhammad Syahrir Wan Hussin, Mohd Nizam Mohmad Kahar, **Jasni Mohamad Zain**, Lim Jiin Kang, "Implementing Genetic Algorithm for Scheduling Optimization in a Chess Tournament", (accepted) *3rd International Conference on Artificial Intelligence in Engineering and Technology*, Kota Kinabalu, Malaysia, 22-24 November 2006.
70. **Jasni Mohamad Zain** dan Mohd Ramiza Ramli, "Aplikasi komunikasi berasaskan web: Penggunaan dan kesan kepada hubungan dalaman dan luaran", (Best paper award) *Seminar Komunikasi Kebangsaan ke 3*, Pulau Pinang, Malaysia, 16-18 Jun 2006.
71. **J. M. Zain**, "Digital Watermarking in Medical Images", *PhD Thesis*, Brunel University, 2005.
72. **J. M. Zain** and M. Clarke, "Fragile Image Watermarking with One-to-One Block Mapping", in *MMU International Symposium on Information and Communication Technologies (M2USIC)*, Petaling Jaya, Malaysia, 24-25th November 2005.
73. **Jasni M Zain** and Malcolm Clarke, "LSB Reversible Watermarking Surviving JPEG Compression", in *The 27th Annual International Conference of the IEEE Engineering in Medicine and Biology Society*, Shanghai, China, 1-4 September 2005. **IF 0.072**
74. **Jasni M Zain** and Malcolm Clarke, "LSB Watermarking for JPEG Compression", *MRG Annual Conference 2005*, Manchester, May 2005.
75. **Jasni Zain** and Malcolm Clarke, "Issues in watermarking medical images", *PREP2005*, University of Lancaster, April 2005.
76. **Jasni Zain** and Malcolm Clarke, "Security In Telemedicine: Issues in Watermarking Medical Images", *3rd International Conference Sciences of Electronic, Technologies of Information and Telecommunications (SETIT 2005)*, Susa, Tunisia, 27-31 March 2005.
77. **Jasni Zain**, "Security in Telemedicine: Watermarking medical images", *Medical Error and Technologies Research Workshop*. London, 3 November 2004.
78. **J.M Zain**, L. P. Baldwin, M. Clarke, "Reversible watermarking for authentication of DICOM images", in *The 26th Annual International Conference of the IEEE*

Engineering in Medicine and Biology Society, San Francisco, California, 1-4 September 2004, pp. 3237-3240.

79. **J. M. Zain**, M. Clarke, L. P. Baldwin, "The effect of reversible LSB manipulation to the quality of image", in *PREP2004*, University of Hertfordshire, April 2004.
80. **J Zain** and R S H Istepanian, "Digital Watermarking in Wireless Telemedical Environment", in *Proceedings of PREP2003*, Exeter University, Exeter, April 2003.
81. **J M Zain**, "Globalization and Telecommunication Technologies", in *MRG 2nd annual Conference*, Manchester, September 2003.
82. **J M Zain**, "Threats and Challenges in Securing Telemedicine System", in *MRG 2nd annual Conference*, Manchester, September 2003.
83. **Jasni M Zain**, *Counselling in Secondary Schools in Malaysia, Masters Thesis*, University of Hull, 1998.
84. **Jasni Mohamad Zain**, "Intelligent Computer Assisted Learning for Gastrointestinal Diseases", *Final Year Project*, University of Liverpool, 1989.

