



CURRICULUM VITAE

Assoc. Prof. Ts. Dr. Nur Izura Udzir



PERSONAL DETAILS

- Work Address : Department of Computer Science,
Faculty of Computer Science and Information Technology,
Universiti Putra Malaysia, 43400 UPM Serdang, Selangor,
Malaysia
- Contact numbers : (O) +603-97691156 / 1708 / 1747 (M) +6019-6410966
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- Emails : izura@upm.edu.my
- Specialization : Intrusion detection systems, Access control, Computer security,
Coordination in distributed systems
- Academic Qualifications : PhD in Computer Science, University of York, UK, 2006
Master of Science (Comp. Sc.), Universiti Putra Malaysia, 1998
Bac. of Computer Science, Universiti Pertanian Malaysia, 1995
- H-index : 12 (Scopus) / 17 (Google Scholar)
- No. years of service at UPM : 21 years

Professional Qualifications/Certifications and Membership

1. Member, IEEE Computer Society
2. Committee Member, Information Security Professionals Association of Malaysia (ISPA.my)
3. Member, Malaysian Board of Technologists (MBOT) (No.: GT18051611) – since April 2018
4. Member, Malaysian Society for Cryptology Research (MSCR)
5. Member, The Society of Digital Information and Wireless Communications (SDIWC)
6. CompTIA A+ Certified Professional IT Technician, 17 Dec 2007, CompTIA
7. Microsoft Gold Certified: Microsoft Windows Server 2008, 24 Dec 2008, Microsoft Corporation

ADMINISTRATIVE RESPONSIBILITIES

1. Deputy Director, Co-curriculum and Student Development Center, UPM (2 Jan 2018 – 31 Dec 2020)
2. Head, Department of Computer Science, FSKTM (Dec 2013-Nov 2016)
3. Head, Information Security Group (2008-2013)
4. Coordinator, External Programs Unit, FSKTM (Jan 2017 - Dec 2018). UPM Holdings, UPM Education & Training Sdn Bhd.
5. Programme Coordinator, Master of Computer Science, FSKTM (Jan 2012- Nov 2013)

TEACHING

Postgraduate level courses:

1. Information Security Management
2. Research Methods in Computer Science
3. Intrusion Detection System
4. Selected Topics in Distributed Computing
5. Advanced Programming Languages
6. Database Technology
7. Object Oriented Programming (C++)

Undergraduate level courses:

1. Operating System (since 2007 to date)
2. Computer Programming (Java)
3. Computer Programming (C++)
4. Data Structure (1998, 2007)
5. Special Topics in Computer Science
6. Fortran Programming

EXPERIENCE IN ASSESSING ACADEMIC PROGRAMMES

No	Year	Programme Name	Type of appointment	Institution/Agency
1.	2019-2021	Bachelor of Information Technology (Cyber Security)	Academic Advisor	New Era University College
2.	2019	Diploma of Computer Science (Internet Computing)	External Assessor	Universiti Pendidikan Sultan Idris
3.	2018-2020	Diploma of Computer Science	External Assessor	Kolej Poly-Tech MARA Sdn. Bhd.
4.	2017-2018	Bachelor of Education (Information Technology) with Honours	External Assessor for full accreditation of program	Universiti Pendidikan Sultan Idris
5.	2016	Executive Diploma of Information Technology	External Assessor for full accreditation of program	Universiti Malaya
6.	2015	1. Master of Data Science 2. Master of Information Technology Management	Subject Matter Expert, Program Study Committee for new programs	Universiti Malaya
7.	2017	Master of Cyber Security and Management	Subject Matter Expert for new program	National Defence University of Malaysia (UPNM)

Experiences in **academic assessment/curriculum development**:

1. Subject Matter Expert, Program Study Committee, for program Bachelor of Computer Science, Faculty of Computer Science and Information Technology, Universiti Putra Malaysia (2012-2016)
2. Subject Matter Expert, for new program Master of Information Security, Faculty of Computer Science and Information Technology, Universiti Putra Malaysia (2012-2016)
3. Subject Matter Expert, for new program Master of Digital Forensic, Faculty of Computer Science and Information Technology, Universiti Putra Malaysia (2013-2015)
4. Subject Matter Expert, for revision of program Master of Computer Science, Faculty of Computer Science and Information Technology, Universiti Putra Malaysia (2014-2018)
5. Curriculum Review Committee, Department of Computer Science, FSKTM (2006/2007).
6. Internal Auditor MS ISO 9001:2000 FSKTM (2008-2013)
7. External Assessor Panel for Exam Items for Diploma of Information Security at **Politeknik Ungku Omar**, Perak (2014-2015) – moderate exam question papers.
8. External Moderator, for **SEGi College** Subang Jaya (2014-2015) – moderate exam question papers.

RESEARCH PROJECTS

Project Status	As Project Leader	As Co-Researcher	Collaborations with Other Institutions
Completed	6	11	5
Ongoing	0	1	1

As Project Leader:

1. A Hybrid Multibiometric Continuous Authentication Framework Based on Shielding Functions and Non-Invertible Transformation, FRGS (08-01-15-1721FR), RM 71,000, Nov 2015 – Oct 2017, Completed
2. Intrusion Detection with Hybrid Learning Algorithm, RUGS, RM 39,000, Nov 2012 – Oct 2014, Completed
3. A Linear-Temporal Formal Language for Context-Sensitive Usage Control Policies, FRGS (02-12-10-1005FR), RM 42,500, March 2011 - Aug 2012, Completed
4. User-centered Privacy Model Based on Mobile Trusted Module (MTM) in Pervasive Computing Systems, FRGS, RM50,000, Sept 2009 - Feb 2011, Completed

5. Refining Garbage Collection in Open Distributed Systems, Science Fund, RM 120,000, Dec 2007 – May 2009, Completed
6. Effectiveness of CBIS Combination Model, UPM Short Term Grant, RM10,000, June 2000 – May 2001, Completed

Collaborations with Other Institutions - as Co-Researcher

1. An Algorithm to Identify Purpose for Personal Data in Big Data Analytics using Correlation Approach (UM), FRGS
2. Identification of True Identity of Online Users based on Human Intrinsic Characteristics for Cyber Crime Investigation, Shukor Bin Abd Razak (UTM), FRGS
3. Identity Disintegration Mechanism For Cardiothoracic Information Privacy, UTM-RUGS
4. New Fragmented Image File Identification and Recovery Mechanisms Using Error Level Analysis and Data Compression Features for Digital Forensic Investigation (UTM), FRGS
5. A Prototype Development of a Micro Cryptographic Engine in Resource-Constrained Devices (UNITEN), PRGS

