# **CURRICULUM VITAE**



# 1. PERSONAL INFORMATION

Name	Farid Bin Zubir
Designation/Title	Assistant Professor / Senior Lecturer / Dr.
First Appoinment Date in UTM	28/10/2009
Full time/Contract	Full Time
Citizenship	Malaysian
E-mail	faridzubir@utm.my or farid@fke.utm.my
Telephone	(+6) 013 238 1905
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# 2. ACADEMIC QUALIFICATION

Aug 2008	008 Bachelor of Engineering (Electrical – Telecommunication)		
	Universiti Teknologi Malaysia		
Dec 2010	Master of Engineering (Electrical) – Microwave Engineering		
	Universiti Teknologi Malaysia		
Jan 2016	Doctor of Philosophy (RF/Microwave & Communication Engineering)		
	The University of Birmingham, United Kingdom		
Sept 2019 -	Honorary Postdoctoral Fellow		
Aug 2021	The University of British Columbia, Canada		

### 3. MEMBERSHIP IN PROFESSIONAL BODIES

No.	Name	Status	Registration no.
1.	Board of Engineers Malaysia	Member	76322A
2.	IEEE Professional	Member	90508873

# 4. COURSES TAUGHT

2010/2011 – 2	SEW3742 – Digital Communication Laboratory		
	SEU2712 – Electrical Practice Workshop		
	SEU2712 – Electrical Practice Workshop		
2011/2012 – 1	SET4722 – Advanced Microwave Laboratory		
	SEE3732 – Basic Communication Laboratory		
	SEE2742 – Digital Electronic Laboratory		
	SEE2742 – Digital Electronic Laboratory		
Dec 2011 – June 2015	Study Leave (PhD) – University of Birmingham, United Kingdom.		
2015/2016 - 1	2015/2016 – 1 CAPSTONE Project – Radar Laboratory (Final year lab)		
	SKEE3732 – Instrumentation Laboratory		
2016/2017 – 1	SKEU2003 – Electrical Technology		
	SKEU2003 – Electrical Technology		
	SKEE3732 – Basic Communication Laboratory		
2016/2017 – 2	SKEU2012 – Electronics		
	SKEE2742 – Electrotechnics Laboratory		
	SKEE3742 – Basic Microwave Laboratory (3 <sup>rd</sup> year PBL)		

SKEE2073 – Signals and Systems	
CAPSTONE Project – Radar Laboratory (Final year lab)	
SKEE2523 – Electromagnetic Theory	
SKEE2742 – Electrotechnics Laboratory	
SKEU2033 – Circuit Theory	
SKEU2012 – Electronics	
SEEE2073 – Signals and Systems	
SEEU2012 – Electronics	
SEEE1022 – Introduction to Scientific Programming	

# 5. SUPERVISION

# Ph.D

Year	Name	Status	Title	Role	
		Adaptive Beamforming			
2015	Murtala Aminu-Baba	Completed	Network for Wireless	Co-Supervisor	
			System		
			Wideband Class E		
2017	Khairul Hilmi Yusof		Outphasing	Main	
		On-going	Transmitting Amplifier.	Supervisor	
			Metamaterial-Based		
			Dual-band Butler	Main	
2021	Abdulkadir Bello Shallah	On-going	matrix for 5G	Supervisor	
			Applications		

### <u>Master</u>

Year	Name	Status	Title	Role	
2015	Shallah Abdulkadir Bello	Completed	Microstrip Reflectarray Antenna using Second Iteration Minkowski- like Radiating Element	Supervisor	
2015	Nur Syahirah Mohd Yaziz	Completed	Active Compact Log- Periodic Antenna	Co-Supervisor	
2015	Amerrul Zabri	Completed	Wireless Sensor Node Incorporated with Dipole, Yagi and Fractal Antenna for Video Monitoring Application	Co-Supervisor	
2016	Norsaidah Muhamad Nadzir	Completed	Wireless Sensor Node with Passive RFID for Indoor Monitoring System	Co-Supervisor	
2018	Kirish Boodhoo	Completed	Design of Multiband Matching Network for Highly Efficient Power Amplifier	Supervisor	
2018	Wang Yao	Completed	8-port 5G Massive MIMO in Sub-6 GHz Base Station for LTE Bands 43/46 Application	Supervisor	

