



## Associate Professor Dr Fatimah Khalid

### PERSONAL DETAILS

Department: Multimedia  
Faculty: Computer Science and Information Technology  
Field of Specialization: Computer Vision and Image Processing

### ACADEMIC QUALIFICATIONS

Institution: Universiti Kebangsaan Malaysia (UKM)  
Year: 2008  
Degree: PhD, *Computer Science*  
Dissertation: 3D Face Recognition

Institution: Universiti Kebangsaan Malaysia (UKM)  
Year: 1998  
Degree: Master of I.T., *Computer Science*

Institution: Universiti Teknologi Malaysia (UTM)  
Year: 1993  
Degree: Bachelor, *Computer Science*

### ACADEMIC APPOINTMENT

No.	Position	Department/Faculty/Other Institution	Year	Duration
1.	Associate Professor (Secondment)	Computer Science Department, Tabuk University, Tabuk, Saudi Arabia	January 2016 – June 2017	1 ½ years

2.	Associate Professor	Department of Multimedia, FSKTM, UPM	2012 - present	8 years
3.	Senior Lecturer	Department of Multimedia, FSKTM, UPM	2009 - 2012	3 years
4.	Lecturer	Department of Multimedia, FSKTM, UPM	1999- 2009	10 years
5.	Lecturer	Sal College	1998 – 1999	2 years

## COURSES TAUGHT

### I. UNDERGRADUATE

No.	Code of Courses	Credit Hour	Number of Students	Teaching Assessment / 5.00	Semester/Academic Year
1	Human Computer Interaction	3+0	250 400	N/A	I 99/00, II 99/00
2	Multimedia Technology	3+0	300	N/A	I 00/01, I 03/04, II 03/04, I, 2008/09
3	Audio Video Digitization	3+0	210 210	N/A	I 00/01 II 00/01
4	Digital Publication	3+0	170	N/A 4.07, 4.45	II 00/01, II 03/04 I 2009/10, I 2009/10
5	Java Programming	2+1	47	4.11	II 03/04
6	Multimedia Programming	3+1	26	4.29	I 2008/09
7	Multimedia Introduction	2+1	25	4.2, 4.65 4.18, 4.81	II 2008/09, II 2009/10 I 2010/11, I 2011/12
8	Multimedia Application Development	3+0	25	4.51	II 2008/09
9	Digital Image Processing	3+0	20	4.56	II 2009/10
10	Data Compression	3+0	19, 40	4.5,4.43	I 2010/11, I 2011/12 until now
11	Digital Image Processing	3+0	42	4.58 4.5	II 2011/12 & II 2013/14 until now
12	Programming 1 (Java)	3+1	46	4.24	I 2012/13
13	Programming Languages	3+0	-	-	2017 (Tabuk University)
14	Multimedia Systems	3+0	-	-	2016 – 2017 (Tabuk University)
15	Programming II (C#)	3+0	-	-	2017 (Tabuk University)
16	Game Analysis and Design	3+0	20	4.2	I 2017/18

## II. POSTGRADUATE

No.	Code of Courses	Credit Hour	Number of Students	Teaching Assessment / 5.00	Semester/Academic Year
1	Multimedia Authoring System	3+0	30	N/A	Nov 03/04
2	Design and Integration of Graphic Elements	3+0	5	N/A	I 2008/09
3	Image Compression	3+0	11 10	4.94 4.92	I 2009/10 II 2009/10
4	Computer Vision	3+0	20	4.21 4.34 4.42	II 2011/12 II 2012/13 I 2014/15 until now

## ADMINISTRATIVE RESPONSIBILITIES

No.	Position	Department/Faculty/Other Institution	Year
1	Head	Department	15 July 2019 – 14 July 2021
2	Head	Department	10 December 2012 – 09 December 2015
3	Head, Software Development Unit	Faculty	2012
4	Head, Welfare and Social Club	Faculty	2009
5	Head, Final Year Project Committee	Department	2008 - 2012
6	Head, Publicity Committee	Department	2009
7	Internal Auditor MS ISO 9001:2000	Faculty	2009 - 2010
8	Head, Practical Training Committee	Department	2003 - 2004
9	Head, Research Bulletin Committee	Department	2009
10	Head, Annual Report Committee	Department	2008

## RESEARCH ACTIVITIES

No.	Title	Role (Main/Co-researcher)	Sponsor/Grant and Amount (RM)	Period (year)	Status (Completed/Ongoing)
1.	Synergy-Muscle Fatigue Model based Intelligent Control to Signify Realism of Character Animation	Co-researcher	FRGS (RM 105,400)	1/9/2019-30/8/2021 (2 years) Postponed to 2023 due to pandemic	Ongoing
2.	Formulating Ground Normalized Difference Vegetation Index (G-NDV) for detecting stressed crops using sub-pixel regional registration and sub-pixel temporal analysis	Co-researcher	FRGS (RM 147,800)	1/9/2019-30/8/2021 (2 years) Postponed to 2023 due to pandemic	Ongoing
3.	Face recognition for unconstrained environment of smartphone face dataset	Main-researcher	Putra (RM 50,000)	2018-2020 (2 years)	completed
4.	Improve the Robustness of a 3D Face Recognition by Archiving a Variability Degree Database	Main-researcher	RUGS (RM 30,000)	2009-2010 (1½ years)	completed
5.	Expression Invariant Face Recognition using Multistage 3D Face Fitting with 3D Morphable Face Model	Main-researcher	FRGS (RM 40,000)	2010-2012 (2 years)	completed
6.	Adaptive Continuous Background Extraction in Sudden and Gradual Changes using Initialized Cascading Model	Main-researcher	RUGS (RM 15,000)	2012-2015 (2 years)	completed
7.	Shadow Detection using Colour and Edge Information for Colourless and Edgeless Images	Main-researcher	RUGS (RM 15,000)	2012-2015 (2 years)	completed
8.	An adaptive Hybrid Medical Image Compression technique using symmetric properties of human body to achieve high compression ratio	Main-researcher	FRGS (RM 72,200)	2014-2016 (2 years)	completed
9.	Prototype Development of Concept Based Video Retrieval System	Co-researcher	PRGS (RM94,000)	2	completed
10.	Fitting Non-Uniform B-Spline Curve and Surface to Transesophageal Echocardiography Images to Determine an Abnormality of Cardiac Structure	Co-researcher	FRGS (RM44,000)	2	completed
11.	Recognition and Classification of Herbs Plant Diseases Via	Co-researcher	RUGS (RM49,500)	2	completed

	Hierarchical Dynamic Neural Network				
12.	Marching Style Evaluation using Kinect-based Skeleton Tracking for 3D Human Motion Analysis	Co-researcher	RUGS (RM 15000)	2	completed

## INTELLECTUAL PROPERTY

### COPYRIGHT

No.	Title	Category	Year Published
1	Texture Synthesis Application	Software	2011
2	MirrorLite Mobile Application	Software	2012
3	Moving Object Detection System : MODE	Software	2012
4	Sepia Transformation Tool (St <sup>2</sup> )	Software	2012
5	Online Food Ordering System Design.	Software	2011
6	Static Object-oriented Debugger	Software	2012
7	Design of Object-oriented Debugger	Literacy Work	2012
8	mindIT word Puzzle.	Literacy Work	2011
9	e-Counseling System Specification and Design.	Literacy Work	2011
10	P'SAMAK System.	Software	2011
11	P'SAMAK Database Design.	Software	2011
12	Simple Network Protocol (SNMP) Data Retrieval Application.	Software	2011
13	Texture Synthesis Application.	Software	2011
14	E-Perubatan system Universiti Putra Malaysia.	Software	2011
15	e-Counseling System.	Software	2011
16	Sistem Ilmu Sumber Manusia (SISMAN).	Software	2011
17	System Design for Dialogue-based Train Information System.	Software	2011
18	Framework of Information Retrieval System.	Literacy Work	2011
19	Database Design for Trusted Human Resource Management System (THRMS).	Software	2011
20	Face Recognition System	Software	2013

## SUPERVISION OF STUDENTS

Program Level	Name of Students and Title of Thesis/Project	Main Supervisor/ Co-supervisor	Status (Completed/ Ongoing)	Year
PhD	Seyed Hashem Davarpanah <i>Adaptive Continuous Background Extraction In Sudden And Gradual Changes Of Image Illumination Using An Initialized Cascading Model</i>	Main Supervisor	Completed	2008 - 2012