* FRGS – Fundamental Research Grant Scheme (MOHE)
RUGS – Research University Grant Scheme

POSTGRADUATE SUPERVISIONS

Number of postgraduate students supervised:

Program	Status	As a Chairman (Main Supervisor)	As a Member (Co-Supervisor)
PhD	Graduated	7	23
	Ongoing	8	18
Masters (by research)	Graduated	2	11
	Ongoing	0	0
Masters (by coursework)	Graduated	20	N/A
	Ongoing	2	N/A

POSTGRADUATE THESES EXAMINATIONS

Role	Internal	External
Examiner for PhD theses (international/oversea universities)	N/A	3
Examiner for PhD theses	17	13
Examiner for Master theses	10	11
Chairman of Thesis Examination Committee (Viva Voce)	16	N/A

PUBLICATIONS

Publication	Quantity
Books	3
Chapters in Book	13
Journals	107
<i>ISI-Indexed Journal</i>	(14)
<i>Citation Indexed Journal (Scopus)</i>	(56)
<i>Journal Indexed by Other Bodies</i>	(26)
<i>Non-Citation Indexed Journal</i>	(11)
International Conference Proceedings	105
<i>Cited Proceedings (in Scopus)</i>	(60)
<i>International Conference Proceedings</i>	(45)
Other publications	5

SELECTED PUBLICATIONS

Books

1. Khaleel Ahmad, **Nur Izura Udzir**, Ganesh Deka (eds.). 2019. *Opportunistic Networks: Mobility Models, Protocols, Security, and Privacy*, Oxford: Chapman and Hall/CRC. 376 pages.
2. Rusli Abdullah and **Nur Izura Udzir** (eds), 2015. *The Instructor's Manual for Case Study Development and Its Application: A Case of Computer Science Application*, UPM Press. ISBN 978-967-344-481-6.
3. **Nur Izura Udzir**, Razali Yaakob, Mohamed Nordin Zakaria. 2002. *C++: Pengenalan kepada Pengaturcaraan (C++: Introduction to Programming)*, Selangor, Malaysia: Prentice Hall. ISBN 983-9236-81-4.

Chapters in Book

1. Abayomi Jegede, **Nur Izura Udzir**, Azizol Abdullah and Ramlan Mahmod. 2017. A Secure and Privacy Preserving Iris Biometric Authentication Scheme with Matrix Transformation. In: Choi D., Guilley S. (eds) *Information Security Applications. WISA 2016. Lecture Notes in Computer Science*, vol 10144, pp. 341-352. Springer, Cham. ISSN: 0302-9743. DOI: 10.1007/978-3-319-56549-1_29 (Scopus)
2. Mohd Rafiz Salji, **Nur Izura Udzir**, Mohd Izuan Hafez Ninggal, Nor Fazlida Mohd. Sani, Hamidah Ibrahim. 2016. Performance-Aware Trust-Based Access Control for Protecting Sensitive Attributes, in *Recent Advances on Soft Computing and Data Mining, Advances in Intelligent Systems and Computing*, Volume 549 of the series *Advances in Intelligent Systems and Computing*, pp. 560-569, Springer Nature, ISSN: 2194-5357. DOI: https://doi.org/10.1007/978-3-319-51281-5_56 (Scopus).
3. Ahmad Riza'ain Yusof, **Nur Izura Udzir**, Ali Selamat. 2016. An Evaluation on KNN-SVM Algorithm for Detection and Prediction of DDoS Attack, in *Trends in Applied Knowledge-Based Systems and Data Science, Lecture Notes in Computer Science*, vol. 9799, pp.95-102. DOI: 10.1007/978-3-319-42007-3_9, Springer Nature
4. Ali Dehghantanha, **Nur Izura Udzir**, Ramlan Mahmod, 2011. Evaluating User-centered Privacy Model (UPM) in Pervasive Computing Systems, in *Lecture Notes in Computer Science (LNCS)*, vol. 6694, pp. 272-284, DOI: 10.1007/978-3-642-21323-6_35.

... and more.

ISI-Indexed Journals

1. Ali A. Alwan, Hamidah Ibrahim, **Nur Izura Udzir**, and Fatimah Sidi. 2018. Missing Values Estimation for Skylines in Incomplete Database, *International Arab Journal of Information Technology (IAJIT)*, Zarqa University, Vol.15, No. 1, January 2018, pages 66-75 [ISI Q4 Impact factor 0.519].
2. Asif Iqbal Hajamydeen and **Nur Izura Udzir**. 2016. A Refined Filter for UHAD to Improve Anomaly Detection, *Security and Communication Networks*, John Wiley & Sons, 9(14), 2434 – 2447, DOI: 10.1002/sec.1514. ISSN 1939-0122. (Q4, ISI Impact Factor 2015: 0.806).
3. Ali Alwan, Hamidah Ibrahim, **Nur Izura Udzir**, Fatimah Sidi. 2016. Processing Skyline Queries in Incomplete Distributed Databases, *Journal of Intelligent Information Systems*, Volume 48, Issue 2, 1 April 2017, pp. 399-420, Springer. ISSN: 0925-9902. DOI 10.1007/s10844-016-0419-2 (Q3, ISI Impact Factor 1.00)
4. Asif Iqbal Hajamydeen, **Nur Izura Udzir**, Ramlan Mahmod and Abdul Azim Abdul Ghani. 2016. An unsupervised heterogeneous log-based framework for anomaly detection, *Turkish Journal of Electrical Engineering & Computer Sciences*, vol. 24, pp. 1117-1134. ISSN 1300-0632. (Q4, ISI Impact Factor: 0.644)
5. **Nur Izura Udzir**, Alan M. Wood dan Jeremy L. Jacob. 2007. Coordination with Multicapabilities, in *Science of Computer Programming: Special Issue on Coordination Models and Languages*, vol. 64(2), Jan 2007, pp. 205-222, ISSN: 01676423, DOI: 10.1016/j.scico.2006.06.005, Elsevier. (ISI Impact factor: 0.7)

6. **Nur Izura Udzir**, Alan M. Wood dan Jeremy L. Jacob. 2005. Coordination with Multicapabilities, in Lecture Notes in Computer Science, vol. 3454, pp. 79-93. Springer. (Q4 ISI Impact factor: 0.402)

... and more.