# B.Eng.

Year	Name	Status	Title	Role
2016	Reuban Rao Radhakrishnan	Completed	Highly Efficient Power Amplifiers	Supervisor
2017	Fatin Iswani Azmi	Completed	Millimeter wave 5G Antenna for Mobile Handset	Supervisor
2018	Siti Nadia Bazle	Completed	Millimeter wave Substrate Integrated Waveguide Antennas	Supervisor
2019	Shihabuddin Kabashi Khatir Kabashi	Completed	Development of Highly Efficient Rectification Circuit	Supervisor
2021	Octavia Odella Ujai	Completed	High-efficiency and Wideband Radio Frequency Power Amplifier	Supervisor

### 6. POSTGRADUATE EXAMINATION / VIVA

# M.Sc. Internal Examiner

Year	Name	Project Title
2016	Basliza Mohamad Noor Rectangular Patch Antenna at 30G	
		Monopole Antenna with Modified
2017	Owusu Joseph	Ground Plane for Second Generation
		Terrestrial Digital Video Broadcasting in
	Handheld Devices	
2017	Chan Swuei Ngan Filtering Antenna for WLAN Applicati	
		Circular Polarisation Folded
2018	Lim Jit Min	Reflectarray Antenna for 5G
		Applications
		A Dual-Band Hybrid MIMO Dielectric
2018	Irene Kong Cheh Lin	Resonator Antenna for LTE
		Applications
2019	Mohd Wafi Fahmi Zainal Arifin	Filtenna using Metamaterial for WiMax
		Application

# M.Eng. External Examiner

Year	Name / University	Project Title
2021	Md. Golam Sadeque / Multimedia	High-Efficiency And Wideband Radio
	University	Frequency Power Amplifier For 3.3GHz
		To 4.3GHz
	An Ultra-Wideband Antenna Wit	
2022	Munirah Az Zahra binti Abdul Rashid /	Band-Notched Characteristics For
	Univ. Tun Hussein Onn Malaysia	Wearable Application

### 7. RESEARCH ACTIVITIES

# Research University Grant (RUG) UTM

Ref. No.	Research Title	Approved	Role
PY/2011/00199	Bandwidth Enhancement Technique for Dielectric Resonator Antenna	MYR 149,000	Member
PY/2011/00180	Investigation of On-Body Absorbtion and Coupling Effects by Utilizing Fabric Antennas at 3GHz to 12GHz Frequency Bands	MYR 40,000	Member
PY/2016/07622	Wideband Dielectric Resonator Antenna for 5G Application	MYR 50,000	Member
PY/2016/06847	Direct Integration of Power Amplifier and Antenna	MYR 20,000	Leader
PY/2017/00484	Circular Polarization Folded Reflectarray Antenna	MYR 20,000	Member
PY/2017/00371	Highly Efficient Power Amplifier for Microwave Transmitter	MYR 20,000	Leader
PY/2017/00614	Filter-Antenna Design for Wireless Communication System	MYR 20,000	Member
PY/2017/00662	Wireless Sensor Node with Long Range Detection using RFID	MYR 40,000	Member
PY/2017/00903	3D Printed Waveguide Based Beamforming Circuit for Wireless Communication System	MYR 20,000	Member
PY/2017/01621	Administering Metamaterial into Electromagnetic Absorbers and AMC Reflectors for Size Reduction and Performance Enhancement	MYR 20,000	Member
PY/2017/02009	Compact and Resilient Wearable Antenna for Wireless Cardiac Monitoring System	MYR 50,000	Member
PY/2017/02524	The Development of An Integrated Technology Recycle Bin (INTOTHEBIN)	MYR 21,500	Member
PY/2018/02956	MM-Wave Antenna Design and Analysis using Waveguide Technology	MYR 20,000	Leader
PY/2018/02953	MM-Wave Antenna Beamforming Network Design and Analysis using Waveguide Technology	MYR 40,000	Member
PY/2018/02957	MM-Wave Coupler Design and Analysis using Waveguide Technology	MYR 20,000	Member
PY/2018/02954	MM-Wave Phase Shifter and Crossover	MYR 20,000	Member
PY/2018/03497	Propagation Modelling for Rural Area	MYR 42,000	Leader
PY/2018/03493	Design and Development of Point to Point and Multipoint Wireless System	MYR 42,000	Member
PY/2018/03501	Characterisation of High Gain Antenna for Energy Harvesting	MYR 94,000	Member
PY/2018/03521	Energy Efficient Mesh Network for Rural and Sparse Area	MYR 42,000	Member
PY/2020/03540	Development of High Performance 5G Antennas using integrated metamaterials	MYR 40,000	Member

