RESEARCHER'S BACKGROUND

Name	Associate Professor Ir. Dr. Sharul Kamal Bin Abdul Rahim
Academic Position	Associate Professor
Faculty	Faculty of Electrical Engineering
Research Interest(s)	Microwave, Antenna, RF Front-end Design
Research Entity	Member of Wireless Communication Center (WCC)
UTM Administrative Post (if any)	1. Pengetua, Kolej Tuanku Canselor (KTC), UTM. 2016 – current. 2. Honorary Committee, Institute Pembangunan Felo (IPF), 2016 – current 3. Committee Member, Professional Qualification Development Program. 2013 – current. 4. FRGS Assessor for Innovative Engineering Research Alliance. 2011 – current.
Appointment in Professional Bodies (if any)	1. Chairman, Technical Committee (TC 49) Malaysia, SIRIM (2013-Current). 2. Vice Chairman, Institute of Engineer Malaysia (IEM), Southern Branch (2016-2017) 3. 3Technical Expert,on Wearable Electronic Devices and Technologies Working Group (WG) SIRIM (2016 -Current) 4. Executive Committee, Institute of Engineer Malaysia (IEM), Southern Branch (2012-2016) 5. Executive Committee, IEEE AP/MTT/EMC Joint Chapter Malaysia, (2017-Current) 6. Executive Committee, Industry Standard Committee on Electrical and Electronics Equipments and Accessories (ISC S), SIRIM, (2011- Current) 7. Executive Committee, IEEE Malaysia Power Electronics, Industrial Electronics & Industrial Applications Chapter, (2013- 2015). 8. Steering Committee of 5G Working Group (NPWG)- Suruhanjaya Komunikasi Multimedia Malaysia (SKMM) (2013-Current).

RESEARCH PROFILE

Indexed Publication	• Book Chapter: 1 • Article/Review: 103 • Conference Paper: 73
Citation	587
H-index	13
Intellectual property rights	**PATENT FILED/DISCLOSURE** **2015** 1. An Ultra-Wideband Dielectric Resonator Antenna **PI 2015702376** 2. Two Arm Archimedean Spiral Antenna **PI 2015 702382** 3. Transparent Branch Line Couplier (Blc) For Intelligent Transport System(Its) Butler Matrix Beamforming Networkp **PI 2015 702089**.

2013

1. Transparent Dual-Band Antenna for Green Technology Building : **PI 2013 006407**
2. Artificial Magnetic Conductor Using a Defective Ground Structure:**PI 2013002632**
3. Bandwidth Enhancement and Miniaturization of Dielectric Resonator Antenna for 5.8GHz Wireless LAN **PI 2013 701840**
4. Reduced Size Cascaded Butler Matrices for Dual Band Beam Applications **PI 2013 701851**

2011

1. Single Band Semi-Lumped Element Branch Line Coupler : **PI 2011 000377**
2. An Active Branch Line Coupler for Butler Matrix : **PI 2011 000378**
3. A Circular Polarized Microstrip Antenna at 2.5 GHz :**PI2011 000068**
4. A Microstrip Patch Antenna System at 2.5 GHz with Cross Polarization : **PI 2011 000065**

2010

1. Blind Spot Detector **: PI 20101897**
2. A Communication Device : **UI 2010001896**
3. Dual Band Active Microstrip Monopole Antenna for Wireless Local Area Network: **PI 2010 002045**
4. Dual Band Aperture Coupled Microstrip Patch Antenna : **PI 2010 002044**
5. An Ultra Wide Band Coupler for Butler Matrix : **PI 2010 006184**
6. A Dual Band Circular Polarization Microstrip Antenna at 2.45GHz & 5.8 GHz : **PI 2010 006187**

2009

1. Fluid Delivery Control System : **PI 20090943**
2. Dual Beam Dual Band Active Antenna Beamforming Networks : **PI 20093798**
3. A Device for Hearing Impaired Children : **PI 20093827**
4. Reduced Size Active Antenna Beamforming Networks using Cascaded Butler Matrices : **PI 20091560**
5. Reduced Size Multibeam Active Antenna Beamforming Networks : **PI 20090942**
6. Multi Beamwidth Active Antenna Beamforming Network using Butler Matrix : **PI 20091027**

2008

1) Active Antenna Beam Forming Networks Using Butler Matrices : **PI 20080734**
2) Reduce Size Butler Matrix for Smart Antenna System : **PI 20084114**