Citation-Indexed Journals (Scopus)

1. Asif Iqbal Hajamydeen and **Nur Izura Udzir**. 2019. A Detailed Description on Unsupervised Heterogeneous Anomaly Based Intrusion Detection Framework, in Scalable Computing: Practice and Experience, Vol. 20, No. 1, pp. 113-160. DOI 10.12694/scpe.v20i1.1465, ISSN 1895-1767. (Scopus)
2. Abayomi Jegede, **Nur Izura Udzir**, Azizol Abdullah and Ramlan Mahmod. 2018. Revocable and Non-Invertible Multibiometric Template Protection Based on Matrix Transformation, *Pertanika Journal of Science and Technology*, 26 (1): 133-160 (2018) ISSN: 0128-7680 (Scopus)
3. Mohd Rafiz Salji, **Nur Izura Udzir**, Mohd Izuan Hafez Ninggal, Nor Fazlida Mohd and Sani Hamidah Ibrahim, 2018. Performance and Divisional Trust and Purpose-Based Access Control for Privacy Preservation, *Journal of Engineering and Applied Sciences*, 13: 7032-7038. (Scopus)
4. Yousef Bakhdlaghi, **Nur Izura Udzir**, Azizol Abdullah and Nor Fazlida Mohd Sani. 2018. A Super-Peer Approach for Scalable Collaborative Intrusion Detection Network (CIDN), *International Journal of Engineering and Technology*, 7 (4.31) (2018): 352-356. ISSN 2227-524X. (Scopus)
5. Murizah Kassim, Maznifah Mohd Sahalan, **Nur Izura Udzir**. 2018. Framework Architecture on High Data Availability Server Virtualization for Disaster Recovery, *Journal of Telecommunication, Electronic and Computer Engineering (JTEC)*, Vol. 10 No. 1-5, pp. 163-169. ISSN: 2180-1843, e-ISSN: 2289-8131. (Scopus)
6. Khaleel Ahmad, Md. Shoaib Alam, **Nur Izura Udzir**. 2018. Security of NoSQL Database Against Intruders, in *Recent Patents on Engineering*, 12:1, 12 July 2018. ISSN 1872-2121, DOI: 10.2174/1872212112666180731114714. (Scopus)
7. Maryam Shahpasand, Ramlan Mahmod, **Nur Izura Udzir**. 2018. Voice over IP on Windows IoT core, *International Journal of Internet Technology and Secured Transactions*, 8(3): 412-432. ISSN: 1748569X, DOI: 10.1504/IJITST.2018.093665. (Scopus)
8. Abayomi Jegede, **Nur Izura Udzir**, Azizol Abdullah and Ramlan Mahmod. 2017. Modified Shielding Function for Multibiometric Authentication and Template Protection, *ESTEEM Academic Journal* 13, 118-128. ISSN 1675-7939. (EBSCO)
9. Sitti Syarah Maharani, Razali Yaakob, **Nur Izura Udzir**. 2017. A framework for university entry selection using neural network, *Advanced Science Letters*, Volume 23, Issue 5, May 2017, Pages 4158-4161, ISSN: 1936-6612, DOI: 10.1166/asl.2017.8314 (Scopus)
10. Hamidah Ibrahim, Waheed Yasin, **Nur Izura Udzir**, and Nor Asila Wati Abdul Hamid. 2016. Intelligent cooperative web caching policies for media objects based on J48 decision tree and Naïve Bayes supervised machine learning algorithms in structured peer-to-peer systems, *Journal of Information and Communication Technology*, Volume 15, Issue 2, 2016, Pages 85-116. ISSN: 1675-414X (Scopus)
11. Abayomi Jegede, **Nur Izura Udzir**, Azizol Abdullah and Ramlan Mahmod. 2017. State of the Art in Biometric Key Binding and Key Generation Schemes, *International Journal of Communication Networks and Information Security (IJCNIS)*, Vol. 9, No. 3, pp. 333-344 December 2017. ISSN: 2076-0930 (Scopus)
12. Norjihani Abdul Ghani, Suraya Hamid, **Nur Izura Udzir**. 2016. Big Data and Data Protection: Issues with Purpose Limitation Principle, *International Journal of Advances in Soft Computing and Its Application (IJASCA)*, Special Issue, vol. 8, no. 3, pp. 116-121. December 2016. ISSN 2074-8523 (Scopus)
13. Mohd Rafiz Salji, **Nur Izura Udzir**, Mohd Izuan Hafez Ninggal, Nor Fazlida Mohd. Sani, Hamidah Ibrahim. 2016. Role Performance Trust-Based Access Control for Protecting Sensitive Attributes, *International Journal of Security and Its Applications (IJSIA)*, vol. 10, no. 12,(2016), pp. 153-172. ISSN: 1738-9976 (Scopus Q3)
14. Mohd Rafiz Salji, **Nur Izura Udzir**, Nor Fazlida Mohd Sani and Hamidah Ibrahim. 2016. Performance and Divisional Trust and Purpose-Based Access Control for Privacy Preservation. 2016. *Advanced Science Letters*, ISSN: 1936-6612 (Scopus).

