

**Faculty of Electrical Engineering**

# Annual Report on Research Innovation, Community and Networking

**2016**



**UTM**  
UNIVERSITI TEKNOLOGI MALAYSIA

Faculty of  
Electrical Engineering

## FOREWORD BY THE DEAN



It is my pleasure to share with you this 2016 Electrical Engineering Faculty (FKE)'s Annual Report on Research, Innovation, Community and Networking. This report showcases some of the exciting developments and achievements, illustrating FKE's commitment to research excellence, for the year 2016. Starting 2016, FKE is overseeing 14 research groups under the auspicious of the newly named post of the Deputy Dean of Research, Innovation, Network and Community (TDPIJK) at FKE. In order to help the Faculty and TDPIJK to spurs and manage the research at the faculty, improvement on the working committees related to the research and innovation activities have been done. FKE is committed to be a world class centre

of excellence and a leader in teaching and learning, research and innovation within the field of electrical engineering. Steps have been taken to encourage and help staffs to obtain research grants and funding as well as to publish more in reputed and top ranking journals. Courses, seminar and workshops on ways of securing various research finding, publication in high ranking journals, as well as on knowledge sharing and research collaborative opportunities between the faculty and industries have been conducted throughout 2016. FKE secured research funding from various sources, winning research awards at international level and national level, granted with patents and IPR/copyright. In terms of publication, FKE's is among the most productive in the university.

I believe all faculty members have contributed their best effort to ensure the faculty achieves the best performance by producing excellent graduates, publications and research outputs. Lastly, I wish to extend my appreciation and gratitude to all FKE staff and postgraduate students who have contributed towards the FKE achievement in 2016, and I look forward to more achievements from our staff and students in the coming years.

I hope you will enjoy reading this report. Thank you.

Prof. Dr. Johari Halim Shah Osman

Dean

Faculty of Electrical Engineering

University Teknologi Malaysia

2017



## MESSAGE FROM DEPUTY DEAN OF RESEARCH, INNOVATION, NETWORK AND COMMUNITY



It is my pleasure to present the Annual Report for the Faculty of Electrical Engineering achievement in Research, Innovation Network and Community. The report presents briefly the faculty's activities and achievements in 2016 for Research Innovation Network and Community. First and foremost, I would like to express my heartiest gratitude and appreciation to all my committee for their effort and contribution for collecting the data for Research Innovation Network and Community, Faculty of Electrical Engineering 2016.

The Faculty of Electrical Engineering has 14 research group, one Hi CoE and three CoEs. The contribution from the Research Group and Centre of Excellence bring the faculty to stand tall in various fields of research, consultancy, publications, networking, awards and community based projects related to the Faculty of Electrical Engineering. This year 2016 faculty has managed to secure research grants under various sponsors with the amount of RM6,381,926.25 in the public grants, RM409,012.00 in private grants and RM14,732.52 in international grants. In term of publications, faculty has published 338 in index jurnal, 216 in non index jurnal, 160 in conference proceeding and 51 in books chapter. As a principle investigator of the resaerch grants the total number of 138 academic staff in the Faculty work as a principle investigator. For the innovation section 9 numbers of patents have been granted, 5 numbers of patents have been filed and 35 IPR have been regsitered such as copyright, trademerak and industrial design. The income generation from the faculty in year 2016 is more than RM4 million which comes from training, prostgraduate fees, short courses, conferences, licensing, consultation and gifts. Faculty also involve in MOA and MOU with various company and universities such as MIMOS, JCY HDD technology, KEJORA, CREST, PROTON, UTeM, University Lancang Kuning Indonesia and Universitas Sriwijaya Indonesia. In year 2016 two of faculty staff members have been awarded with Top Research Scientist Malaysia which was awarded to Prof Dr Tharek Abdul Rahman and Malaysia Rising Star Awardship to Prof Zainal Salam. Other awards that faculty have achieved include Malaysia Technolgy Awarad (MTE), International Invention, Innovation & Technology Exhibition (ITEX), International Innovative Practices in Higher Education Expo (I-PHEX), [IMalaysia Imagine](#), Innovation Challenge and Champion of ABU Asia-Pacific Robot Contest ([ROBOCON](#)). In year 2016 Faculty has managed to organize the first international conference title International Conf in Electrical Electronic Communication and Control Engineering. The total numbers of 154 papers have been accepted for oral presentation. All papers accepted have been published in Index jurnal SCOPUS.

Lastly, I wish to thanks to all commitee especially to FKE Research Manager and Facility Manager, who have contributed towards producing this report and I hope this compilation will be useful to all

Best Regards, Salam

**Prof Dr. Mohamad Kamal A Rahim**

Deputy Dean Research Innovation Network and Community

Faculty of Electrical Engineering

University Teknologi Malaysia

2017

**CONTENTS**

Page

**1.0 Introduction**

1.1	Research Group and Center of Excellence	5
1.2	List of active members in each RG and HICoE/CoE.	8

**2.0 List of FKE's Academic Staff**

2.1	Department of Communication (COMM)	17
2.2	Department of Control & Mechatronics (CMED)	18
2.3	Department of Electronics & Computer Engineering (ECE)	19
2.4	Department of Electrical Power (POWER)	20

**3.0 Research University Audit**

3.1	Person Incharge in Each Section and Subsection	22
3.2	MyRA Audit	22
3.3	Malaysian Research Assessment Instrument	24

**4.0 FKE performance base on MyRa2**

4.1	Section B1 – Critical Mass	25
4.2	Section B4 – Award and Stewardship	28
4.3	Section C1 – Publications	31
4.4	Section C2 – Research Grant Received	34
4.5	Section E – Innovations	39
4.6	Section F – Professional Services & Gift	44
4.7	Section G – Network and Linkages	46

**5.0 Research and Innovation Related Activities** 58**6.0 Community Activities** 70**7.0 Conclusion** 75

<b>Appendix 1:</b>	<b>List of Publications</b>	76
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<b>Appendix 2:</b>	<b>List of Research Grants</b>	108
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## 1.0 INTRODUCTION

In year 2016, Research, Innovation, Community and Networking have been managed by Faculty. All the activities under Faculty will be reported directly under Vice chancellor of Research and Innovation. In the Faculty of Electrical Engineering there are 14 Research Group (RG), 1 High Center of Excellence (HCOE) and 3 Center of Excellence (CoE) which is affiliated with the Faculty. The list of Head of Research Group and Director of Centre of Excellence is shown in Table 1.1.

Table 1.1: Research Group/Centre of Excellence and Head of Research Group/Director of CoE

No	Name of Research Group	Head of Research Group/Director of CoE	Members
1.	ACOUSTIC RESEARCH GROUP	IR. DR. MOKHTAR HARUN	5
2.	ADVANCED CONTROL RESEARCH GROUP	PROF. MADYA DR. ZAHARUDDIN MOHAMED	17
3.	ADVANCE RF AND MICROWAVE RESEARCH GROUP (ARFMRG)	PROF. DR. MOHAMAD KAMAL A. RAHIM	7
4.	BIO MEDICAL AND INSTRUMENTATION ELECTRONICS (bMIE)	DR. MOHD AZHAR ABDUL RAZAK	14
5.	COMPUTATIONAL NANO ELECTRONICS (CoNE)	PROF. DR. RAZALI ISMAIL	7
6.	DIGITAL SIGNAL & IMAGE PROCESSING (DSIP)	PROF. MADYA DR. AHMAD ZURI SHA'AMERI	7
7.	LIGHTWARE COMMUNICATION RESEARCH GROUP (LRCG)	DR. ASRUL IZAM AZMI	12
8.	MICRO – NANO SYSTEMS ENGINEERING (MNSE)	DR. MOHD RIDZUAN AHMAD	4
9.	POWER ELECTRONICS & DRIVES RESEARCH GROUPS (PEDRG)	PROF. MADYA DR. NIK RUMZI NIK IDRIS	10
10.	POWER ENGINEERING RESEARCH GROUP (PERG)	PROF. IR. DR. ABDULLAH ASUHAIMI MOHD ZIN	10
11.	PROCESS TOMOGRAPHY RESEARCH GROUP AND INSTRUMENTATION (PROTOM – i)	PROF. DR. RUZAIRI A RAHIM	14
12.	SONAR TECHNOLOGY & MARINE INSTRUMENTATION (STAR)	PROF. MADYA DR. NOR HISHAM KHAMIS	5
13.	ADVANCED TELECOMMUNICATION TECHNOLOGY RESEARCH GROUP (ATTTRG)	DR. ROZEHA A. RASHID	13
14.	VLSI & EMBEDDED COMPUTING ARCHITECTURES DESIGN & RESEARCH GROUP (VECAD)	PROF. DR ABU KHAIRI A'AIN	8
15.	WIRELESS COMMUNICATION CENTRE WCC (HICoE)	PROF. DR. THAREK ABDUL RAHMAN	11
16.	CENTRE FOR ARTIFICIAL INTELLIGENCE AND ROBOTIC (CAIRO)	PROF. MADYA IR. DR. HAZLINA SELAMAT	4
17.	CENTRE OF ELECTRICAL ENERGY SYSTEM (CEES)	PROF. DR. MOHD. YUSRI HASSAN	7
18.	INSTITUTE OF HIGH VOLTAGE AND HIGH CURRENT (IVAT)	PROF. DR. ZULKURNAIN ABDUL MALEK	14

## Research Group



### 1.1 Research Groups and Center of Excellence

The research groups and center of excellence at the Faculty of Electrical engineering are working together to create a more inclusive research environment, where all feel welcomed, supported and have equal access to networks for mentoring and research activities. There are 14 research groups, 1 HiCoE and 3 CoEs which contribute to a total of 172 active member of researchers at the faculty. Tables 1.2 – 1.19 provide the list of active members in each RG and HiCoE/CoE. The research interests for each research groups and centre are summarized below:

#### 1.1.1 Research Groups



*Acoustics Research Group (ARG)* is composed of researchers in the field of acoustics that branch out the study and experimental works in the area of room acoustics and environmental noise, flexible Surface Acoustics Wave (SAW) and microwave sensory devices, nanomaterial, microwave propagation, microwave dielectric measurements, and numerical methods in electromagnetic.



*Advanced Control Research Group (ACRG)* involves with the research areas in control, mechatronics, robotics and instrumentation engineering which include modeling and control of advanced mechatronics systems including robots, process control, control theory, control and automation in agriculture, intelligent control, network control and advanced sensors and actuators.



*Advanced RF&Microwave Research Group (ARFMRG)* The Advance RF and Microwave Research Group is composed of researchers whose interests are based around the theme of RF and microwave devices in general.



*Bio medical & Instrumentation Electronics (BMiE)* focused on four main areas aimed at transforming healthcare through technology and innovation.



*Computational Nanoelectronics Research Group (CoNE)* focuses on nanoelectronics although other related application areas such as sensors are also explored.



*Digital Signal and Image Processing (DSIP)* covers two main areas: signal processing and image/video processing.



*Lightwave Communication Research Group (LCRG)* involve R&D and consultation services that are related to photonic based telecommunication devices, system and technology.



*Micro Nano system Engineering (MNSE)* works are motivated from the notion that single cell analysis approach will give a significant impact to the understanding of the biology field.



*Power Electronics and Drives Research Group (PEDRG)* dynamically involves in projects and research in the field of power electronics and drives.



*Power Engineering Research Group (PERG)* involved mostly research and development activities related to the Department of Power.



*Process Tomography and Instrumentation (PROTOM-i)* focuses on the design and development of electronic sensors, with special interest in process tomography.



*Sonar Technology and Marine Instrumentation (STAR)* works on sonar technology and marine instrumentation.



*Advanced Telecommunication Technology Research Group (ATTRG)* is composed of researchers whose interests are based around the theme of telematics protocol, sensor node and networking in general.



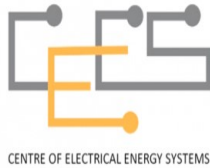
*The VeCAD (VLSI – eCAD)* is composed of researchers whose interests are based on microelectronic embedded system and advanced digital computing architectures.

### 1.1.2 HICoE



*Wireless Communication Centre (WCC)* has committed itself to the research, development and commercialisation activities in the field of wireless communication engineering in both national and international levels.

### 1.1.3 CoE



*The Centre of Electrical Energy Systems (CEES)* was established with the mission in providing innovative ideas and solutions in electrical power engineering and energy. It focuses on Renewable Energy, Smart Power Grids, Energy Efficiency, Demand Side Management, Electrical Energy Markets and Power Quality.



*The Institute of High Voltage and High Current (IVAT)* works on research and development, test and calibration works in high voltage areas, so that efficient technologies and power system apparatus can be effectively employed for the transmission and distribution to the consumer of electrical energy.



*Centre for Artificial Intelligent and Robotic (CAIRO)* has established itself as the leading R&D center in AI, Robotics and Automation in the country.



## 1.2: List of active members in each Research Group (RG) and HICoE/CoE.

Table 1.2-1.19 show the active members of FKE staff. All the members listed in the tables are academic staff of Faculty of Electrical Engineering.

Table 1.2: Acoustic Research Group (ARG)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Mokhtar bin Harun (Ir. Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=eg0-_coAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=eg0-_coAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mokhtar_Harun2">https://www.researchgate.net/profile/Mokhtar_Harun2</a>
2	Siti Zaleha binti Abd. Hamid	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=HII8haQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=HII8haQAAAAJ&amp;hl=en</a>
3	Rashidah @ Siti Saedah binti Arsat (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=0bq9FckAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=0bq9FckAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/R_Arsat/stats">https://www.researchgate.net/profile/R_Arsat/stats</a>
4	You Kok Yeow (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Ed4ly6wAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Ed4ly6wAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Kok_Yeow_You">https://www.researchgate.net/profile/Kok_Yeow_You</a>
5	Mohamad Ngasri bin Dimon (Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=fdifmX8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=fdifmX8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohamad_Ngasri_Dimon">https://www.researchgate.net/profile/Mohamad_Ngasri_Dimon</a>

Table 1.3: Advanced Control Research Group (ACRG)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Zaharuddin bin Mohamed (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=cm2iAqEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=cm2iAqEAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Zaharuddin_Mohamed">https://www.researchgate.net/profile/Zaharuddin_Mohamed</a>
2	Yahaya bin Md. Sam (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=TNLaDi8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=TNLaDi8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Yahaya_Md_Sam">https://www.researchgate.net/profile/Yahaya_Md_Sam</a>
3	Shahdan bin Sudin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=pTxFwycAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=pTxFwycAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Shahdan_Sudin">https://www.researchgate.net/profile/Shahdan_Sudin</a>
4	Sophan Wahyudi bin Nawawi (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=JInvfU8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=JInvfU8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Sophan_Nawawi">https://www.researchgate.net/profile/Sophan_Nawawi</a>
5	Mohamad Noh bin Ahmad @ Mohd Sanif (Dr.)	Assoc. Prof	<a href="https://scholar.google.com/citations?user=rktXdpQAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=rktXdpQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohamad_Noh_Ahmad">https://www.researchgate.net/profile/Mohamad_Noh_Ahmad</a>
6	Abdul Rashid bin Husain (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=hvmI40UAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=hvmI40UAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Abdul_Husain">https://www.researchgate.net/profile/Abdul_Husain</a>
7	Johari Halim Shah bin Osman (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=keKFgzgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=keKFgzgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Johari_Hs_Osman">https://www.researchgate.net/profile/Johari_Hs_Osman</a>
8	Zamani bin Md. Zain	Assoc. Prof	<a href="https://www.researchgate.net/profile/Zamani_Md_Zain">https://www.researchgate.net/profile/Zamani_Md_Zain</a>
9	Mohamad Shukri bin Zainal Abidin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=9FGZIT8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=9FGZIT8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohamad_Shukri_Zainal_Abidin">https://www.researchgate.net/profile/Mohamad_Shukri_Zainal_Abidin</a>
10	Lim Cheng Siong (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=YxgUV7YAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=YxgUV7YAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Cheng_Siong_Lim/">https://www.researchgate.net/profile/Cheng_Siong_Lim/</a>
11	Rosbi bin Mamat (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=2T2CIR0AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=2T2CIR0AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Rosbi_Mamat">https://www.researchgate.net/profile/Rosbi_Mamat</a>
12	Norhaliza binti Abdul Wahab (Ir. Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=L44maIMAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=L44maIMAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Assoc_Prof_Ir_Dr_Norhaliza_Wahab">https://www.researchgate.net/profile/Assoc_Prof_Ir_Dr_Norhaliza_Wahab</a>
13	Mohd Ariffanan bin Mohd Basri	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=0FMe26EAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=0FMe26EAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ariffanan_Basri">https://www.researchgate.net/profile/Ariffanan_Basri</a>
14	Nurul Adilla Mohd Subha	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=exIfER4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=exIfER4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nurul_Adilla_Mohd_Subha/info">https://www.researchgate.net/profile/Nurul_Adilla_Mohd_Subha/info</a>
15	Salinda bt. Buyamin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=11xc560AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=11xc560AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Salinda_Buyamin">https://www.researchgate.net/profile/Salinda_Buyamin</a>
16	Mohamad Amir Shamsudin	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=IDbLsg4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=IDbLsg4AAAAJ&amp;hl=en</a>

			<a href="https://www.researchgate.net/profile/Moahamad_Shamsudin">https://www.researchgate.net/profile/Moahamad_Shamsudin</a>
17	Fatimah Sham binti Ismail (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=1OLxccAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=1OLxccAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Fatimah_Sham_Ismail">https://www.researchgate.net/profile/Fatimah_Sham_Ismail</a>

Table 1.4: Advanced RF &amp; Microwave Research Group (ARFMRG)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Mohamad Kamal bin A. Rahim (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=662NXqYAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=662NXqYAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/MKA_Rahim">https://www.researchgate.net/profile/MKA_Rahim</a>
2	Osman bin Ayob	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=GEJwILcAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=GEJwILcAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Osman_Ayop">https://www.researchgate.net/profile/Osman_Ayop</a>
3	Farid bin Zubir	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=gddZW9kAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=gddZW9kAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Farid_Zubir">https://www.researchgate.net/profile/Farid_Zubir</a>
4	Noor Asniza binti Murad (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=7mU9NZEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=7mU9NZEAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Noor_Murad">https://www.researchgate.net/profile/Noor_Murad</a>
5	Mohd Fairus bin Mohd Yusoff (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=P033aMEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=P033aMEAAAAJ&amp;hl=en</a>
6	Noor Asmawati binti Samsuri (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=SUFR12cAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=SUFR12cAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Na_Samsuri">https://www.researchgate.net/profile/Na_Samsuri</a>
7	Mohamad Rijal Hamid	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=c4XS38AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=c4XS38AAAAJ&amp;hl=en</a> <a href="https://pure.utm.my/en/persons/mohamad-rijal-hamid">https://pure.utm.my/en/persons/mohamad-rijal-hamid</a>

Table 1.5: Bio Medical &amp; Instrumentation Electronics (BMiE)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Mohd Azhar bin Abdul Razak (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=XNtbhIUAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=XNtbhIUAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Abdul_Razak">https://www.researchgate.net/profile/Mohd_Abdul_Razak</a>
2	Mitra bte Mohd Addi	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=um5haq8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=um5haq8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mitra_Mohd_Addi">https://www.researchgate.net/profile/Mitra_Mohd_Addi</a>
3	Nor Aini Zakaria (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=6GmS-3kAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=6GmS-3kAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nor_Zakaria8">https://www.researchgate.net/profile/Nor_Zakaria8</a>
4	Ismail bin Ariffin	Senior Lecturer	<a href="https://scholar.google.com/citations?hl=en&amp;user=vTKhp-sAAAAJ">https://scholar.google.com/citations?hl=en&amp;user=vTKhp-sAAAAJ</a> <a href="https://www.researchgate.net/profile/Ismail_Ariffin">https://www.researchgate.net/profile/Ismail_Ariffin</a>
5	Abd. Hamid bin Ahmad	Senior Lecturer	
6	Camallil bin Omar	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=TWq7IDgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=TWq7IDgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Camallil_Omar">https://www.researchgate.net/profile/Camallil_Omar</a>
7	Puspa Inayat binti Khalid (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=ASJ87KIAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=ASJ87KIAAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Puspa_Inayat_Khalid">https://www.researchgate.net/profile/Puspa_Inayat_Khalid</a>
8	Norlaili bte Mat Safri (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=5malFPgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=5malFPgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Norlaili_Safri">https://www.researchgate.net/profile/Norlaili_Safri</a>
9	Nasrul Humaimi bin Mahmood (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=cLITFdKAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=cLITFdKAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nasrul_Humaimi_Mahmood">https://www.researchgate.net/profile/Nasrul_Humaimi_Mahmood</a>
10	Mohd Afzan bin Othman (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=H5OVUHIAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=H5OVUHIAAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Afzan_Othman">https://www.researchgate.net/profile/Mohd_Afzan_Othman</a>
11	Eileen Su Lee Ming (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=VtLE6L4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=VtLE6L4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Eileen_Su">https://www.researchgate.net/profile/Eileen_Su</a>
12	Rubita Sudirman (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=qO_aFxAaaaaJ&amp;hl=en">https://scholar.google.com.my/citations?user=qO_aFxAaaaaJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Rubita_Sudirman">https://www.researchgate.net/profile/Rubita_Sudirman</a>
13		Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=boClK8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=boClK8AAAAJ&amp;hl=en</a>

	Fauzan Khairi bin Che Harun (Dr.)		<a href="https://www.researchgate.net/profile/Fauzan_Khairi_Che_Harun2">https://www.researchgate.net/profile/Fauzan_Khairi_Che_Harun2</a>
14	Norhafizah bte Ramli	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=AQLxIG4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=AQLxIG4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Norhafizah_Ramli">https://www.researchgate.net/profile/Norhafizah_Ramli</a>