Working Papers

1. Proposal for The Establishment of The Centre Of Excellence For IBM (IBM center of Excellence) in Universiti Malaysia Pahang. (2011)
2. Proposal of a new Programme Master of Science (information and communication technology). (2010)
3. Proposal of a new Programme Master of Science (Software Engineering). (2010)
4. Proposal of a new Programme Master of Science (Computer Systems and Networking). (2010)
5. Proposal of a new Programme Bachelor of computer science (Multimedia and Graphics Technology). (2008)
6. Proposal for the concept of provision of ICT services to Universiti Malaysia Pahang (ICT Council 2007).
7. Proposal for Upgrading the implementation of Smartcard System at Universiti Malaysia Pahang (ICT Council 2007).
8. Guidelines for the provision of computer facilities and ICT Equipment for common user Universiti Malaysia Pahang (ICT Council 2007).
9. Proposal for University application system development concept (ICT Council 2007).
10. Proposal for installation of network and budget for Dormitory 1 residential college of Universiti Malaysia Pahang (ICT Council 2007)

Seminars/ courses attended

1. The 2010 International Conference on Computational Science and Its Applications (ICCSA 2010), March 23-26, 2010, Kyushu Sangyo University, Fukuoka, Japan.

2. The International Conference On Software Engineering and Computer Systems (ICSECS 09), 19-21 Oct. 2009, Kuantan, Pahang, Malaysia.
3. The 2nd IEEE International Conference on Computer Science and Information Technology (IEEE ICCSIT 2009), 8-11 August 2009, Beijing, China.
4. International Conference of Education, Research and Innovation (ICERI 2008), 17-19th November 2008, Madrid, Spain.
5. The 4th International Conference on Natural Computation (ICNC'08) 18-21 October 2008, Jinan, China.
6. Menghadiri Seminar permuafakatan KPT bersama Kementerian Pelajaran Malaysia tahun 2008, 27-29 Julai 2008.
7. Menghadiri Seminar pengajian tinggi anjuran akademi kepimpinan (AKEPT), KPT, 17 Julai 2008.
8. Kursus PTK5 UKM, Residence Hotel Uniten, 10-13 Jun 2008.
9. Menghadiri persidangan 16th World Congress on Information and Technology and MSC Malaysia @ WCIT, 18-22 May 2008, KLCC.
10. Bengkel pemurnian struktur organisasi, spesifikasi tugas & strategi kompetensi dan permohonan jawatan baru tahun 2009 UMP, 14-17 May 2008, Grand Bluewave, Shah Alam.
11. Menyertai pameran ITEX 2008, 9-11 May 2008, KLCC.
12. Bengkel penggubalan kurikulum program sarjana sains strategi, 21-23 April 2008, Holiday Villa, Cherating.
13. Menghadiri 'innovation and commercialization showcase & seminar 2008' , 9-10 April 2008, UTHM, Batu Pahat.
14. Menyertai pameran di ekspo harta intelek trate 2008, 22-27 April 2008, KLCC.
15. Menghadiri 'solution envisioning workshop' anjuran MOSTI , 3-5 April 2008, Eastin hotel,PJ.
16. Bengkel penyediaan pelan strategic ICT , 25-27 Mac 2008, MS Garden Kuantan.
17. Penyertaan projek penyelidikan ke pameran Malaysia Technology Expo 2008 (MTE 2008), 20-23 February 2008, PWTC Kuala Lumpur.
18. Majlis amanat penjawat perkhidmatan awam (MAPPA) kali ke 8 , 28 Januari 2008, PICC Putrajaya.
19. Mesyuarat pelan tindakan UMP 2008-2010 , 24-27 Januari, A'Famosa resort, Melaka.
20. Malaysia-Japan International Symposium on Advanced Technology 2007 (MJISAT 2007) Seri Pacific Hotel, Kuala Lumpur, Malaysia. 12-14, November 2007.
21. 29th Annual International Conference of the IEEE Engineering in Medicine and Biology Society, Lyon, France, 23-26 August 2007.
22. Bengkel Penulisan Proposal Penyelidikan Sciencefund, Hyatt Regency Kuantan Resort, 10 Julai 2007.
23. International Conference on Electrical Engineering and Informatics (ICEEI 2007), School of Electrical Engineering and Informatics, Bandung Institute of Technology, Bandung, Indonesia, June 17-19, 2007.
24. Kursus PTK3, UKM Bangi, 22-25 May 2007.
25. Bengkel Perancangan Strategik FSKKP, UMP. 13-15 April 2007. Duta Village Resort.
26. S-Plus Training. 11-15 January 2007. KUKTEM.
27. Bengkel Penjenamaan Universiti Malaysia Pahang, 10 Januari 2007. KUKTEM.
28. IBM Rational Rose Software Training. 11-15 December 2006. KUKTEM.
29. 2nd International Conference in Postgraduate Education 2006. 27-28 November 2006. UNIMAS, Kuching, Sarawak.
30. Third International Conference on Artificial Intelligence in Engineering and Technology ICAIET 2006. 22-24 November 2006. Nexus Resort Karambunai, Kota Kinabalu, Sabah.
31. Bengkel Penulisan Jurnal Antarabangsa/Kebangsaan. 27-28 September 2006. KUKTEM.
32. Kursus Pengurusan Prestasi. 12 September 2006. KUKTEM.