15. Mohd Rafiz Salji, **Nur Izura Udzir**, Nor Fazlida Mohd Sani and Hamidah Ibrahim. 2016. Divisional Purpose-Based Access Control for Privacy Protection, *Advanced Science Letters*, ISSN: 1936-6612 (Scopus).
16. Abayomi Jegede, **Nur Izura Udzir**, Azizol Abdullah and Ramlan Mahmod. 2015. Face Recognition and Template Protection with Shielding Function, *International Journal of Security and Its Applications*, ISSN: 1738-9976.
17. Reza Adinehnia, **Nur Izura Udzir**, Lilly Suriani Affendey, Iskandar Ishak and Zurina Mohd. Hanapi. 2015. User-independent and Self-optimizing Intrusion Detection Framework for Large Database Systems, *WSEAS Transactions on Information Science and Applications* (indexed in Scopus), ISSN: 1790-0832, Volume 12, 2015, Art. #26, pp. 194-201.
18. Nur Hafiza Zakaria, Ramlan Mahmod, **Nur Izura Udzir**, Zuriati Ahmad Zukarnain. 2015. Enhancing Advanced Encryption Standard (AES) S-Box Generation using Affine Transformation, *Journal of Theoretical and Applied Information Technology (JATIT)*, Vol.72 No.1, pp. 18-22, ISSN: 1992-8645.
19. Waleed Halboob, Ramlan Mahmod, **Nur Izura Udzir**, Mohd Taufik Abdullah. 2015. Privacy Policies for Computer Forensics, *Computer Fraud & Security*, 2015(8):9-13, (Scopus), Elsevier.
20. Waleed Halboob, Ramlan Mahmod, **Nur Izura Udzir**, Mohd Taufik Abdullah, Ali Deghantanha. 2015. Current Trends and Future Directions of Privacy Preservation in Computer Forensics. *Computer Law and Security Review (CLSR)*. ISSN: 0267-3649.
21. Waleed Halboob, Khaled S. Alghathbar, Ramlan Mahmod, **Nur Izura Udzir**, Mohd. Taufik Abdullah and Ali Deghantanha, 2014. An Efficient Computer Forensics Selective Imaging Model. *Lecture Notes in Electrical Engineering, Future Information Technology*, vol. 276, pp. 277-284.
22. Waleed Halboob, Ramlan Mahmod, **Nur Izura Udzir**, Mohd. Taufik Abdullah and Ali Deghantanha, 2014. An Ordered Selective Imaging and Distributed Analysis Computer Forensics Model. *Journal of Applied Sciences*, 14: 2704-2712. ISSN 1812-5654.
23. Nur Alifah Roslan, Ramlan Mahmod, **Nur Izura Udzir**, Zuriati Ahmad Zukarnain. 2014. Primitive Structural Method for High Capacity Text Steganography, *Journal of Theoretical and Applied Information Technology*, vol 66. Pp. 373-383. ISSN: 1992-8645. Scopus.
24. Anahita Farjamfar, Mohd Taufik Abdullah, Ramlan Mahmod, **Nur Izura Udzir**. 2014. A Review on Mobile Device's Digital Forensic Process Models, *Research Journal of Applied Sciences, Engineering and Technology*, vol. 8, no. 3, pp. 358-366. Scopus.
25. Waheed Yasin, Hamidah Ibrahim, **Nur Izura Udzir**, and Nor Asilah Wati Abdul Hamid. (2014). Cooperative Web Proxy for Media Objects Based on Peer-to-Peer Systems, *Int. J. of Innovative Computing, Information and Control*, vol. 11, no. 2, April 2015. ISSN 1349-4198
26. Waheed Yasin, Hamidah Ibrahim, **Nur Izura Udzir**, and Nor Asilah Wati Abdul Hamid. (2014). Intelligent Cooperative Web Caching policies for Media Objects based on Supervised Machine Learning Algorithms, *Journal of Information and Communication Technology (JICT)*
27. Norazah Abd Aziz, **Nur Izura Udzir**, Ramlan Mahmod. 2014. Extending TLS with Mutual Attestation for Platform Integrity Assurance, *Journal of Communications*, Volume 9, No. 1, January 2014 , pp. 63-72. ISSN 1796-2021.
28. Halboob, W., Alghathbar, K. S., Mahmod, R., **Udzir, N. I.**, Abdullah, M. T., & Deghantanha, A. 2014. An Efficient Computer Forensics Selective Imaging Model, *Future Information Technology, Lecture Notes in Electrical Engineering 276*, pp. 277-284, Springer.
29. Teh Jia Yew, Khairulmizam Samsudin, **Nur Izura Udzir** and Shaiful Jahari Hashim. 2013. Rootkit Guard (RG) – An Architecture for Rootkit Resistant File-system Implementation based on TPM, *Pertanika Journal of Science and Technology*, Vol. 21(2):507-520, Jul. 2013. ISSN: 0128-7680.
30. Norziana Jamil, Ramlan Mahmod, Muhammad Reza Z`aba, **Nur Izura Udzir** and Zuriati Ahmad Zukarnain. 2012. STITCH-256: A Dedicated Cryptographic Hash Function, in *Journal of Applied Sciences*, online, ISSN: 1812-5654.
31. Norziana Jamil, Ramlan Mahmod, Muhammad Reza Z`aba, **Nur Izura Udzir** and Zuriati Ahmad Zukarnain. 2011. An Observation of Cryptographic Properties of 256 One-Dimensional Cellular Automata Rules, *Communications in Computer and Information Science*, 251(2):409-420.

32. Asif Iqbal Hajamydeen, **Nur Izura Udzir**, Ramlan Mahmud and Abdul Azim Abdul Ghani. 2011. Filtering Events using Clustering in Heterogeneous Security Logs, in *Information Technology Journal (ITJ-ANSI)*, 10(4):798-806. ISSN 1812-5638, DOI: 10.3923/itj.2011.798.806.
33. Nuur Alifah Roslan, Ramlan Mahmud and **Nur Izura Udzir**. 2011. Sharp-Edges Method in Arabic Text Steganography, in *Journal of Theoretical and Applied Information Technology (JATIT)*, vol. 33, no. 1, pp. 32-41 ISSN 1992-8645.
34. Zaiton Muda, Warusia Yassin, Md. Nasir Sulaiman and **Nur Izura Udzir**. 2011. A K-Means and Naive Bayes Learning Approach for Better Intrusion Detection, in *Information Technology Journal (ITJ-ANSI)*, 10(3):648-655. DOI: 10.3923/itj.2011.648.655
35. **Nur Izura Udzir**, Hamidah Ibrahim and Sileshi Demesie. 2010. Finer Garbage Collection in Lindacap. In *International Journal of Information Technology and Web Engineering (IJITWE)*, 5(3):1-26. ISSN: 1554-1045.
36. **Nur Izura Udzir**, Alan M. Wood dan Jeremy L. Jacob. 2007. Coordination with Multicapabilities, in *Science of Computer Programming: Special Issue on Coordination Models and Languages*, vol. 64(2), Jan 2007, pp. 205-222, Elsevier. (Impact factor: 0.7)

... and more.