Table 1.6: Computational Nanoelectronics (CoNE)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Razali bin Ismail (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=3hMiA4UAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=3hMiA4UAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Razali_Ismail">https://www.researchgate.net/profile/Razali_Ismail</a>
2	Nurul Ezaila bte Alias (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?hl=en&amp;user=CADoKKgAAAAJ&amp;view_op=list_works">https://scholar.google.com.my/citations?hl=en&amp;user=CADoKKgAAAAJ&amp;view_op=list_works</a> <a href="https://www.researchgate.net/profile/Nurul_Alias6">https://www.researchgate.net/profile/Nurul_Alias6</a>
3	Zaharah binti Johari (Dr.)	Senior Lecturer	<a href="https://scholar.google.com/citations?hl=en&amp;user=5OgS1X0AAAAJ&amp;cstart=20&amp;view_op=list_works">https://scholar.google.com/citations?hl=en&amp;user=5OgS1X0AAAAJ&amp;cstart=20&amp;view_op=list_works</a> <a href="https://www.researchgate.net/profile/Zaharah_Johari">https://www.researchgate.net/profile/Zaharah_Johari</a>
4	Suhaila binti Isaak (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=0GavdN4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=0GavdN4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Suhaila_Isaak">https://www.researchgate.net/profile/Suhaila_Isaak</a>
5	Michael Tan Loong Peng (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Fbq_pnwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Fbq_pnwAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Michael_Tan7">https://www.researchgate.net/profile/Michael_Tan7</a>
6	Yusmeeraz binti Yusof (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=WYFPVjQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=WYFPVjQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Yusmeeraz_Yusof">https://www.researchgate.net/profile/Yusmeeraz_Yusof</a>
7	Suhana binti Mohamed Sultan (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=9OjFkKoAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=9OjFkKoAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Suhana_Mohamed_Sultan">https://www.researchgate.net/profile/Suhana_Mohamed_Sultan</a>

Table 1.7: Digital Signal and Image Processing (DSIP)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Ahmad Zuri bin Sha'ameri (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=qtXhAR8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=qtXhAR8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Az_Shaameri">https://www.researchgate.net/profile/Az_Shaameri</a>
2	Zaid bin Omar (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=vsOlcsMAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=vsOlcsMAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Zaid_Omar">https://www.researchgate.net/profile/Zaid_Omar</a>
3	Usman Ullah Sheikh Izzat Ullah Sheikh (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=guVIQXWAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=guVIQXWAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Usman_Ullah_Sheikh">https://www.researchgate.net/profile/Usman_Ullah_Sheikh</a>
4	Musa bin Mohd Mokji (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=UqZB5u8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=UqZB5u8AAAAJ&amp;hl=en</a>
5	Muhammad Mun'im bin Ahmad Zabidi	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=1Mu1UsAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=1Mu1UsAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Munim_Zabidi2">https://www.researchgate.net/profile/Munim_Zabidi2</a>
6	Syed Abdul Rahman bin Syed Abu Bakar (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=FtWO1yYAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=FtWO1yYAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Syed_Ab_Rahman_Abu_Bakar">https://www.researchgate.net/profile/Syed_Ab_Rahman_Abu_Bakar</a>
7	Ab Al-Hadi bin Ab Rahman (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=s-cZvg4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=s-cZvg4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ab_Al_Hadi_Ab_Rahman">https://www.researchgate.net/profile/Ab_Al_Hadi_Ab_Rahman</a>

Table 1.8: Micro Nano System Engineering (MNSE)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Mohd Ridzuan bin Ahmad (Ir. Dr)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Ly4ZR1YAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Ly4ZR1YAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ridzuan_Ahmad">https://www.researchgate.net/profile/Ridzuan_Ahmad</a>
2	Amirjan bin Nawabjan	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=PXAr_9EAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=PXAr_9EAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Amirjan_Nawabjan">https://www.researchgate.net/profile/Amirjan_Nawabjan</a>
3		Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=4xweE-kAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=4xweE-kAAAAJ&amp;hl=en</a>

	Mastura Shafinaz Zainal Abidin (Dr.)		<a href="https://www.researchgate.net/profile/Mastura_Zainal_Abidin">https://www.researchgate.net/profile/Mastura_Zainal_Abidin</a>
4	Shaharin Fadzli bin Abd. Rahman (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=2-1-76oAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=2-1-76oAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Shaharin_Fadzli_Abd_Rahman">https://www.researchgate.net/profile/Shaharin_Fadzli_Abd_Rahman</a>

Table 1.9: Power Electronics and Drives Research Group (PEDRG)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Nik Rumzi bin Nik Idris (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=67XLCj8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=67XLCj8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nik_Rumzi_Nik_Idris">https://www.researchgate.net/profile/Nik_Rumzi_Nik_Idris</a>
2	Mohd Zaki bin Daud	Lecturer	<a href="https://scholar.google.com/citations?user=EUu31aIAAAJ&amp;hl=en&amp;oi=ao">https://scholar.google.com/citations?user=EUu31aIAAAJ&amp;hl=en&amp;oi=ao</a> <a href="https://www.researchgate.net/profile/Mohd_Daud12">https://www.researchgate.net/profile/Mohd_Daud12</a>
3	Tan Chee Wei (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=2DWWdlYAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=2DWWdlYAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Chee_Wei_Tan">https://www.researchgate.net/profile/Chee_Wei_Tan</a>
4	Nik Din bin Muhamad	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=l47UcrkAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=l47UcrkAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nik_Din_Muhamad">https://www.researchgate.net/profile/Nik_Din_Muhamad</a>
5	Mohd Junaidi Abdul Aziz (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=36Bk4iQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=36Bk4iQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/J_Aziz">https://www.researchgate.net/profile/J_Aziz</a>
6	Mohd Rodhi bin Sahid (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=AcV5ZDMAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=AcV5ZDMAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Rodhi_Sahid">https://www.researchgate.net/profile/Mohd_Rodhi_Sahid</a>
7	Shahrin bin Md. Ayob (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=If7Fjh4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=If7Fjh4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Shahrin_Md">https://www.researchgate.net/profile/Shahrin_Md</a>
8	Naziha binti Ahmad Azli (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=UkB4tiYAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=UkB4tiYAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Naziha_Azli">https://www.researchgate.net/profile/Naziha_Azli</a>
9	Awang bin Jusoh (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=tblmjvIAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=tblmjvIAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Awang_Jusoh">https://www.researchgate.net/profile/Awang_Jusoh</a>
10	Abdul Halim bin Mohd Yatim (Dr. Ir)	Professor	<a href="https://scholar.google.com.my/citations?user=cfZJo0AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=cfZJo0AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Abdul_Halim_Yatim">https://www.researchgate.net/profile/Abdul_Halim_Yatim</a>

Table 1.10: Power Engineering Research Group (PERG)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Abdullah Asuhaimi bin Mohd Zin (Dr. Ir.)	Professor	<a href="https://scholar.google.com/citations?user=iLL50SQAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=iLL50SQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Abdullah_Mohd_Zin">https://www.researchgate.net/profile/Abdullah_Mohd_Zin</a>
2	Jasrul Jamani bin Jamian (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=QNceupIAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=QNceupIAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/J_J_Jamian">https://www.researchgate.net/profile/J_J_Jamian</a>
3	Zaniah binti Muda	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=PS65lcwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=PS65lcwAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Zaniah_Muda">https://www.researchgate.net/profile/Zaniah_Muda</a>
4	Ahmad Safawi bin Mokhtar (Dr.)	Senior Lecturer	<a href="https://scholar.google.com/citations?user=vB9jsBkAAAAJ&amp;hl=en&amp;oi=ao">https://scholar.google.com/citations?user=vB9jsBkAAAAJ&amp;hl=en&amp;oi=ao</a> <a href="https://www.researchgate.net/profile/Ahmad_Safawi">https://www.researchgate.net/profile/Ahmad_Safawi</a>
5	Saifulnizam bin Abd. Khalid (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=WXYfZbQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=WXYfZbQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Saifulnizam_Abdul_Khalid">https://www.researchgate.net/profile/Saifulnizam_Abdul_Khalid</a>
6	Rasyidah bte Mohamad Idris (Dr.)	Senior Lecturer	<a href="https://scholar.google.com/citations?user=tkOLExAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=tkOLExAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Rasyidah_Mohamad_Idris">https://www.researchgate.net/profile/Rasyidah_Mohamad_Idris</a>
7	Mohd Fadli bin Rahmat (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=GZXp2RgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=GZXp2RgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Fadli_Rahmat">https://www.researchgate.net/profile/Mohd_Fadli_Rahmat</a>
8	Mohd Hafiz bin Habibuddin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=m85L4tEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=m85L4tEAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Habibuddin">https://www.researchgate.net/profile/Mohd_Habibuddin</a>
9	Azhar bin Khairuddin (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=4i1HJj4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=4i1HJj4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Azhar_Khairuddin">https://www.researchgate.net/profile/Azhar_Khairuddin</a>
10	Mohd Wazir bin Mustafa (Ir. Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=MFAAM_EAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=MFAAM_EAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Mustafa3">https://www.researchgate.net/profile/Mohd_Mustafa3</a>



Table 1.11: Sonar Technology and Marine Instrumentation (STAR)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Nor Hisham bin Khamis (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=o8rE1NQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=o8rE1NQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nor_Khamis">https://www.researchgate.net/profile/Nor_Khamis</a>
2	Mohd Shahrizal Rusli	Tutor	
3	Ameruddin bin Baharom	Senior Lecturer	
4	Muhammad Arif bin Abd. Rahim	Senior Lecturer	
5	Kamal bin Khalil	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=HU6BWgUAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=HU6BWgUAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Kamal_Khalil5">https://www.researchgate.net/profile/Kamal_Khalil5</a>

Table 1.12: Advanced Telecommunication Technology Research Group (ATTRG)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Sharifah Hafizah bt. Syed Ariffin (Ir. Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=M-oAwGEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=M-oAwGEAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Sharifah_Hafizah_Syed_Ariffin?ev=hdr_xprf">https://www.researchgate.net/profile/Sharifah_Hafizah_Syed_Ariffin?ev=hdr_xprf</a>
2	Mazlina binti Esa (Dr.)	Professor	<a href="https://www.researchgate.net/profile/Mazlina_Esa">https://www.researchgate.net/profile/Mazlina_Esa</a>
3	Sharifah Kamilah binti Syed Yusof (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=4qzKk6KAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=4qzKk6KAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Sharifah_Kamilah">https://www.researchgate.net/profile/Sharifah_Kamilah</a>
4	Kamaludin bin Mohd Yusof (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Lpbt7w8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Lpbt7w8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Kamaludin_Mohamad_Yusof">https://www.researchgate.net/profile/Kamaludin_Mohamad_Yusof</a>
5	Mohd Adib bin Sarijari (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=XsBnMXsAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=XsBnMXsAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_adib_Sarijari">https://www.researchgate.net/profile/Mohd_adib_Sarijari</a>
6	Nurzal Effiyana binti Ghazali (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=IgnGVDUAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=IgnGVDUAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ghazali_NEffiyana">https://www.researchgate.net/profile/Ghazali_NEffiyana</a>
7	Alias bin Mohd	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=N8vcyC4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=N8vcyC4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Alias_Mohd3/">https://www.researchgate.net/profile/Alias_Mohd3/</a>
8	Samura bin Ali	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=IsCTOlGAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=IsCTOlGAAAAJ&amp;hl=en</a>
9	Rozeha binti A. Rashid (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Q2rNtOoAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Q2rNtOoAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Rozeha_A_Rashid">https://www.researchgate.net/profile/Rozeha_A_Rashid</a>
10	Nurul Mu'azzah binti Abdul Latiff (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=IQHA1oAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=IQHA1oAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nurul_Muazzah_Abdul_Latiff2">https://www.researchgate.net/profile/Nurul_Muazzah_Abdul_Latiff2</a>
11	Nik Noordini bte Nik Abdul Malek (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=D64vUQMMAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=D64vUQMMAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nik_Noordini_Nik_Abd_Malik">https://www.researchgate.net/profile/Nik_Noordini_Nik_Abd_Malik</a>
12	Ahmad Shahidan bin Abdullah (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=cij7mQgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=cij7mQgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ahmad_Shahidan_Abdullah">https://www.researchgate.net/profile/Ahmad_Shahidan_Abdullah</a>
13	Muhammad Ariff bin Baharudin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com/citations?user=u8vHsigAAAAJ&amp;hl=en">https://scholar.google.com/citations?user=u8vHsigAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Muhammad_Baharudin2">https://www.researchgate.net/profile/Muhammad_Baharudin2</a>

Table 1.13: Process Tomography and Instrumentation Research Group (PROTOM-i)

NO.	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Ruzairi bin Abdul Rahim (Dr.)	Profesor	<a href="https://scholar.google.com.my/citations?user=7OynBqwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=7OynBqwAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ruzairi_Rahim2">https://www.researchgate.net/profile/Ruzairi_Rahim2</a>
2	Mohamed Sultan Mohamed Ali (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=7j5AKTMAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=7j5AKTMAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohamed_Sultan_Mohamed_Ali2">https://www.researchgate.net/profile/Mohamed_Sultan_Mohamed_Ali2</a>
3	Shafishuhaza bte Sahlan (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=pevpXyIAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=pevpXyIAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Shafis_Sahlan">https://www.researchgate.net/profile/Shafis_Sahlan</a>
4	Khairul Hamimah binti Abas (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=mSYdZyEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=mSYdZyEAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Khairul_Hamimah_Abas2">https://www.researchgate.net/profile/Khairul_Hamimah_Abas2</a>
5	Mohd Shukri bin Abdul Manaf	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=-9E3cbYAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=-9E3cbYAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Shukri_Abdul_Manaf">https://www.researchgate.net/profile/Mohd_Shukri_Abdul_Manaf</a>
6	Yusri bin Md. Yunos (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=C6-Jf_QAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=C6-Jf_QAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Yusri_Yunos2">https://www.researchgate.net/profile/Yusri_Yunos2</a>
7	Anita binti Ahmad (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=-LDhw0kAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=-LDhw0kAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Anita_Ahmad2">https://www.researchgate.net/profile/Anita_Ahmad2</a>
8	Leow Pei Ling (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=PLUtB7cAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=PLUtB7cAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Pei_Ling_Leow">https://www.researchgate.net/profile/Pei_Ling_Leow</a>
9	Mohamad Hafis Izran bin Ishak (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=h1Vx9pwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=h1Vx9pwAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohamad_Ishak5">https://www.researchgate.net/profile/Mohamad_Ishak5</a>
10	Herman bin Wahid (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=aqyBgY4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=aqyBgY4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Herman_Wahid">https://www.researchgate.net/profile/Herman_Wahid</a>
11	Mohd Amri Md. Yunus (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=b44eNdoAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=b44eNdoAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Amri_Md_Yunus">https://www.researchgate.net/profile/Mohd_Amri_Md_Yunus</a>
12	Sallehuddin bin Ibrahim (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=ZXQoIQYAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=ZXQoIQYAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Sallehuddin_Ibrahim">https://www.researchgate.net/profile/Sallehuddin_Ibrahim</a>
13	Herlina binti Abdul Rahim (Ir. Dr)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=RnqqkXkAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=RnqqkXkAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Herlina_Rahim">https://www.researchgate.net/profile/Herlina_Rahim</a>
14	Mohd Fua'ad bin Rahmat (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=00F3f6EAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=00F3f6EAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Rahmat3">https://www.researchgate.net/profile/Mohd_Rahmat3</a>

Table 1.14: VLSI and Embedded Computing Architecture Design Research Group (VECAD)

NO	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Abu Khari bin A'ain (Dr.)	Professor	<a href="https://scholar.google.com/citations?view_op=list_works&amp;hl=en&amp;user=uRAeeTUAAAAJ">https://scholar.google.com/citations?view_op=list_works&amp;hl=en&amp;user=uRAeeTUAAAAJ</a> <a href="https://www.researchgate.net/profile/Abu_Aain">https://www.researchgate.net/profile/Abu_Aain</a>
2	Izam bin Kamisian	Lecturer	<a href="https://scholar.google.com.my/citations?user=CgvQ9ZQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=CgvQ9ZQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Izam_Kamisian">https://www.researchgate.net/profile/Izam_Kamisian</a>
3	Zulfakar bin Aspar	Lecturer	<a href="https://scholar.google.com.my/citations?user=6_uxKkIAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=6_uxKkIAAAJ&amp;hl=en</a>
4	Norlina bte Paraman (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?view_op=list_works&amp;hl=en&amp;user=vU-kH3QAAAAJ">https://scholar.google.com.my/citations?view_op=list_works&amp;hl=en&amp;user=vU-kH3QAAAAJ</a> <a href="https://www.researchgate.net/profile/Norlina_Paraman">https://www.researchgate.net/profile/Norlina_Paraman</a>
5	Shaikh Nasir bin Shaikh Husin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=x-TbrikAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=x-TbrikAAAAJ&amp;hl=en</a>
6	Ismahani bte Ismail (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?hl=en&amp;user=WWTYSL0AAAAJ&amp;view_op=list_works">https://scholar.google.com.my/citations?hl=en&amp;user=WWTYSL0AAAAJ&amp;view_op=list_works</a> <a href="https://www.researchgate.net/profile/Ismahani_Ismail">https://www.researchgate.net/profile/Ismahani_Ismail</a>
7		Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=BwUfGooAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=BwUfGooAAAAJ&amp;hl=en</a>

	Muhammad Nadzir bin Marsono (Dr.)		<a href="https://www.researchgate.net/profile/Muhammad_Nadzir_Marsono">https://www.researchgate.net/profile/Muhammad_Nadzir_Marsono</a>
8	Mohamed Khalil bin Mohd Hani (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=FERbCMEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=FERbCMEAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohamed_Khalil-Hani">https://www.researchgate.net/profile/Mohamed_Khalil-Hani</a>

Table 1.15: Light Wave Communication Research Group (LCRG)

NO	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Asrul Izam bin Azmi (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Yfyd80EAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Yfyd80EAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/A_Azmi">https://www.researchgate.net/profile/A_Azmi</a>
2	Mohd Rashidi bin Salim (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=S1OLuAgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=S1OLuAgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Rashidi_Salim">https://www.researchgate.net/profile/Mohd_Rashidi_Salim</a>
3	Muhammad Al-Farabi bin Muhammad Iqbal (Dr.)	Senior Lecturer	<a href="https://scholar.google.nl/citations?user=BvuWrwAAAAJ&amp;hl=en">https://scholar.google.nl/citations?user=BvuWrwAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Farabi_Iqbal">https://www.researchgate.net/profile/Farabi_Iqbal</a>
4	Ahmad Sharmi bin Abdullah (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=V8m32lgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=V8m32lgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ahmad_Abdullah16">https://www.researchgate.net/profile/Ahmad_Abdullah16</a>
5	Muhamad Yusof bin Mohd Noor (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=svz5v5sAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=svz5v5sAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Muhammad_Mohd_Noor">https://www.researchgate.net/profile/Muhammad_Mohd_Noor</a>
6	Nor Hafizah binti Ngajikin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=H7y8RCMAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=H7y8RCMAAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nor_Ngajikin">https://www.researchgate.net/profile/Nor_Ngajikin</a>
7	Nadiatulhuda binti Zulkifli (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=r4_JWiwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=r4_JWiwAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nadia_Zul/info">https://www.researchgate.net/profile/Nadia_Zul/info</a>
8	Norazan bin Mohd Kassim (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=O_DNhmKAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=O_DNhmKAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Nm_Kassim">https://www.researchgate.net/profile/Nm_Kassim</a>
9	Mohd Hanif bin Ibrahim (Dr.)	Assoc. Prof	<a href="https://scholar.google.com.my/citations?user=gC3WMkgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=gC3WMkgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_Ibrahim10">https://www.researchgate.net/profile/Mohd_Ibrahim10</a>
10	Abu Bakar bin Mohammad (Ir. Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=1XaYnKkAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=1XaYnKkAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Abu_Mohammad">https://www.researchgate.net/profile/Abu_Mohammad</a>
11	Abu Sahmah bin Mohd Supa'at (Ir. Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=l-maUdcAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=l-maUdcAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Abu_Supaat">https://www.researchgate.net/profile/Abu_Supaat</a>
12	Sevia Mahdaliza bt. Sutan Nameh (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=x3UvAeQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=x3UvAeQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Sevia_Idrus">https://www.researchgate.net/profile/Sevia_Idrus</a>

Table 1.16: HiCoE Wireless Communication Centre (WCC)

NO	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Tharek bin Abd. Rahman (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=OXQp2xgAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=OXQp2xgAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Tharek_Abd_Rahman">https://www.researchgate.net/profile/Tharek_Abd_Rahman</a>
2	Razali bin Ngah (Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=Fx_xde4AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Fx_xde4AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Razali_Ngah">https://www.researchgate.net/profile/Razali_Ngah</a>
3	Sharul Kamal bin Abdul Rahim (Ir. Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=o73B5QsAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=o73B5QsAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Sharul_Abdul_rahim">https://www.researchgate.net/profile/Sharul_Abdul_rahim</a>
4	Marwan Hadri bin Azmi (Dr.)	Senior Lecturer	<a href="https://scholar.google.com/citations?hl=en&amp;user=H4EcFhwAAAAJ">https://scholar.google.com/citations?hl=en&amp;user=H4EcFhwAAAAJ</a> <a href="https://www.researchgate.net/profile/Marwan_Bin_Azmi">https://www.researchgate.net/profile/Marwan_Bin_Azmi</a>
5	Muhammad Ramlee bin Kamarudin (Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=tYHqSGUAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=tYHqSGUAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/MR_Kamarudin">https://www.researchgate.net/profile/MR_Kamarudin</a>
6	Mohd Haizal bin Jamaludin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Khrhbp8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Khrhbp8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Mohd_haizal_Jamaluddin2">https://www.researchgate.net/profile/Mohd_haizal_Jamaluddin2</a>
7	Norhudah bte Seman (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=wz3ga5IAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=wz3ga5IAAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Norhudah_Seman">https://www.researchgate.net/profile/Norhudah_Seman</a>
8	Omar bin Abdul Aziz (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=V-1CLesAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=V-1CLesAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Omar_Abdul_Aziz">https://www.researchgate.net/profile/Omar_Abdul_Aziz</a>
9	Leow Chee Yen (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=WSDmXAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=WSDmXAAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Chee_Yen_Leow">https://www.researchgate.net/profile/Chee_Yen_Leow</a>