33. Seminar Menangani Isu Wanita Islam (SMIWI 06). 5 Ogos 2006, Kolej Shahputra.
34. Kursus Penulisan Edisi Awal Format Ghani. 28 Jun, KUKTEM.
35. Kursus Pegawai Pengiring dan Penyambut Tetamu Dalam Majlis. 2-5 May 2006, KUKTEM.
36. National IP Day Seminar. 28 April 2006. MyIPO, KL Convention Centre.
37. MDC- The Home for Every Technopreneur Seminar. 25 Jan. 2006. MDC-TeaM, KUKTEM.
38. Using Games, Simulations and Case Studies in Higher Education. 28-29 Oct. 1997, UNIPEN, UTM.
39. Kursus Aplikasi Multimedia. 18-19 Oct. 2001, UTM.
40. Kursus Kaedah Penyelidikan. 23 April-4 May 2001, UTM.
41. Bengkel Penggunaan Alat Bantuan Mengajar. 22-23 December 1997, UTM.
42. Kursus Induksi (Umum & Khusus). 21 April-6 May 1999.
43. Ipv6 Workshop. 12 September 2001, MIMOS.
44. Pengaturcaraan JAVA & Servlet. 14-18 May 2001. UTM.
45. Kursus Pra-Perkhidmatan Dalam Bidang Pedagogi dan Metodologi Pengajaran. 13-17 October 1997.

Postgraduate Students

Supervision

Title of Project	Student	Level	Date
1. Measuring Aesthetic Value of GUI Interface by Object Using Fuzzy Logic	Tey Meng Kar	MSc	Completed May 2008
2. Two rows Car Plate Detection System	Nor Amizam Jusoh	MSc	Completed 2011
3. Knowledge Management Framework in e-Learning environment: A Case Study of a Digital Dashboard e-Learning System using Data Mining Technique to measure Student Performance in Higher Education Institution	Prof. Madya Wan Maseri Wan Mohd	PhD	Completed 2013
4. E-Care: An option for diabetes management	Abbas Saliimi Lokman	MSc	Completed 2011
5. Wood Defect detection Using Image Processing	Nik Kamariah Nik Ismail	MSc	Completed 2013
6. Smooth Support Vector Machine for Face Recognition Using Eigenfaces	Muhammad Furqan	MSc	Completed 2010
7. Contrast Optimisation By Region Adaptation	Muhammad Mahmood Ahmed	MSc	Completed 2013
8. A Bayesian Proportional Hazards Reliability Model	Santi Puteri Rahayu	PhD	Completed Viva 3/8/2012
9. Development of Smooth Support Vector Machines for Classification	Santi Wulan Purnami	PhD	Completed Viva 21/6/2011
10. Assessing the Impact of Knowledge Management System Usage on Higher Education Resources	Rahmat Widia Sembiring	PhD	Completed 2014