PY/2021/02679	Wideband Outphasing Technique for	MYR 40,000	Leader
	Efficient RF Power Amplifier in Radio		
	Base Station's Transmitter		
PY/2021/01568	Multi-band and Switched-band Matching	MYR 20,000	Leader
	Networks for Highly Efficient Frequency		
	Adaptive Power Amplifiers		

# **Fundamental Research Grant Scheme (FRGS)**

Ref. No.	Research Title	Approved	Role
FRGS/1/2016/TK04/ UTM/02/4	Thorough Analysis of Wearable Antenna Performance and SAR due to Various Substrate Materials for Flexible and Reliable Wireless Medical Monitoring Applications	MYR 70,000	Member
PY/2019/01971	CHARACTERIZATION OF UNIT CELL METAMATERIAL TRANSMISSION LINE FOR BANDSTOP AND BANDPASS APPLICATIONS	MYR 75,000	Member

### **International Joint Research Grant**

Grant	Project	Approved	Role
ICT Virtual Organisation of ASEAN Institutes and NICT (ASEAN IVO) 2018	Smart Aquaculture Quality Monitoring (AQM) System with Internet of Things (IoT)	USD 74,876	Member

### 8. PATENT & PUBLICATIONS

Ö.	PATENT & PUBLICATIONS
1.	Comparison between circular array and linear array microstrip antenna.
	F Zubir, MKA Rahim, T Masri, MN Karim
	RF and Microwave Conference, 2008. RFM 2008. IEEE International, 422-426
2.	Microstrip antenna array's gain enhancement via Electromagnetic Band Gap structures.
	T Masri, MKA Rahim, <b>F Zubir</b> , O Ayop, MNA Karim, HA Majid
	RF and Microwave Conference, 2008. RFM 2008. IEEE International, 121-125
3.	Simulated fractals shape for unit cell reflectarray.
	F Zubir, MKA Rahim
	Microwave Conference, 2009. APMC 2009. Asia Pacific, 583-586
4.	Electromagnetic band gap structures incorporate with dual band microstrip antenna array.
	T Masri, MK Abd Rahim, OB Ayop, <b>F Zubir</b> , NA Samsuri, HA Majid
	Progress In Electromagnetics Research M 11, 111-122
5.	Electromagnetic band gap structure for planar ultra wide band antenna.
٥.	T Masri, MKA Rahim, HA Majid, O Ayop, F Zubir, MNA Karim
	Journal of Electromagnetic Waves and Applications 24 (2-3), 229-239
6.	Analysis of dual layer unit cell with minkowski radiating shape for reflectarray antenna on different substrate properties.
0.	A Wahid, MKA Rahim, F Zubir
	Applied Electromagnetics (APACE), 2010 IEEE Asia-Pacific Conference on, 1-5
7.	Triple-band printed dipole antenna with single-band AMC-HIS.
/ .	M Abu, MK Abd Rahim, OB Ayop, F Zubir
	Progress In Electromagnetics Research B 20, 225-244
8.	Design and analysis of microstrip reflectarray antenna with minkowski shape radiating element.
0.	F Zubir, MK Abd Rahim, OB Ayop, HA Majid
	Progress In Electromagnetics Research B 24, 317-331
9.	Patent Filed: PI 2010003851 – Microstrip Reflectarray with printed Minkowski patch
10.	Log periodic fractal koch antenna for UHF band applications.
10.	MN A Karim, MK Abd Rahim, HA Majid, OB Ayop, M Abu, F Zubir
	Progress In Electromagnetics Research 100, 201-218