10	Chua Tien Han	Lecturer	<a href="https://scholar.google.com.my/citations?user=JXMVNusAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=JXMVNusAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Tien_Han_Chua">https://www.researchgate.net/profile/Tien_Han_Chua</a>
11	Jafri bin Din ( Dr. )	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=KhwvNwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=KhwvNwAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Jafri_Din">https://www.researchgate.net/profile/Jafri_Din</a>

Table 1.17: Centre of Electrical Energy (CEES)

NO	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Mohammad Yusri bin Hassan (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=fDK-sewAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=fDK-sewAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Mohammad_Yusri_Hassan">https://www.researchgate.net/profile/Mohammad_Yusri_Hassan</a>
2	Hasimah binti Abdul Rahman (Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=pVNu86oAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=pVNu86oAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Hasimah_Abdul_Rahman">https://www.researchgate.net/profile/Hasimah_Abdul_Rahman</a>
3	Zainal bin Salam (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=L48PgBQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=L48PgBQAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Zainal_Salam">https://www.researchgate.net/profile/Zainal_Salam</a>
4	Faridah binti Husin	Senior Lecturer	<a href="https://scholar.google.com/citations?user=BUqGGP0AAAAJ&amp;hl=en">https://scholar.google.com/citations?user=BUqGGP0AAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Faridah_Hussin3">https://www.researchgate.net/profile/Faridah_Hussin3</a>
5	Norzanah binti Rosmin (Dr.)	Senior Lecturer	<a href="https://scholar.google.com/citations?hl=en&amp;user=geu79AwAAAAJ">https://scholar.google.com/citations?hl=en&amp;user=geu79AwAAAAJ</a>
			<a href="https://www.researchgate.net/profile/Norzanah_Rosmin2">https://www.researchgate.net/profile/Norzanah_Rosmin2</a>
6	Dalila binti Mat Said (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=nHJOGNwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=nHJOGNwAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Dalila_Said">https://www.researchgate.net/profile/Dalila_Said</a>
7	Md. Pauzi bin Abdullah (Ir. Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=Xr6L3GUAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=Xr6L3GUAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Md_Pauzi_Abdullah">https://www.researchgate.net/profile/Md_Pauzi_Abdullah</a>

Table 1.18: Institute of High Voltage and High Current (IVAT)

NO	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Zulkurnain bin Abd. Malek (Dr.)	Professor	<a href="https://scholar.google.com.my/citations?user=GV-DW18AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=GV-DW18AAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Zulkurnain_Abdul-Malek">https://www.researchgate.net/profile/Zulkurnain_Abdul-Malek</a>
2	Mohd. Muhridza bin Yaacob (Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=a1LGKp8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=a1LGKp8AAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Mohd_Yaacob2">https://www.researchgate.net/profile/Mohd_Yaacob2</a>
3	Zolkafle bin Buntat (Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=P6Yo7egAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=P6Yo7egAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Zolkafle_Buntat2">https://www.researchgate.net/profile/Zolkafle_Buntat2</a>
4	Mohamed Afendi bin Mohamed Piah (Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=iT7dvmoAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=iT7dvmoAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/M_Afendi_M_Piah">https://www.researchgate.net/profile/M_Afendi_M_Piah</a>
5	Zuraimy bin Adzis (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=YHehHAIAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=YHehHAIAAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Zuraimy_Adzis">https://www.researchgate.net/profile/Zuraimy_Adzis</a>
6	Noor Azlinda bte Ahmad (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=tI-HbOwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=tI-HbOwAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Azlinda_Ahmad/stats">https://www.researchgate.net/profile/Azlinda_Ahmad/stats</a>
7	Mona Riza bte Mohd Esa (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=y_3SGUoAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=y_3SGUoAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Mona_Riza_Mohd_Esa">https://www.researchgate.net/profile/Mona_Riza_Mohd_Esa</a>
8	Yanuar Zulardiansyah Arief (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=wLrOd8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=wLrOd8AAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Yanuar_Arief3">https://www.researchgate.net/profile/Yanuar_Arief3</a>
9	Lau Kwan Yiew (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=pIvAAkEAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=pIvAAkEAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Kwan_Yiew_Lau">https://www.researchgate.net/profile/Kwan_Yiew_Lau</a>
10	Zulkarnain bin Ahmad Noorden (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=3nIXEIMAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=3nIXEIMAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Zulkarnain_Ahmad_Noorden">https://www.researchgate.net/profile/Zulkarnain_Ahmad_Noorden</a>
11	Mohd Hafizi bin Ahmad (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=grUMijMAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=grUMijMAAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Mohd_Ahmad2">https://www.researchgate.net/profile/Mohd_Ahmad2</a>
12	Muhammad Abu Bakar Sidik (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=-34HzVkAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=-34HzVkAAAAJ&amp;hl=en</a>
			<a href="https://www.researchgate.net/profile/Muhammad_Abu_Bakar_Sidik">https://www.researchgate.net/profile/Muhammad_Abu_Bakar_Sidik</a>
13		Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=iZWf_6IAAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=iZWf_6IAAAAAJ&amp;hl=en</a>



	Nouruddeen Bashir Umar (Dr.)		<a href="https://www.researchgate.net/profile/Nouruddeen_Bashir">https://www.researchgate.net/profile/Nouruddeen_Bashir</a>
14	Nor Asiah bte Muhamad (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=WVuSjg8AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=WVuSjg8AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/NA_Muhamad">https://www.researchgate.net/profile/NA_Muhamad</a>

Table 1.19: Center of Artificial Intelligence and Robotics (CAIRO)

NO	NAME	DESIGNATION	GOOGLE SCHOLAR LINK/RESEARCH GATE
1	Hazlina binti Selamat (Ir. Dr.)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=X_qB-VQAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=X_qB-VQAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Hazlina_Selamat">https://www.researchgate.net/profile/Hazlina_Selamat</a>
2	Shamsuddin Mohd Amin	Professor	<a href="https://www.researchgate.net/profile/Shm_Amin">https://www.researchgate.net/profile/Shm_Amin</a>
3	Yeong Che Fai (Dr.)	Senior Lecturer	<a href="https://scholar.google.com.my/citations?user=_cflm90AAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=_cflm90AAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Yeong_Fai">https://www.researchgate.net/profile/Yeong_Fai</a>
4	Ahmad 'Athif bin Mohd Faudzi (Ir. Dr)	Assoc. Prof.	<a href="https://scholar.google.com.my/citations?user=1uq08KwAAAAJ&amp;hl=en">https://scholar.google.com.my/citations?user=1uq08KwAAAAJ&amp;hl=en</a> <a href="https://www.researchgate.net/profile/Ahmad_Athif_Mohd_Faudzi">https://www.researchgate.net/profile/Ahmad_Athif_Mohd_Faudzi</a>

## 2.0 LIST OF FKE'S ACADEMIC STAFFS

Faculty of Electrical Engineering has four departments. All the academic staff belong to one of the following departments; i) Department of Communication (Comm), ii) Department of Control and Mechatronics (CMED), iii) Department of Electronics and Computer Engineering (ECE) and iv) Department of Electrical Power Engineering (Power).

### 2.1 Department of Communication (Comm)

The list of communication engineering department staffs are listed in Table 2.1. There are 54 academic staff which are 6 Professors, 10 Associate Professors, 35 Senior Lecturers, 1 Lecturer and 2 Tutors.

Table 2.1: List of Academic Staff in Comm

NO.	NAME	DESIGNATION
1	Tharek bin Abd. Rahman (Dr.)	Professor
2	Abu Bakar bin Mohammad (Ir. Dr.)	Professor
3	Mazlina binti Esa (Dr.)	Professor
4	Abu Sahmah bin Mohd Supa'at (Ir. Dr.)	Professor
5	Sevia Mahdaliza bt. Sutan Nameh (Dr.)	Professor
6	Mohamad Kamal bin A. Rahim (Dr.)	Professor
7	Mohamad Ngasri bin Dimon (Dr.)	Assoc. Prof.
8	Norazan bin Mohd Kassim (Dr.)	Assoc. Prof.
9	Sharifah Kamilah binti Syed Yusof (Dr.)	Assoc. Prof.
10	Jafri bin Din ( Dr. )	Assoc. Prof.
11	Razali bin Ngah (Dr.)	Assoc. Prof.
12	Sharifah Hafizah bt. Syed Ariffin (Ir. Dr.)	Assoc. Prof.
13	Mohd Haniff bin Ibrahim (Dr.)	Assoc. Prof.
14	Sharul Kamal bin Abdul Rahim (Ir. Dr)	Assoc. Prof.
15	Muhammad Ramlee bin Kamarudin (Dr.)	Assoc. Prof.
16	Ameruddin bin Baharom	Senior Lecturer
17	Alias bin Mohd	Senior Lecturer
18	Nor Hisham bin Khamis (Dr.)	Senior Lecturer
19	Mokhtar bin Harun (Ir. Dr.)	Senior Lecturer
20	Samura bin Ali	Senior Lecturer
21	Rozeha binti A. Rashid	Senior Lecturer
22	Siti Zaleha binti Abd. Hamid	Senior Lecturer
23	Yusri bin Md. Yunos (Dr.)	Senior Lecturer
24	Mohamad Rijal bin Hamid (Dr.)	Senior Lecturer
25	Kamaludin bin Mohd Yusof (Dr.)	Senior Lecturer
26	Nor Hafizah binti Ngajikin (Dr.)	Senior Lecturer
27	Noor Asniza binti Murad (Dr.)	Senior Lecturer
28	Nurul Mu'azzah binti Abdul Latiff (Dr.)	Senior Lecturer
29	Asrul Izam bin Azmi	Senior Lecturer
30	Mohd Fairus bin Mohd Yusoff (Dr.)	Senior Lecturer
31	Nadiatulhuda binti Zulkifli (Dr.)	Senior Lecturer
32	Marwan Hadri bin Azmi (Dr.)	Senior Lecturer

33	Noor Asmawati binti Samsuri (Dr.)	Senior Lecturer
34	Rashidah @ Siti Saedah binti Arsat (Dr.)	Senior Lecturer
35	Mohd Haizal bin Jamaludin (Dr.)	Senior Lecturer
36	Norhudah bte Seman (Dr.)	Senior Lecturer
37	Nik Noordini bte Nik Abdul Malek (Dr.)	Senior Lecturer
38	You Kok Yeow (Dr.)	Senior Lecturer
39	Ahmad Sharmi bin Abdullah (Dr.)	Senior Lecturer
40	Leow Chee Yen (Dr.)	Senior Lecturer
41	Muhamad Yusof bin Mohd Noor (Dr.)	Senior Lecturer
42	Ahmad Shahidan bin Abdullah (Dr.)	Senior Lecturer
43	Muhammad Ariff bin Baharudin (Dr.)	Senior Lecturer
44	Nurzal Effiyana binti Ghazali (Dr.)	Senior Lecturer
45	Omar bin Abdul Aziz (Dr.)	Senior Lecturer
46	Mohd Adib bin Sarijari (Dr.)	Senior Lecturer
47	Farid bin Zubir (Dr.)	Senior Lecturer
48	Mohd Rashidi bin Salim (Dr.)	Senior Lecturer
49	Muhammad Al-Farabi bin Muhammad Iqbal (Dr.)	Senior Lecturer
50	Osman bin Ayob (Dr.)	Senior Lecturer
51	Chua Tien Han	Lecturer
52	Nor Aishah binti Muhammad	Tutor
53	Arnidza bin Ramli	Tutor

## 2.2 Department of Control and Mechatronics (CMED)

Control and Mechatronics engineering department has 39 academic staffs which is 4 Professor, 11 Associate Professors, 22 Senior Lecturers and 2 Lecturers. Table 2.2 shows the number of active academic staffs in CMED department.

Table 2.2: List of Academic Staff in CMED

NO.	NAME	DESIGNATION
1	Ruzairi bin Abdul Rahim (Dr.)	Professor
2	Johari Halim Shah bin Osman (Dr.)	Professor
3	Shamsudin bin Hj. Mohd Amin (Dr.)	Professor
4	Mohd Fua'ad bin Rahmat (Dr.)	Professor
5	Yahaya bin Md. Sam (Dr.)	Professor
6	Zamani bin Md. Zain	Assoc. Professor
7	Sallehuddin bin Ibrahim (Dr.)	Assoc. Professor
8	Hazlina binti Selamat (Ir. Dr.)	Assoc. Professor
9	Herlina binti Abdul Rahim (Ir. Dr.)	Assoc. Professor
10	Norhaliza binti Abdul Wahab (Ir. Dr.)	Assoc. Professor
11	Mohamad Noh bin Ahmad @ Mohd Sanif (Dr.)	Assoc. Professor
12	Rosbi bin Mamat (Dr.)	Assoc. Professor
13	Zaharuddin bin Mohamed (Dr.)	Assoc. Professor
14	Abdul Rashid bin Husain (Dr.)	Assoc. Professor

15	Ahmad 'Athif bin Mohd Faudzi (Ir. Dr)	Assoc. Professor
16	Shahdan bin Sudin (Dr.)	Senior Lecturer
17	Shafishuhaza bte Sahlan (Dr.)	Senior Lecturer
18	Leow Pei Ling (Dr.)	Senior Lecturer
19	Sophan Wahyudi bin Nawawi (Dr.)	Senior Lecturer
20	Fatimah Sham binti Ismail (Dr.)	Senior Lecturer
21	Mohd Shukri bin Abdul Manaf	Senior Lecturer
22	Anita binti Ahmad (Dr.)	Senior Lecturer
23	Mohd Amri Md. Yunus (Dr.)	Senior Lecturer
24	Herman bin Wahid (Dr.)	Senior Lecturer
25	Salinda bt. Buyamin (Dr.)	Senior Lecturer
26	Mohd Ridzuan bin Ahmad (Ir. Dr)	Senior Lecturer
27	Yeong Che Fai (Dr.)	Senior Lecturer
28	Shahrum Shah bin Abdullah (Dr.)	Senior Lecturer
29	Kumeresen a/l A. Danapalasingam (Ir. Dr)	Senior Lecturer
30	Lim Cheng Siong (Dr.)	Senior Lecturer
31	Mohamad Shukri bin Zainal Abidin (Dr.)	Senior Lecturer
32	Mohamad Hafis Izran bin Ishak (Dr.)	Senior Lecturer
33	Mohamed Sultan Mohamed Ali (Dr.)	Senior Lecturer
34	Khairul Hamimah binti Abas (Dr.)	Senior Lecturer
35	Nurul Adilla Mohd Subha (Dr.)	Senior Lecturer
36	Mohamad Amir Shamsudin (Dr.)	Senior Lecturer
37	Mohd Ariffanan bin Mohd Basri (Dr.)	Senior Lecturer
38	Nasarudin bin Ahmad	Lecturer
39	Ahmad Ridhwan bin Wahab	Lecturer

### 2.3 Department of Electronics and Computer Engineering (ECE)

Electronics and Computer Engineering Department has 50 academic staffs which are 4 Professors, 6 Associate Professors, 37 senior lecturers and 2 lecturers as listed in Table 2.3.

Table 2.3: List of Academic Staff in ECE

NO.	NAME	DESIGNATION
1	Jasmy Yunus (Dr.)	Professor
2	Mohamed Khalil bin Mohd Hani (Dr.)	Professor
3	Razali bin Ismail (Dr.)	Professor
4	Abu Khari bin A'ain (Dr.)	Professor
5	Ahmad Zuri bin Sha'ameri (Dr.)	Assoc. Professor
6	Muhammad Mun'im bin Ahmad Zabidi	Assoc. Professor
7	Muhammad Nadzir bin Marsono (Dr.)	Assoc. Professor
8	Muhammad Nasir bin Ibrahim (Dr.)	Assoc. Professor
9	Rubita Sudirman (Dr.)	Assoc. Professor
10	Syed Abdul Rahman bin Syed Abu Bakar (Dr.)	Assoc. Professor
11	Abd. Hamid bin Ahmad	Senior Lecturer
12	Ab Al-Hadi bin Ab Rahman (Dr.)	Senior Lecturer



13	Azli bin Yahya (Dr.)	Senior Lecturer
14	Camallil bin Omar	Senior Lecturer
15	Eileen Su Lee Ming (Dr.)	Senior Lecturer
16	Fauzan Khairi bin Che Harun (Dr.)	Senior Lecturer
17	Ismahani bte Ismail (Dr.)	Senior Lecturer
18	Ismail bin Ariffin	Senior Lecturer
19	Ismawati binti Abd. Ghani	Senior Lecturer
20	Johari bin Kasim	Senior Lecturer
21	Kamal bin Khalil	Senior Lecturer
22	Michael Tan Loong Peng (Dr.)	Senior Lecturer
23	Mohd Afzan bin Othman (Dr.)	Senior Lecturer
24	Mohd Azhar bin Abdul Razak (Dr.)	Senior Lecturer
25	Muhammad Arif bin Abd. Rahim	Senior Lecturer
26	Musa bin Mohd Mokji (Dr.)	Senior Lecturer
27	Nasrul Humaimi bin Mahmood (Dr.)	Senior Lecturer
28	Norhafizah bte Ramli	Senior Lecturer
29	Norlaili bte Mat Safri (Dr.)	Senior Lecturer
30	Ooi Chia Yee (Dr.)	Senior Lecturer
31	Puspa Inayat binti Khalid (Dr.)	Senior Lecturer
32	Shaikh Nasir bin Shaikh Husin (Dr.)	Senior Lecturer
33	Suhaila binti Isaak (Dr.)	Senior Lecturer
34	Suhana binti Mohamed Sultan (Dr.)	Senior Lecturer
35	Yusmeeraz binti Yusof (Dr.)	Senior Lecturer
36	Zuraimi bin Yahya	Senior Lecturer
37	Mastura Shafinaz Zainal Abidin (Dr.)	Senior Lecturer
38	Nor Aini Zakaria (Dr.)	Senior Lecturer
39	Nurul Ezaila bte Alias (Dr.)	Senior Lecturer
40	Shaharin Fadzli bin Abd. Rahman (Dr.)	Senior Lecturer
41	Usman Ullah Sheikh Izzat Ullah Sheikh (Dr.)	Senior Lecturer
42	Zaharah binti Johari (Dr.)	Senior Lecturer
43	Zaid bin Omar (Dr.)	Senior Lecturer
44	Mitra bte Mohd Addi (Dr.)	Senior Lecturer
45	Norlina bte Paraman (Dr.)	Senior Lecturer
46	Amirjan bin Nawabjan (Dr.)	Senior Lecturer
47	Mohd Shahrizal Rusli (Dr.)	Senior Lecturer
48	Izam bin Kamisian	Lecturer
49	Zulfakar bin Aspar	Lecturer

## 2.4 Department of Electrical Power Engineering (Power)

Electrical Power engineering department has 41 academic staff which are 7 Professors, 8 Associate Professors, 32 Senior Lecturers and 1 Lecturer. The list is given in Table 2.4.

Table 2.4: List of Academic Staff in Power

NO.	NAME	DESIGNATION
1	Abdullah Asuhaimi bin Mohd Zin (Ir. Dr.)	Professor
2	Abdul Halim bin Mohd Yatim (Ir. Dr.)	Professor

3	Zainal bin Salam (Dr.)	Professor
4	Ahmad bin Darus (Dr.)	Professor
5	Mohd Wazir bin Mustafa (Ir. Dr.)	Professor
6	Zulkurnain bin Abd. Malek (Dr.)	Professor
7	Mohammad Yusri bin Hassan (Dr.)	Professor
8	Azhar bin Khairuddin (Dr.)	Assoc. Professor
9	Nik Rumzi bin Nik Idris (Dr.)	Assoc. Professor
10	Naziha binti Ahmad Azli (Dr.)	Assoc. Professor
11	Awang bin Jusoh (Dr.)	Assoc. Professor
12	Mohamed Afendi bin Mohamed Piah (Dr.)	Assoc. Professor
13	Zolkafle bin Buntat (Dr.)	Assoc. Professor
14	Hasimah binti Abdul Rahman (Dr.)	Assoc. Professor
15	Ahmad Safawi bin Mokhtar (Dr.)	Senior Lecturer
16	Zaniah binti Muda	Senior Lecturer
17	Md. Pauzi bin Abdullah (Ir. Dr.)	Senior Lecturer
18	Saifulnizam bin Abd. Khalid (Dr.)	Senior Lecturer
19	Faridah binti Husin	Senior Lecturer
20	Mohd Hafiz bin Habibuddin (Dr.)	Senior Lecturer
21	Rasyidah bte Mohamad Idris (Dr.)	Senior Lecturer
22	Mohd Fadli bin Rahmat (Dr.)	Senior Lecturer
23	Mohd Junaidi Abdul Aziz (Dr.)	Senior Lecturer
24	Shahrin bin Md. Ayob (Dr.)	Senior Lecturer
25	Nik Din bin Muhamad	Senior Lecturer
26	Mohd Rodhi bin Sahid (Dr.)	Senior Lecturer
27	Dalila binti Mat Said (Dr.)	Senior Lecturer
28	Nor Asiah bte Muhamad (Dr.)	Senior Lecturer
29	Noor Azlinda bte Ahmad (Dr.)	Senior Lecturer
30	Zuraimy bin Adzis (Dr.)	Senior Lecturer
31	Jasrul Jamani bin Jamian (Dr.)	Senior Lecturer
32	Tan Chee Wei (Dr.)	Senior Lecturer
33	Lau Kwan Yiew (Dr.)	Senior Lecturer
34	Mohd Hafizi bin Ahmad (Dr.)	Senior Lecturer
35	Zulkarnain bin Ahmad Noorden (Dr.)	Senior Lecturer
36	Norzanah binti Rosmin (Dr.)	Senior Lecturer
37	Mona Riza bte Mohd Esa (Dr.)	Senior Lecturer
38	Madihah Md. Rasid (Dr.)	Senior Lecturer
39	Norjulia Mohamad Nordin (Dr.)	Senior Lecturer
40	Siti Maherah binti Hussin (Dr.)	Senior Lecturer
41	Mohd Zaki bin Daud	Lecturer

### 3.0 RESEARCH UNIVERSITY AUDIT

The most important activity as a Research University is the audit of MyRA2. This audit will be based on the KPI of the Faculty for the year 2016.