Journals Indexed by Other Bodies

1. Ahmad Riza'ain Yusof, **Nur Izura Udzir**, Ali Selamat. 2019. Systematic literature review and taxonomy for DDoS attack detection and prediction, *International Journal of Digital Enterprise Technology (IJDET)*, Volume 1, Issue 3, pp. 292-315. ISSN 1756-2554. DOI: <https://doi.org/10.1504/IJDET.2019.097849>. Indexed in: (Asian Digital Library, cnpLINKer (CNPIEC), Google Scholar, J-Gate)
2. Poh Kuang Teo, Hamidah Ibrahim, Fatimah Sidi, **Nur Izura Udzir**. 2018. An Effective Modality Conflict Model for Identifying Applicable Policies During Policy Evaluation, *Journal of Advances in Computer Engineering and Technology (JACET)*, vol.4, no. 4, pp. 255-266. ISSN 2423-4206. (Google Scholar, ROAD, Civilica)
3. Chng Chern Wei, Sharifah Md. Yasin, Mohd. Taufik Abdullah, and **Nur Izura Udzir**. 2018. A Review of DNA-Based Block Cipher, *International Journal of Computer Networks and Communications Security*, vol. 6, no. 9, pp. 196-200. ISSN 2410-0595. (Google Scholar, EBSCO, ISC, DOAJ, Ulrich's, CiteSeerX, and more...)
4. Chng Chern Wei, Sharifah Md. Yasin, Mohd. Taufik Abdullah, and **Nur Izura Udzir**. 2018. New DNA Based Dynamical S-Box for Block Cipher, *Journal of Engineering Research and Application*, vol. 8, no. 7, pp. 64-69. ISSN 2248-9622. DOI: 10.9790/9622-0807046469. (Google Scholar, DOAJ, EBSCO, Ulrich's, ProQuest, etc.)
5. Abayomi Jegede, **Nur Izura Udzir**, Azizol Abdullah and Ramlan Mahmud. 2017. Modified Shielding Function for Multibiometric Authentication and Template Protection, *ESTEEM Academic Journal*, Vol. 13, December 2017, pp. 118-128. ISSN Print: 1675-7939, Electronic: 2289-4934. (MyCite, EBSCO, UDLedge Social Sciences & Humanities Citation Index (SS&HCI) and Focus)
6. Abayomi Jegede, **Nur Izura Udzir**, Azizol Abdullah and Ramlan Mahmud. 2017. Cancelable and Hybrid Biometric Cryptosystems: Current Directions and Open Research Issues, *International Journal of Advanced and Applied Sciences (IJAAAS)*, 4(11) 2017, Pages: 65-77 (Thomson Reuters, Google Scholar, etc.)
7. Mohd Anuar Mat Isa, Ramlan Mahmud, **Nur Izura Udzir** and Habibah Hashim. 2016. A Method to Compute International Relations using Relation Algebra, *Journal of Media and Information Warfare*, Vol. 8, 1-38, Jun 2016. ISSN: 1985-563X (Google Scholar, MyCite)
8. Ali A. Alwan, Hamidah Ibrahim and **Nur Izura Udzir**. 2015. A Model for Processing Skyline Queries over a Database with Missing Data, *Journal of Advanced Computer Science and Technology Research*, vol. 5 no. 3, pp. 71-82. ISSN 2231-8852. (Google Scholar, EBSCO, CAS, BASE)
9. Auday H. Saeed Al-Wattar, Ramlan Mahmud, Zuriati Ahmad Zukarnain & **Nur Izura Udzir**, 2015. Generating A New S-Box Inspired by Biological DNA, *International Journal of Computer Science and Applications (IJCSA)*, Vol-4, Issue-1, April 2015, pp. 32-42; ISSN (Print): 2324-7037. (Ulrich's, Scribd, Google Scholar, etc.)
10. Auday H. Al-Wattar, Ramlan Mahmud, Zuriati Ahmad Zukarnain, and **Nur Izura Udzir**. 2015. A New DNA Based Approach of Generating Key-Dependent MixColumns Transformation, *International*

- Journal of Computer Networks & Communications (IJCNC), Vol.7, No.2, March 2015, pp. 93-102. ISSN: 2410-0595. (ERA, Google Scholar, EBSCO, ProQuest, Ulrich's, CiteSeer, etc.)
11. Auday H. Saeed Al-Wattar, Ramlan Mahmud, Zuriati Ahmad Zukarnain and **Nur Izura Udzir**. 2015. A New DNA-Based Approach of Generating Key-Dependent Shift Rows Transformation, *International Journal of Network Security & Its Applications (IJNSA)* Vol.7, No.1, January 2015, pp. 79-89. ISSN: 0974-9330 (Online); 0975-2307 (Print). (Google Scholar, EBSCO, ProQuest, Ulrich's, CiteSeer, Scribd, etc.)
 12. Norazah Abdul Aziz, Sharipah Setapa and **Nur Izura Udzir**. 2013. Mutual Remote Attestation in IPSec Based VPN, in *International Journal of Cryptology Research*, 4(1):55-67. ISSN 1985-5753. (Google Scholar)
 13. M. Mahboubian and **N.I. Udzir**. 2013. A Naturally Inspired Statistical Intrusion Detection Model, *International Journal of Computer Theory and Engineering (IJCTE)*, Vol.5(3): 578-581. ISSN: 1793-8201. (Google Scholar, EBSCO, ProQuest, Ulrich's, Copernicus, etc.)
 14. Mohammad Mahboubian, **Nur Izura Udzir**, Shamala Subramaniam, Nor Asila Wati Abdul Hamid. 2012. An AIS Inspired Alert Reduction Model, *International Journal of Cyber-Security and Digital Forensics (IJCSDF)*, 1(2):130-139. ISSN: 2305-0012. (Google Scholar, Copernicus, EBSCO, DOAJ, ProQuest, Ulrich's, etc.)
 15. Mohd Anuar Mat Isa, Jamalul-lail Ab Manan, Ramlan Mahmud, Habibah Hashim, **Nur Izura Udzir**, Ali Dehghan Tanha, Mar Yah Said. 2012. Game Theory: Trust Model for Common Criteria Certifications & Evaluations, *International Journal of Cyber-Security and Digital Forensics (IJCSDF)*, Vol. 1, No. 1, pp. 50-58. ISSN: 2305-0012. (Google Scholar, Copernicus, EBSCO, DOAJ, ProQuest, Ulrich's, etc.)
 16. Zaiton Muda, Warusia Mohamed Yassin, **Nur Izura Udzir** and Md. Nasir Sulaiman. 2012. Intrusion Detection with K-Means Clustering and OneR Classification, in *International Journal of Information Assurance and Security (JIAS)*, vol.7. ISSN 1554-1010. (Google Scholar, IET, Inspec)
 17. Zul Hilmi Abdullah, **Nur Izura Udzir**, Ramlan Mahmud and Khairulmizam Samsuddin. 2011. Towards a Dynamic File Integrity Monitor through a Security Classification, in *International Journal of New Computer Architectures and their Applications (IJNCAA)*, 1(3):789-802. (Google Scholar, Copernicus, EBSCO, ProQuest, Ulrich's, etc.)
 18. Ali Dehghantanha, Ramlan Mahmud, and **Nur Izura Udzir**. 2009. A XML based, User-centered Privacy Model in Pervasive Computing Systems, in *International Journal of Computer Science and Networking Security (IJCSNS)*, Vol. 9 No. 10 pp. 167-173. (EBSCO, ProQuest, CiteFactor)
 19. Ali Dehghantanha, Ramlan Mahmud, **Nur Izura Udzir**, and Zuriati Ahmad Zukarnain. 2009. UPEM: User-centered Privacy Evaluation Model in Pervasive Computing Systems, in *Ubiquitous Computing and Communication Journal (UBICC)*, 4(4). (Google Scholar, EBSCO, DOAJ, ProQuest, CiteSeer, etc.)

... and more.