11.	Design, implementation and performance of ultra-wideband textile antenna.
11.	MAR Osman, MK Abd Rahim, M Azfar Abdullah, NA Samsuri, F Zubir
	Progress In Electromagnetics Research B 27, 307-325
12.	Log-Periodic patch antenna with tunable frequency.
	MF Ismail, MKA Rahim, <b>F Zubir</b> , O Ayop
	Proceedings of the 5th European Conference on Antennas and Propagation (EUCAP)
13.	Second iteration fractal Koch planar log periodic antenna design.
	MKA Rahim, MNA Karim, F Zubir, O Ayop, NA Samsuri
	Microwave and Optical Technology Letters 53 (8), 1869-1875
14.	Design and Analysis UWB Wearable Textile Antenna.  MAR Osman, MKA Rahim, K Kamardin, F Zubir, NA Samsuri
	Proceedings of the 5th European Conference on Antennas and Propagation (EUCAP)
	The effects of straight-pin type earring worn on the head on SAR at 2.4 GHz and 5.8 GHz.
15.	MZ Anuar, NA Samsuri, MKA Rahim, N Othman, <b>F Zubir</b>
	RF and Microwave Conference (RFM), 2011 IEEE International, 389-392
16	Design and analysis of ultra wide band planar monopole antenna.
16.	MKA Rahim, T Masri, HA Majid, O Ayop, <b>F Zubir</b>
	WSEAS Transactions on Communications 10 (7), 212-221
17	Dual Layer Microstrip Refflectarray Composed of Two Stacked Arrays with Minkowski and Square Shaped Radiating
17.	Element.
	MF Ismail, A Wahid, MKA Rahim, F Zubir
	Jurnal Teknologi 58 (1)
18.	A new power combiner using aperture coupling technique for push-pull Class B Power Amplifier.
16.	F Zubir, P Gardner
	IET Digital Library
19.	Multilayer antennas with harmonic filtering for differentially fed power amplifier integration.
17.	F Zubir, P Gardner
	Antennas and Propagation in Wireless Communications (APWC), 2013 IEEE-APS.
20.	Differentially fed multilayer antennas with harmonic filtering for push-pull Class B Power Amplifier integration.
	F Zubir, P Gardner
	Microwave Conference (EuMC), 2013 European, 96-99
21.	Design of optimum matching networks for push-pull amplifier-Antenna modules.
	F Zubir, P Gardner
	IET Colloquium on Antennas, Wireless and Electromagnetics 2014, 1-20.
22.	New Technique to Comply with Impedance Requirement of Transistor for Push-Pull Amplifier.
	F Zubir, P Gardner, MKA Rahim 2015 IEEE International RF and Microwave Conference (RFM), 14 – 16 December 2015.
	Series iteration of Fractal Koch antenna at UHF band.
23.	Yaziz, N.S.M., Rahim, M.K.A., <b>Zubir, F.</b> , Murad, N.A.
	2016 10th European Conference on Antennas and Propagation, EuCAP 2016, 7481564
24.	Dual-band metamaterial perfect absorber with nearly polarization-independent.
24.	Ayop, O., Rahim, M.K.A., Murad, N.A., Samsuri, N.A., Zubir, F., Majid, H.A.