#### 3.1 Person Incharge

The person incharge (PIC) for each subsection and section of the MyRA2 audit is listed in [Table 2.1](#).

Table 3.1: Person Incharge in each section and subsection

No	PIC	Position/Section in charge
1.	Professor Dr Mohamad Kamal A Rahim	Deputy Dean Research and Innovation FKE
2	Ir Dr Md Pauzi Abdullah	Research Manager
3	Mdm Sabrina Zainal Abidin	Personal Assistant
4	Mdm Azlina Mohd Lazim	Administration/B(2) & B(3)
5	Ir Dr Michael Tan Loong Peng	B(1) and C(2)
6	Dr Mohamad Amir Shamsuddin	B(4)
7	Dr Asrul Izam Azmi	C(1)
8	Dr Jasrul Jamani Jamian	C(1)
9	Dr Mohd Rodhi Sahid	D
10	Dr Shaharin Fadzli Abd Rahman	E
11	Dr Mohd Ariffanan Mohd Basri	F
12	Dr Nik Nordini Nik Abdul Malik	G

#### 3.2 MyRa2 Audit

There are seven areas that the Faculty need to fulfill the KPI as well as the performance of Faculty which is based on MyRa2 glossary. The areas are:

Section B – Quality and Quantity of Research which relate with achievement of Faculty staff as a principle investigator, the PhD or professional qualification, research experience and number of award received

Section C – Quality and Quantity which relate with the achievement of number of high journal publications in Scopus Index journal and Quartile from WoS, research book, book chapter and non index journal as well as the total number of research grant received in money

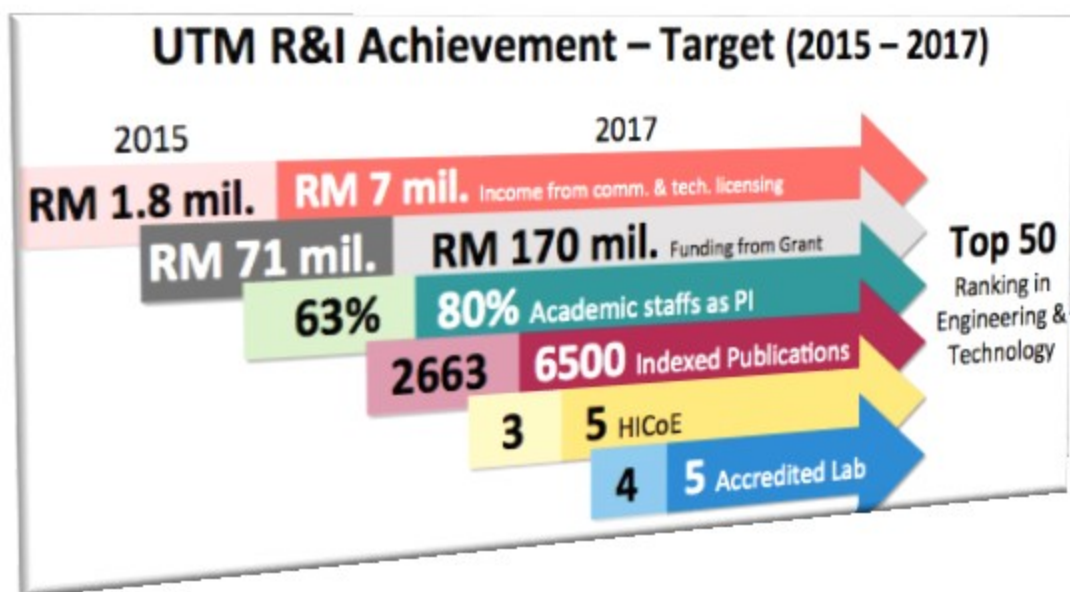
Section D – Quality and Quantity for postgraduate achievement in Graduate on Time (GOT) and the number of post-doctoral hiring include local and international

Section E – Innovations relate with the number of product patented and filling, total number of product commercialized and technology licensing as well as the number of IPR or copyright or trademark that has been copyright

Section F – Professional Services and Gifts are related with postgraduate fees for local and international, the gross income received from organising conferences, seminar, workshop, consultancy, commercialization product and technology licensing or gift in term equipment, research material or money

Section G – Networking and Linkages relate with total no of MOA sign local and international, number of staff joint with other research project with industry or universities and the total no of staff that been appointed as chair or committee member in local and international organization

Section H – Accreditation Laboratory is the laboratory that obtained the accreditation from certain bodies.





### 3.3 Malaysian Research Assessment Instrument (MYRA II-2016)

NO	SECTION	FULL MARK	MARKS OBTAINED	% (CAPPED)	MARKS OBTAINED UNCAPPED	% (UNCAPPED)
1	Section B : Quantity and Quality of Researchers	15	7.52	50%	7.69	51%
2	Section C : Quantity and Quality of Research	35	16.05	46%	16.57	47%
3	Section D : Quantity and Quality of Postgraduates	10	13.30	133%	15.40	154%
4	Section E : Innovation	15	9.77	65%	17.27	115%
5	Section F : Profesional Services and Gifts	10	2.94	29%	4.97	50%
6	Section G : Networking and Linkages	12	6.92	58%	6.92	58%
7	Section H : Lab Acrcditation	3	3.00	100%	1.20	40%
	<b>Total</b>	<b>100</b>	<b>59.50</b>	<b>60%</b>	<b>70.03</b>	<b>70%</b>

## 4.0 FKE PERFORMANCE BASE ON MYRA2

### 4.1 SECTION B1: CRITICAL MASS

Table 4.1 tabulates the number of principal investigator with active grant in 2016 or short for critical mass for each department in FKE. Table 4.2 lists the critical mass of each RG and CoE/HiCoE with university, national, industry and international research grants.

Table 4.1 - Critical Mass for Each Department

	CMED	COMM	ECE	POWER	Total
University	16	17	15	12	60
National	14	20	12	17	63
Industry	2	2	7	1	12
International	2	1	0	0	3
Total	34	40	34	30	138

Table 4.2 - Critical Mass for each RG and CoE/HiCoE

RG/CoE/HiCoE	University	National	Industry	International	Total
ACRG	6	6	0	0	12
ARFMRG	4	2	0	0	6
ARG	1	2	0	0	3
ATTRG	8	3	1	0	12
BMIE	9	3	1	0	13
CONE	3	4	0	0	7
DSIP	1	2	2	0	5
LCRG	3	6	0	0	9
MNSE	1	2	0	0	3
PEDG	3	3	1	0	7
PERG	3	2	0	0	5
PROTOM-i	9	5	0	1	15
STAR	1	0	1	0	2
VeCAD	1	2	3	0	6
CAIRO	1	1	2	1	5
CEES	3	3	0	0	6
IVAT	3	8	0	0	11
WCC	0	9	1	1	11
Total	60	63	12	3	138

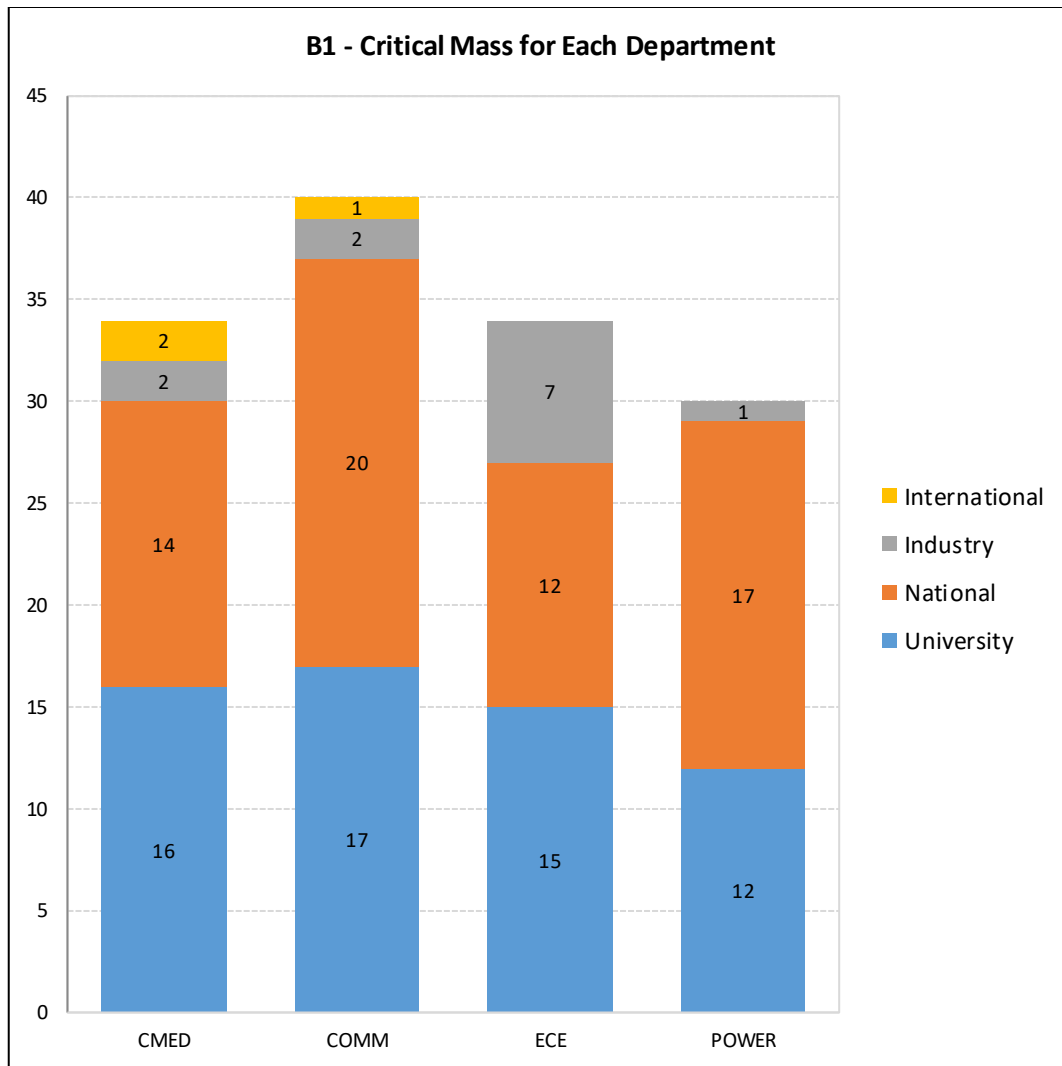


Figure 4.1 – Stacked Bar Chart of Critical Mass for Each Department

Figure 4.1 illustrates stacked bar chart of critical mass for CMED, COMM, ECE and POWER. Communication Department (COMM) has the highest total number of grants, in which 20 of them are National grants and 17 are University grants. ECE has the most industry grants, which is 7 followed by COMM and CMED, both at 2, and POWER at 1. There are no active industry grants for ECE and POWER in 2016. On the other hand, CMED has 2 industry grants and COMM at 1.

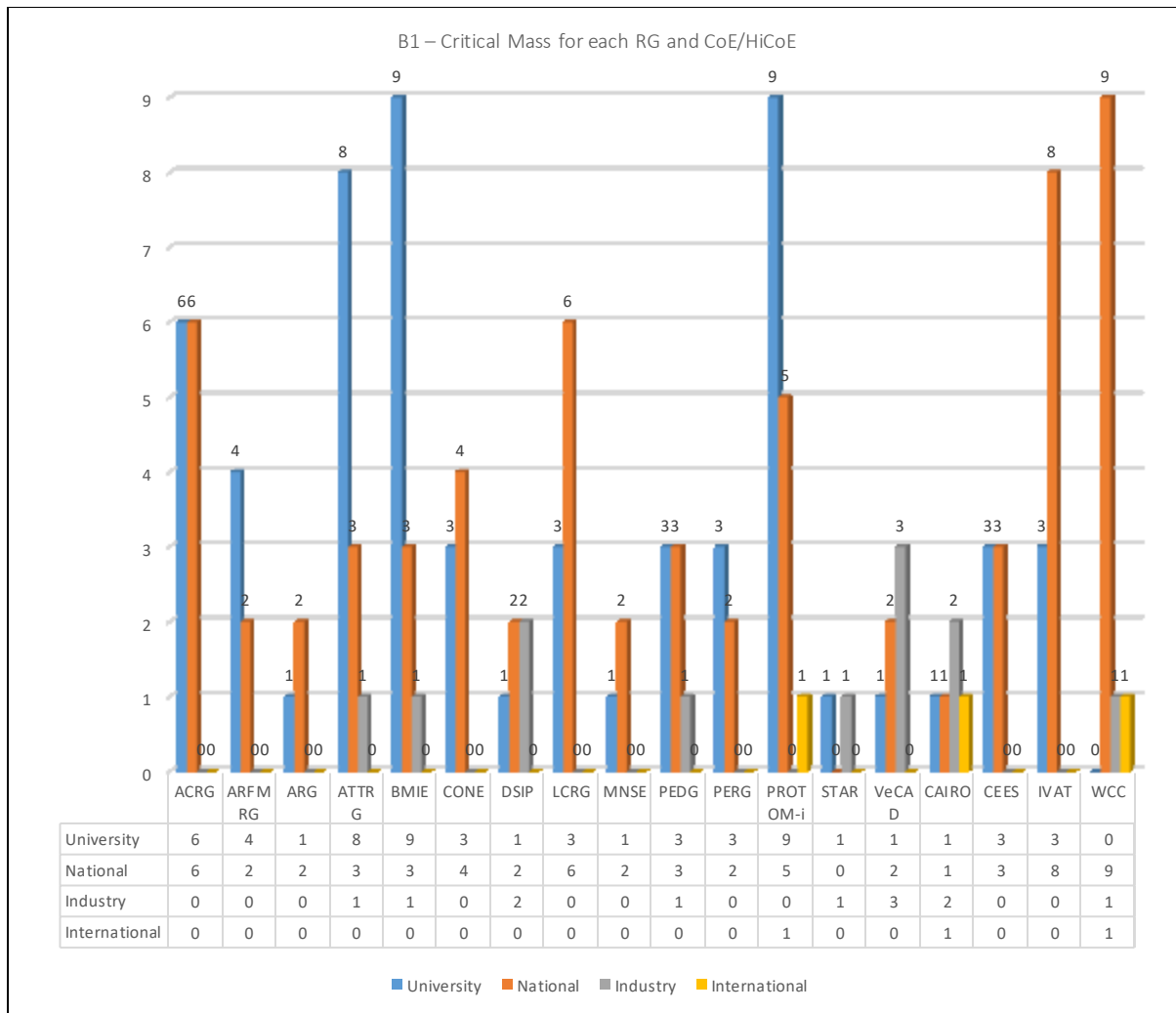


Figure 4.2 – Clustered Bar Chart of Critical Mass for each RG and CoE/HiCoE

Figure 4.2 shows the clustered bar chart of critical mass for each RG and CoE/HiCoE. BMIE and PROTOM-i have the highest university grants each at 9. Similarly, WCC has the most national grants at 9. VeCAD secured 3 industry grants in 2016. Only a handful of RG and CoE/HiCoE with one international grant each. They are PROTOM-i, CAIRO and WCC.

## 4.2 SECTION B4: AWARD AND STEWARSHIP

### 4.2.1 Detail of Conferred RECOGNITION / STEWARDSHIP Award by FKE UTM Staff (BY NATIONAL BODIES)

#### a) Communication Engineering Department

No.	Recipient	Award	Conferring Body
1	Prof. Dr. Tharek Abdul Rahman	2016 Top <a href="#">Research</a> Scientists Malaysia by the Academy of Sciences, Malaysia	Academy Of Sciences Malaysia (ASM)

#### b) Electrical Power Engineering

No.	Recipient	Award	Conferring Body
1	Prof. Dr. Zainal Salam	Malaysia Rising Star Awards - Frontier Research category in Malaysia's Rising Star Award & CREAM 2016 Status Ceremony in Putrajaya	Kementerian Pendidikan Tinggi

### 4.2.2 Detail of Conferred Exhibition Award by FKE UTM Staff (BY INTERNATIONAL BODIES)

#### a) Control & Mechatronics Engineering

No.	Award	Title	Project Leader
1	Gold in 27th International Invention, Innovation & Technology Exhibition (ITEX)	Mass-based Microfluidics System for Point-of-Care Application	Dr. Mohd Ridzuan Ahmad
2	Champion of ABU Asia-Pacific Robot Contest ( <a href="#">ROBOCON</a> ) 2016	-	Team manager – Dr. Ridzuan Ahmad

#### b) Electrical Power Engineering

No.	Award	Title Product	Project Leader
1	Gold in 27th International Invention, Innovation & Technology Exhibition (ITEX)	Polarization And Depolarization Current Analyzer For Material	Assoc. Prof. Dr Mohamed Afendi Mohamed Piah

### 4.2.3 Detail of Conferred Exhibition Award by FKE UTM Staff (BY NATIONAL BODIES)

#### a) Communication Engineering Department

No.	Award	Title Product	Project Leader
1	Silver in Malaysia Technology Expo (MTE 2016) – February 2016	Wideband Polarization Insensitive modified circular ring metamaterial absorbers	Prof. Dr. Mohamad Kamal b. A. Rahim

2	Bronze in Malaysia Technology Expo (MTE 2016) – February 2016	A compact high solution dual-port polarization reconfigurable antenna for MIMO application	Prof. Dr. Mohamad Kamal b. A. Rahim
3	Bronze in Malaysia Technology Expo (MTE 2016) – February 2016	Compact UWB antenna with dual band rejection for industrial application	Assoc. Prof. Dr. Sharul Kamal b. A. Rahim
4	Bronze in Malaysia Technology Expo (MTE 2016) – February 2016	Transparent beam forming network using micrometal mesh conductive film	Assoc. Prof. Dr. Sharul Kamal b. A. Rahim

### b) Control & Mechatronics Engineering

No.	Award	Title	Project Leader and Tem
1	1st place winner for innovation category in IMalaysia Imagine Cup 2016	InnovaBoard	Project Leader – Dr Yeong Che Fai
2	2nd place winner for innovation category in IMalaysia Imagine Cup 2016	MonJi	Project Leader – Assoc. Prof. Dr Abdul Rashid Husain

### c) Electronic & Computer Engineering

	Award	Title Product	Project Leader
1	First prize in open category in Telemedicine Innovation Challenge 2016	Mini Heartcatcher team	Supervise by Dr. Eileen Su Lee Ming
2	Audience Selected Project Award in Telemedicine Innovation Challenge 2016	JEC-Count team	Supervise by Dr. Eileen Su Lee Ming

### d) Electrical Power Engineering

No.	Award	Title Product	Project Leader
1	Gold Award in International Innovative Practices in Higher Education Expo (I-PHEX) 2016	Promoting Positive Attitude Toward Mathematics Through Thinking Mathematically	Assoc. Prof. Dr. Naziha Bt Ahmad Azli





Figure 4.3 Gold Awards at I-PHEX 2016



Figure 4.4 Telemedicine Innovation Challenge 2016



Figure 4.5 Silver and Bronze Award Winners in Malaysia Technology Expo (MTE 2016) – February 2016

### 4.3 SECTION C1: PUBLICATION

The summary of publication for all departments in FKE is shown in Table 4.3. Number of publication by FKE in Web of Science (WOS) is 125 while in Scopus is 213, which gives total number of publication in indexed journal of 338. While other categories including non-indexed, conference proceedings and book chapters are with 216, 160 and 51 publications, respectively. All departments show different trend in term of publication number. Power department produced the highest number of Scopus and non-index in FKE with 72 and 59 papers, respectively. COMM department produced the highest number of publication in WOS with total number of 48. While for CMED and ECE departments, non-index publication are the main contribution for the departments. Comparison the number of publication between departments is graphically shown in Figure 4.6. Productivity of each department can be also measured from number of publication per staff, as shown in Figure 4.7.