11. Digital Imaging Device With Watermarking	Liew Siau Chuin	PhD	Completed 2011
12. Image Watermarking Optimization Algorithms In Transform Domains and Feature Regions	Hai Tao	PhD	Completed April 2012
13. A Cryptographic Scheme with Information Hiding	Qin Hongwu	PhD	Completed 2012
14. The Development of Digital Forensic Expert Investigation	Mohammed Adam Ibrahim Fakhreldin	PhD	Completed Jan 2013
15. Robust Image Watermarking techniques Using Image Features	Khalid Hasan	PhD	Completed 2016
16. Watermarking of single and Multi Frame Ultrasound Medical Images	Gran Badshah	PhD (2 nd)	Completed 2016
17. Enhanced LSB Watermarking Methods Based on Sanning Patterns for Authentication of Medical Images	Syifak Izhar	PhD	Completed April 2016
18. A New Soft Set based Technique for Clustering Attribute Selection in Educational Data Mining	Suhrman	PhD	Completed 2016
19. Recognition of Malaysian Sign Language Using Skeleton Data with Neural Network	Sutarman	PhD (2 nd)	Completed 2016
20. A model for power efficiency of mobile devices through lightweight method level computational offloading	Mushtaq Ali	PhD	Completed 2018
21. An enhanced android botnet detection approach using feature refinement	Shahid Anwar	PhD	Completed 2019
22. Enhance key generation algorithm-based user string identity as public key.	Nur Hidayah Muhamad	MSc	Completed 2015
23. Fuzzy-based frost filter for speckle noise reduction of Synthetic Aperture Radar (SAR) image	Ardhi Wicaksono	MSc (2 nd)	Completed 2016
24. Ciphertext Policy-Attribute based scheme for cloud computing	Nur Hidayah Muhamad	PhD	Completed 2024
25. Continuous availability of data and service via middleware in health center	Mohd Hariz Bin Naim @ Mohayat	PhD	Completed (Sept 2023)
26. Monitoring of New Variants Adaptability of Covid-19 Using Patient Data	Abdul Basit	PhD	Ongoing
27. Predictive Analytics of New Variants Adaptability of Covid-19 Using Time Series Data	Hafiza Zoya Mojahid	PhD	Ongoing
28. Accurate Fraud Detection In	Sulaiman Al-Breem	PhD	Ongoing

Online Financial Transaction Using Big Data Analysis Techniques			
28. A Comprehensive Study for Exploring the Role of Artificial Intelligence in Enhancing Cyber Security and Personal Data Protection in Oman's Health Sector.	Al Hasani Yousof Saif Hamed	PhD	Ongoing
29. Application Analysis of Front-End Multi-Dimensional Data Visualization Technology in Image Processing	Cai Yanmin	PhD	Ongoing
30. Heterogeneous Couplings and Persuasive User/Item Information Model for Next Basket Recommendation Using Blockchain	Jiang Yingjie	PhD	Ongoing
31. High Availability on The Mission-Critical Application Server in University Infrastructure by Using Middleware Based On Fog Computing	Mohd Rashid Bin Abu Bakar	PhD	Ongoing

Examiner/External

Title of Project	Student	Date
1. DNA Computing Readout Method Based on In Vitro-In Silico Processing of Real-time Polymerase Chain Reaction.	Muhammad Faiz (UTM)	2009
2. Lightweight Robust Watermarking for Digital Images Using Multiple Domains	Thiba A/P Narasimha Barathevar (UM)	2010
3. Error Correction Codes on Iris Biometric Template	Sim Hiew Moi (UTM)	2010
4. Network Intrusion Preventing System Using Network Intrusion Detection System Decision Tree Data Mining	Syurahbil (UMP)	2010
5. An Enhanced SVD Based Watermarking	Iman Omidvar Tehrani (UTM)	2010
6. Robust Database Watermarking Technique Over Numerical Data Using Image	Hossein Moradian Sardroudj (UTM)	2010
7. Adaptive Image Steganography Based on Optimal Embedding	Omid Zanganeh (UTM)	2010
8. Ellipse-Based Iris Image Segmentation	Aziah Bt Abdollah (UTM)	2011
9. Storytelling Approach For	Hamizah Mohamad Hariri	2011