COPYRIGHTS

2016

1. A semi distributed combined distributed joint activation- hybrid CDJA-HYB phase synchronisation method for closed loop beamforming method: Source code for CDJAHYB**(2016)**
2. Particle Swarm Optimisation-Gravitational Search Algorithm-Explore PSOGSA-E for Fast Convergence and Simpler Tuning: Source Code for PSOGSA-E **(2016)**
3. The distributed evolutionary algorithm manner to achieve synchronization among the distributed nodes **(2016)**
4. Capacity Analysis at Unintended Receiver via Beampattern Optimisation in Collaborative Beamforming: Source Code for Capacity Analysis **(2016)**

	2010 1. Location Detection Device for Hearing Impairment and Normal Children (Parent Device) **(2010).** 2. Advance Blind Spot Detector with Smart Mirror **(2010).** 3. Education Aid Gadget for Hearing Impairment Children using RFID Technology **(2010).** **2008** 1. Optimization of SNR using Diversity Combining Techniques **(2008)**. 2. Error Vector Magnitude Measurement on Cascaded Butler Matrices **(2008)**. 3. Uniform Amplitude and Spacing Butler Matrix Radiation Pattern **(2008).** 4. Controlling the Nozzle for Smart Petrol Station **(2008)**. 5. Location Detection Device for Hearing Impairment and Normal Children (Child Device) **(2010).**

RESEARCH SUPERVISION (MAIN & CO-SUPERVISOR)

Completed	• PhD: 10 • MSc: 8
Current	• PhD: 10 • MSc: 7

AWARDS & RECOGNITIONS

2016	1. **Citra Karisma Anugerah Penerbitan** : Anugerah penulis Jurnal Berindex COE. 2. **Bronze Medal, MTE 2016,** "Compact UWB Antenna with Dual Band Rejection for Industrial Rejection ". 3. **Bronze Medal, MTE 2016,** "Transparent Beamforming Network Using Micro Metal Mesh Conductive Film ". 4. **FKE Anugerah Khidmat Cemerlang**. 5. **FKE Anugerah Khidmat Penyelidikan**. 6. **FKE Anugerah Khidmat Penerbitan**. 7. **Anugerah Pembentang Terbaik** Geran GUP RM20,000. 8. **IEEE MTT-S Chapter** Education Awards
2015	1. **Silver Medal PECIPTA 2015**, "UWB Transparent Antenna for Positional Tracking Applications". 2. **Bronze Medal PECIPTA 2015,** "Transparent Branch Line Coupler for Intelligent Transportation Beamforming Network". 3. **Silver Medal, INATEX 2015,** "Compact UWB Antenna with Dual Band Rejection for Industrial Applications". 4. **Bronze Medal, INATEX 2015,** "Transparent Beamforming Network using Micro-Metal Mesh Conductive Film". 5. **Matching Grant** UTM for Intel Project. 6. **Best Paper Award** on International Conference on Telecommunication, Electronics and Computer Engineering.
2014	**1. Citra Karisma Anugerah Penerbitan** : Anugerah penulis Jurnal Berindex.
2013	**1. GOLD Medal, ITEX 2013,** "Transparent Dual Band Antenna for Green Technology Building". **2. GOLD Medal, ITEX 2013**,"Compact Dual Band Circularly Polarized Patch Antenna with Bandwidth Enhancement". **3. Silver Medal, ITEX 2013**,"Multilayer 3dB UWB Coupler for Butler Matrix Applications".