Soodabeh Safa <i>Plant Image identification Using colour Shape and Log Gabor wavelet Features</i>		Completed	2011 - 2016
Mohammed W. M. Ashour <i>An Automatic Multistage Quality Monitoring and Statistical Process Control System for Razor Blade Manufacture</i>		Completed	2013 - 2018
Noor Amjed Hassan <i>Robust Iris Recognition for Non Ideal Environment</i>		Completed	2014 - 2018
Illiana Azizan <i>Emotion Detection for Emphatic Feedback during E-Learning</i>		Ongoing	2018
Noor Ain Rosly <i>Data Hiding in Image Based using Hybrid Method</i>		Ongoing	2018
Amirul Azuani Romle <i>Cloud Image Data Security Enhancement with Hybrid Steganography Approach</i>		Ongoing	2018
Zhang Su <i>Point Cloud Classification based on Attention and Dense Connected</i>		Ongoing	2021
Gawed Mokbel Saif Nagi <i>A Robust Automated Attendance Suslem using Face Recognition Techniques</i>	<b>Co-supervisor</b>	Completed	2013
Husniza Razalli <i>Automatic Face Tracking and Facial Age Range Estimation using Face Triangle Formation</i>		Completed	2016
Ng Seng Beng <i>Automatic Analysis and Quantification of Coronary Lesions during Coronary Angiogram using Quantitative Lesion Analysis Table</i>		Completed	2015
Aqeel Abdullah Ahmed Al-Surmi <i>3D Reconstruction of The Human Heart From Single View for Augmented Reality</i>		Completed	2015
Samaneh Mazaherikalahroodi <i>Fingerprint Touch-Less Mobile Verification Solution for Data Privacy Threats</i>		Completed	2016
Fareshteh Falah Chamasemani <i>Enhanced Region-Based Surveillance Video Indexing and Retrieval Framework using Video Abstraction</i>		Completed	2017
Wong Pei Voon <i>Object-based Crowd Behaviour Analysis</i>		Completed	2018

	Zainal Abdul Kahar <i>Skeleton Joints Moment With Convex K-Nn For Hand Gestures Recognition In Hologram Central Nervous System Using Low-End Devices</i>		Submitted	2016
	Abari Ovyne John <i>A Novel Deep Learning Framework for Phishing Image Spam Detection and Classification on Fog Environment</i>		Ongoing	2018
	Tian Shuai <i>Natural Facial Expressions for 3D Characters' Emotional States using Micro Facial Expressions</i>		Ongoing	2020
Master by Research	Maryam Golchin <i>Improving Shadow detection using Color and Edge information</i>	<b>Main Supervisor</b>	Completed	2013
	Eman Thabet <i>Fast Marching and Enhanced Features Fusion Introduced with Dynamic Hand Gesture Tracking Approach using Updated Covariance Matrix-local Corner Keypoints Technique</i>		Completed	2017
	Sun Luyao <i>Implementation And Improvement Of Chinese Calligraphy Font Recognition Based On Cnn Classic Model (Lenet-5 Model)</i>	<b>Co-supervisor</b>	Ongoing	2019
	Nurul Asma Abd Razak <i>An Improved Framework of Morphological-Based Segmentation for Eggs Identification in Mahseer's Gonad Ultrasound Image</i>		Completed	2017
	Siti Khadijah Ali <i>Optimum Simplicity for 3D Face Database</i>		Completed	2012
	Ahmad Suhail Azmi <i>Image Based Modelling System</i>		Completed	2012
	Nor Azura Md Ali <i>Construction of A 3D Model from Bidimensional Medical Images for Animal Dissection Simulator</i>		Completed	2015
	Siti Zubaidah Skh Abd Rahman <i>Watermarking for Digital Text</i>		Completed	2004
	Halidah Harun <i>Steganography in Digital Text</i>		Completed	2004
	Fam Whai Yen <i>Video Compression</i>		Completed	2003
Master by Course	Zainal Abdul Kahar <i>Heterogeneous Optical Flow Based Tracking for Traffic Control</i>	<b>Main Supervisor</b>	Completed	2014
	Siti Azreena Mubin <i>Face Recognition System</i>		Completed	2012

	Vinod a/l Ramanathan <i>Moving Object Detection System</i>		Completed	2012
	Abeer A.S Alsarhi <i>Texture Synthesis using Voronoi Diagrams</i>		Completed	2010
	Rahmah Lob Yusof <i>Human factors in web designing</i>		Completed	2000
	Mohd Naim Hj. Mohd Ishak <i>Answering Science in English for primary year 6</i>		Completed	2003
	Cheong Wee Thing <i>Library Inquiring an Borrowing Book System.</i>		Completed	2003
	Mustaffa Din <i>Multimedia Information System</i>		Completed	2003
	Yusop Said <i>Interactive Courseware : Adobe Photoshop</i>		Completed	2003
Bachelor	Hee Sim Fuat <i>Intelligent Tutoring System</i>	<b>Main Supervisor</b>	Completed	2001
	Azrul Razlan Md Azizan <i>Multimedia Heart System</i>		Completed	2001
	Mahazam Mohd Halil <i>Multimedia System</i>		Completed	2001
	Ganesan Thambirajah <i>Video Interactive for department of Multimedia</i>		Completed	2001
	Syamsul Azlan Ahmad Ramdzan <i>Multimedia System</i>		Completed	2001
	Faizal Azlee Mohd Yunus <i>Multimedia System</i>		Completed	2001
	Zul-Azri Mohd Husni <i>Multimedia System</i>		Completed	2001
	Nurul Amilin Badruddin <i>Animal Classification System</i>		Completed	2001
	Faridah Abdullah <i>Plant Transportation System</i>		Completed	2001
	Ooi Chin Lee <i>Client/Server Chat System</i>		Completed	2001
	Faridzhana Toskhan <i>Instructional Software</i>		Completed	2001
	Haliza Hassan <i>Simulation Instrucational Software</i>		Completed	2001
	Haidaliza Mohamad Latip <i>Picture Dictionary Application</i>		Completed	2001
	Liaw Chin Ying <i>Virtual Advertising</i>		Completed	2003
	Nurmizurin Mohd Rashidi <i>Pakej Pembelajaran Multimedia Sains</i>		Completed	2003



Mohd Azzad Mohd Hashim <i>Kepelbagaian Benda Hidup</i>	Completed	2003
Aimi Nazirah Abd Razak <i>Perisian Pembelajaran Cara-cara Pemasangan Komputer Menggunakan Kaedah Multimedia</i>	Completed	2003
Puteri Intan Sarah Razali <i>Perisian Pembelajaran Multimedia Bestari Arab Untuk Permulaan (BeSTAR2002)</i>	Completed	2003
Norzuraini Shibi <i>Laman Web Matematik Tingkatan 4 dan 5</i>	Completed	2003
Mohd Suhaimi Mohamed Sopian <i>Electronic Diary (E-Diary)</i>	Completed	2003
Mas Rina Mustaffa <i>Sistem Pembelajaran Bahasa Isyarat</i>	Completed	2003
Thong Siew May <i>Sistem Pendaftaran Sukarelawan Rakan Muda</i>	Completed	2003
Pua Chuik Kien <i>Portal Mengenal Perodua Kancil</i>	Completed	2003
Kwan Siew Peng <i>Pembelajaran secara Interaktif Fizik SPM - Dinamik</i>	Completed	2003
Normah Katap <i>Peta Elektronik UPM</i>	Completed	2003
Shahira Nur Zolkepli <i>On-line House Registration &amp; Information System</i>	Completed	2003
Wong Soo Chin <i>Pakej Pembelajaran Sejarah Malaysia</i>	Completed	2003
Toh Yung Cheng <i>Perisian Kursus Ibadat Solat Fardhu dan Wuduk</i>	Completed	2003
Noor Khatijah Hamidi <i>Seri Malaysia Taiping : Online Reservation System</i>	Completed	2003
Adlyn Sharul Zainudin <i>Kiosk Informasi Litar Formula 1</i>	Completed	2003
Akram Abu Bakar <i>Pakej Pembelajaran Membina Laman Web menggunakan HTML</i>	Completed	2003
Rafida Lazim <i>3-D Computer Game</i>	Completed	2003
Nooroha Buang <i>Permainan Komputer (Wira Jalanan)</i>	Completed	2003
Mohd Salmi Amin <i>Pembangunan Aplikasi Multimedia berasaskan Internet</i>	Completed	2003