	Applied Physics A: Materials Science and Processing, 123 (1), 63, 2017
25.	Detection of the faulty sensors on basis of the pattern using symmetrical structure of linear array antenna.
	Khan, S.U., Rahim, M.K.A., Murad, N.A., <b>Zubir, F.</b> , Ayop, O., Yusoff, M.F.M., Hamid, M.R., Dewan, R.
	Applied Computational Electromagnetics Society Journal 32 (4), pp. 358-365, 2017
26.	Video monitoring application using wireless sensor node with various external antenna.
	Zabri, A., Rahim, M.K.A., <b>Zubir, F.</b> , Nadzir, N.M., Majid, H.A.
	Indonesian Journal of Electrical Engineering and Computer Science, Vol. 6 (1), pp. 148-154, 2017
27.	Wireless sensor node with passive RFID for Indoor monitoring system.
	Nadzir, N.M., Rahim, M.K.A., <b>Zubir, F.</b> , Zabri, A., Majid, H.A.
	International Journal of Electrical and Computer Engineering, Vol. 7(3), pp. 1459-1466, 2017  Highly Efficient Power Amplifier for Microwave Transmitter.
28.	F. Zubir, R. R. Radhakrishnan
	17th Asia Simulation Conference, AsiaSim 2017, Part II, Communications in Computer and Information Science (CCIS
	752), Modeling, Design and Simulation of Systems, pp. 736–745, 2017.
20	Microstrip Reflectarray using Second Iteration Minkowski-like Radiating Element.
29.	AB Shallah, <b>F Zubir</b> , MKA Rahim, O Ayop
	2017 IEEE Asia-Pacific Microwave Conference Proceedings, 8 Jan 2018, pp. 176-179
30	Frequency Reconfigurability Array Antenna with Electromagnetic Band Gap (EBG) Cells.
30	R Dewan, MKA Rahim, M Himdi, MR Hamid, <b>F Zubir</b> , NA SAmsuri
	2017 IEEE Asia-Pacific Microwave Conference Proceedings, 8 Jan 2018, pp. 747-750
31.	Frequency Reconfiguration Mechanism of a PIN Diode on a Reconfigurable Antenna for LTE and WLAN Applications.
51.	SM Shah, MFM Daud, ZZ Abidin, FC Seman, SA Hamzah, N Katiran, F Zubir
<u></u>	International Journal of Electrical and Computer Engineering (IJECE), Vol. 8(3), 2018
32.	Band-pass Filter with Harmonics Suppression Capability.
52.	Izni Husna Idris, Mohamad Rijal Hamid, Kamilia Kamardin, Mohamad Kamal A Rahim, Farid Zubir, Huda A Majid
	International Journal of Electrical and Computer Engineering (IJECE), Vol.8(4), 2018
33.	The Improvement of First Iteration Log Periodic Fractal Koch Antenna With Slot Implementation.
	NSM Yaziz, MKA Rahim, <b>F Zubir</b> , NS Nadzir, R Dewan, HA Majid
	International Journal of Electrical and Computer Engineering (IJECE), Vol.8(4), 2018
34.	Long-Range Monitoring System with PDMS Material.
	NM Nadzir, MKA Rahim, <b>F Zubir</b> , HA Majid
<u> </u>	Indonesian Journal of Electrical Engineering and Computer Science, Vol. 10(3), 2018