Blocks Integration Tools	(UKM)	
10. Shadow Detection Using Color and Edge Information for Colorless and Edgeless Images	Maryam Golchin (UPM)	2012
11. Recursive Embedding Technique using DWT for Lossless Watermark	Nurul Badriah Abu Bakar (UTM)	2012
12. Reflection Removal and Feature Extraction Techniques in Non-Cooperative Visible Eye Images for Iris Recognition	Anis Farihan Mat Raffei (UTM)	2013
13. An Efficient Texture Classification Based On Pattern Trends Using Fuzzy Logic, Local Edge And Textile Unit	Uppu Ravi Babu (Acharya Nagarjuna University, INDIA)	2013
14. A New Blind Color Image Watermarking Technique in Hybrid Domain Using LSB Insertion and Discrete Slantlet Transform	Harith Raad Hasan(UTM)	2013
15. Error Correction code and Weighted Matching Score Level Fusion for Multimodal Iris and Face Biometric	Sim Hiew Moi (UTM)	2014
16. Secure Audio Steganography Technique Using Scrambling and Message Integrity Methods	Mohammed Salem Mohammed Atoum	2014
17. 3D Shape Descriptors For Activities Of daily Living Interpretation Based on Kinect-Like Depth Image	Muhammad Amir Bin As'ari	2014
18. A New Blind Color Image Watermarking Technique in Hybrid Domain Using Slantlet Transform	Harith Raad Hasan	2014
19. Enhancement and Segmentation for Detection of Breast Cancer in Mammogram	Muhammad Talha Naseem Uppal (UTM)	2014
20. Enhancing Robustness of Digital Signature with Reduced Bandwidth for Authentication Purpose Using Image Steganography	Erfaneh Noroozi (AIS)	2014
21. Effective Image Tampering Detection and Self Recovery Algorithm Using Active Watermarking	Sajjad Dadkhah (AIS)	2014
22. Watermarking	Nur Hafizah Ghazali (UTM)	2015
23. Automatic Ear and Classification	Ifeanyi Nikole Ugbaga (UTM)	2015

Identification Scheme Using Geometric Features and K-Nearest Neighbour Classifier		
24. Enhanced SFCM Based Medical Image Segmentation Algorithm	Iman Omidvar Tehrani (UTM)	2015
25. Reduction The Effects of Noise in the Iris Pattern Recognition System	Arezou Banitalebi Dehkordi (UTM)	2015
26. Image Processing	Einas AIMArghini (UTHM)	2015
27. Social Engineering Attack Detection Framework: Focusing SMS Spam and Phishing	Cik Feresa Mohd Foozy	2015
28. Particle-based methods for dynamic object tracking in a large view environment	Zalili Musa (UMP)	2016
29. Competent decision Making through hybrid reduction for binary based information system in soft set theory	Ahmad Nazari Mohd Rose (UTHM)	2016
30. Chaos-based Encryption Scheme for scalable video coding	Rashidah Kadir (UTM)	2016
31. A Robust Digital Image Watermarking Scheme Using Hybrid DWT-SVD Technique	Tanya Koohpayeh Araghi	2016
32. Shoreline changes Framework By Utilising Multispectral Images and Supervised Machine Learning Filtering	Farizuwana Akma Zulkifle	2016
33. Enhancing Fragility of Zero Text Watermarking By using Effective Character List	Morteza Bashardoost	2017
34. Enhanced Block-based Copy-Move Image Forgery Detection Using Clustering Technique	Osamah Mohammed Abdo AlQershi	2017
35. Robust Combination of Iris and Periocular Recognitions for Non-Cooperative Visible Eye Images	Anis Farihan Mat Raffei	2017
36. A New Hybrid Method For Image Cryptography Based on Novel Scrambling and New Bit-Plane Replacement	Omar Farook Mohammad	2018
37. A New Structured Knight Tour Algorithm by Four Knights with Heuristic Preset Rules	Tan Chee Wee	2018