Noraishah Othman <i>Sistem Rekod dan sewa kereta</i>	Completed	2003
Nor Azlina Abdul Mubin <i>Sistem Pembelian Rumah Kediaman dengan Multimedia</i>	Completed	2003
Liew Kim Fatt <i>Laman Web e-shop</i>	Completed	2003
Daing Nazihah Ganim Achok <i>Multimedia Database System</i>	Completed	2003
Ismail Rosle <i>Sistem Pengesanan Tebing</i>	Completed	2003
Faddy Mazlan <i>Sistem Penilaian Markah Pelajar</i>	Completed	2003
Nur Idayu Hasman <i>Sistem Hutan Maya</i>	Completed	2008
Muhammad Nazreeq bin Mohd Nizam <i>Sistem Inventori Kedai Buku</i>	Completed	2008
Nurul Fazilah Hassan <i>UPM Online Survey System</i>	Completed	2009
Nurul Faiza Mohd Zain <i>Aplikasi Pembelajaran Haji Dan Umrah Secara Stand Alone</i>	Completed	2009
Liyana Izzah Omar <i>Kiosk Informasi Pasaraya Carefour</i>	Completed	2009
Khairiah Kamar @ Kamaruddin <i>Kiosk Hospital Kota Tinggi</i>	Completed	2009
Norazlina Mamat <i>Sistem Berasaskan Web</i>	Completed	2009
Fong Khai Li <i>Online Training System</i>	Completed	2009
Norhuda Md Rashid <i>Iqra &amp; Tajwid Mobile Application</i>	Completed	2013
Rosliza Abd Ghani <i>Iqra &amp; Tajwid Mobile Application</i>	Completed	2013
Noor Iqlima Mohd Yusoff <i>Iqra &amp; Tajwid Mobile Application</i>	Completed	2013
Ryan Sukiang <i>Iqra &amp; Tajwid Mobile Application</i>	Completed	2013
Hafizah A Rahim <i>Object calculation and Shape Detection</i>	Completed	2014
Zaheiri Irfan Zakariah <i>GoNotes!</i>	Completed	2014
Mohd Nazmi Fikri Zainal Abidin <i>Text Recognition</i>	Completed	2015
Nurul Izzati Nazifa Harum <i>Brain Tumor Detection</i>	Completed	2015

Farhana Haque & Banu Rawindran <i>Plant Recognition System using Leaf Shape Features and Minimum Euclidean Distance</i>	Completed	2015
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## PUBLICATIONS

### I. JOURNALS

No	Name of Writer (s)	Year Published	Title	Name of Journal	Vol. No.	Page No.
1	Zainal Abdul Kahar, Puteri Suhaiza Sulaiman, <b>Fatimah Khalid</b> , Azreen Azman	2021	Skeleton Joints Moment (SJM): A Hand Gesture Dimensionality Reduction for Central Nervous System Interaction.	IEEE Access	9	146640-146652
2	<b>Fatimah Khalid</b> , Noor Amjed, RahmitaWirza O.K. Rahmat, Hizmawati Madzin, Illiana Azizan	2020	Face Recognition for Varying Illumination And Different Optical Zoom Using A Combination Of Binary And Geometric Features	IEEE Access	8	129774-129784
3	Eman Thabet, <b>Fatimah Khalid</b> , Puteri Suhaiza Sulaiman and Razali Yaakob	2020	Algorithm Of Local Features Fusion And Modified Covariance-Matrix Technique For Hand Motion Position Estimation And Hand Gesture Trajectory Tracking Approach	Multimedia Tools and Applications	79	1-33
4	Soodabeh Safa, <b>Fatimah Khalid</b>	2020	An Improved Plant Identification System by Fuzzy c-means Bag of Visual Words Model and Sparse Coding	International Journal of Advanced Trends in Computer Science and Engineering	9	5229-5235
5	Pei Voon Wong, Norwati Mustapha, Lilly Suriani Affendey, <b>Fatimah Khalid</b>	2020	A Crowd Video Retrieval Framework using Generic Descriptors	Journal of Computers	31	34-45

6	Samieiyeganeh, M, Rahmita, R.W.B.O.K, Khalid, F.B., Kasmiran, K.A.B.	2020	An overview of deep learning techniques in echocardiography image segmentation	Journal of Theoretical and Applied Information Technology	98	3561-3572
7	Mas Rina Mustaffa, Indra Nachammai Nachiappan, Lili Nurliyana Abdullah, Fatimah Khalid, Masnida Hussin	2020	Grain Recognition based on Colour and Shape Analysis	International Journal of Advanced Science and Technology	29	1512-1522
8	Ovye John Abari, Nor Fazlida Mohd Sani, Fatimah Khalid, Mohd Yunus Bin Sharum, Noor Afiza Mohd Ariffin	2020	Phishing Image Spam Classification Research Trends: Survey and Open Issues	International Journal of Advanced Computer Science and Applications	11	794-805
9	Luyao Sun, Noridayu Manshor, and Fatimah Khalid	2020	Review Of Chinese Calligraphy Font Recognition Methods	International Journal of Advanced Research in Engineering and Technology	11	1176-1186
10	Noor Amjed, <b>Fatimah Khalid</b> , RahmitaWirza O.K. Rahmat, Hizmawati Binit Madzin	2019	A Robust Geometric Skin Colour Face Detection Method under Unconstrained Environment of Smartphone Database	Applied Mechanics and Materials	892	31-37
11	Mohammed W. Ashour, <b>Fatimah Khalid</b> , Lili N. Abdullah, Alfian A. Halin	2019	Surface Defects Classification of Hot-Rolled Steel Strips Using Multi-directional Shearlet Features	Arabian Journal for Science and Engineering (Q2)	44	2925-2932
12	Pei Voon Wong, Norwati Mustapha, Lilly Suriani Affendey, <b>Fatimah Khalid</b>	2019	Collective interaction filtering approach for detection of group in diverse crowded scenes	KSII Transactions on Internet and Information Systems (Q3)	13	912-928
13	Zheng S., Rahmat R.W. O, Khalid F., Nasharuddin N.A.	2019	3D texture-based face recognition system using fine-tuned deep residual networks	PeerJ Computer Science	5	e236
14	Nur Delliera Shahiera Shaharom, Mas	2019	Durian Species Recognition based on Fast Discrete Curvelet	International Journal of Advanced Trends	8	323-331

	Rina Mustaffa, Lili Nurliyana Abdullah, Fatimah Khalid		Transform and K-Nearest Neighbour	in Computer Science and Engineering		
15	Noor Amjed, <b>Fatimah Khalid</b> , RahmitaWirza O.K. Rahmat, Hizmawati Binit Madzin	2018	Noncircular Iris Segmentation Based On Weighted Adaptive Hough Transform Using Smartphone Database	Journal of Computational and Theoretical Nanoscience (Q3)	Vol. 15 No. 2	739-743(5)
16	Noor Amjed, <b>Fatimah Khalid</b> , RahmitaWirza O.K. Rahmat, Hizmawati Binit Madzin	2018	Binary conversion method based on illumination distribution model under unconstrained smartphone face database	Journal of Advanced Computer Science and Technology Research	Vol. 8 No. 3	82-93
17	Eman Thabet, <b>Fatimah Khalid</b> , Puteri Suhaiza Sulaiman and Razali Yaakob	2018	Fast marching method and modified features fusion in enhanced dynamic hand gesture segmentation and detection method under complicated background	Journal of Ambient Intelligence and Humanized Computing (Q2)	Vol. 9 No. 3	755-769
18	Chamasemani, F.F., Affendey, L.S., Mustapha, N., Khalid, F.	2018	Video abstraction using density-based clustering algorithm	Visual Computer	Vol. 34 No. 10	1299-1314
19	Chamasemani, F.F., Affendey, L.S., Mustapha, N., Khalid, F.	2018	Region-based surveillance video retrieval with effective object representation	Imaging Science Journal	Vol. 66 No. 3	184-194
20	Eman Thabet, <b>Fatimah Khalid</b> , Puteri Suhaiza Sulaiman and Razali Yaakob	2017	Low Cost Skin Segmentation Scheme in Videos using Two Alternative Methods for Dynamic Hand Gesture Detection Method	Advances in Multimedia (Hindawi) (Q3)	2017	1-9
21	Eman Thabet, <b>Fatimah Khalid</b> , Puteri Suhaiza Sulaiman and Razali Yaakob	2017	BRISK Local Corner Keypoints based Hand Position Estimation for Hand Gesture Trajectory Tracking Method	Journal of Advanced Science and Engineering Research	Vol. 7 No. 1	43-57