35.	Design of Miniaturized Multiband Patch Antenna Using CSRR for WLAN/WiMAX Applications.
	MA Baba, MKA Rahim, F Zubir, MFM Yusoff
	TELKOMNIKA (Telecommunication Computing Electronics and Control), Vol. 16(4), 2018
36.	Planar Monopole Antenna With Hexagonal Split Ring Resonators.
	MA Baba, MKA Rahim, F Zubir, MFM Yusoff, NA Samsuri, O Ayop, KI Jahun
	2018 IEEE Asia-Pacific Conference on Antennas and Propagation (APCAP)
27	• • • • • • • • • • • • • • • • • • • •
37.	UHF RFID Tag Using Polycarbonate Material.
	NM Nadzir, MKA Rahim, NA Samsuri, <b>F Zubir</b> , O Ayop, HA Majid
	2018 IEEE Asia-Pacific Conference on Antennas and Propagation (APCAP)
38.	Passive UHF RFID tag Antenna using Polycarbonate and PDMS Material.
	NM Nadzir, MKA Rahim, F Zubir, NA Samsuri, O Ayop, H Majid
	2018 International Symposium on Antennas and Propagation (ISAP), Article No. 8627523.
39.	Probability of Detection using reconfigurable Antenna.
37.	MKA Rahim, KHB Yusof, KM Yusof, F Zubir, O Ayop
	2018 International Symposium on Antennas and Propagation (ISAP), Article No. 8627824
40.	Wideband Monopole Antenna with Rotational Circular SRR.
40.	MA Baba, MKA Rahim, F Zubir, MFM Yusoff, O Ayop, NA Samsuri
	Lecture Notes in Electrical Engineering 547, pp. 419-424
4.1	Planar Monopole Antenna with Offset Square Split Ring Resonator.
41.	MA Baba, MKA Rahim, <b>F Zubir</b> , MFM Yusoff, O Ayop, NA Samsuri
	2018 International Symposium on Antennas and Propagation (ISAP), Article No. 8627647
	Frequency Tuning Varactor-loaded Reconfigurable Antenna for m-WIMAX and WLAN Applications.
42.	SM Shah, K Hamdan, ZZ Abidin, FC Seman, SA Hamzah, N Katiran, <b>F Zubir</b>
	International Journal of Electrical and Computer Engineering (IJECE), Vol. 13(2), pp. 779-786, 2019.
-	Antenna with Artificial Magnetic Conductor for Wireless Application.
43.	MKA Rahim, MR Hamid, NA Samsuri, NA Murad, <b>F Zubir</b> , O Ayop, MFM Yusof, HA Majid
	2019 IEEE Asia-Pacific Conference on Applied Electromagnetics (APACE)
<b>—</b>	Wideband Multi-layer Frequency Selective Surface Based Transmitarray Unit Cell for Satellite Communication
44.	Applications.
	Muhammad Muhammad, Naeem Iqbal, Mohd Fairus Mohd Yusoff, Mohammad Kamal A Rahim, Mohamad Rijal
	Hamid, Farid Zubir, Osman Ayop, Zaharah Johari
	2019 International Symposium on Antennas and Propagation (ISAP)
45.	A Comparison of Various Double Loops Frequency Selective Surfaces in terms of Angular Stability.
	Nur Biha Mohamed Nafis, Mohamad Kamal A Rahim, Osman Ayop, Farid Zubir, Huda A Majid
	2019 International Symposium on Antennas and Propagation (ISAP)
46.	Fractal Yagi-Uda antenna for WLAN applications.
	Amerrul Zabri, MKA Rahim, <b>F Zubir</b> , NM Nadzir, HA Majid
-	Telkomnika 17 (5), 2019
47.	UHF RFID Antenna Tag Design and Analysis for Antenna Miniaturization. Norsaidah Muhamad Nadzir, Mohamad Kamal A Rahim, Farid Zubir, Huda A Majid