PRODUCTS

PATENTS FILED

1. "A formal language for context-sensitive privacy policies", Ramlan Mahmud, **Nur Izura Udzir**, Zuriati Ahmad Zukarnain, Ali Dehghantanha (2010)
2. "A Formal Language for Describing, Comparing, and Constrasting Context-Dependent Policies", Ramlan Mahmud, **Nur Izura Udzir**, Zuriati Ahmad Zukarnain, Ali Dehghantanha (2010)

Publication	Quantity
Software Copyrights	12
Other Copyrights	2

AWARDS

1. **MIMOS Prestigious Award 2015**, awarded to Nur Izura Udzir for the supervision of the doctoral thesis by Dr. S.M Warusia Mohamed S.M.M Yassin entitled "An Integrated Anomaly Intrusion Detection Scheme using Statistical, Hybridized Classifiers and Signature Approach."
2. **Anugerah Siswi Cemerlang 1995** (Excellent Female Student Award 1995) from Persatuan Siswazah Wanita Malaysia (Women Graduates Association of Malaysia).
3. Won **seven (7) Best Paper Awards** at international conferences.
4. Won medals at **R&D Invention and Research Exhibition**: 4 Golds, 7 Silvers, 11 Bronzes
5. Anugerah Perkhidmatan Cemerlang (*Excellent Service Award*) UPM for 2012 and 2017.
6. Sijil Anugerah Perkhidmatan Cemerlang (Certificate of *Excellent Service Award*) UPM every year since 2009 until 2017.
7. Anugerah Pengajar Cemerlang (*Excellent Teacher Award*) FSKTM 2008, 2009, 2010, 2011, 2014, 2016.
8. Anugerah Penerbitan Penyelidik Cemerlang (*Excellent Research Publication Award*) FSKTM 2013.
9. Anugerah Jalinan Industri Cemerlang (*Excellent Industrial Linkages Award*) FSKTM 2014.
10. Anugerah Sukarelawan Terbilang (*Outstanding Volunteer Award*) FSKTM 2013.

RECOGNITION

Role	Quantity
As Keynote/Invited Speaker	15
As Speaker at Seminars/Forums	44
Interviewed by mass media	16
Editorial Board for International Journals	3
Journal article reviewer	25
Conference article reviewer	19
Book chapter reviewer	1

As Keynote/Invited Speaker:

1. **Invited Speaker** at the International Virtual Conference on Big Data Security Challenges on 15th March 2019.
2. **Keynote Speaker**, the Pre-University Graduation and Excellence Award Ceremony (Majlis Anugerah Kecemerlangan dan Graduasi Prauniversiti) 2017, SMK Seri Serdang, Selangor, on 25 August 2017.
3. **Panel speaker** at the Asian World Summit 5th Information Security Summit – Spotlight on Cloud, 17-18 May 2016, Swiss-Garden Hotel & Residences Kuala Lumpur. (Session "Simplifying the complexity of cloud migration.")
4. Panel for a **Talk Show** Program on **Capital TV** "Persoalannya" entitled "*Dunia Siber: Selamatkah kita?*", 30 Aug 2016
5. **Invited Speaker**, "*Psikologi dan IT: Media Sosial dan Kesan Terhadap Kesihatan dan Kesejahteraan Masyarakat*", for Psychology and Counselling Week 2016, 11 May 2016, at Kolej Dar al-Hikmah, Kajang, Selangor.
6. **Invited Speaker** (representing Malaysia) at the UNIW 2nd International Family Conference, 24-25 January 2015, Istanbul, Turkey. Organized by the Union of Non-Governmental Organizations of the Islamic World (UNIW). Paper title: "Globalization through ICT: Security Threats and Risks towards Family".
7. **Keynote Speaker**, "*Globalisasi melalui ICT: Ancaman Keselamatan dan Risiko Terhadap Keluarga*" at the Seminar *Bicara Inspirasi Wanita dan Sains: Antara Perspektif dan Penglibatan* (WASAPP), 22 Aug 2015, Kolej Dar Al-Hikmah, Kajang.
8. **Keynote Speaker** at the World Congress on Computing and Information Technology (WCIT) 2013 and The Second International Conference on Cyber Security, Cyber Peacefare and Digital Forensic (CyberSec2013), 4-5 March 2013, Kuala Lumpur, Malaysia
9. **Invited Speaker**, Malaysian Cryptology and Information Security Lecture Series 2013, 4-5 July 2013, UPM Selangor, Malaysia. Organized by UPM & Malaysian Society for Cryptology Research (MSCR)

10. Speaker at the **Research and Writing Workshop** for KUIS lecturers, 21 April 2015, at the Faculty of Science and Information Technology, International Islamic University College Selangor (KUIS), Malaysia.
11. **Guest Speaker**, "Publishing with Impact, Ethically", on 17 Oct 2014, at the College of Information Technology, Universiti Tenaga Nasional, Malaysia.
12. **Keynote speaker** at *Seminar Guru Cemerlang Daerah Hulu Langat*, titled "*Menghadapi Cabaran Globalisasi dalam Dunia Pendidikan: ICT sebagai Alat Pemudahcaraan*", 25 Sep 2014, at UPM.
13. **Invited Speaker** at Information Security Seminar 2014 at Politeknik Ungku Omar, Perak, 4 Sept 2014.
14. **Invited Speaker** at IT Seminar "Threats and Security in ICT", at Politeknik Ungku Omar, Perak, 29 March 2013.
15. **Invited Speaker** at IT Seminar "Threats and Security in ICT", at Politeknik Ungku Omar, Perak, 1 Nov 2012.
16. **Invited speaker**, "Current Teaching Method and ICT: A Necessity (*Kaedah Pengajaran Semasa dan Teknologi ICT: Satu Keperluan*)" at the People's Islamic School Teachers Convention of Perak (*Konvensyen Guru Sekolah Agama Rakyat Negeri Perak*), 23 June 2007, in Tapah, Perak.