Table 4.3: Publication by category for all departments in FKE

CATEGORY	COMM	CMED	POWER	ECE	Total	MYRA Requirement
WEB OF SCIENCE, ISI (Q1 & Q2)	23	13	21	11	68	531
WEB OF SCIENCE, ISI (Q1 - Q4)	48	23	37	17	125	-
SCOPUS	60	48	72	32	213	-
INDEXED	108	71	109	49	338	758
NON-INDEXED & OTHER	46	55	59	56	216	712
INDEXED CONFERENCE	60	18	51	31	160	89
BOOKCHAPTER	18	18	7	8	51	142

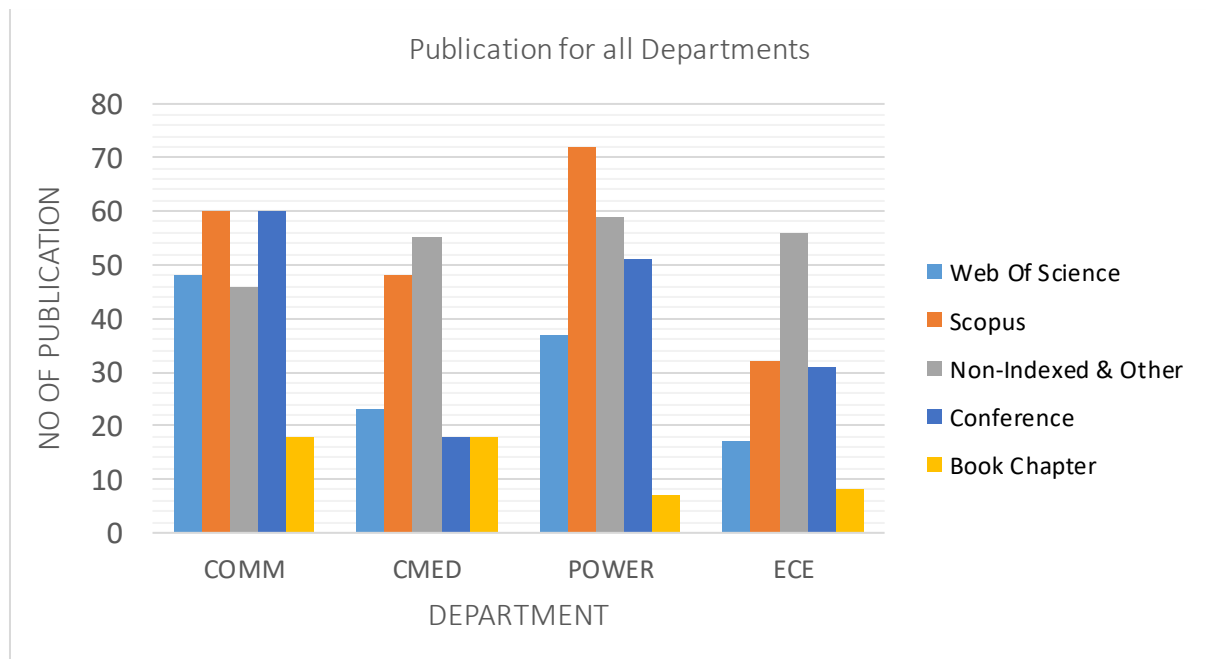


Figure 4.6: Publication by category for all departments in FKE

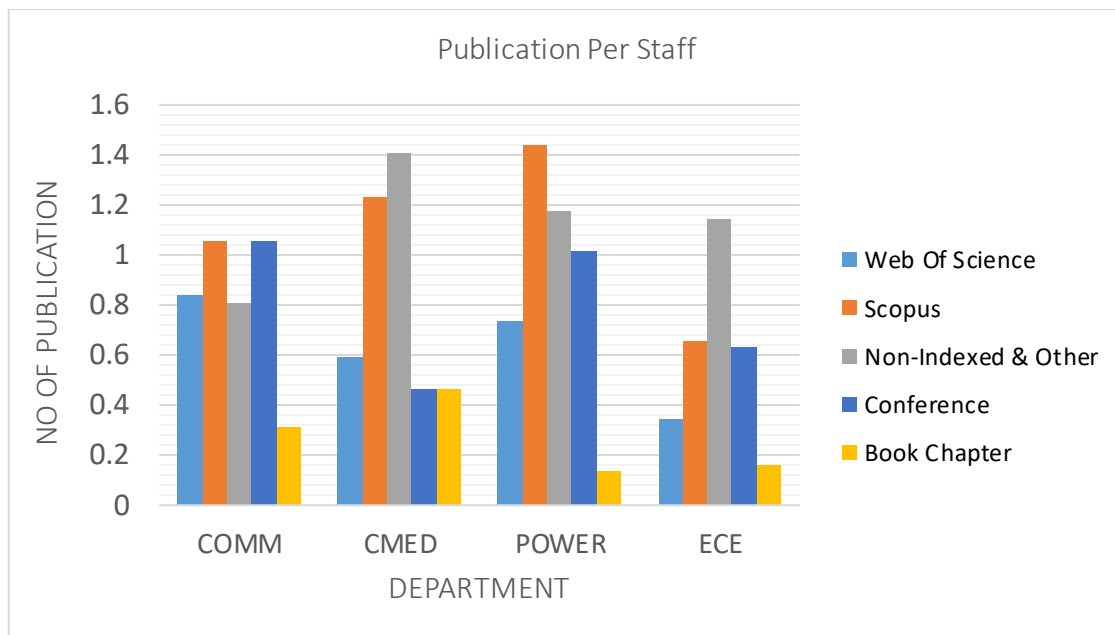


Figure 4.7: Publication per staff

Publication for departments in 4 quartiles i.e. Q1, Q2, Q3 and Q4 is shown in Figure 4.8. The total publication in Q1 and Q2 for FKE is 68 which is below the MYRA requirement of 531. Department of Power led the number of publication in Q1 by 15 publications. Department of Communication contributes the most number for combined Q1 and Q2 with total of 23 publications.

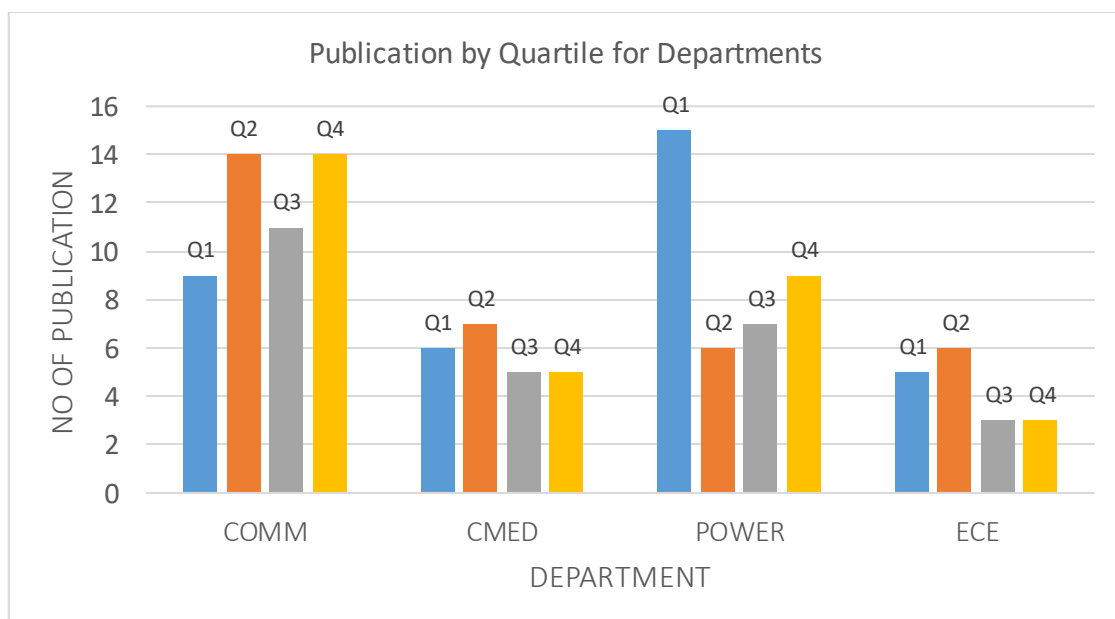


Figure 4.8: Publication by quartile in Web of Science for all departments

Publication outputs in 2015 and 2016 are compared and shown in Figure 4.9. Number of publication in three categories i.e. Q1&Q2, Scopus and bookchapter is dropped in from 2015 to 2016. The dropped of number of publication in these three categories gives certain degree of impact in RU marks.

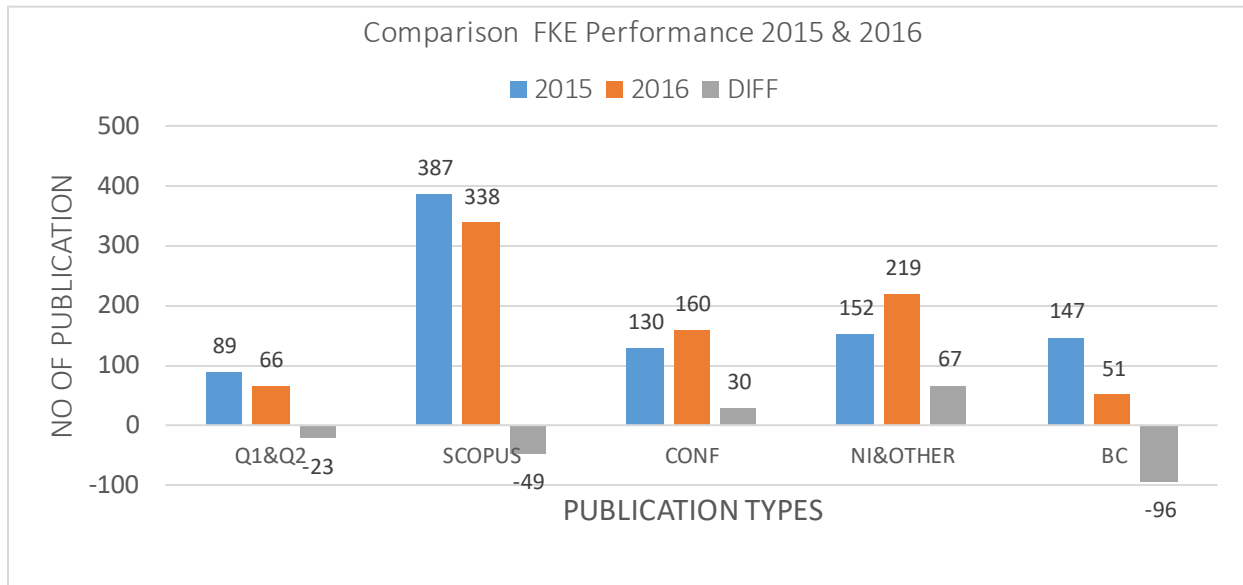


Figure 4.9: Comparison of publication output between year 2015 and 2016

Figure 4.10 shows publication output of all research groups and Center of Excellence (COE) in FKE. Wireless Communication Center (WCC) published the highest number in Web of Science indexed journal with total number of 23. Protom-I research group published the highest number in Scopus indexed and non-indexed journal with total number of 34 for both categories. All research groups are encouraged to increase their effort to ensure faculty's performance will be improved in next year.

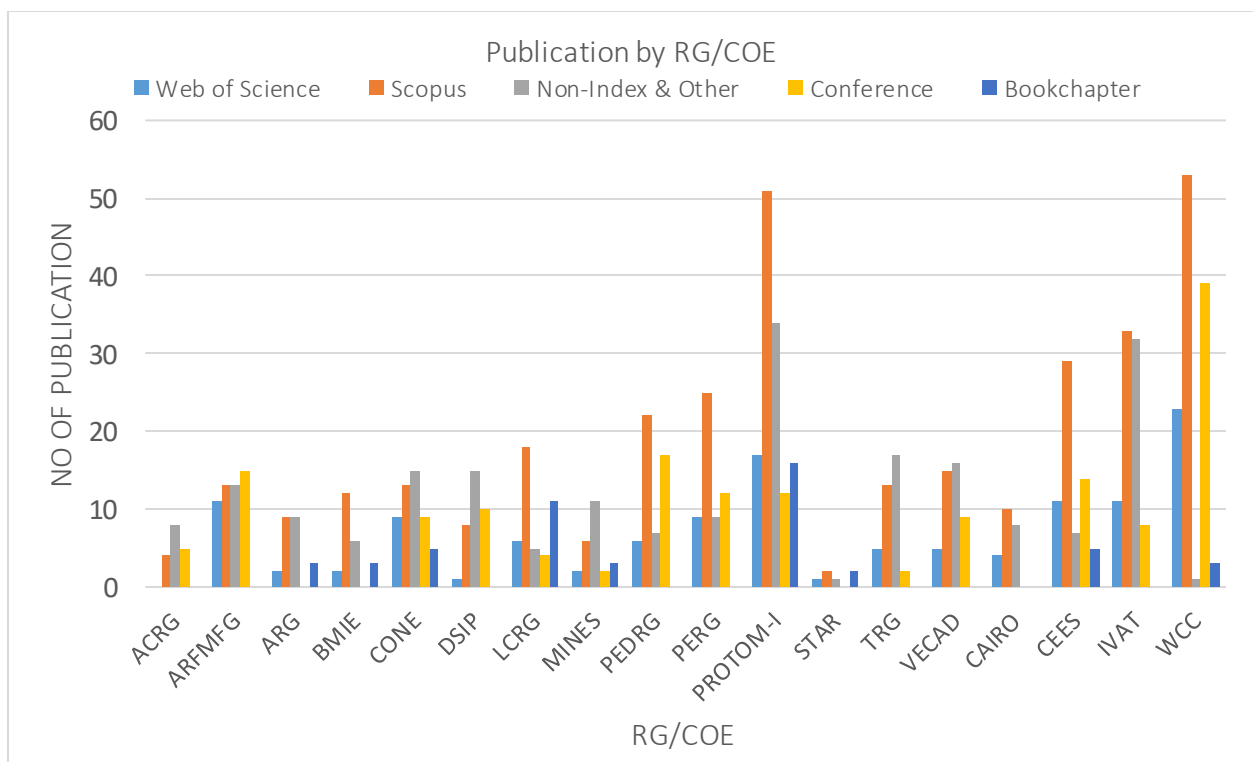


Figure 4.10: Publication by research group and Center of Excellence (COE) in FKE

#### 4.4 SECTION C2: RESEARCH GRANT RECEIVED

Table 4.4 tabulates the amount of public, private and international research grants received in 2016. FKE obtained RM6,381,926.25 of public grants, RM409,012.00 of private grants and RM14,732.52 of international grants. Table 4.5 lists the grant received for each RG and CoE/HiCoE based on public, private and international research grants. LCRG has the highest total grant received at RM1,770,099.89. On the other hand, PEDG has zero amounts received for public, private and international in 2016. BMIE recorded the highest private grants followed at RM145772.

Table 4.4 - Public, Private and International Research Grants Received for each Department

Dept.	CMED	COMM	ECE	POWER	Total
Public	1,392,613.00	3,698,561.89	516,100.00	774,651.36	RM6,381,926.25
Private	100,400.00	38,690.00	269,922.00	0.00	RM409,012.00
International	0.00	14,732.52	0.00	0.00	RM14,732.52
<b>Total</b>	<b>RM1,493,013.00</b>	<b>RM3,751,984.41</b>	<b>RM786,022.00</b>	<b>RM774,651.36</b>	

Table 4.5 - Research Grants Received for each RG and CoE/HiCoE

RG and CoE/HiCoE	Public	Private	International	Total
ACRG	151100.00	46400.00	0.00	RM197,500.00
ARFMRG	150600.00	0.00	0.00	RM150,600.00
ARG	25300.00	0.00	0.00	RM25,300.00
ATTRG	230040.00	0.00	0.00	RM230,040.00
BMIE	288600.00	145772.00	0.00	RM434,372.00
CONE	75500.00	0.00	0.00	RM75,500.00
DSIP	72700.00	73650.00	0.00	RM146,350.00
LCRG	1770099.89	0.00	0.00	RM1,770,099.89
MNSE	91600.00	0.00	0.00	RM91,600.00
PEDG	0.00	0.00	0.00	RM0.00
PERG	238700.00	0.00	0.00	RM238,700.00
PROTOM-i	595680.00	0.00	0.00	RM595,680.00
STAR	86000.00	0.00	0.00	RM86,000.00
VeCAD	79300.00	50500.00	0.00	RM129,800.00
CAIRO	554233.00	54000.00	0.00	RM608,233.00
CEES	91831.00	0.00	0.00	RM91,831.00
IVAT	444120.36	0.00	0.00	RM444,120.36
WCC	1436522.00	38690.00	14732.52	RM1,489,944.52
<b>Total</b>	<b>RM6,381,926.25</b>	<b>RM409,012.00</b>	<b>RM14,732.52</b>	<b>RM6,805,670.77</b>

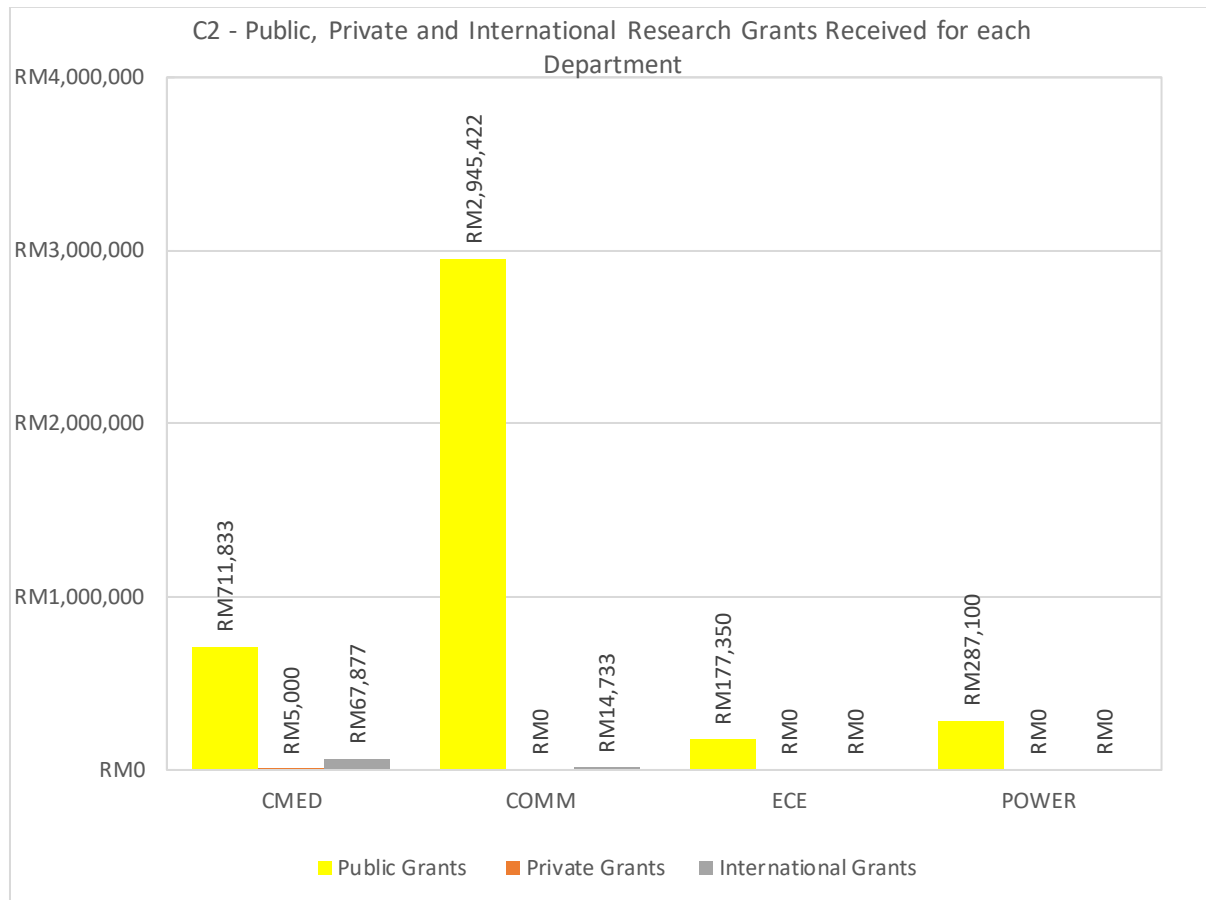


Figure 4.11 – Clustered Bar Chart of Public, Private and International Research Grants for each Department

Figure 4.11 illustrates the public, private and international research grants amount received in 2016 for all the department in FKE. COMM has the highest public grants received at RM2,945,422 followed by CMED at RM711,833, POWER at RM287,100 and CMED at RM177,350. Both ECE and POWER do not have any private and international grants. Only CMED has private grants at RM5,000. COMM has RM14,733 received for international grants followed by CMED at RM67,877.



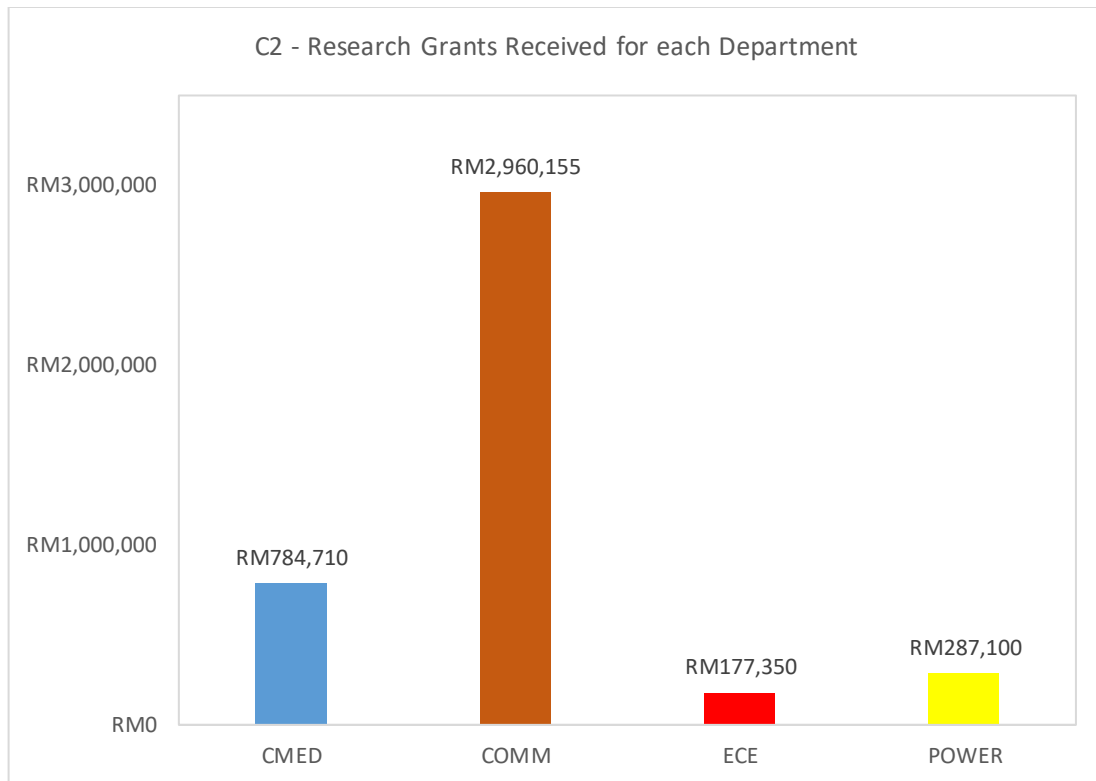


Figure 4.12 - Bar Chart of Research Grants for each Department

Figure 4.12 depicts the bar chart of research grants received in 2016 for all the department in FKE. COMM tops the chart at RM2,960,155 and followed by CMED at RM784,710, ECE at RM177,350 and POWER at RM287,100.