22	Husniza Razalli, H., Rahmat, R.W.O.K., Khalid, F., Sulaiman, P.S.	2017	An image-based children age range verification and classification based on facial features angle distribution and face shape elliptical ratio	Advanced Science Letters	Vol. 23 No. 5	4026-4030
23	Mohammed W. Ashour, <b>Fatimah Khalid</b> , Alfian A. Halin	2016	Multi-Class Support Vector Machines For Texture Classification Using Gray-Level Histogram And Edge Detection Features	International Journal Of Advances In Electronics And Computer Science ( Ijaecs )	Vol. 3 No.3	1-5
24	Soodabeh Safa, <b>Fatimah Khalid</b> , Lili Nurliyana Abdullah, Azreen Azman	2016	Multi View K-SVD Dictionary Learning for Plant Identification	International Journal of Applied Engineering Research (Q3)	Vol. 10 No. 6	14939-14951
25	S.H. Davarpanah, <b>F Khalid</b> , LN Abdullah, and M. Golchin	2016	A Texture Descriptor: Background Local Binary Pattern (BGLBP)	Multimedia Tools and Applications (IF: 1.06)	Vol. 75 No. 11	6549-6568
26	Husniza Razalli, Rahmita Wirza O.K. Rahmat, <b>Fatimah Khalid</b> , Puteri Suhaiza Sulaiman	2016	Automated Facial Features Points Localization for Age Estimation Based on Ideal Frontal Symmetry and Proportion of the Face	Journal of Telecommunication, Electronic and Computer Engineering	Vol. 8 No. 10	67-72
27	Rohollah Moosavi Tayebi, Rahmita Wirza, Puteri S B Sulaiman, Mohd Zamrin Dimon, <b>Fatimah Khalid</b> , Aqeel Al-Surmi and Samaneh Mazaheri	2015	3D multimodal cardiac data reconstruction using angiography and computerized tomographic angiography registration	Journal of Cardiothoracic Surgery	2015	1-25
28	Fereshteh Falah Chamasemani, Lilly Suriani Affendey, Norwati Mustapha and <b>Fatimah Khalid</b>	2015	A Framework for Automatic Video Surveillance Indexing and Retrieval	Research Journal of Applied Sciences, Engineering and Technology	Vol. 10 No. 11	1316-1321
29	Fereshteh Falah Chamasemani, Lilly Suriani Affendey, Norwati Mustapha and <b>Fatimah Khalid</b>	2015	Automatic Video Annotation Framework Using Concept Detectors	Journal of Applied Sciences	Vol. 15 No. 2	256-263

30	Mohammed W. Ashour, <b>Fatimah Khalid</b> , Lili N. Abdullah, Alfian A. Halin	2014	Artificial Neural Network-Based Texture Classification Using Reduced Multidirectional Gabor Features	International Review on Computers and Software (I.RE.CO.S.)	Vol. 9 No. 6	1007-1016
31	Aqeel A. Al-Surni, Rahmita W. Rahmat, Ramlan B. Mahmud, <b>Fatimah B. Khalid</b> and Zamrin Dimon	2014	A New Human Heart Vessel Identification Segmentation and 3D Reconstruction Mechanism	Journal of Cardiothoracic Surgery	Vol. 9 No. 1 (IF:1.11)	161-191
32	Roollah Moosavi Tayebi, Puteri Suhaiza Sulaiman, Rahmita W. Rahmat, Mohd. Zamrin Dimon, Suhaini Kadiman, <b>Fatimah Khalid</b> , Samaneh Mazaherin	2014	A Fast and Accurate Method for Automatic Coronary Arterial Tree Extraction in Angiograms	Journal of Computer Science	Vol. 10 No. 10	2060-2076
33	M. Golchin, <b>Fatimah Khalid</b> , Davarpanah S. H., N.A. Lili	2013	Shadow Detection using Color and Edge Information	Journal of Computer Science	Vol. 9 No. 11	1575-1588
34	Gawed Nagi, Rahmita Wirza Rahmat, Muhamad Taufik Abdullah, <b>Fatimah Khalid</b>	2013	Multimodal 2D-3D Face Recognition	International Journal of Future Computer and Communication	Vol. 2 No. 6	687-691
35	Siti Khadijah Ali, Rahmita Wirza Rahmat, <b>Fatimah Khalid</b> , Hassan H. Khalil	2013	Rational Equation for Simplifying Complex Surfaces	The Arabian Journal for Science and Engineering	Vol. 39 No. 6 (IF:0.243)	4617-4636
36	Aqeel A. Al-Surni, Rahmita W. Rahmat, Ramlan B. Mahmud, Zamrin Dimon and <b>Fatimah B. Khalid</b>	2013	3D Reconstruction of Human Heart Surface from Single Image-View under Different Illumination Conditions	American Journal of Applied Sciences	Vol. 10 No. 7	669-680
37	Gawed Nagi, Rahmita Wirza Rahmat, Muhamad Taufik Abdullah, <b>Fatimah Khalid</b>	2013	Region-based Facial Expression Recognition in Still Images	Journal of Information Processing Systems (JIPS)	Vol. 9 No. 1	173-188

38	Davarpanah S. H., <b>Fatimah Khalid</b> , M. Golchin	2012	An Effective History-based Background Extraction System	Journal of Computer Science	Vol. 8 No. 7	1062-1069
39	Davarpanah, S.H., <b>Fatimah Khalid</b> , N.A. Lili, S.S. Puteri and M. Golchin	2012	Using Multi-Scale Filtering to Initialize a Background Extraction Model	Journal of Computer Science	Vol. 8 No. 7	1077-1084
40	H.K. Bashier, E. Abdu Abusham and <b>F. Khalid</b>	2012	Face Detection Based on Graph Structure and Neural Networks	Academic Journals Inc.	Vol. 7 No. 8	683-691
41	Eimad Eldin Abdu Abusham, Housam Khalifa Bashier, <b>Fatimah Khalid</b> , Shohel Sayeed, Jakir Hossen and S.M.A. Kalaiarasi	2012	Illumination Normalization using Eimad-housam Technique	Academic Journals Inc.	Vol. 7 No. 8	692-700
42	Seyed Hashem Davarpanah, <b>Fatimah Khalid</b> and Maryam Golchin	2010	A Block-Based Multi-Scale Background Extraction Algorithm	Journal of Computer Science	Vol. 6 No. 12	1445-1451
43	<b>Fatimah Khalid</b> , Lili N. A.	2009	3D Face Recognition Using Multiple Features for Local Depth Information	International Journal of Computer Science and Network Security (IJCSNS)	Vol. 9, No. 1	27-32
44	<b>Fatimah Khalid</b> , Tengku Mohd. Tengku Sembok, & Khairuddin Omar	2007	Six Anchor Points Detection by Direct Points Calculation	Jurnal of ICT	Vol. 6	59-72
45	Housam Khalifa bashier, Eimad Eldin Abdu Abusham and <b>Fatimah Khalid</b>	2011	Face Recognition Using Housam-Eimad	Journal of Measurement Science and Instrumentation	Vol. 2	69-73
46	Housam Khalifa bashier, Eimad Eldin Abdu Abusham and <b>Fatimah Khalid</b>	2011	Graph Structure and Correlation Coefficient for Face Detection	Journal of Measurement Science and Instrumentation	Vol. 2	79-83
47	Gawed Nagi, Rahmita Wirza Rahmat, Muhamad Taufik Abdullah, <b>Fatimah Khalid</b>	2012	Face Detection and Recognition in AAS	International Review on Computers and Software (IRECOS)	vol. 7, no. 3,	959-964



48	Lili N.A, <b>F. Khalid</b> , N.M. Borhan	2011	Classification of herbs plant diseases via hierachical dynamic artificial neural network after image removal using kernel regression framework	International Journal on Computer Science and Engineering	Vol 3, No 1	15-20
49	Lili N.A,, N.M. Borhan and <b>F. Khalid</b>	2011	Herbs Plant Disease Recognition via Hierarchical Dynamic Artificial Neural Network	Advance in Multimedia - An International Journal	Vol. 3, No. 1	1-6
50	Siti Khadijah Ali, Rahmita Wirza O. K. Rahmat, <b>Fatimah Khalid</b> & Ng Beng Seng	2011	Mesh Simplification – A New Approach	Jurnal Teknologi, 56 (Sains & Kej.)		65–82
51	Lili N.A, <b>F. Khalid</b> , N.M. Borhan	2010	Classification of Herbs Plant Diseases via Hierarchical Dynamic Artificial Neural Network	Journal of Computer Science and Engineering	Vol 4, No 1	18-23
52	Lili N. A. & <b>Fatimah K.</b>	2009	Content Modeling for Human Action Detection via Multidimensional Approach	International Journal of Image Processing	Vol. 3, No. 1	17-30
53	Lili N. A., <b>Fatimah Khalid</b>	2009	Extracting and Integrating Multimodality Features via Multidimensional Approach for Video Retrieval.	International Journal of Computer Science and Network Security (IJCSNS)	Vol. 9, No. 2	252-257

## II. CONFERENCE PROCEEDINGS

No	Name of Writer(s)	Year Published	Title	Name of Seminar/Conference	Page Number
1	<b>Fatimah Khalid</b> , Nur Afiqah Kaman and Fatin Aliah Mohd Razib	2021	Lossless Compression Techniques: Review, Comparison and Analysis	11th International Conference on Internet Technologies & Society 2021	
2	Khaleel Al-Rababah, Mas Rina Mustafa,	2021	Hybrid Discrete Wavelet Transform and Histogram of Oriented Gradients for	2021 Fifth International Conference on Information Retrieval and Knowledge Management (CAMP)	31-35