	4. **Citra Karisma Anugerah Khidmat Cemerlang**. 5. **Silver Medal, INATEX 2013,** "UWB Transparent Antenna for Positional Tracking Applications". 6. **Bronze Medal, INATEX 2013,** "Transparent Branch Line Coupler for Intelligent Transportation Beamforming Network".
2012	1. **Gold Medal, MTE 2012,** "Dual Band Beam Pattern Reconfigurable Antenna for WLAN Application". 2. **Silver Medal, MTE 2012,** "The Development of Monitoring Assist Device for Hearing Impairment Children". 3. **Silver Medal, MTE 2012,** "Beamforming Network using Dual-Band Dual-Beam Reduced Size Butler Matrices for WLAN Application". 4. **Silver Medal, INATEX 2012,** "Transparent Dual Band Antenna for Green Technology Building". 5. **Silver Medal, INATEX 2012**,"Compact Dual Band Circularly Polarized Patch Antenna with Bandwidth Enhancement". 6. **Silver Medal, INATEX 2012**,"Multilayer 3dB UWB Coupler for Butler Matrix Applications". 7. **Citra Karisma Anugerah Penerbitan** : Anugerah Penulisan Jurnal Berindex, UTM. 8. **Citra Karisma Anugerah Sumbangan dan Pengiktirafan dalam Penyelidikan dan Penggunaan (R&D)** di peringkat Kebangsaan dan Antarabangsa, UTM.
2011	1. **Gold Medal, PECIPTA 2011,** "Ultra Wide Band (UWB) planar Array IntegratedWith Butler Matrix". 2. **Silver Medal, PECIPTA 2011,** "DESIGN OF A DUAL BAND CIRCULAR POLARIZATION MICROSTRIP ANTENNA AT 2.45GHZ & 5.8GHz". 3. **Silver Medal, PECIPTA 2011,** "DUAL BAND DUAL BEAM CASCADED BUTLER MATRICES". 4. **Silver Medal, PECIPTA 2011,** "REDUCED SIZE ACTIVE ANTENNA BEAM FORMING NETWORKS USING CASCADED BUTLER MATRICES". 5. **Bronze Medal, PECIPTA 2011,** "MULTI BEAMWIDTH ACTIVE ANTENNA BEAMFORMING NETWORK USING BUTLER MATRIX". 6. **Silver Medal, INATEX 2011,** "The Development of Monitoring Assist Device for Hearing Impairment Children". 7. **Silver Medal, INATEX 2011,** "Beamforming Network using Dual-Band Dual-Beam Reduced Size Butler Matrices for WLAN Application". 8. **Bronze Medal, INATEX 2011,** "Dual Band Beam Pattern Reconfigurable Antenna for WLAN Application". 9. **Gold Medal, SIIF 2011,** "DUAL BAND DUAL BEAM CASCADED BUTLER MATRICES". 10. **Silver Medal, SIIF 2011,** "Ultra Wide Band (UWB) planar Array IntegratedWith Butler Matrix". 11. **Silver Medal, SIIF 2011,** "Reduced Size Active Antenna Beam Forming Networks Using Cascaded Butler Matrices"
2010	1. **Silver Medal, Malaysia Technology Expo (MTE) 2010** "Communication Assist Device for Hearing Impairment Children" 2. **Silver Medal, Malaysia Technology Expo (MTE) 2010** "Education Aid Gadget for Hearing Impairment Children using RFID Technology" 3. **Silver Medal, INATEX 2010,** "DESIGN OF A DUAL BAND CIRCULAR POLARIZATION MICROSTRIP ANTENNA AT 2.45GHZ & 5.8GHz". 4. **Silver Medal, INATEX 2010,** "Ultra Wide Band (UWB) planar Array IntegratedWith Butler Matrix". 5. **Bronze Medal, INATEX 2010,** "DUAL BAND DUAL BEAM CASCADED BUTLER MATRICES". 6. **Bronze Medal, INATEX 2010,** "REDUCED SIZE ACTIVE ANTENNA BEAM FORMING NETWORKS USING CASCADED BUTLER MATRICES". 7. **Bronze Medal, INATEX 2010, "MULTI BEAMWIDTH ACTIVE ANTENNA BEAMFORMING NETWORK USING BUTLER MATRIX".** 8. **Karnival Rekacipta Kebangsaan 2010,** "Ultra Wide Band (UWB) planar Array IntegratedWith Butler Matrix".

	9. **Karnival Rekacipta Kebangsaan 2010,** "Education Aid Gadget for Hearing Impairment Children using RFID Technology". **10.** **Karnival Rekacipta Kebangsaan 2010,** "Reduced Size Active Antenna Beam Forming Networks Using Cascaded Butler MatriceS".
2009	1. **Silver Medal, PECIPTA 2009** "Smart Antenna using Cascaded Butler Matrices" 2. **Bronze Medal,PECIPTA 2009** "Reduce Size Butler Matrix for Smart Antenna System" 3. **Bronze Medal,INATEX 2009** "LOCATION DETECTION DEVICE FOR HEARING IMPAIRMENT AND NORMAL CHILDREN" 4. **Bronze Medal,INATEX 2009** "Education Aid Gadget for Hearing Impairment Children Using Radio Frequency Identification (RFID) Technology".
2008	1. **Citra Karisma** Anugerah Perkhidmatan Cemerlang **(2008)**.

CONTACT DETAILS

Telephone	07-5535227
Fax	07-5535252
E-Mail	sharulkamal@fke.utm.my, sharulkamal@utm.my
Website	http://sharulkamal.fke.utm.my/home