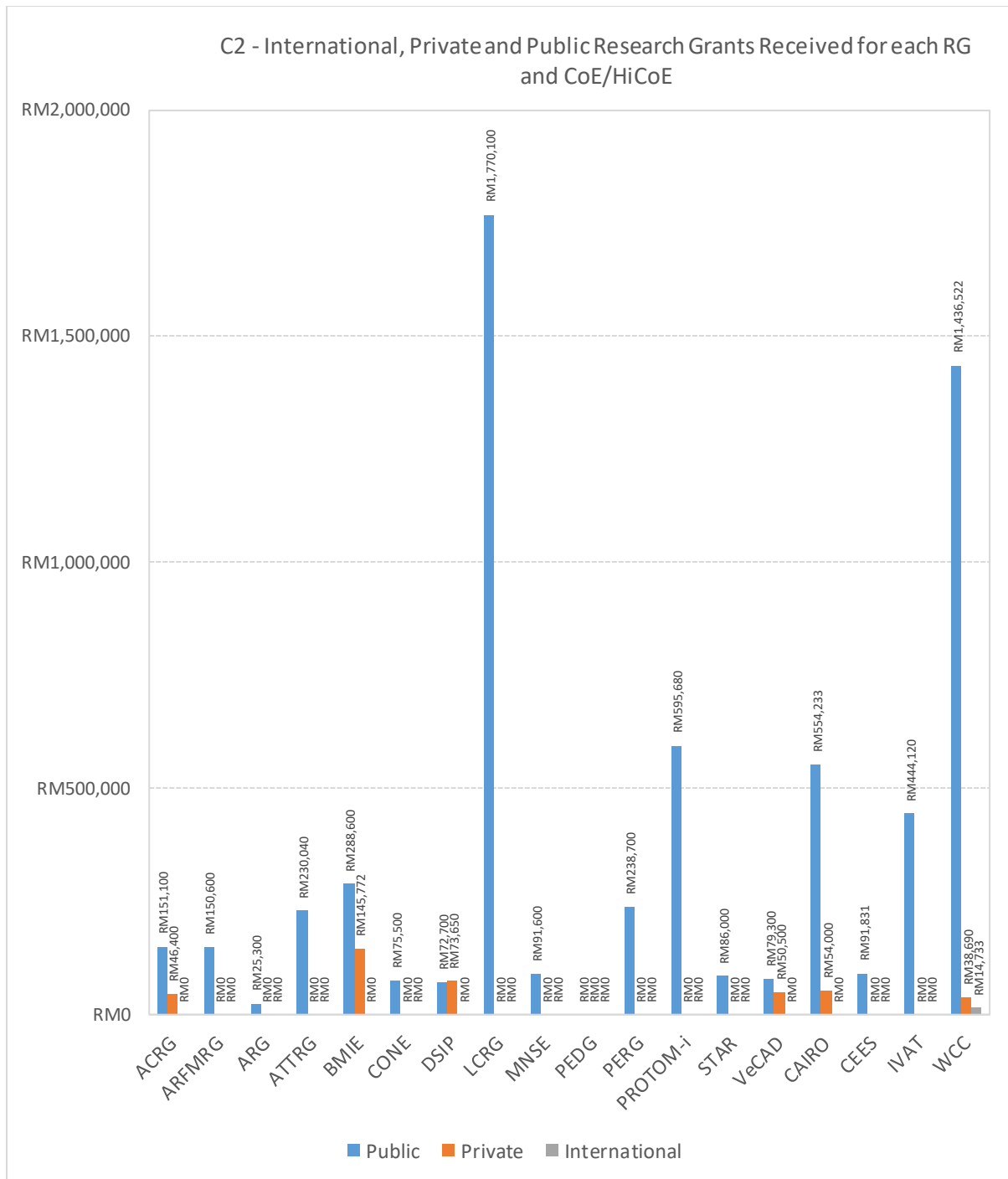


Figure 4.13 – Clustered Bar Chart of Public, Private and International Research Grants for each RG and CoE/HiCoE

Figure 4.13 shows the clustered bar chart of public, private and international research grants received for each RG and CoE/HiCoE. LCRG recorded the highest public grants received at RM1,770,100. Only ACRG, BMIE, DSIP, VeCAD, CAIRO and WCC have private grants received in 2016 at RM46,400, RM145,772, RM73,650, RM50,500, RM54,000 and RM38,690 respectively. None of the RG and CoE except WCC has international grants at RM14,733.

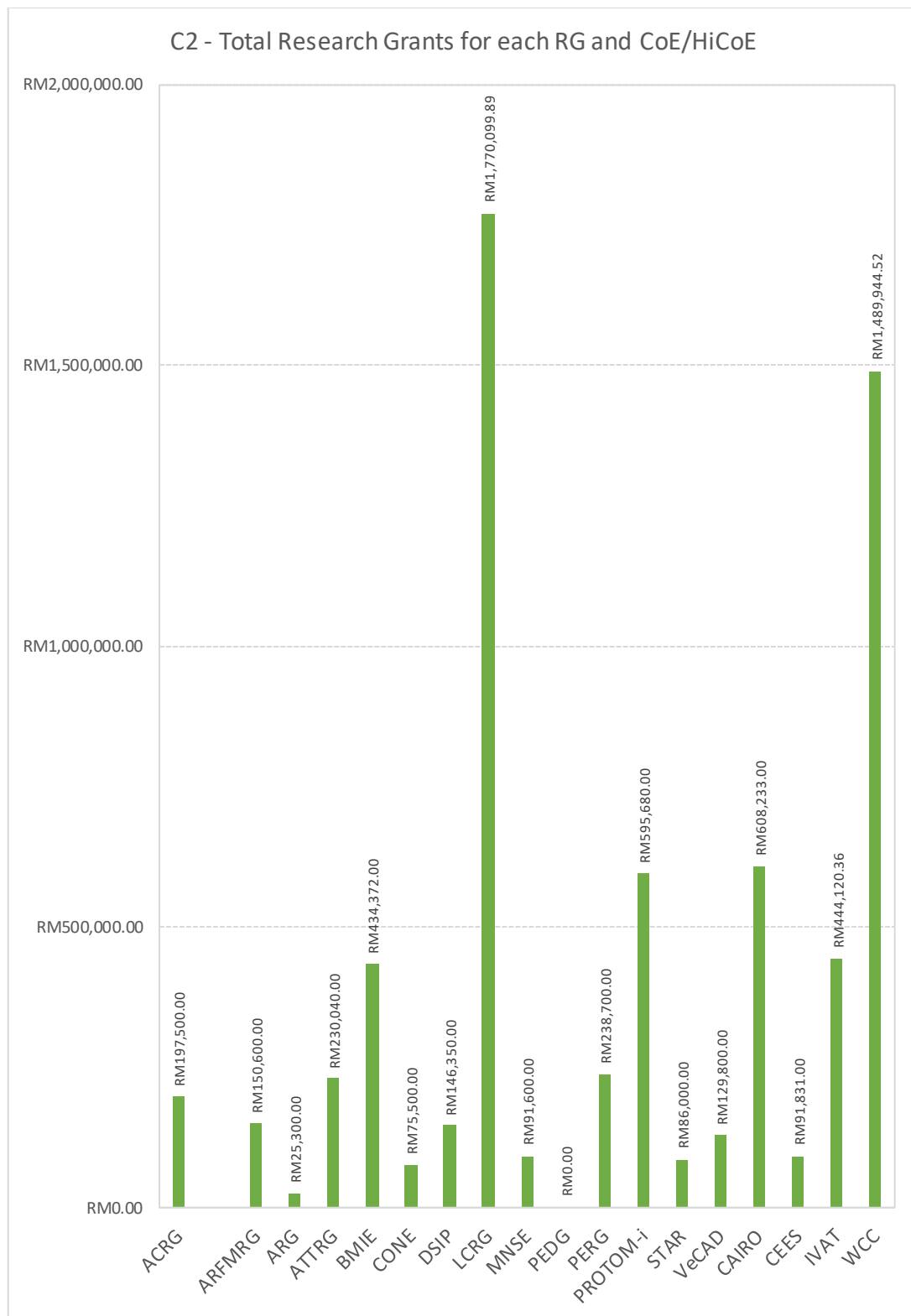


Figure 4.14 - Bar Chart of Public, Private and International Research Grants Received for each RG and CoE/HiCoE

Figure 4.14 shows the bar chart of public, private and international research grants received for each RG and CoE/HiCoE. AMIR and PEDG have no grant received in 2016.

#### 4.5 SECTION E: INNOVATIONS

In this section, research output related to intellectual property right (IPR), commercialized product and technology know-how licensing are assessed. The IPR includes patents, copyright, industrial design and trademark. Table 4.6 summarizes the faculty achievement. The department performance in section E is shown in Figure 4.15. Control and Mechatronics Engineering Department produced highest number of IPR, which contributed to 71 % of faculty achievement. Figure 4.16 shows the contribution of centers of excellence (COEs) and research groups (RGs). Protom-i research group is the highest contributor in this section. 37 % of faculty achievement came from COEs. Details on each category in section E is listed below.

Table 4.6. Summary of faculty achievement in section E

No.	Criteria	Description	Achievement
E1	Patent	a. Total number of patents granted	9
		b. Total number of patents pending	5
E2	Commercialized product	Total number of new products licensed for commercialization in the year	0
E3	Technology know-how licensing	Total number of technology know-how licensing in the year	0
E4	IPR other than patent	Total number of IPR other than patents (i.e. copyright, trademark, industrial design etc)	35

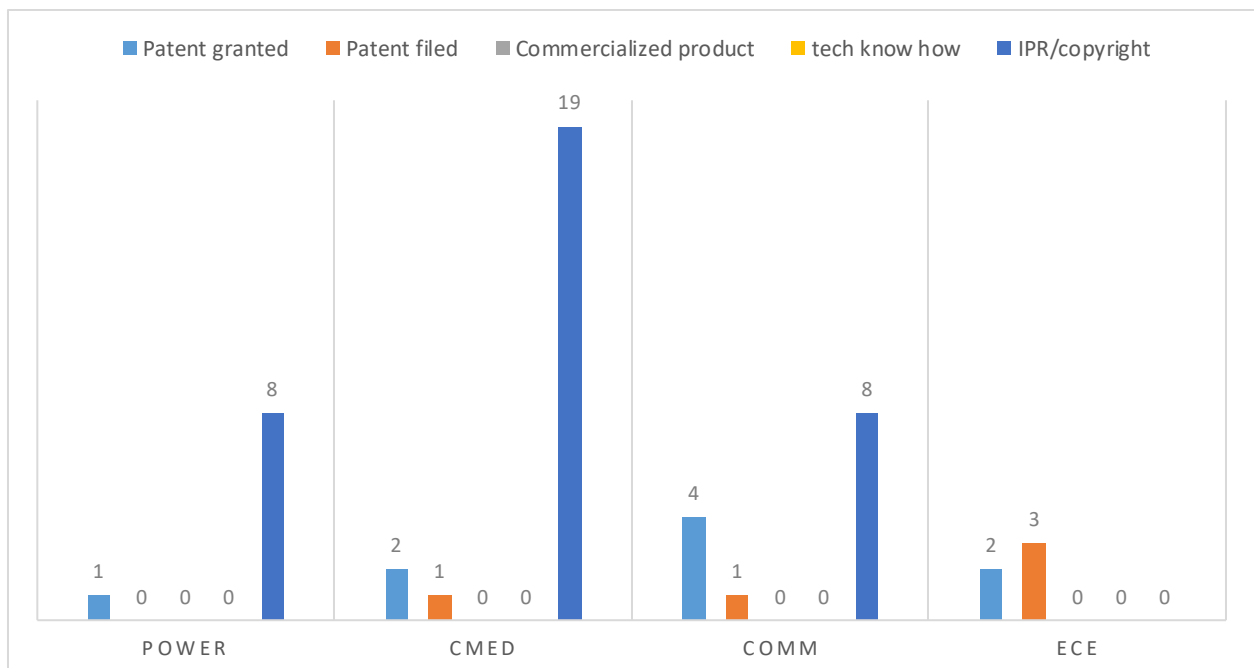


Figure 4.15. Department achievement for all sub-section in innovation

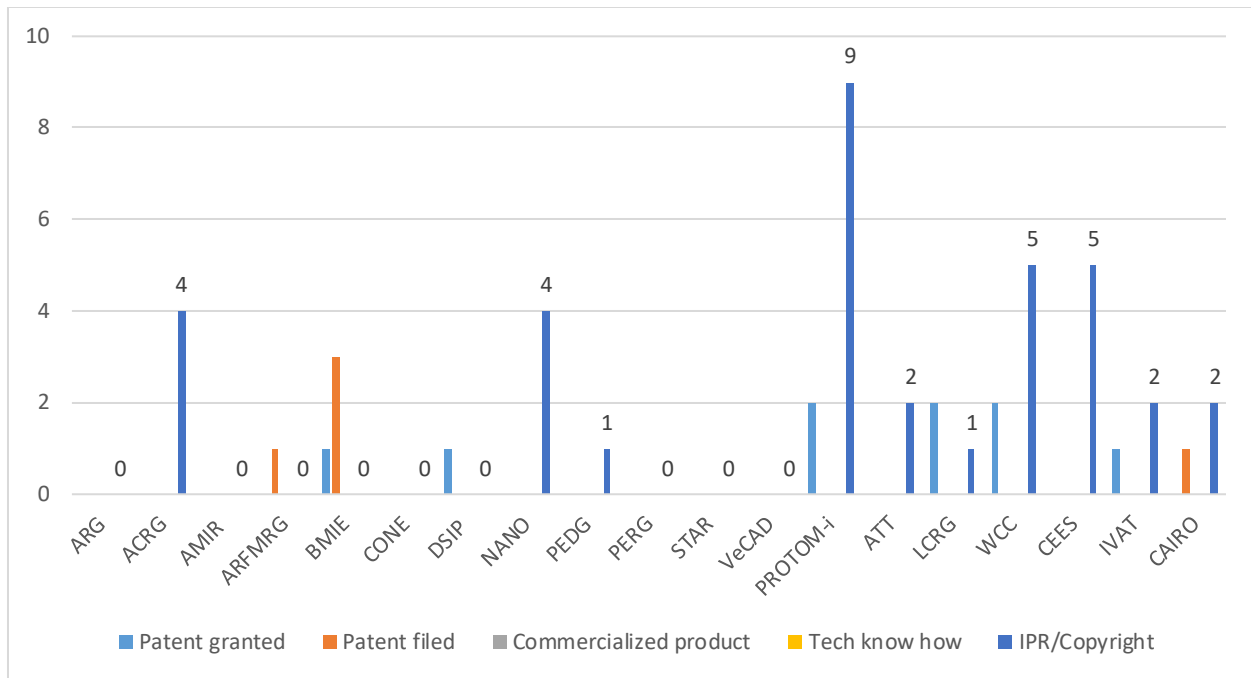


Figure 4.16. RG and COE achievement for all sub-section in innovation

#### 4.5.1 E 1(a) Patent granted

NO	PATENT NO.	PATENT NAME	RESEARCHER	DEPT.	COE/RG
1	MY-157976-A	Device For Use In Lightning Surge Sensor Warning	Mohd Muhridza Yaacob	POWER	IVAT
2	MY-158853-A	Sensor For Conductivity Measurement	Ruzairi Abdul Halim	CMED	PROTOM
3	MY-158142-A	System And Method For Repelling Rats	Herlina Binti Abdul Rahim	CMED	PROTOM
4	MY-157643-A	3.4 GHZ Optical Front End Receiver For Radio Over Fiber (ROF) System	Sevia Mahdaliza Bt. Ibrus Sutan Nameh	COMM	LCRG
5	MY-157817-A	Security Lock Means	Sevia Mahdaliza Bt. Ibrus Sutan Nameh	COMM	LCRG
6	MY-157249-A	Monopole Antenna Device And Method Thereof For Use In Medical Application	Muhammad Ramlee Bin Kamarudin	COMM	WCC
7	MY-158594-A	Inverted-E Antenna For On-Body Communication	Muhammad Ramlee Bin Kamarudin	COMM	WCC
8	MY-158349-A	Speech Recognition Method Using Neural Network	Rubita Binti Sudirman	ECE	BMIE
9	MY-158018-A	Vision Based Barcode Reader System	Syed Abdul Rahman bin Syed Abu Bakar	ECE	DSIP

#### 4.5.2 E1(b) Patent filed

NO	PATENT NO.	PATENT NAME	RESEARCHER	DEPT.	COE/RG
1	PI 2016 000697	Position control using controller for pneumatic actuated ball and beam system	Ahmad Athif Mohd Faudzi	CMED	CAIRO
2	PI 2016 704911	A wideband polarization insensitive metamaterial absorber with dual resonances	Mohamad Kamal A Rahim	COMM	ARFMRG
3	PI 2016 700496	A Method for Classifying Human Motion in Darker Environment	Rubita Sudirman	ECE	BMIE
4	PI 2016 700636	Computer Assisted Method using PCA-K-Mean Clustering (PCA-KM) for Human Motion Classification	Rubita Sudirman	ECE	BMIE
5	PI 2016 700538	A Method for Classifying Human Motion using Human Scalable Physiology Model	Rubita Sudirman	ECE	BMIE

#### 4.5.3 E4. IPR other than patent

NO	CATEGORY	TITLE/PRODUCT	RESEARCHER	DEPT.	COE/RG
1	Copyright	Matlab coding of Area Dimensions and Definite Point Selection for Wind Farm Layout Optimization	Mohammad Yusri Bin Hassan	POWER	CEES
2	Copyright	Area Dimensions and Definite Point Selection for Wind Farm Layout Optimization	Mohammad Yusri Bin Hassan	POWER	CEES
3	Copyright	Hybrid of Least Square Support Vector Machine and Artificial Bee Colony ABC-LSSVM	Mohammad Yusri Bin Hassan	POWER	CEES
4	Copyright	Buildings Load Forecasting using Cascaded GMDH-LSSVM method	Mohammad Yusri Bin Hassan	POWER	CEES
5	Copyright	A Protection Strategy for Micro-Grids Based on Positive-Sequence Component	Dalila Binti Mat Said	POWER	CEES
6	Copyright	Development of Supercapacitor-Battery Integration Scheme for Energy Storage System	Zulkarnain Bin Ahmad Noorden	POWER	IVAT
7	Copyright	Test Cell for Breakdown Test	Lau Kwan Yiew	POWER	IVAT
8	Copyright	Dual-axis photovoltaic tracker with motorized panel cleaning	Tan Chee Wei	POWER	PEDG
9	Copyright	Color segmentation and recognition using fuzzy logic human based perception approach for color vision deficiency	Fatimah Sham Bt. Ismail	CMED	CAIRO



10	Copyright	Crowd Modelling and Simulation Tools for Crowd Analysis	Hazlina Selamat	CMED	CAIRO
11	Copyright	Automated Blinds for Windows using Light Dependent Resistor Sensor	Herlina Binti Abdul Rahim	CMED	PROTOM
12	Copyright	Intelligent energy saving corridor light	Herlina Binti Abdul Rahim	CMED	PROTOM
13	Copyright	Smart lighting system	Herlina Binti Abdul Rahim	CMED	PROTOM
14	Copyright	RFID Inspection system	Herlina Binti Abdul Rahim	CMED	PROTOM
15	Copyright	Automated Cooling Temperature in Server Room	Herlina Binti Abdul Rahim	CMED	PROTOM
15	Copyright	Smart bus stop	Herlina Binti Abdul Rahim	CMED	PROTOM
17	Copyright	Researcher application system module	Ruzairi bin abdul rahim	CMED	PROTOM
18	Copyright	Rmc secretariat registration system module	Ruzairi bin abdul rahim	CMED	PROTOM
19	Copyright	Source code for temperature and humidity control system for tempe incubation process	Norhaliza Binti Haji Abd Wahab	CMED	ACRG
20	Copyright	E-Bantuan Mobile	Mohamad Hafis Izran Bin Ishak	CMED	PROTOM
21	Copyright	Module for Robot Applications in Industry.	Mohd Ridzuan Bin Ahmad	CMED	MNSE
22	Copyright	Module Robot Work Cell Design and Control	Mohd Ridzuan Bin Ahmad	CMED	MNSE
23	Copyright	Module on Welding Technologies.	Mohd Ridzuan Bin Ahmad	CMED	MNSE
24	Copyright	Module on Spray Painting Technologies.	Mohd Ridzuan Bin Ahmad	CMED	MNSE
25	Industrial Design	Duct inspection robot	Mohamad Shukri Bin Zainal Abidin	CMED	ACRG
26	Industrial Design	Fibrous capillary irrigation interface -1	Mohamad Shukri Bin Zainal Abidin	CMED	ACRG
27	Industrial Design	Fibrous capillary irrigation interface -2	Mohamad Shukri Bin Zainal Abidin	CMED	ACRG
28	Copyright	Particle Swarm Optimisation-Gravitational Search Algorithm-Explore PSOGSA-E for Fast Convergence and Simpler Tuning: Source Code for PSOGSA-E	Sharul Kamal Bin Abdul Rahim	COMM	WCC
29	Copyright	A semi distributed combined distributed joint activation-hybrid CDJA-HYB phase synchronisation method for closed loop beamforming	Sharul Kamal Bin Abdul Rahim	COMM	WCC

		method: Source code for CDJAHYB			
30	Copyright	The distributed evolutionary algorithm manner to achieve synchronization among the distributed nodes	Sharul Kamal Bin Abdul Rahim	COMM	WCC
31	Copyright	Capacity Analysis at Unintended Receiver via Beam pattern Optimisation in Collaborative Beamforming: Source Code for Capacity Analysis	Sharul Kamal Bin Abdul Rahim	COMM	WCC
32	Copyright	Wireless water monitoring module	Sharifah Hafizah Syed Ariffin	COMM	ATT
33	Copyright	Load distribution mesh routing protocol	Nurul Mu'azzah Binti Abdul Latiff	COMM	ATT
34	Copyright	Full duplex relaying system algorithm	Leow Chee Yen	COMM	WCC
35	Trade mark	Utm sprinter incubator centre	Sevia Mahdaliza Bt Sutan Nameh Idrus	COMM	LCRG

#### 4.6 SECTION F: PROFESSIONAL SERVICES AND GIFTS

This section is related with postgraduate fees, the gross income received from organizing conferences, seminar, workshop, consultancy, commercialization product and technology licensing, endowment and gifts in term of equipment, research material or money. The following charts show the faculty KPI and performance achievement for year 2016. Figure 4.17 shows the faculty KPI for each subsection that need to be achieved. Figure 4.18 shows the faculty achievement of each subsection. It can be noted that from the charts, the faculty achievement for each subsection is not achieve to the target except for the gifts subsection. Figure 4.19 shows the percentage (%) contribution of departments or COEs in faculty to the FKE achievement. It can be seen that, WCC and IVAT contribute most to the FKE achievement.