	Shyamala C. Doraisamy, <b>Fatimah Khalid</b>		Feature Extraction and Classification of Breast Dynamic Thermogram Sequences		
3	Mohammed W. Ashour, <b>Fatimah Khalid</b> , Alfian Abdul Halin, Samy H. Darwish	2020	A Review on Steel Surface Image Features Extraction and Representation Methods	International Conference for Emerging technologies in Computing	239-250
4	Khaleel Al-Rababah, Mas Rina Mustaffa, Shyamala Doraisamy, and <b>Fatimah Khalid</b>	2020	Hybrid Discrete Wavelet Transform And Histogram Of Oriented Gradients For Feature Extraction And Classification Of Breast Dynamic Thermogram Sequences	Seminar on Information Retrieval and Knowledge Management 2020 (SIRKM'20)	54-56
5	Noor Amjed, <b>Fatimah Khalid</b> , Rahmita Wirza O.K. Rahmat, Hizmawati Bint Madzin	2019	An Efficient Non-Occluded Face Area Detection Method under Unconstrained Environment of Smartphone Database	The IEEE International Conference on Signal and Image Processing Applications (ICSIPA)	-
6	Noor Amjed, <b>Fatimah Khalid</b> , Rahmita Wirza O.K. Rahmat, Hizmawati Bint Madzin	2018	A Robust Geometric Skin Colour Face Detection Method under Unconstrained Environment of Smartphone Database	Third International Conference on Computational Science and Engineering (ICCSE2018)	-
7	Noor Amjed, <b>Fatimah Khalid</b> , Rahmita Wirza and Hizmawati Madzin	2018	Accurate Binary Conversion Method based on Illumination Distribution Model under Unconstrained Smartphone Face Database	International Conference on Computer Assisted Systems in Health CASH2018	-
8	Chamasemani, F.F., Affendey,	2018	Surveillance Video Retrieval Using	Proceedings - 2018 4th International Conference on	137-141

	L.S., Mustapha, N., <b>Khalid, F.</b>		Effective Matching Techniques	Information Retrieval and Knowledge Management: Diving into Data Sciences, CAMP 2018	
9	Eman Thabet, <b>Fatimah Khalid</b> , Puteri Suhaiza Sulaiman and Razali Yaakob	2017	Hand Gesture Trajectory Estimation Using Keypoints Combination of Brisk and Minimum Eigenvalue Techniques for Human Computer Interaction Applications	Research Article in First EAI International Conference on Computer Science and Engineering	1-5
10	Yahya, Z., Rahmat, R.W., <b>Khalid, F.</b> , Rizaan, A., Rahman, R.	2017	An automated 3D modelling application based on vertices from 2D paper sketches	ACM International Conference Proceeding Series	289-293
11	Chamasemani, F.F., Affendey, L.S., Mustapha, N., <b>Khalid, F.</b>	2017	Speeded up surveillance video indexing and retrieval using abstraction	Proceedings of the 2017 IEEE International Conference on Signal and Image Processing Applications, ICSIPA 2017	374-378
12	Eman Thabet, <b>Fatimah Khalid</b> , Puteri Suhaiza Sulaiman and Razali Yaakob	2016	BRISK Local Corner Keypoints based Hand Position Estimation for Hand Gesture Trajectory Tracking Method	CASH 2016	-
13	Mohammed W. Ashour, <b>Fatimah Khalid</b> , Alfian Abdul Halin, Samy H. Darwish	2016	Multi-Class Support Vector Machines for Texture Classification Using Gray-Level Histogram and Edge Detection Features	International Conference on Recent Innovation in Engineering and Technology (ICRIET)	-
14	Voon, W.P., Mustapha, N., Affendey, L.S., <b>Khalid, F.</b>	2016	A new clustering approach for group detection in scene-independent dense crowds	3rd International Conference on Computer and Information Sciences, ICCOINS 2016 - Proceedings	414-417
15	Chamasemani, F.F., Affendey, L.S., Mustapha, N., <b>Khalid, F.</b>	2016	A study on surveillance video abstraction techniques	Proceedings - 5th IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2015	470-475

16	Chamasemani, F.F., Affendey, L.S., Mustapha, N., <b>Khalid, F.</b>	2015	Object detection and representation method for surveillance video indexing	IEEE International Conference on Smart Instrumentation, Measurement and Applications, ICSIMA 2015	-
17	<b>Fatimah Khalid,</b> Zainal Abdul Kahar	2015	Heterogeneous Optical Flow-Based Tracking for Traffic Control	International Postgraduate Conference on Social Science, Science and Technology (IPCSST 2015)	-
18	Mohammed W. Ashour, <b>Fatimah Khalid,</b> Alfian Abdul Halin and Lili Nurliyana Abdullah	2015	Machining Process Classification using PCA-Reduced Histogram Features and the Support Vector Machine	2015 IEEE International Conference on Signal and Image Processing Applications	414-418
19	Soodabeh Safa, <b>Fatimah Khalid,</b> Lili Abdullah and Azreen Azman	2014	A New Bag of visual Words model Using Fuzzy c-means Clustering for plant Classification	The 3rd International Conference on International Digital Media (ICIDM 2014)	1-4
20	Mohammed W. Ashour, <b>Fatimah Khalid,</b> Mohammed Al-Obaydee	2013	Supervised Ann Classification For Engineering Machined Textures Based On Enhanced Features Extraction And Reduction Scheme	International Conference on Artificial Intelligence in Computer Science and ICT (AICS 2013)	71-80
21	Abdallah A. Alomari, <b>Fatimah Khalid,</b> Rahmita O.K. Wirza and Muhamad Taufik Abdullah	2010	A State of Art on Image-Based Face Recognition Approaches	2010 International Conference on Intelligent Network and Computing (ICINC 2010)	V1-18
22	Abdallah A. Alomari, <b>Fatimah Khalid,</b> Rahmita O.K. Wirza and Muhamad Taufik Abdullah	2010	Expression Invariant Face Recognition using Multi-Stage 3D Face Fitting with 3D Morphable Face Model	2010 International Conference on Computer Applications and Industrial Electronics (ICCAIE 2010)	1-5
23	<b>Fatimah Khalid,</b> Tengku Mohd. Tengku Sembok and Lili N. A.	2009	3D Facial Feature Localization for Verification	International Conference on Robotics, Vision, Information and Signal Processing	P1204

24	Abdallah A. Alomari, <b>Fatimah Khalid</b> , Rahmita O.K. Wirza and Muhamad Taufik Abdullah	2011	A state of art on 3D face modeling approaches	International Conference on Electrical Engineering and Informatics (ICEEI2011)	B1-5
25	Gawed Nagi, Rahmita Wirza Rahmat, Muhamad Taufik Abdullah, <b>Fatimah Khalid</b>	2010	Face Recognition in Real-Time Environments	Proceeding of 3 <sup>rd</sup> International Conference on Machine Vision (ICMV 2010)	-
26	Siti Khadijah Ali, Rahmita Wirza, <b>Fatimah Khalid</b>	2010	Mesh Simplification	Proceeding of Annual International Conference on Infocomm Technologies in Competitive Strategies (ICT2010)	1-86
27	Rahmita Wirza, Aqeel A. Al-Surmi, Mohd. Zamrin Dimon, Ramlan Mahmud and <b>Fatimah Khalid</b> ,	2012	<i>Single Image Reconstruction of Human Heart Surface with Specular Reflection Remover,</i>	Proceeding of International Conference on Advanced Computer Science Applications and Technologies ACSAT 2012	-
28	Hazura Zulzalil, Nur Izura Udzir, <b>Fatimah Khalid</b> , Rusli Abdullah, Azrina Kamaruddin.	2001	<i>A Study on Usability Web Pages Using Heuristic Evaluation.</i>	Proceeding of the International Conference in Information Technology and Multimedia.	479-484.
29	<b>Fatimah Khalid</b> , Azrina Kamaruddin, Hazura Zulzalil, Noraini Che Pa, Yusmadi Yah Jusoh	2002	<i>A Study on Usability Web Pages Using Heuristic Evaluation</i>	<i>Second World Engineering Congress 2002, 22-25 July 2002, Kuching, Sarawak.</i>	200
30	<b>Fatimah Khalid</b> , Azrina Kamaruddin, Hazura Zulzalil, Noraini Che Pa, Rabiah A. Kadir..	2002	<i>EASYLAH: A Prototype of On-line Survey using Multimedia Effect and Marketing Strategy in Malaysia.</i>	<i>Second World Engineering Congress 2002, 22-25 July 2002, Kuching, Sarawak.</i>	503-507
31	<b>Fatimah Khalid</b> & Tengku Mohd. Tengku Sembok.	2005	<i>Three-dimensional Model Based Face Recognition : A Literature Overview.</i>	<i>Proceedings of Brunei International Conference On Engineering And Technology.</i>	73-78
32	<b>Fatimah Khalid</b> , Tengku Mohd.	2005	<i>A Gradient-based Facial Composition on System.</i>	<i>Proceeding of International Conference on Robotics, Vision,</i>	819-823.