	ELEKTRIKA-Journal of Electrical Engineering 18 (2), pp. 49-54, 2019
	Millimeter Wave Fifth Generation (5G) Antenna for Smartphone Application.
48.	Fatin Iswani Azmi, <b>Farid Zubir</b> , Norsaidah Muhamad Nadzir
	ELEKTRIKA-Journal of Electrical Engineering 18 (2), pp. 44-48, 2019
	45 degree arrangement of compact array antenna for MIMO application.
49.	MF Ismail, HA Majid, C Macwright, MNAH Shaabani, MS Mohd, MM Zahar, <b>F Zubir</b> , O Ayob, MA Abdullah
	· · · · · · · · · · · · · · · · · · ·
	Indonesian Journal of Electrical Engineering and Computer Science 15 (2), pp. 838-844, 2019
50.	UHF meander bowtie antenna for RFID application.
1	Norsaidah Muhamad Nadzir, MKA Rahim, <b>F Zubir</b> , HA Majid
-	Indonesian Journal of Electrical Engineering and Informatics (IJEEI) 7 (2), pp. 295-302, 2019
51.	Floral structure for textile-based metamaterial absorber
	Siti Nurzulaihan Isa, Osman Ayop, <b>Farid Zubir</b> , Noor Asniza Murad, Mohammad Kamal A Rahim
-	Indonesian Journal of Electrical Engineering and Informatics (IJEEI) 7 (2), pp. 375-381, 2019
52.	Multiband hairpin-line bandpass filters by using metamaterial complimentary split ring resonator.
1	Mohd Fairus Mohd Yusoff, Muhammad Akram Mohd Sobri, Farid Zubir, Zaharah Johari
	Indonesian Journal of Electrical Engineering and Informatics (IJEEI) 7 (2), pp. 289-294, 2019
53.	3D printed horn antenna using direct metal laser melting technique for millimetre wave applications.
1	Muataz W Sabri, MKA Rahim, F Zubir
	Indonesian Journal of Electrical Engineering and Informatics (IJEEI) 7 (2), pp. 323-330, 2019
54.	Compact Patch MIMO Antenna With Low Mutual Coupling For WLAN Applications.
1	Murtala Aminu-Baba, Mohammad Kamal A Rahim, Farid Zubir, Adamu Y Iliyasu, Mohd Fairus Mohd Yusoff, KI
1	Jahun, Osman Ayop
	ELEKTRIKA-Journal of Electrical Engineering 18 (1), pp. 43-46, 2019
55.	Wideband Monopole Antenna with Rotational Circular SRR.
	Murtala Aminu-Baba, Mohammad Kamal A Rahim, Farid Zubir, Mohd Fairus Mohd Yusoff, Noor Asmawati Samsuri
	2019 10th International Conference on Robotics, Vision, Signal Processing and Power Applications, pp. 419-424
56.	Wideband Frequency Selective Surface Based Transmitarray Antenna at X-Band.
	MN Iqbal, MFM Yusoff, MKA Rahim, MR Hamid, F Zubir, Z Johari, HA Majid
	Indonesian Journal of Electrical Engineering and Informatics (IJEEI) 8 (3), pp. 500-510, 2020
57.	A compact triband microstrip antenna utilizing hexagonal CSRR for wireless communication systems.
] ,,,	M Aminu-Baba, MKA Rahim, F Zubir, MFM Yusoff, AY Iliyasu, MM Gajibo, HA Majid, KI Jahun
	Bulletin of Electrical Engineering and Informatics 9 (5), pp. 1916-1923, 2020
58.	Effects of bending on a flexible metamaterial absorber.
55.	SN Isa, O Ayop, ASM Supa'at, MKA Rahim, NA Murad, F Zubir, HA Majid
	Bulletin of Electrical Engineering and Informatics 9 (6), pp. 2436-2442, 2020