Interviews in Mass Media

1. Appeared in '**Kafe Ahad**' slot at **MetroTV** on 29 July 2018, speaking on the topic related to the dangers of pornography.
2. Interviewed by **Harian Metro** on 24 July 2018, on the topic related to the dangers of pornography, entitled "Menonton Bahan Lucah Akan Ubah Bahan Kimia dalam Otak hingga Menyebabkan Ketagihan", published on 29 July 2018.
3. Appeared in **Berita TV9** on 9 Aug 2017, speaking on the dangers of pornography.
4. Invited panel in the '**Nasi Lemak Kopi O**' program at **TV9**, with a topic on "Digital Pickpocket", on 21 Jan 2017, at TV9, Sri Pentas, Kuala Lumpur
5. Panel for a **Talk Show** Program on **Capital TV** "Persoalannya" entitled "*Dunia Siber: Selamatkah kita?*", 30 Aug 2016
6. Interviewed by **NST** on 24 Oct 2017 on the topic related to user personal data breach in Malaysia.
7. My comments on the topic related to e-wallet security was published in **Kosmo** in an article "Transaksi e-Dompet hanya guna tablet, telefon pintar" on 10 Jan 2018.
8. Interviewed by **Utusan Malaysia** on the topic "Selamatkah aplikasi e-Wallet?", published on 6 Mar 2017.
9. Interviewed by **Harian Metro** on the topic "Susulan Penyeluk Saku Digital: Bukan Mustahil untuk Klon", published on 20 Jan 2017.
10. Interviewed by **Harian Metro** on the topic "Kad pendua curi identiti", published on 7 Feb 2017.
11. Interviewed by **Harian Metro** on the topic "Lindungi Telefon Bimbit Anda", published on 24 Jan 2017.
12. Interviewed by **Sinar Harian** on the topic related to the dangers of pornography, entitled "Bahaya anak kecil guna gajet" and "Tonton pornografi permulaan kepada zina", published on 31 July 2017.
13. Interviewed by **Harian Metro**, advising parents to be wary and constantly monitor kids use of Internet to protect them from negative influences, published on 23 Oct 2019.
14. Invited panel in the '**Keluarga di 9**' Slot at **TV9**, with a topic on "Universiti Asmara", 9 Jan 2008, at TV9, Sri Pentas, Kuala Lumpur
15. Interviewed by **Aniqah** magazine on the topic "Preparing psychology to face birthing moment (*Mempersiapkan Psikologi Menghadapi Saat Bersalin*)", 10 March 2008
16. Interviewed by **Iman** magazine on the topic "Ku Abadikan Cinta..." (the meaning of love in Islam), 21 March 2013

As Speaker at Seminars/Forums

1. Speaker at the *Bicara Santai* (title: "Sekeluarga Tolak Pornografi (SToP)") in conjunction with Bulan Keluarga Kebangsaan 2018, on 3 Nov 2018 at the Pusat Keluarga LPPKN Seremban 2 Negeri Sembilan. Organized by LPPKN, and officiated by YAB Deputy Prime Minister Malaysia cum Minister for Women and Family Development (KPWKM).
2. Speaker at the Seminar Keibubapaan "Sekeluarga Tolak Pornografi (SToP)" on 29 Sept 2018 at the Pusat Dakwah Islamiyah Paroi, Negeri Sembilan. Organized by ABIM and WADAH Negeri Sembilan, and officiated by YB Tuan Eddin Syazlee bin Shith, Deputy Minister Multimedia and Communication Malaysia.
3. Speaker at the SToP Seminar titled "*SToP: Sekeluarga Tolak Pornografi*", 17 August 2018, to community at the Garaj Belia MBSA, Pangsapuri Rimba Jaya, Shah Alam, Selangor.

4. Panelist at Forum Mahasiswa “*Mahasiswa Pemangkin Kebitaraan Negara*”, organized by World Assembly of Muslim Youth (WAMY), National Union of Malaysian Muslim Students (PKPIM) and Co-Curriculum and Student Development Centre UPM, on 29 May 2018, at Masjid Hasanah Bangi.
 5. Invited as jury and trainer for dakwah infographic design competition, 30-31 March 2018, at Kolej Universiti Islam Antarabangsa Selangor (KUIS), as part of Program Latihan Pendakwah Muda (MyDaie) organized by World Assembly of Muslim Youth (WAMY) Malaysia in cooperation with KUIS, Ministry of Education Malaysia, *Gabungan Dakwah Malaysia* and Islamic Dakwah Foundation Malaysia (YADIM).
 6. Speaker at the Kempen Sekeluarga Tolak Pornografi (SToP), pada 31 March 2018, at the Megawati Hall, Official Residence of Menteri Besar Selangor, Shah Alam, organized by WADAH Selangor and Persatuan Taska Negeri Selangor (PTNS) in cooperation with PEKAWANIS.
 7. Panelist at Forum Keselamatan Media Sosial: Be Social, Be Safe 24 March 2018 at the Auditorium Radin Umar UPM, organized by Ministry of Women, Family and Community Development (KPWKM) in cooperation with Co-Curriculum and Student Development Centre UPM.
 8. Speaker at the Ibadah and Akhlaq Enhancement Campaign 2017/2018 on 9 Mar 2018, at International Islamic School Malaysia (Kuantan), Pahang on the topic of “Using Social Media Responsibly”.
 9. Speaker at the *Bengkel Pelan Pengajaran Modul Pendidikan Keselamatan Keluarga dan Anak* (PEKA) 2018 on the topic of “Child Online Protection”, on 21 Feb 2018, at the Hotel Flamingo, Ampang Selangor. The program was organized by the National Population and Family Development Board (LPPKN) (Ministry of Women, Family and Community Development Malaysia).
 10. Moderator at the parallel session on Kepedulian Kebejatan Sosial Keluarga at the Town Hall Kepedulian Kebejatan Sosial Peringkat KPWKM organized by Ministry of Women, Family and Community Development (KPWKM) via Social Institute of Malaysia (ISM) on 5 Dec 2017, at Social Institute of Malaysia, Kuala Lumpur.
 11. Panelist at Family and Marriage Caunselling Seminar titled “*Sokongan Komuniti dalam Melestarikan Perkahwinan dan Keluarga*”, 9 Dec 2017, at the Faculty of Education UKM. (I focussed on issues and effects of cyber security and social media on family and marriage.)
 12. Speaker at the Seminar Pendidikan Kekeluargaan Islam, titled “*Cabaran Media Baharu dalam Keluarga Muslim*”, 30 Sept 2017, in Terengganu.
 13. Panelist for Program *Perkampungan Menara Gading Kebangsaan* (PMGK) 2017, titled “*Memberdaya Tekad Transformatif: Memberdaya Kebitaraan Mahasiswa Mukmin*”, organized by the National Union of Malaysian Muslim Students (PKPIM), 3 April 2017, at Unisel Bestari Jaya, Selangor
 14. Panelist for Program *Belia, Kesukarelawanan dan Kepertanggungjawaban Terhadap Media Sosial*, titled “*Kepertanggungjawaban Remaja terhadap Media Sosial: No Wifi, No Life*”, 25 Mar 2017, at Shah Alam, Selangor
 15. Speaker at the *Konvensyen Pendidikan Al-Hikmah* titled “*Bagaimana Menghadapi Generasi Y, Z, Alpha*”, 11 Feb 2017, in Kajang, Selangor, organized by the Yayasan Takmir Pendidikan
 16. Panelist in the Forum “*Universiti sebagai Wajah Peradaban*” at the Konvensyen Pelajar Islam Kebangsaan, organized by Persatuan Kebangsaan Pelajar Islam Malaysia (PKPIM), July 2007, at the Malaysian-France Institute UniKL, Bangi, Selangor
 17. Panelist in the Forum “*Pembangunan Belia dalam Lima Dekad: Ke arah mana?*” at the National Youth Officer Convention (*Konvensyen Pegawai Belia Kebangsaan*), organized by Ministry of Youth and Sports Malaysia, 10 Feb 2008, at Vistana Hotel, Kuala Lumpur
- ... and more.