	Tengku Sembok, & Khairuddin Omar.			<i>Information and Signal Processing.</i>	
33	<b>Fatimah Khalid,</b> Tengku Mohd. Tengku Sembok.	2007	<i>A Set of Scalar Features Representation for 3D Face.</i>	<i>Proceedings of 2nd International Conference on INFORMATICS 1</i>	T5-11.
34	<b>Fatimah Khalid,</b> Tengku Mohd. Tengku Sembok	2007	<i>Face Recognition Using 24 3D Local Geometrical Features: PCA.</i>	Proceedings of Computer Artificial Intelligence Technology Conference.	-
35	<b>Fatimah Khalid,</b> Tengku Mohd. Tengku Sembok	2008	<i>Face Recognition Using Local Geometrical Features – PCA with Euclidean Classifier.</i>	Proceedings of International Symposium on Information Technology	1034-1039
36	Rabiah Abd Kadir, Lili Nurliyana, <b>Fatimah Khalid</b>	2002	<i>Application of Audio Digitizing</i>	Proceedings of National Conference on Computer Graphics & Multimedia '02	218-223
37	Lili Nurliyana, Rabiah Abd Kadir, <b>Fatimah Khalid</b>	2003	<i>Transition to Video.</i>	<i>Proceedings of First Malaysia-France Regional Workshop on Image Processing in Vision Systems and Multimedia Communication</i>	35-40
38	Lili Nurliyana, Rabiah Abd Kadir, <b>Fatimah Khalid</b>	2003	<i>How to integrate Multimedia Technology in the Mathematical Science</i>	Proceedings of National Seminar on Mathematics And Science XI	-
39	<b>Fatimah Khalid,</b> Tengku Mohd. Tengku Sembok	2005	<i>3D Face Representation using COSMOS</i>	Seminar Siswazah UKM	-
40	<b>Fatimah Khalid,</b> Tengku Mohd. Tengku Sembok	2006	<i>Direct Point Calculation to Facial Feature Extraction.</i>	Seminar Siswazah, Kustem	-
41	L. N. Abdullah, R. A. Kadir, <b>F. Khalid.</b>	2004	Malaysia Case Study: Transition from GSM, GPRS to UMTS.	<i>MMU, Malacca.</i>	-
42	L. N. Abdullah, R. A. Kadir, F. Khalid.	2004	A Content Based Approach to Video Retrieval and Browsing.	<i>MU, PWTC, KL.</i>	-

### III. MODULE

1. Azrina Kamaruddin, Hazura Zulzalil, **Fatimah Khalid**. 2000. *Interaksi Manusia Komputer (SIM 3202) Modul PJJ: IDEAL, Jilid 1*.

### IV. BULLETIN

**Fatimah Khalid**. 2009. 3d Facial Recognition using Local Geometric Features for Pose and Expression Variation, *Research Bulletin*, Faculty of Computer Science and Information Technology, UPM.

### V. THESIS

1. "3D Facial Recognition Using Local Geometric Features for Pose and Expression Variation", **PhD in Computer Science**, Faculty of Technology and Information System, University Kebangsaan Malaysia, 2008.
2. "Trigonometry Software : The use of Multimedia Technology" , Master in Information Technology, Faculty of Technology and Information System, University Kebangsaan Malaysia, 1998.

### CONFERENCES / SEMINARS ATTENDED

1. **Presenter** at the *2019 IEEE International Conference on Signal and Image Processing Applications (ICSIPA2019)*, Hilton, Kota Kinabalu, Sabah, 29– 30 August 2018.
2. **Invited Presenter** at the *FCIT 1<sup>st</sup> Scientific Forum 2018: Health Informatics, Robotics, Informations Security*, paper entitled "Scalable Region Based Lossless Compression for Medical Imaging in Mobile Application", Faculty of Computing and Information Technology, Tabuk University, Saudi Arabia, 25 – 26 February 2018.
3. **Presenter** at the *Third International Conference on Computational Science and Engineering (ICCSE2018)*, Hilton, Kota Kinabalu, Sabah, 29– 30 August 2018.
4. **Session Chair** at the *International Conference on Computer Assisted System in Health (CASH2018)*, Palace of Golden Horses, Kuala Lumpur, 1 – 2 September 2018.
5. **Presenter** at the *International Postgraduate Conference on Social Science, Science and Technology (IPCSSST 2015)*, The Klagan Regency, Kota Kinabalu, Sabah, 11– 12 August 2015.
6. **Session Chair** at the *International Conference on Computer Assisted System in Health (CASH2014)*, Palm Garden Hotel Putrajaya, 19 – 21 December 2014.
7. **Presenter** at the *3rd International Conference on International Digital Media (ICIDM 2014)*, The Sutera Harbour Resort, Kota Kinabalu, Sabah, 2 – 4 December 2014.
8. **Session Chair** and **Presenter** at the *International Conference on Artificial Intelligence in Computer Science and ICT (AICS 2013)*, paper entitled "Supervised Ann Classification For Engineering Machined Textures Based On Enhanced Features Extraction And Reduction Scheme", 25 - 26 November 2013, Langkawi, MALAYSIA.
9. **Session Chair** at the *International Conference on Advanced Computer Science Applications and Technologies (ACSAT'13)*, Sheraton Kuching, Sarawak, 22 – 24 December 2013.

10. **Invited Presenter** at the *Workshop on Advanced Information Technology (WIT-A 2012)*, paper entitled "Face Detection based on Graph Structure and Neural Networks", School of Computer Science and Engineering, UNSW, Australia, 25 – 27 June 2012.
11. **Session Chair** and Participant at the *International Conference on Advanced Computer Science Applications and Technologies (ACSAT'12): Workshop on Computer Assisted Surgery and Diagnostic (CASD)*, paper entitled "Integration of Heterogeneous Databases for Medical Experts, The Palace of the Golden Horses Hotel, Kuala Lumpur, 27 – 28 November 2012.
12. **Exhibitor** at the *Pameran Product Technoexchange NEF-AWANI ICT Fair*, PWTC, 10 – 11 February 2012.
13. Participant at the *International Conference on Information Retrieval and Knowledge Management (CAMP'12)*, Mines Wellness Hotel, Kuala Lumpur, 13 – 15 March 2012.
14. **Presenter** at the *Multimedia Departmental Seminar*, FSKTM, UPM, paper entitled "Face Detection based on Graph Structure and Neural Networks", 23 July 2012.
15. Participant at the *Bumiputera Technopreneur Dialogue with Y.A.B. Dato' Sri Mohd Najib Tun Razak*, 21 June 2012.
16. **Presenter** at *International Conference on Electrical Engineering and Informatics*, Institut Teknologi Bandung, Bandung, Indonesia, 17-19 July, 2011.
17. **Presenter** at the *Exhibition in Design, Research, and Innovation (PRPI)*, Great Hall, UPM, paper entitled "3D Face Recognition", 28 July 2009.
18. **Presenter** at *7<sup>th</sup> International Conference on ROBOTICS, VISION, INFORMATION AND SIGNAL PROCESSING (ROVISIP)*, Langkawi, Malaysia, 19-20 December, 2009.
19. **Session Chair** at *7<sup>th</sup> International Conference on ROBOTICS, VISION, INFORMATION AND SIGNAL PROCESSING (ROVISIP)*, Langkawi, Malaysia, 19-20 December, 2009.
20. Participant at the *Program Melestari Budaya Organisasi Prestasi Tinggi*, Pejabat Pendaftar, UPM, 15-17 May 2009.
21. Participant at the *Seminar on Enhancing Teaching Effectiveness*, FSKTM, UPM, 18 February 2009.
22. **Presenter** at the *Multimedia Departmental Seminar*, FSKTM, UPM, paper entitled "3D Facial Recognition Using Local Geometric Features for Pose and Expression Variation", November 2008.
23. **Presenter** at *International Symposium on Information Technology*, UKM, KLCC, 26 – 29 August 2008.
24. **Presenter** at *2<sup>nd</sup> International Conference on INFORMATICS 1*, UM, PJ Hilton, 28 Nov 2007.
25. **Presenter** at *Computer Artificial Intelligence Technology Conference*, UKM, Bangi, 12 Nov 2007.
26. **Presenter** at *Computer Science and Mathematics Symposium*, KUSTEM, Terengganu, 8 – 9 Nov 2006.
27. Participant at the *Computer Science and Mathematics Symposium (CSMS)*, KUSTEM, Terengganu, 8-9 November, 2006.
28. **Presenter** at the *International Conference on Robotics, Vision, Information and Signal Processing*, USM, Penang, 20-22 July 2005.
29. **Presenter** at *Seminar Siswazah*, UKM, Bangi, 12 – 15 Sept 2005.
30. Participant at *5<sup>th</sup> International Conference on ROBOTICS, VISION, INFORMATION AND SIGNAL PROCESSING (ROVISIP)*, USM, Penang, 20-22 July, 2005.
31. Participant at the *Seminar Siswazah FTSM (UKM)*, Allson Kelana, Selangor, 15 Disember 2004.
32. **Presenter** at the *National Conference on Computer Graphics & Multimedia '02*, P UTM , Melaka, utrajaya, 2002.