38. Automatic White Matter Lesions Segmentation and False Positive Elimination on Brain MR Images	Ong Kok Haur	2019
39. Colour Constancy Feature Detection And Matching Technique For Wireless Lan/Camera Indoor Positioning Systems	Wan Mohd Ya'akob Wan Bejuri	2019
40. Iris Partial recognition based on two dimensional (2D) Legendre wavelet filter for feature extraction	Danlami Muktar (UTHM)	2019
41. An Improved Contractive auto encoder based on restricted Boltzmann machine for solving Multiclass classification problems	Muhammad Aamir (UTHM)	2019
42. Streamlines Seed point Selection and Enhancement for Unsteady Flow Visualization	Yusman Azimi Yusoff	2019
43. A New Combined Technique for Brain Edema Segmentation of Medical magnetic resonance Images.	Ahmed Saifullah Sami (UTM)	2020
44. An Improved Framework for Content and Link-Based Spamdexing Detection: A Combined Approach	Asim Shahzad	2020
45. An Enhanced Gated Recurrent Unit with Auto Encoder for Solving Text Classification Problems	Muhammad Zulqarnain	2020
46. Skin Lesion Fused Saliency Map segmentation Method and Classification Using Fused Pigmented Deep Features from Dermoscopic Images	Rabia Javed (UTM)	2020
47. Package Metrics for Improving Software Development (PM-ISD) Reliability Assessment of Safety Critical Systems	Abdulaziz Ahmed Thawaba (UTHM)	2020
48. Finger Vein Biometric Identification	Yuhanim Hani	2021
49. An Improved Clustering Method for Segmentation of Multidimensional Magnetic Resonance Imaging (MRI)	Soobia Saeed	2021
50. An Ontological framework for Information Extraction	Gohar Zaman	2021

from Diverse Scientific Sources		
51. Metaheuristic Prediction Model Based on Random Forest in Deriving Pterygium Eye Redness Grade	Mohd Ridhwan Hilmi Mohd Adnan (UTM)	2023
52. A Data Harmonization Framework for Heterogeneous Textual Datasets Using Token Summarization Method	Ganesh Kumar (UTP)	2023
53. Image-to-image Translation Using Generative Adversarial Network for Image super Resolution	Saleh Hashim Saleh Al Takrouri (UTM)	2023
54. Improving Fraud Detection Process with Accounting Data Cleaning Model For Fraud Detection by Accounting Auditor	Mohamad Affendi Bin Abdul Malek (UiTM)	2024
55. Noisy Iris Recognition System Using Modified Circular Hough Transform (MCHT) and Enhanced Darknet19	Suzwani Ismail (UiTM)	2024
56. Novel Differential Evolution for Feature Selection in Anomaly-based Intrusion Detection System	Aqeel Taha Saadon (UTM)	2024
57. Enhance Tiny Crack Feature Extraction Method for Structural Health Monitoring of Concrete Structure	Devi Willieam Anggara (UTM)	2024
58. Enhanced Features Selection and Cluster Based Classification for Detecting Zero-Day Attacks In Heterogeneous Internet of Things Networks	Naveed Ahmed (UTM)	2024

Involvement in Professional Organisations and Community Services

1. Senior Member of the IEEE.
2. Member of Engineering in Medicine and Biomedical Society.
3. Member of IEEE Women in Engineering.
4. Member of ACM.
5. Member of International Association of Computer Science and Information Technology (IACSIT).
6. Member of Digital Watermarking Web Community.
7. Member of Sukarelawan Hospital Sultanah Aminah, Johor Bharu (1998-1999)
8. Past Vice President of Muslim Representative Council (Women Section) in UK and Eire (2002-2004).
9. Member of Ikram

10. MC for Seminar Menangani Isu Wanita Islam (SMIWI 06) organized by Kementerian Pembangunan Wanita, Keluarga dan Masyarakat and JIM.