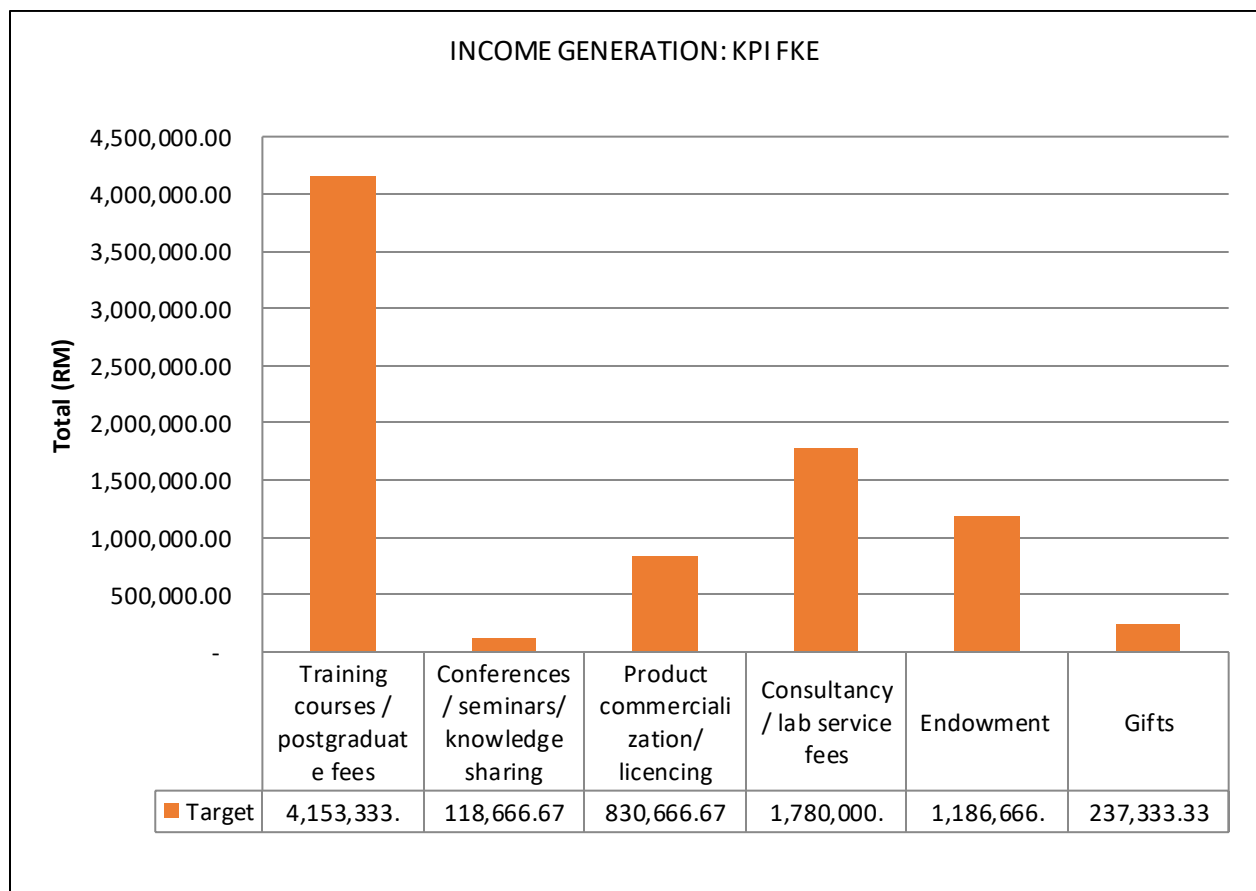


Figure 4.17 FKE KPI for each sub-section

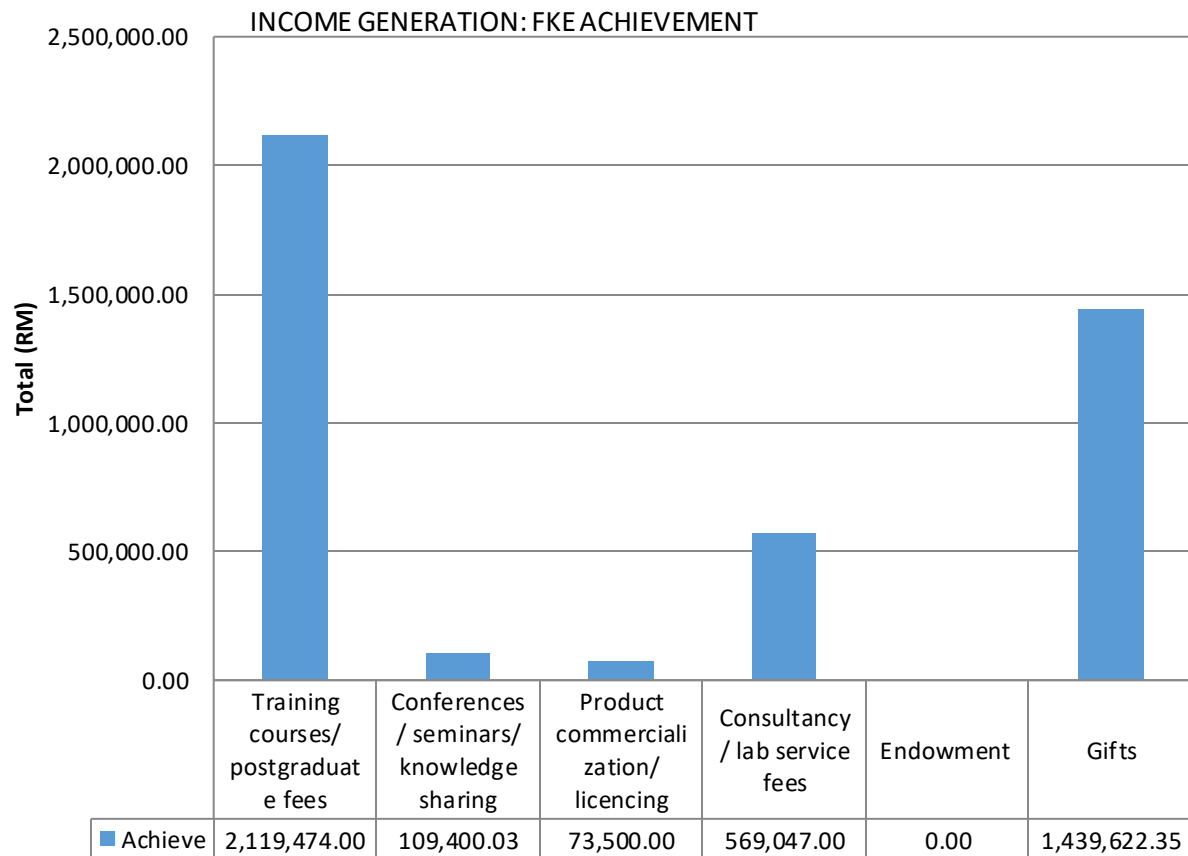


Figure 4.18 FKE achievement of each subsection

**INCOME GENERATION: % CONTRIBUTION OF DEPT./COE TO FKE ACHIEVEMENT**

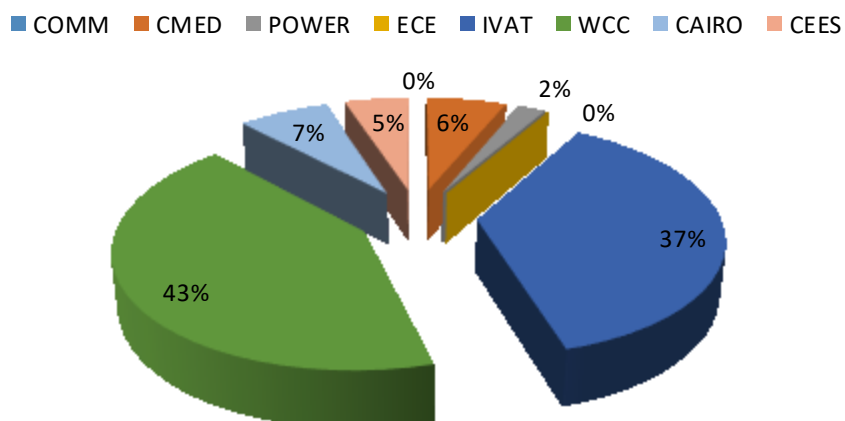


Figure 4.19 Percentage (%) contribution of departments or COEs in faculty to the FKE achievement

#### 4.7 SECTION G: NETWORK AND LINKAGES

Network and Linkages Section consists of four difference sections of Memorandum of Agreement (MOA), Joint Projects, Memberships and Knowledge/ Technology Diffusion Projects/ Assimilation (Social Innovation). Below are the details of all activities by Departments and Research Groups.

##### 4.7.1 MOA & Staff Involved (National)

###### a) Department of Communication (COMM)

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1		MIMOS BERHAD	Assoc. Prof. Ir. Dr. Sharifah Hafizah Bt. Syed Ariffin	An Open and Robust Architecture for Internet of Things Using a New Layered Protocol Approach	ATT
2		MIMOS BERHAD	Dr. Rozeha A. Rashid	An Open and Robust Architecture for Internet of Things Using a New Layered Protocol Approach	ATT
3		COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Dr. Bruce Leow Chee Yen	Near Field Communication Based Wireless Charging and Radio Frequency Energy Harvesting for Smart Phone Application	WCC
4		COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Prof. Dr. Tharek Abd. Rahman	Near Field Communication Based Wireless Charging and Radio Frequency Energy Harvesting for Smart Phone Application	WCC
5		COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Dr. Norhudah bt. Seman	Near Field Communication Based Wireless Charging and Radio Frequency Energy Harvesting for Smart Phone Application	WCC
6		COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	PM. Ir. Dr. Sharul Kamal bin Abdul Rahim	Near Field Communication Based Wireless Charging and Radio Frequency Energy Harvesting for Smart Phone Application	WCC

## b) Department of Control and Mechatronics (CMED)

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1		JCYHDD TECHNOLOGY SDN BHD	Ir. Dr. Kumeresan A. Danapalasingam	Development of an Automatic HDD Base Flatness Tweaking System	CAIRO
2		COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Dr. Yeong Che Fai	Robotic Assessment of Motor Recovery after Stroke	CAIRO
3		LEMBAGA KEMAJUAN JOHORETENGARA (KEJORA)	Dr. Yeong Che Fai	Robotic Assessment of Motor Recovery after Stroke	CAIRO
4		UNIVERSITI TEKNIKAL MALAYSIA MELAKA	PM. Dr. Hazlina Selamat	A novel practical synchronization control approach for a twin-axes table driven system in industrial transportation	CAIRO

## c) Department of Electronics and Computer Engineering (ECE)

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1	Collaboration Research in Engineering, Science & Technology Centre (CREST) & Keysight Technologies Microwave Products (M) Sdn Bhd		PM. Dr. Ahmad Zuri bin Sh'ameri	Enhancement of signal parameters estimation for RF power sensors in the presence of 1/f noise.	DSIP
2	Collaborative Research in Engineering, Science and Technology		Dr. Eileen Su Lee Ming	Mini Heartcatcher-A Smartphone Application with Native Intelligent	BMiE

Center (CREST), Techcare Innovation Sdn Bhd & UTM		Arrhythmia Classifier		
3	COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Ab Al-Hadi bin Ab Rahman	Fast SoC Prototyping Using Low Latency Hybrid Virtual Platform	DSIP
4	COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Dr. Eileen Su Lee Ming	Robotic Assessment of Motor Recovery after Stroke	BMiE
5	COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	PM. Dr. Muhammad Nadzir bin Marsono	HARDWARE - FPGA BASED ENABLED CONSTRAINT RANDOM VALIDATION (CRV)Hybrid Virtual Platform	VECAD
6	Collaboration Research in Engineering, Science & Technology Centre (CREST) & Keysight Technologies Microwave Products (M) Sdn Bhd	Dr. Musa bin Mohd Mokji	Enhancement of signal parameters estimation for RF power sensors in the presence of 1/f noise.	DSIP
7	Collaboration Research in Engineering, Science & Technology Centre (CREST) & Keysight Technologies Microwave Products (M) Sdn Bhd	PM. Dr. Ahmad Zuri bin Sh'ameri	Enhancement of signal parameters estimation for RF power sensors in the presence of 1/f noise.	DSIP
8	COLLABORATIVE RESEARCH IN ENGINEERING,	Prof. Dr. Mohamed Khalil bin Mohd Hani	Fast SoC Prototyping Using Low Latency	VECAD



SCIENCE & TECHNOLOGY CENTER (CREST)	Hybrid Virtual Platform
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**d) Department of Electrical Power Engineering (POWER)**

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1		Tianu Sdn. Bhd.	Prof. Dr. Zulkurnain Abdul Malek		IVAT
2		Universiti Malaya (UM)	Prof. Dr. Abdul Halim bin Mohd Yatim	Power Control Technology for Fuel Cell Vehicles	PEDG
3		PROTON Berhad	Prof. Dr. Nik Rumzi bin Nik Idris	Collabration Agreement On The Establishment of Proton Satellite Laboratories : UTM-Proton Future Drive Laboratory	PEDG

**4.7.2 MOA & Staff Involved (International)**

**a) Department of Communication (COMM)**

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1	Institute for Information & Communications Technologies Joanneum Research		Assoc. Prof. Dr. Jafri bin Din	Measurement and assessment of second order statistics of Ka band SatCom systems in tropical regions	WCC
2		Institute for Information & Communications Technologies Joanneum Research	Assoc. Prof. Dr. Jafri bin Din	Measurement and assessment of second order statistics of Ka band SatCom systems in tropical regions	WCC

3	EUROPEAN UNION	Dr. Leow Chee Yen	Advancing the state of the art of MIMO: the key to the successful evolution of wireless networks	WCC
4	Institute for Information & Communications Technologies Joanneum Research	Dr. Mohd Fairus bin Mohd Yusoff	Measurement and assessment of second order statistics of Ka band SatCom systems in tropical regions	ARFMRG
5	COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Dr. Norhudah Seman	Near Field Communication Based Wireless Charging and Radio Frequency Energy Harvesting for Smart Phone Application	WCC
6	COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Assoc. Prof. Ir. Dr. Sharul Kamal Abd. Rahim	Near Field Communication Based Wireless Charging and Radio Frequency Energy Harvesting for Smart Phone Application	WCC

**b) Department of Control and Mechatronics (CMED)**

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1	Mikrotools Pte Ltd		Dr. Mohamed Sultan bin Mohamed Ali	Non-Traditional Micromachining of Undoped Silicon Using Electrical-Discharge-Machining	PROTOM-i
2		JAPAN INTERNATIONAL COOPERATION AGENCY (JICA)	Assoc. Prof. Ir. Dr. Ahmad Athif Bin Mohd Faudzi	Image-guided Transbronchial Intervention using Soft Actuator	CAIRO
3	Mikrotools Pte Ltd		Dr. Mohamed Sultan bin Mohamed Ali	Non-Traditional Micromachining of Undoped Silicon Using Electrical-Discharge-Machining	PROTOM-i

## c) Department of Electronics and Computer Engineering (ECE)

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1		COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	PM. Dr. Muhammad Nadzir bin Marsono	Fast SoC Prototyping Using Low Latency Hybrid Virtual Platform	VECAD
2		COLLABORATIVE RESEARCH IN ENGINEERING, SCIENCE & TECHNOLOGY CENTER (CREST)	Dr. Musa bin Mohd Mokji	Enhancement of signal parameters estimation for RF power sensors in the presence of 1/f noise	DSIP

## d) Department of Electrical Power Engineering (Power)

NO	MOA.	JOINT RESEARCH	RESEARCHER	TITLE	RG/CoE
1	Universitas Lancang Kuning, Indonesia		Prof. Dr. Zulkurnain Abdul Malek		IVAT
2	Universitas Sriwijaya, Indonesia		Prof. Dr. Zulkurnain Abdul Malek	Characterization of Polymeric Material filled with Graphene Oxide Nanofiller	IVAT

#### 4.7.3 National Membership (Committee)

##### a) Department of Communication (COMM)

NO	COMMITTEE OF	RESEARCHER	APPOINTMENT	RG/CoE
1	IEEE AP/MTT/EMC (Antenna & Propagation / Microwave Theory & Technique / Electromagnetic Compatibility) Joint Chapter Malaysia	PM Dr. Muhammad Ramlee Kamarudin	Vice Chair	WCC
2	IEM Southern Branch	PM DR SHARUL KAMAL ABDUL RAHIM	Vice Chair	WCC

##### b) Department of Control and Mechatronics (CMED)

NO	COMMITTEE OF	RESEARCHER	APPOINTMENT	RG/CoE
1	Persatuan Saintis Muslim Malaysia	Assoc. Prof. Ir. Dr. Ahmad Athif Bin Mohd Faudzi	Committee member	CAIRO
2	IEEE Control Systems Society Malaysia	Prof. Mohd Fua'ad Rahmat	Vice Chair	PROTOM-i
3	IEEE Control Systems Society Malaysia	Prof. Yahaya Md Sam	Committee	ACRG

##### c) Department of Electronics and Computer Engineering (ECE)

NO	COMMITTEE OF	RESEARCHER	APPOINTMENT	RG/CoE
1	IEEE SIGNAL PROCESSING SOCIETY MALAYSIA CHAPTER	PM Dr. Syed Abdul Rahman Syed Abu Bakar	Chair	DSIP
2	IEEE Malaysia Young Professional Affinity Group	Dr. Zaid Omar	Vice Chair	DSIP

##### d) Department of Electrical Power Engineering (Power)

NO	COMMITTEE OF	RESEARCHER	APPOINTMENT	RG/CoE
1	IEEE Power & Energy Society Malaysia Chapter	Dr. Md Pauzi bin Abdullah	Vice Chair	CEES
2	IEEE Power Electronics Society Malaysia Chapter	PM Dr. Nik Rumzi Nik Idris	Chair	PEDG
3	IEEE Power Electronics Society Malaysia Chapter	Dr. Tan Chee Wei	Secretary	PEDG

4	IEEE Power Electronics Society Malaysia Chapter	Dr. Shahrin Md Ayob	Treasurer	PEDG
5	IEEE Power Electronics Society Malaysia Chapter	Dr. Junaidi Abd Aziz	Committee	PEDG
6	IEEE Power Electronics Society Malaysia Chapter	Mohd Zaki Daud	Committee	PEDG
7	IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter	Dr. Yanuar Zulardiansyah Arief	Chair	IVAT
8	IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter	Dr. Nor Asiah Muhamad	Treasurer	IVAT
9	IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter	Dr. Lau Kwan Yiew	Committee	IVAT
10	IEEE Dielectrics and Electrical Insulation Society (DEIS) Malaysia Chapter	Dr. Mohd Hafizi Ahmad	Committee	IVAT

#### 4.7.4 International Membership (Committee)

##### a) Department of Control and Mechatronics (CMED)

NO	COMMITTEE OF	RESEARCHER	APPOINMENT	RG/CoE
1	FEDERATION OF ASIA STIMULATION SOCIETIES	Prof. Dr. Yahaya Bin Md. Sam	Committee member	ACRG

#### 4.7.5 Knowledge/Technology Diffusion Projects/ Assimilation (Social Innovation)

##### a) Department of Control and Mechatronics (CMED)

NO	NEW PROJECT	COMMUNITY	RESEARCHER	TITLE	RG/CoE
1	Teknologi Inovasi Untuk Memetik Buah Mata Kucing Yang Selamat Dan Mudah	Penduduk Di Kawasan Segamat	Dr. Mohamad Hafis Izran Bin Ishak		PROTOM-i

**b) Department of Electronics and Computer Engineering (ECE)**

NO	NEW PROJECT	COMMUNITY	RESEARCHER	TITLE	RG/CoE
1		SMK Taman Universiti 2 And SMK Dato Usman Awang	Dr. Shaikh Nasir @ Nasir Bin Shaikh Husin	Interactive Arduino Hardware Development And Programming For Secondary School Students	VECAD
2		Mrms Tun Dr. Ismail Dan SMK Taman Desa Skudai	Dr. Shaikh Nasir @ Nasir Bin Shaikh Husin	Innovative Arduino Programming And Hardware Development To Encourage School Students To Stem	VECAD

**c) Department of Electrical Power Engineering (Power)**

NO	NEW PROJECT	COMMUNITY	RESEARCHER	TITLE	RG/CoE
1	Pendedahan Terhadap Sistem Tenaga Solar Terasing Dan Teknik Penyelenggaraannya	Masyarakat Orang Asli Di Kluang	Dr. Zulkarnain Bin Ahmad Noorden		IVAT
2		Pelajar Sekolah Menengah Teknik Semenanjung Malaysia	Dr. Jasrul Jamani Bin Jamian	Kajian Keberkesanan Pembelajaran Melalui Pak-21 Kepada Pelajar Sekolah Menengah Teknik Semenanjung Malaysia	PERG

**4.7.6 Comparison**

Graphs below shows the difference between performance in networking and linkages by research group and departments of both 2015 and 2016.