33. **Poster presenter** at the *Second World Engineering Congress*, UNIMAS, Kucing, paper entitled “Virtual Academy-Distance Education using Automated Responding System”, 22-25 July 2002.

## AWARDS RECEIVED

### I. INTERNATIONAL

#### Malaysia Technology Expo (ITEX), PWTC, KL.

- **Gold** medal for project entitled, “3D Depth Measurement using Images via Rotational Optical Flow Magnitude”, Rahmita Wirza Rahmat, Lili Nurliayana, Ahmad Suhail Azmi, Ng Seng Beng, **Fatimah Khalid** and Oteh Maskon, 17 May 2012.

### II. NATIONAL

1. Exhibition in Design, Research, and Innovation (PRPI), Great Hall, UPM.
  - **Bronze** medal for project entitled, “3D Face Recognition”, **Fatimah Khalid**, 20 – 22 July 2009.
  - **Silver** medal for project entitled, “Malay Interrogative Knowledge Identifier”, Fatimah Sidi, Marzanah A.Jabar, Iskandar Ishak, Lilly Suriani Affendy, Nor Fazlida Mohd. Sani, Aida Mustapha, **Fatimah Khalid**, and Rodziah Atan, 26 – 28 September 2013.
2. Excellent Service Awards for year 2005 to 2014, Universiti Putra Malaysia
3. Excellent Teaching Awards for year 2011-2014, FSKTM, UPM.
4. Excellent Grant Awards, 2011 and 2014, FSKTM, UPM.

## RECOGNITION

### I. THESES EXAMINATION

#### PhD (as a chairman of the examination committee’s thesis - viva)

1. Ahmad Shahi Soozaei, *Naïve Bayesian Decision Model for the Interoperability of Heterogeneous Systems in An Intelligent Building Environment*, 2015.
2. Asif Iqbal, *A New Anomaly Detection Framework for Heterogeneous Logs*, 2013.

#### PhD (as an internal examiner)

1. Nasr Addin Ahmed Salem Al-Maweri, *A Dynamic Integrated Digital Watermarking System for Digital Documents Protection from Unauthorized Distribution*, 2015.
2. Zaher Hamid Saleh Al-Tairi, *Hand Interaction for Deformable Objects*, 2014.
3. Anas A Abboud, *Measuring Right Ventricular Volume Using 3D*, 2013.
4. Fatemeh Safara, *Cumulant-Based Basis Selection and Feature Extraction for Improving Heart Sound Classification*, 2013.

5. Faten Abed Ali Dawood, *Echocardiography Velocity Analysis of Right Ventricular in 3D-Echocardiography Using Hybrid Method for Endocardial Motion Tracking*, 2013.
6. Hassan Hadi Khalil, *Automated Indication of Vessel Location in Cardiovascular Angiography using 3D Surface Reconstruction of Coronary Artery Tree*, 2011.
7. Mas Rina Mustafa, *Content-Based Image Retrieval Through Extended Normalised Ridgelet-Fourier and Multi-Resolution Joint Auto Correlograms*, 2011.
8. Md Nabil Ahmad Zawawi, *A Framework for Robust Image Steganography in 2D Images*, 2012.

**MSc (as an internal examiner)**

1. Kavitha Jaganathan, *Single Hand Indian Classical Gesture Recognition Based On DWT and DCT Feature Extraction*, 2015.
2. Saleheh Heidari, *Pulmonary Nodules Extraction by Image Processing Techniques*, 2015.
3. Erfan Mirzabeiki, *Visualization of Extracted Grammatical Role of the Words using Parse Tree Conversion to Improve Understanding of English Text*, 2014.
4. The Chao Ying, *Genre and Mood Classification Using Lyrics Text*, 2013.

**External Examiner**

**PhD theses:**

- Ahmad Yahya Dawod, *Hand Gesture Recognition Based on Isolated and Continuous Sign Language*, 2017, Faculty of Technology and Information Science, The National University of Malaysia.
- R. Sonia, *Integrated Approach for Down Syndrome Detection from Ultrasound Fetal Images during First Trimester in Singleton Pregnancies*, 2017, Faculty of Computer Science and Engineering, Sathyabama University.
- Khamis Masaoud Salem Ahmed, *Ear Recognition using Stochastic Clustering Method and Iterative Closest Point Algorithm*, 2016, Faculty of Technology and Information Science, The National University of Malaysia.
- Suriati Abdul Aziz, *Model Konsep Persembahan Multimedia Bersepadu bagi Guru di Malaysia*, 2015, School of Multimedia Technology and Communication, Universiti Utara Malaysia (UUM) Sintok, Kedah, Malaysia.

**Master of Information Technology theses:**

- Iman Mohamed Burhan, *Multi-View Gait Recognition Based On Enhanced Gait Energy Image and Radon Transform Techniques*, 2015, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.
- Inass Shahadha Hussein, *Palmprint Recognition Using Invariant Moments Based on Wavelet Transform*, 2014, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.
- Ghassan Jasim Mohammed, *Automatic Driver Drowsiness Detection Using HAAR Algorithm and Support Vector Machine (SVM) Techniques*, 2014, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.
- Mohammed Majeed Razooq, *Texture Analysis and Classification using Feature Extraction Methods Based on Random Forest and Decision Tree*, 2014, Faculty of

Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.

- Zahraa Jabbar Hussein, *Palmpoint Recognition using Generalization Bag of Words of DSF*, 2012, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.
- Ma Jie, *Medical Image Segmentation Enhancement using Threshold Based Method*, 2012, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.
- Zinah Rajab Hussein, *Influence Diagnostic Accuracy in Dynamic Echocardiograph by Combination of Qualitative and Quantitative Analysis*, 2010, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.
- Negin Karimi Hosseini, *Human Gait Recognition : A Silhouette Based Approach*, 2013, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.
- Layla Watangli Ashrif Mosh, *N-Seed Region Growing For Automated Oil Palm Fresh Fruit Bunch Plucking System*, 2013, Faculty of Technology and Information Science, Universiti Kebangsaan Malaysia (UKM), Bangi, Selangor.

## II. EDITORIAL BOARD/TECHNICAL EDITOR/REVIEWER

### Journal

1. **Reviewer**, Journal of Information and Communication Technology for the paper titled “Eye Blink Detection Based on Template Matching Technique”, 2016
2. **Reviewer**, Journal of Information and Communication Technology for the paper titled “Road Triangle Detection for Non-Road Area Elimination using Lane Detection and Image”, 2016
3. **Reviewer**, Journal of Information and Communication Technology for the paper titled “iFreePhony: Minimalistic Interface for a Developing Country Community”, 2016
4. **Reviewer**, IET Computer Vision for paper titled “Morphmap for Nonlinear Dimensionality Reduction”, 2013.
5. **Reviewer**, IET Computer Vision for paper titled “Adaptive Shadow Detection Using Global Texture and Sampling Deduction”, 2012.
6. **Reviewer**, International Journal of Speech Technology (IJST) for paper titled “An Overview of Digital Speech Watermarking Techniques”, 2012.
7. **Reviewer**, *Pertanika Journal (Scopus)*, UPM, for paper entitled “T3D Visualization Approach for Wayang Kulit (Shadow Play Theatre) in Malaysia”, 2011.
8. **Reviewer**, *Pertanika Journal (Scopus)*, UPM, for paper entitled “Development of graphic symbols based on tropical plant images in decorative tiles production”, 2011.
9. **Reviewer**, *Pertanika Journal (Scopus)*, UPM, for paper entitled “CBIR using colour and shape fused features”, 2012.
10. **Reviewer**, Jurnal Teknologi (UTM), UPM, for paper entitled “Real-Time Eye Tracking and Iris Localization”, 2009.