Awards

1. Anugerah Perkhidmatan Cemerlang (APC) 2022, UiTM.
2. Special Award "The Best Invention of the Pacific Rim", INPEX 2013, Pittsburgh USA, June 2013.
3. Gold Medal Award at MTE 2013 for 'Automated Wood Species Recognition for Malaysian Wood', PWTC, 21-23 Feb 2013.
4. Recipient for Anugerah Perkhidmatan Cemerlang (APC) 2009, UMP.
5. Bronze Medal Award at ITEX 2009 for 'Student Evaluation System', KLCC, 15-17 May 2009.
6. Bronze Medal Award at ITEX 2009 for 'Visitor Information Management System', KLCC, 15-17 May 2009.
7. Gold Medal Award at ITEX 2008 for 'E-care: an option for diabetes management', KLCC, 9-11 May 2008.
8. Silver Medal Award at ITEX 2008 for 'Knowledge Management System Framework For Higher Education Institution: A Case Study of a Digital Dashboard System Using Data Clustering Technique To Measure Student Performance in Higher Education', KLCC, 9-11 May 2008.
9. Gold medal award at MTE 2008 for 'Knowledge Management System Framework For Higher Education Institution: A Case Study of a Digital Dashboard System Using Data Clustering Technique To Measure Student Performance in Higher Education', PWTC, 21-23 February 2008.
10. Bronze medal award at MTE 2008 for 'Measuring Aesthetics of Webpage', PWTC, 21-23 February 2008.
11. Bronze Medal award at Anugerah Projek Penyelidikan Terbaik sempena Hari Kualiti dan Majlis Penyampaian Anugerah UMP, 2007.
12. Pemenang ketiga Anugerah Poster Kualiti Kategori Individu sempena Hari Kualiti dan Majlis Penyampaian Anugerah UMP, 2007.
13. Silver medal award at IENA 2007 for 'Digital Watermarking with Tamper Detection and Recovery', 1-4 November 2007, Nuremberg, Germany.
14. Gold medal award at ITEX 2007 for 'Authentication Watermarking with Tamper Detection and Recovery', 17-21 May 2007. KLCC.
15. Bronze medal award at ITEX 2007 for 'Students Exam Verification System', 17-21 May 2007.
16. Silver medal award at Malaysian Technology Expo 2007 (MTE 2007) for 'Authentication Watermarking with Tamper Detection and Recovery', 29-21 March 2007.
17. Best paper award "Aplikasi komunikasi berasaskan web: Penggunaan dan kesan kepada hubungan dalaman dan luaran", *Seminar Komunikasi Kebangsaan ke 3*, Pulau Pinang, Malaysia, 16-18 Jun 2006.
18. Anugerah Projek Penyelidikan Terbaik 2006, Tempat Pertama, "Fingerprint Watermarking with Tamper Detection, Hari Kualiti 2006, KUKTEM .

Intellectual Property

1. Patent filing PI20080477: Authentication Watermarking with Tamper Detection and Recovery
2. Copyright for invention: MALAYSIA WOOD IDENTIFICATION SYSTEM