59.	
	Comparative Analysis of Sokal's Equations Versus Load-pull Implementation of Class-E Low-pass Network.
	B Kirish, <b>F Zubir</b> , MKA Rahim, SM Shah Indonesian Journal of Electrical Engineering and Computer Science 19 (3), pp. 1348-1358, 2020
<i>(</i> 0	Analytical Solution of Amplifier-Antenna System's Impedance Matching Requirement for Reliable Microwave
60.	Transmitter.
	F Zubir, P Gardner, MKA Rahim, O Ayop, NA Samsuri
	IEEE Access 8, pp. 182640-182662, 2020
61.	Low loss waveguide-based Butler matrix with iris coupling control method for millimeterwave applications.
	Muataz W Almeshehe, Noor Asniza Murad, Mohamad Kamal A Rahim, Osman Ayop, <b>Farid Zubir</b> , Mohamad Zoinol
	A Abd Aziz, Mohamed N Osman, HA Majid Waves in Random and Complex Media, Taylor & Francis, pg. 1-21, 2021.
	A compact dual-band semi-flexible antenna at 2.45 GHz and 5.8 GHz for wearable applications
62.	SM Shah, AA Rosman, MAZA Rashid, ZZ Abidin, FC Seman, HA Majid, SH Dahlan, SA Hamzah, N Katiran, A
	Ponniran, F Hassan, F Zubir
	Bulletin of Electrical Engineering and Informatics 10 (3), pp. 1739-1746, 2021.
63.	A compact triband miniaturized MIMO antenna for WLAN applications
	Murtala Aminu-Baba, Mohamad Kamal A Rahim, Farid Zubir, Adamu Yau Iliyasu, Kabiru Ibrahim Jahun, Mohd
	Fairus Mohd Yusoff, MM Gajibo, AA Pramudita, Irene Kong Cheh Lin. AEU-International Journal of Electronics and Communications 136, 153767, 2021
	A novel single-feed hybrid reconfigurable microstrip patch antenna for 5G mobile communication and radio frequency
64.	energy harvesting applications at 28/38GHz
	Muhammad Kamran Shereen, Muhammad Irfan Khattak, Farid Zubir, Abdul Basit
	PloS one, Vol. 17, Issue 1, page e0260407, 2022
65.	Slot implementation on second iteration of fractal log periodic dipole antenna for UHF band application Muhammad Hafeez Rosmin, Mohamad Kamal A Rahim, Nur Syahirah Yaziz, Muhammad Naeem Iqbal, Osman Ayop,
	Muhammad Amir Haziq Kamarusshahrin, <b>Farid Zubir</b>
	Journal of Physics: Conference Series, Vol. 2250, Issue 1, Page 012004, 2022
66.	Flexible Rectenna for Energy Harvesting System
00.	Mohamad Kamal A Rahim, Bashar AF Esmail, Nur Syahirah M Yaziz, Noor Asmawati Samsuri, Noor Asniza Murad,
	Osman Ayop, <b>Farid Zubir</b> , Huda A Majid, Norsaidah Muhamad Nadzir
	ELEKTRIKA-Journal of Electrical Engineering, Vol. 21, Issue 1, page 73-77, 2022  Miniaturized ultra-wideband filter with independently controlled notch bands for 5.1/6/8 GHz wireless applications
67.	Abdul Basit, Muhammad Irfan Khattak, <b>Farid Zubir</b> , Syed Waqar Shah
	PloS one, Vol. 17, Issue 6, page e0268886, 2022
68.	Recent Developments of Butler Matrix From Components Design Evolution to System Integration for 5G Beamforming
	Applications: A Survey
	Applications: A Survey Abdulkadir Bello Shallah, Farid Zubir, Mohamad Kamal A Rahim, Huda A Majid, Usman Ullah Sheikh, Noor Asniza
- ~ .	Applications: A Survey Abdulkadir Bello Shallah, <b>Farid Zubir</b> , Mohamad Kamal A Rahim, Huda A Majid, Usman Ullah Sheikh, Noor Asniza Murad, Zubaida Yusoff
	Applications: A Survey Abdulkadir Bello Shallah, Farid Zubir, Mohamad Kamal A Rahim, Huda A Majid, Usman Ullah Sheikh, Noor Asniza
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<b>9.</b> <i>1</i>	Applications: A Survey Abdulkadir Bello Shallah, <b>Farid Zubir</b> , Mohamad Kamal A Rahim, Huda A Majid, Usman Ullah Sheikh, Noor Asniza Murad, Zubaida Yusoff IEEE Access 10, pp. 88434-88456, 2022  AWARDS
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9. 1. 1. 2. 3.	Applications: A Survey Abdulkadir Bello Shallah, Farid Zubir, Mohamad Kamal A Rahim, Huda A Majid, Usman Ullah Sheikh, Noor Asniza Murad, Zubaida Yusoff IEEE Access 10, pp. 88434-88456, 2022  AWARDS  Full Scholarship by The Public Service Department of Malaysia – B.Eng 2004  Dean's Award B.Eng – Aug 2008  National Science Fellowship by The Ministry of Science, Technology & Innovation Malaysia (MOSTI) – M.Eng 2008
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1. 2. 3.	Applications: A Survey Abdulkadir Bello Shallah, Farid Zubir, Mohamad Kamal A Rahim, Huda A Majid, Usman Ullah Sheikh, Noor Asniza Murad, Zubaida Yusoff IEEE Access 10, pp. 88434-88456, 2022  AWARDS  Full Scholarship by The Public Service Department of Malaysia – B.Eng 2004 Dean's Award B.Eng – Aug 2008  National Science Fellowship by The Ministry of Science, Technology & Innovation Malaysia (MOSTI) – M.Eng 2008 Best Postgraduate Student, M.Eng – Mar 2011  Pro-Chancellor Award, M.Eng – Mar 2011
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