### Proceedings

1. **Review Committee**, *Asia Information Retrieval Society Conference (AIRS 2014)* for a paper titled "Characteristic Classification of Durian Varieties Images for Knowledge Representation by Using Conceptual Graph", 2014.
2. **Review Committee**, *Asia Information Retrieval Society Conference (AIRS 2014)* for a paper titled "Enhanced FastPFOR for Inverted Index Compression", 2014.
3. **Technical Reviewer**, *The International Conference on Information Retrieval and Knowledge Management (CAMP '12)*, Kuala Lumpur, Malaysia, 2012.
4. **Technical Reviewer**, *The International Conference on Advanced Computer Science Applications and Technologies (ACSAT'12): Workshop on Computer Assisted Surgery and Diagnostic (CASD)*, Kuala Lumpur, November 2012.
5. **Review Committee**, *International Symposium on Information Technology (ITSIM' 10)*, KLCC, KL, 2010.
6. **Review Committee**, *The IEEE International Conference on Signal and Image Processing Applications (ICSIPA09)* which will be held in Kuala Lumpur, Malaysia on 18-19th November 2009.
7. **Reviewer Committee**, *IEEE Symposium on Computers and Informatics*, Kuala Lumpur, 2010.
8. **Reviewer Committee**, *IEEE Symposium on Computers & Informatics (ISCI'11)*, Kuala Lumpur, 2011.
9. **Reviewer Committee**, *IEEE Conference on Computer Applications & Industrial Electronics (ICCAIE 2011)*, Penang, Malaysia, 2011.
10. **Reviewer Committee**, *IEEE International Conference on Signal & Image Processing Applications (ICSAPA 2011)*, Kuala Lumpur, Malaysia, November 2011.
11. **Reviewer Committee**, *IEEE Conference on Open Systems (ICOS 2011)*, Langkawi, Malaysia, December 2011.

### Research Proposals

1. Review Committee, *Exploratory Research Grant Scheme Fasa 1/2011*, FSKTM, UPM, 24 Mac 2011
2. Review Committee, *Fundamental Research Grant Scheme Fasa 1/2011*, FSKTM, UPM, 30 Mac 2011.
3. Review Committee, *Fundamental Research Grant Scheme Fasa 1/2011*, FSKTM, UPM, February 2012.

### III. PROFESSIONAL MEMBERSHIPS

1. Member, IEEE Computer Society

## INVOLVEMENT / COMMITTEE MEMBERSHIP / EXTENSION

### 1. INTERNATIONAL LEVEL

1. **Program Committee**, *Seminar on Information Retrieval and Knowledge Management (SIRKM'17)*, FSKTM, UPM, July 2017.

2. **Program Committee**, International Conference on Advanced Computer Science Applications and Technologies (ACSAT'12), Kuala Lumpur, November 2012.
3. **Organizing Committee**, The International Conference on Information Retrieval and Knowledge Management (CAMP'12), Kuala Lumpur, 2011-2012.
4. **Organizing Committee**, Research and Development on Computer Science (Redecs '01), 2001.

### 3. NATIONAL LEVEL

1. **University Putra Malaysia Quality Assurance Evaluator Panel**, 2018-2020.
2. **University Kebangsaan Malaysia Quality Assurance Evaluator Panel**, Master of Multimedia System, 15-16 January 2019.
3. **External Final Examination Assessor**, Bachelor Programs of Computer and Information Technology, Al-Madinah International University, 24 July 2018.
4. **Program Evaluator**, Diploma in Multimedia, Kolej Poly-Tech MARA, 2014-2017.
5. **Program Evaluator**, Master of Science in Multimedia Studies, Universiti Utara Malaysia, 29<sup>th</sup> April, 2014.
6. **Head of Examiner**, Multimedia Course, Matriculation Program of Computer Science, Kementerian Pelajaran Malaysia, 29 April – 5 May 2014 **until now**.
7. **Trainer and Facilitator**, MS Office 2007: Word and Excel Course for staff of Ministry of Higher Education Malaysia (Education Sponsorship Division), 19 – 20 June 2012.
8. **Head of Group Examiner**, Matriculation Program of Computer Science, Kementerian Pelajaran Malaysia, 2012 **until now**.
9. **Examination Question Evaluator**, Matriculation Program of Computer Science, Kementerian Pelajaran Malaysia, 2012 **until now**.
10. **Examination Question Drafter**, Matriculation Program of Computer Science, Kementerian Pelajaran Malaysia, 2012 **until now**.
11. **Examination Question Interpreter**, Matriculation Program of Computer Science, Kementerian Pelajaran Malaysia, Mei, 2012.
12. **Examination Question Interpreter**, Matriculation Program of Computer Science, Kementerian Pelajaran Malaysia, September, 2012.
13. **Program Coordinator**, Francais Program (College Shah Putra), 2002-2004.

### 4. UNIVERSITY LEVEL

1. **Internal Auditor**, Quality Management System of Research and Commercial Development, Office of the Deputy Vice Chancellor (Research and Innovation), UPM, 2008 – 2010.
2. **Member**, PERMATA UPM, since 2011.
3. **Member**, Muslimin Cooperation (*Koperasi Muslimin*), since 2001.

### 5. FACULTY LEVEL

1. **Expert Reference**, Teaching and Research of SKM 4205 (Digital Image Processing), FSKTM, UPM, 2012.
2. **Accompany** UPM auditors during Monitoring Audit by UPM, 18-22 May 2009.

3. **Coordinator**, Computer Graphic and Animation (SKM/SMM 2302) course for the UPM-IPTS Bachelor Franchise programme since 2009.
4. **Coordinator**, Shah Putra College for the UPM-IPTS Bachelor Franchise programme
5. **Coordinator**, Graphic and Animation (SKM 2302) course for the UPM-IPTS Bachelor programme
6. **Committee**, Faculty's Annual Report, FSKTM, UPM 2008 - 2009.
7. **Committee**, Faculty's Research Bulletin, FSKTM, UPM, 2008 - 2009.
8. **Committee**, Mobile System Unit, FSKTM, UPM, since 2012.
9. **Committee**, Software Development Unit, FSKTM, UPM, since 2011.
10. **Assessor**, Industrial Training of the Faculty, since 2008.
11. **Assessor**, Final Examination Question Paper Assessment Committee for UPM-IPTS Diploma Franchise programme, since 2009.
12. **Assessor**, Final Examination Question Paper Assessment Committee for Graduate Studies, FSKTM, UPM, 2011.
13. **Editorial**, *Penerbitan Unit Pembangunan Perisian*, FSKTM, 2011.
14. **Facilitator**, *Bengkel Penyediaan Pengkomersilan*, Residence Hotel UNITEN, 18 – 19 October, 2012.
15. **Facilitator**, *Android Programming Workshop*, FSKTM, UPM, 8 March, 2012.
16. **Instructor and Organizer**, *Bengkel Penyediaan Dokumen Hak Cipta*, Bilik Seminar C, FSKTM, UPM, 12 July, 2012.
17. **Organizer**, *Bengkel Patent*, Bilik Seminar C, FSKTM, UPM, 1 August, 2012.

## 6. DEPARTMENT LEVEL

1. **Chairperson**, Final Year Project Committee, since 2008.
2. **Chairperson**, Research Project of "*Pembangunan Automasi Kehadiran Pelajar Menggunakan Pengecaman Muka*", 2008.
3. **Assessor**, Final Examination Question Paper Assessment Committee for Bachelor, since 2008
4. **Assessor**, Final Examination Question Paper Assessment Committee for Master, since 2010
5. **Assessor**, Final Year Students' Project (SMM 4999), since 2008.
6. **Committee Member**, Curriculum Evaluation Committee, since 2012.
7. **Coordinator**, Final Year Students' Project (SMM 4999), FSKTM, UPM, since 2008.
8. **Course Coordinator**, for courses on Multimedia Introduction (SMM 2005/2300).
9. **Experts**, sub fields research studies, FSKTM, UPM, 2011.

## STUDENTS DEVELOPMENT

1. **Academic Advisor** for Bachelor of Computer Science (Multimedia) students.
2. **Committee Member** for *Program Sepetang bersama PA-Pelajar* organized by Department of Multimedia, FSKTM, UPM, at FSKTM, UPM, 2011.
3. **Committee Member** for *Program ITniti* organized by Department of Multimedia, FSKTM, UPM, at FSKTM, UPM, 2011.
3. **Speaker** at the *Bengkel Pengukuhan Projek Tahun Akhir*, Department of Multimedia, FSKTM, UPM, 2008-2012.

## COMMUNITY INVOLVEMENT

1. Community Program to *MRSM School, Kuala Kelawang*, 6 October, 2017.
2. Community Program to *Perkampungan Orang Asli Sungai Ruil, Cameron Highland*, June 25 – 26, 2010.
3. Volunteer for provision of assistance to the disaster victims at *Perkampungan Orang Asli Sungai Ruil, Cameron Highland*, August 16, 2011.
4. Community Program to *Rumah Amal Anak Yatim, Kampung Sungai Manggis, Selangor*, 2011.

## CONTACT DETAILS

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