Current Research Interest

1. Head of Project "**Monitoring and Maintenance of 100 Fish Pond Online System using IoT (Web and mobile app)**", 2021-2023, RM934,500
2. Member of Project "(Ref: RACER/1/2019/ICT04/UMP//2)
A New Embedding Algorithm using Hilbert-Peano Pattern in Enhancing Authentication Systems for Textual Documents", 2019-2021, RM48,200
3. Member of Project "A New Neural Network Model for Small Datasets Chatbot Framework based on Thought Vector Keywords Matching", FRGS 2018-1 (Ref: FRGS/1/2018/ICT02/UMP/02/12), 2019-2021, RM80,200.
4. Member of Project "A New Embedding Technique based on Psychovisual Threshold for Robust and Secure Compressed Video Steganography", FRGS 2018-1 (Ref: FRGS/1/2018/ICT04/UMP/02/2) , 2019-2021, RM59,950.
5. Member of Project "A robust geometrical invariant Fourier transform of Image Analysis", FRGS 2017-1, 15 Aug 2017- 14 Aug 2019, RM52,500.
6. Member of project "An Artificial Intelligence Based Efficient Recommender System For Academic Literature", RDU1703100, 15 May 2017- 14 May 2019. RM25,000.
7. Member of Project "Multiple Optical Character Recognition of Jawi script by generalized maximum entropy", RDU1603102, 29 Jun 2016- 28 Jun 2018, RM 21,250.
8. Member of Project "Development of privacy and security protection protocol for wireless medical devices", RDU1603105, 29 Jun 2016- 28 Jun 2018, RM21,250.
9. Member of Project "A New Design of an Artifact-Attribute Social Research Networking Eco-system for Malaysian Greater Research Network", MyGRANTS, RDU120702. RM 3,000,000.
10. Head of Project "Malaysian Timber Species Retrieval and Similar Matching", UMP, RDU120387, 1 Okt 2012 – 30 Sep 2014. RM20,000.
11. Member of Project "Ensemble Mobile Platform and Security Tools for Innovation Digital Economy Environment", LRGS, RDU110901, 27 Dis 2011-26 Dis 2014, RM192,480.
12. Head of Project "Development of a Bahasa Malaysia Chatbot for Diabetes Management Activities", Geran Penyelidikan UMP, RDU100360, 1 Aug 2010 – 31 Julai 2011. RM11,200.
13. Head of project " Storing and Querying XML Documents in RDB Using Xparent Model Mapping Schema", GRS 090325, 1 Julai 2010-30 Jun 2013. RM 16,500.
14. Head of Project "A Study on Wood Species Recognition for Malaysian Timber", Geran Penyelidikan UMP, RDU100346, 1 Julai 2010- 20 Jun 2011. RM31,000.
15. Member of Project "Design an Agent Algorithm to Find the Optimum Population and Generation Size in Genetic Algorithm (Gas), FRGS, RDU100103, 1 April 2010 – 31 Mac 2012. RM 32,000.
16. Head of Project " E-Care: An Option for Diabetes Management", GRS070166, 29 Feb. 2008-31 Ogos 2009. RM28,100.
17. Member of Project "A Study on digital Image Processing for Machine Vision Inspection System", RDU100329, 1 Mei 2010-30 April 2011.
18. Head of Project "Foreground Objects Detection in Image Sequences Based on Scene Understanding", GRS 100323, 15 April 2010-14 Mei 2011. RM16,500.
19. Head of Project "A Robust Digital Image Watermarking Based on Intelligent Optimization Algorithms", GRS100324, 15 April 2010-14 Mei 2011. RM16,500.
20. Member of Project "Data Analysis for Tsunami Formation", RDU 100302, 1 Jan 2010-1 Jan 2012.
21. Head of Project " Kernel Logistic Regression-Least Square Support Vector Machine for Credit Risk Classification in Data Mining", RDU090399, 1 Mei 2009-30 April 2010, RM29,000.
22. Head of Project "Enhancement of Car Plate Entering System: Case Study of

- Two rows car plate", GRS070135, 16 Nov 2007-15 Nov 2008. RM28,100.
23. Member of Project "Geographical Information Retrieval for Asset Location Detection Using Web-based Interactive Map", RDU 07/03/64, 3 September 2007- 2 Ogos 2008. RM20,000.
 24. Head of Project " Pengukuran Estetik Antaramuka Pengguna Bergrafik Berasaskan Objek dan Warna Dengan Menggunakan Objek Kabur", GRS070114, 1 April 2007- 30 Jun 2008. RM18,733.
 25. Head Of Project " Digital Watermarking in Chemical Structure", GRS070115, 1 April 2007- 31 Dis 2008. RM 28,100.
 26. Head of Project "Gaharu Grade Classification Using Image Processing Technique", RDU 07/03/12, Geran Penyelidikan UMP, 1 April 2007 – 31 Mar 2008. RM50,000.
 27. Head of Project "Fingerprint for Password Security", RDU 04/1/18, Oct 2006.

Referees

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