Involvement at International level:

1. Editorial Board, International Journal of Engineering Sciences (IJES)
2. Editorial Board, Journal of Computer and Communications (JCC), Scientific Research
3. Editorial Board, Journal of Modern Computer Networks (JMCN), Science Publishers
4. Journal article reviewer (18 articles)
5. Conference article reviewer (19 articles)
6. Book chapter reviewer for “Security in Computing and Networking – Part 1”, UTM Press (2014)

National level:

1. Board of Directors, National Population and Family Development Board (LPPKN) (Ministry of Women, Family and Community Development Malaysia), 1 April 2019 – 31 Mac 2021.
2. Expert member, MyQUANTUM, Cybersecurity Malaysia, since 2016.
3. Committee, Information Security Professionals Association of Malaysia (ISPA.my), 2011-2014

4. Member of Protection Profile Working Group (PPWG) for the Adaptation of Development for ICT Products, under MOSTI and Cybersecurity Malaysia
5. Referee for Academic Staff Promotion, for consideration to Associate Professor at Universiti Teknologi Malaysia (2012)
6. Member of Expert Group 5 (EG5-Secure Access) for the National Cybersecurity Roadmap, of MIMOS and MOSTI.
7. Reviewer for Taylor's Research Grant Scheme (TRGS) Proposal, Taylor's University, May 2012.

PROFESSIONAL SERVICES

International level:

1. External Member, Selection Committee for Associate Professor (Computer Science), Monash University Malaysia (2016-to date)
2. Committee Member/Expert, ISO/IEC JTC 1/WG11 Smart Cities (International level) (starting 28 July 2017).
3. Invited to conduct lectures and scientific consultations for master students at M. Auezov South Kazakhstan State University (SKSU), Kazakhstan, 29 Oct – 10 Nov 2014.
4. Technical Program Committee, IEEE International Conference on Smart Computing and Electronic Enterprise (ICSCEE) 2018, at Al-Madinah International University, 11-12 July 2018, Selangor, Malaysia.
5. Technical Program Committee, International Conference on Innovations in Computer Science and Engineering (iCiCSE2018), 30 - 31 July 2018, Kuching, Sarawak, Malaysia. Program Committee, the 7th International Conference on IT Convergence and Security (ICITCS2017), 25-28 September 2017, in Seoul, Korea Republic
6. Technical Program Committee, 2015 International Summit on Bio-Metrics and Smart Government (IBMSGs' 2015), 18-20 January 2015, Sousse, Tunisia
7. Technical program committee for 2015 International Conference on Computer Applications & Technology (ICCAT' 2015), 5-7 November, Rome, Italy
8. Program Committee, International Symposium on Biometrics and Security Technologies 2014 (ISBAST14), 25-27 Aug 2014, Kuala Lumpur, Malaysia.
9. Technical Program Committee, Sixth International Conference on Computational Intelligence and Communication Networks 2014 (CICN 2014), 8-10 Nov 2014, Bhopal, India
10. Technical Program Committee, 4th World Congress on Information and Communication Technologies 2014 (WICT 2014), 8-11 Dec 2014, Malacca, Malaysia
11. Organizing Committee, 2009 International Conference on Future Computer and Communication (ICFCC 2009)
12. Organizing Committee, and Emcee for the 3rd Malaysian Software Engineering Conference 2007 (MySEC'07), 3-4 December 2007 in Selangor, Malaysia.
13. Program Committee, 2nd International Conference on Computational Science and Technology (ICCST2014), 27-29 August 2014 at Kota Kinabalu, Sabah, Malaysia. (in conjunction with the 4th International Conference on Artificial Intelligence in Engineering and Technology (ICAJET2014))
14. Program Committee, The International Conference on Cyber Security, Cyber Warfare and Digital Forensic (CyberSec), 26-28 June 2013, Kuala Lumpur

National level:

1. Committee Member/Expert, DSM/NMC/ISC-G/WG5-2 (Jabatan Standard Malaysia), starting Jan 2017.
2. Committee member, Education and Human Development Committee, Selangor Foundation (*JK Pendidikan dan Pembangunan Insan Yayasan Selangor*), starting Oct 2018.
3. Protem Committee, Information Security Professional Association of Malaysia (ISPA.my), 2010
4. External Assessor for Bachelor of Education (Information Technology) with Honours program, Faculty of Arts, Computing and Creative Industry, **Universiti Pendidikan Sultan Idris** for full accreditation of program, 2017-2018
5. External Assessor Panel (Subject Matter Expert) for Executive Diploma of Information Technology program (UMCCed), **Universiti Malaya** for full accreditation of program, 2016
6. Subject Matter Expert, Program Study Committee, Faculty of Computer Science and Information Technology, **Universiti Malaya** for new programs: Master of Data Science and Master of Information Technology Management, 2015
7. Subject Matter Expert, Faculty of Science and Defense Technology, **National Defence University of Malaysia (UPNM)** for new program Master of Cyber Security and Management, 2017

8. External Assessor Panel for 2014-2015 Exam Items for Diploma of Information Security at **Politeknik Ungku Omar**, Perak
9. External Moderator, for **SEGi College** Subang Jaya, 2014-2015 – moderate exam question papers.
10. Reviewer for Taylor's Research Grant Scheme (TRGS) Proposal, **Taylor's University**, May 2012.
11. Expert Reference, Cyber Security Roadmap Review Workshop, 5 Nov 2009, Putrajaya International Convention Centre, organized by MIMOS Bhd and MOSTI.
12. Expert Reference, Cyber Security Roadmap Review Workshop, 27 July 2009, Putrajaya International Convention Centre, organized by MIMOS Bhd and MOSTI.
13. Expert Reference, National R&D Roadmap for Self Reliance in Cyber Security Technologies: A Review and Update Workshop, 8 October 2007, Palace of the Golden Horses, Seri Kembangan, Selangor, organized by MIMOS Bhd and MOSTI.
14. Committee, and Emcee for Mobile Alternative Learning Technology Workshop (MALT2008)
15. Committee, and Emcee for the National Conference on Research and Development in Computer Science and its Applications 2001 (REDECS'01), 24–25 October 2001 at UNITEN

Last updated: 15 May 2019