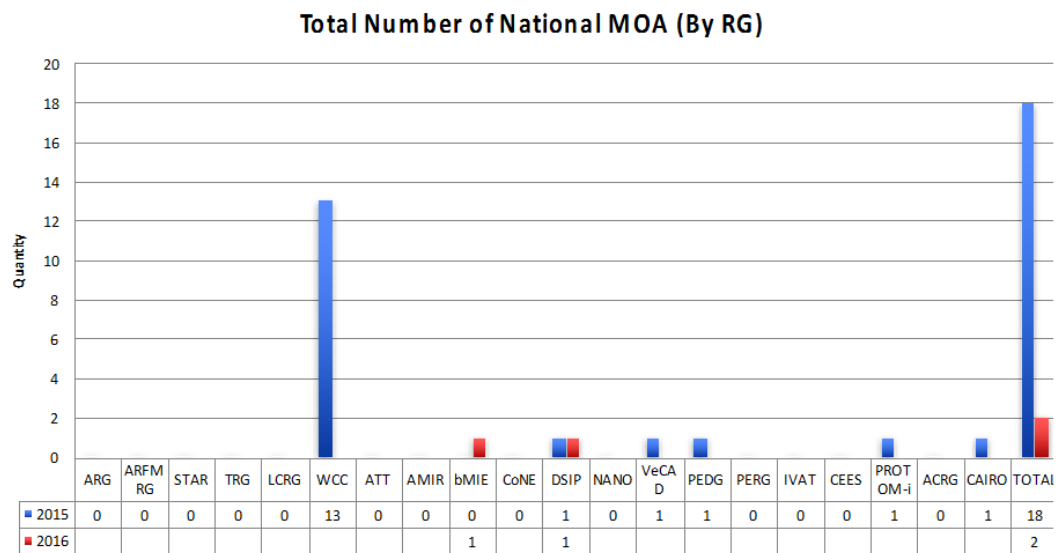


Figure 4.20a: Total Number of National MOA by Research Group

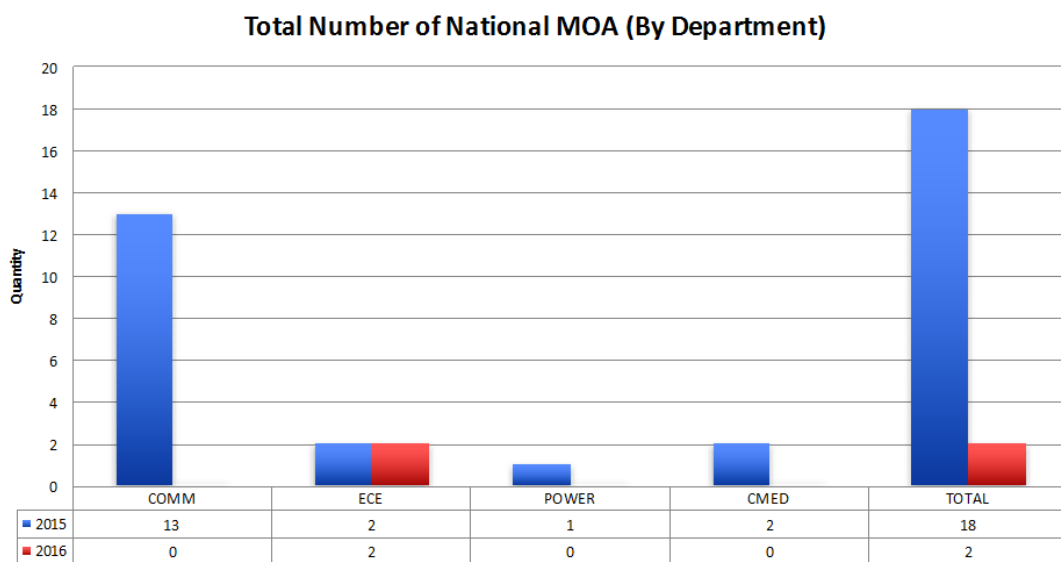


Figure 4.20b: Total Number of National MOA by Department

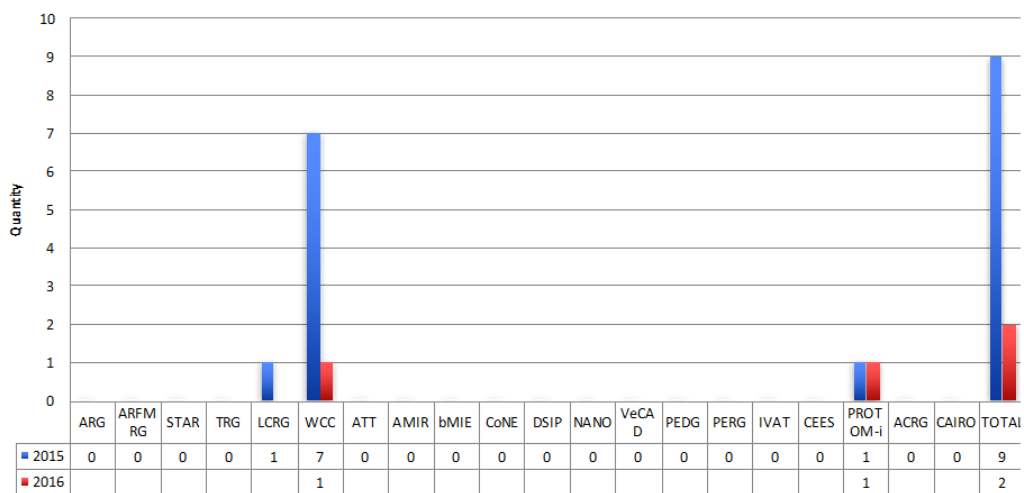
**Total Number of International MOA (By RG)**

Figure 4.20c: Total Number of International MOA by Research Group

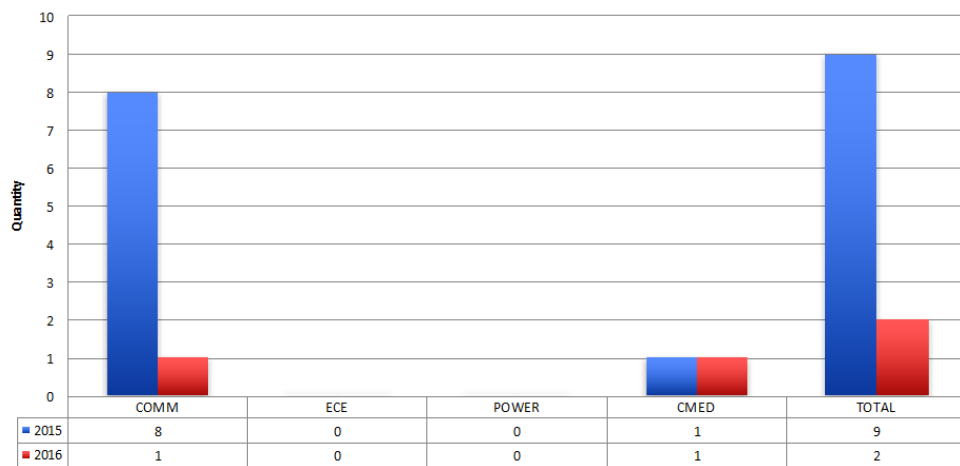
**Total Number of International MOA (By Department)**

Figure 4.20d: Total Number of International MOA by Department

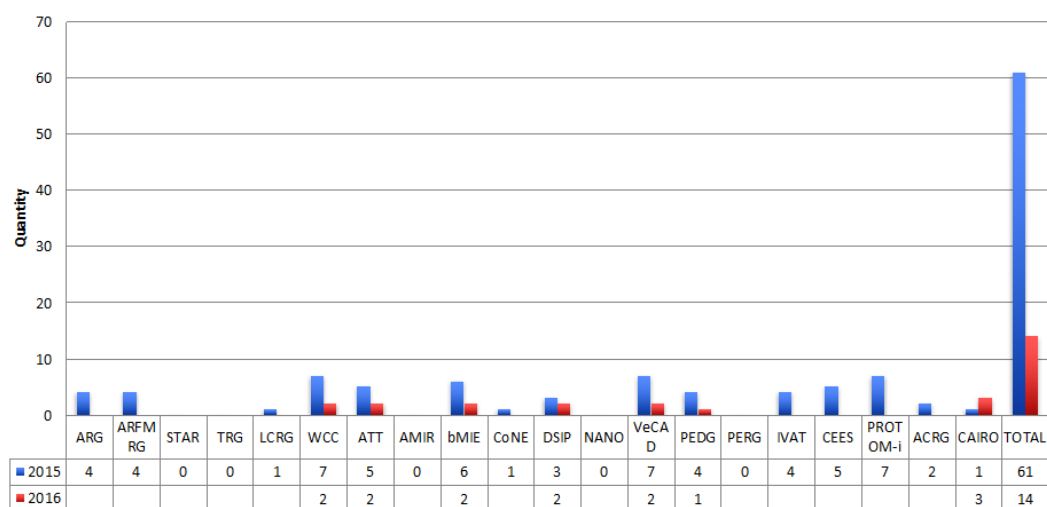
**Total Number of Staff in National Collaboration (By RG)**

Figure 4.20e: Total Number of National Joint Research by Research Group



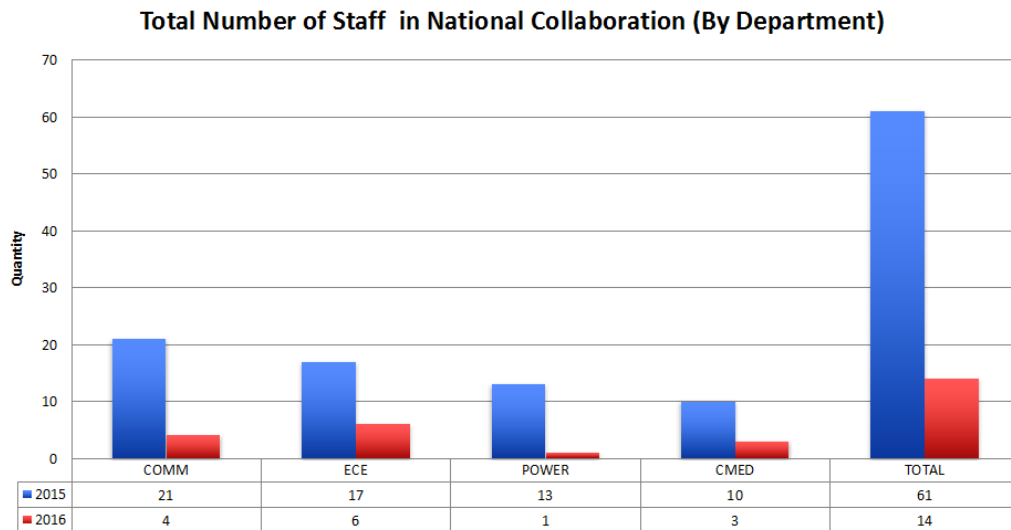


Figure 4.20f: Total Number of National Joint Research by Department

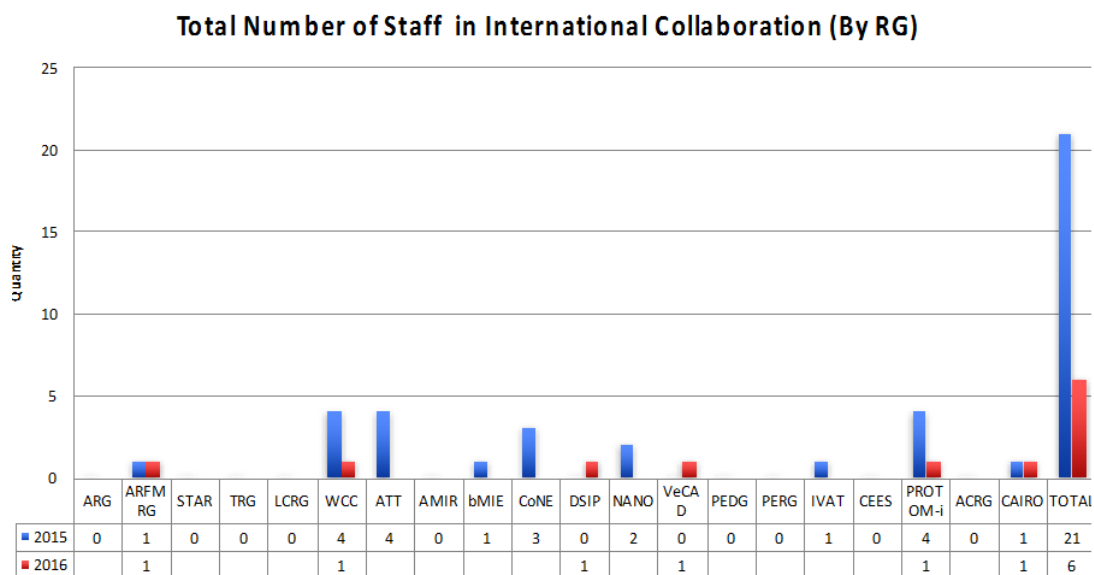


Figure 4.20g: Total Number of International Joint Research by Research Group

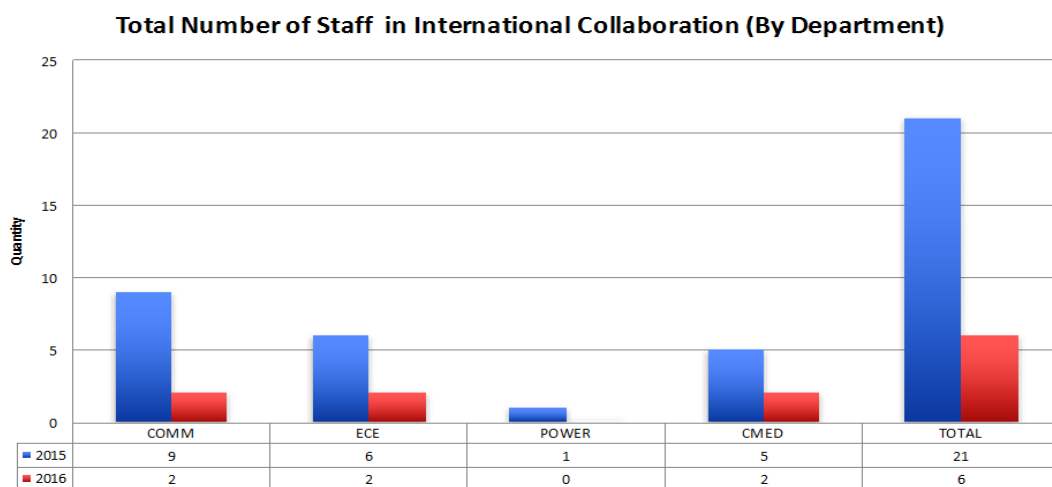


Figure 4.20h: Total Number of International Joint Research by Department

## 5.0 RESEARCH AND INNOVATION RELATED ACTIVITIES

The activities of Research, Innovation and Networking for year 2016 are listed in this section. Also, the faculty managed to organize one international conference, which is called ICEECC2016. The conference was held in December 2016 at block P19a, Faculty of Electrical Engineering.

### 5.1 Research Book Workshop

The research book workshop was held at Alumni UTM from 15<sup>th</sup> to 16<sup>th</sup> February 2016. 35 academic staffs attended the workshop. The facilitators for the workshop were Prof. Dr. Rosli Hussin (FS) and Assoc. Prof. Dr. Normah Mohd Ghazali (FKM).



Figure 5.1: Pictures from Research Book Workshop

## 5.2 Preparation and Assessment Workshop : Research Grant Proposal

Date: 21 February 2016 (Sunday)

Time: 2:30 to 4:30 pm

Venue: Conference Room 1, Level 2, P19a, FKE



Figure 5.2: Pictures from Research Grant Proposal Workshop

## 5.3 Briefing on Innovation and Commercialization

UTM Innovation & Commercialisation Centre (ICC) focuses on three main activities :- i) helps UTM researchers to commercialise intellectual property arising from their research: patenting, licensing, spin-out companies. ii) manages UTM technology consultation which assists UTM researchers to identify and manage consulting opportunities and helps clients access experts from UTM's world-class, interdisciplinary research base. iii) provides consulting expertise and advice in technology transfer and innovation management to clients across the public and private sectors around the world.

Date: 23 February 2016 (Tuesday)

Time: 9:30 am to 4:30 pm

Venue: Conference Room 1, Level 2, FKE



Figure 5.3: Briefing on Innovation and Commercialization by ICC

#### 5.4 Sharing Session : Sakura Grant Science Fund Japan

“Japan-Asia Youth Exchange Program in Science” (SAKURA Exchange Program in Science) is the program for enhancing exchanges between Asia and Japan of the youths who will play a crucial role in the future field of science and technology through the close collaboration of industry-academia-government by facilitating short-term visits of competent Asian youths to Japan. This program aims at raising the interest of Asian youths toward the leading Japanese science and technologies at Japanese universities, research institutions and private companies.

The following 15 countries and regions are expected to be eligible for invitation for the SAKURA Exchange Program in Science for the year of 2015.

Brunei Darussalam, Kingdom of Cambodia, Kingdom of Thailand, Lao People's Democratic Republic, Malaysia, Mongolia, People's Republic of China, Republic of India, Republic of Indonesia, Republic of Korea, Republic of Singapore, Republic of the Philippines, , the Republic of the Union of Myanmar, Socialist Republic of Viet Nam, and Taiwan (alphabetical order). More details can be found from the following website: <http://ssp.jst.go.jp/EN>

Date: 27 March 2016 (Tuesday)

Time : 2:30 to 4:30 pm

Venue: Conference Room 1, Level 2, P19a, FKE



Figure 5.4: Sharing Session on Sakura grant by Dr Norlaili

### 5.5 Sharing Session : International Grant With Research Alliance Dean (Innovative Engineering)

Date: 7 March 2016 (Monday)

Time: 2:30 to 4:30 pm

Venue: Bilik Mesyuarat Utama, Level 2, P19a, FKE

Speaker: Prof. Ir. Dr. Abu Sahmah Mohd. Supa'at



Figure 5.5: Sharing Session on International Grant by Research Alliance Dean (Innovative Engineering)

## 5.6 Innovation and Commercialization Workshop

Date: 28 March 2016 (Monday)

Time : 8:30 am to 5:00 pm

Venue: Conference Room 1, Level 2, P19a, FKE

In this workshop, each part/section is described in detail along with the tutorial and there is also question and answer session at the end of the workshop.

Commercialisation Team : [commercialisation@icc.utm.my](mailto:commercialisation@icc.utm.my)

IP Management Unit :

[herme@icc.utm.my](mailto:herme@icc.utm.my), [hafizah@icc.utm.my](mailto:hafizah@icc.utm.my)

Spin Off & Licensing : [nurammi@icc.utm.my](mailto:nurammi@icc.utm.my)

Business Development & Exhibition : [muammar@icc.utm.my](mailto:muammar@icc.utm.my)

Marketing & Promotion : [hazirah@icc.utm.my](mailto:hazirah@icc.utm.my)



Figure 5.6: Innovation and Commercialization Workshop



## 5.7 Science Fund Workshop

Date: 26 April 2016 (Tuesday)

Time : 2:30 to 4:30 pm

Venue: Conference Room 1, Level 2, P19a, FKE

Speaker: Assoc. Prof. Dr. Jafri



Figure 5.7: Science Fund Workshop

## 5.8 Sharing Session on Middle East Research Grant

The speaker shared his experience and knowledge in getting grant from Middle East Countries. Example of Middle East Countries with International Research Funding are:

- Qatar - Qatar National Research Fund (QNRF)
- Kuwait – Kuwait Foundation for the Advancement of Sciences (KFAS)
- Oman –Open Research Grant Program (The Research Council)
- UAE – Research Program (National Research Fund-MOHE & Scientist Research)
- Saudi Arabia - KACST Research Program

The details of the activity is as follows;

Date: 18 May 2016 (Wednesday)

Time : 3:00 pm

Venue: Conference Room 1, evel 2, P19a, FKE.

Speaker: Assoc. Prof. Dr Norhan Abdul Rahman



Figure 5.8: Sharing Session Middle East Research Grant

## 5.9 Seminar on Publishing in High Impact Journal

This seminar focuses on important aspects of writing: formulating a good title, a “wow” abstract, comprehensive introduction, as well as discussion of results and conclusion sections. Effective writing is an essential skill for academicians, researchers and students. Being able to publish in high impact journals is becoming a key ingredient for successful appraisals, promotions and career mobility. The details of the activity is as follows;

Date: 1st June 2016 (Wednesday)

Time : 9:00 am to 12:30 noon

Venue: Conference Room 1, Level 2, FKE

By: Professor Dr. Zainal Salam (FKE)



Figure 5.9: Prof. Zainal share his experience on Publishing in High Impact Journal





Figure 5.10: The participants of seminar on Publishing in High Impact Journal

### 5.10 Talk on Double Tax Deduction

The main objective of the talk is to ensure researchers as well as private sector/industry have clear understanding on the implementation of double tax deduction and its benefit to the private sector/industry. The details of the activity is as follows;

Date : 19th Sept. 2016 Time : 2.30 pm

Venue : Bilik Mesy. Utama, Level 2, FKE

By : Mr. Muhammad Tariq Rahmalan (RMC)



Figure 5.11: Talk on Double Tax Deduction by Mr Tariq Rahmalan (RMC)

### 5.11 Electrical Engineering Student Showcase (EESS), 2016



## ELECTRICAL ENGINEERING STUDENT SHOWCASE

Faculty of Electrical Engineering, Universiti Teknologi Malaysia

24th May 2016, Dewan Sultan Iskandar, Universiti Teknologi Malaysia

Electrical Engineering Student Showcase 2016 or better known as EESS2016 is a pioneer final year student exhibition day organized by the Faculty of Electrical Engineering (FKE). A combination of several existing exhibition days from the faculty; MIRCED, ECEX, TED and POWEX, EESS2016 is a perfect fusion of the current and burgeoning electrical research areas in Malaysia hence providing a medium to showcase the students' research ideas in the faculty. EESS2016 is a day of appreciation and a well-earned recognition to our final year students in their relentless efforts in perfecting their projects. By participating, students gain valuable experience presenting their work and interacting with the public. Additionally, deans, supervisors, staff, administrators, and alumni members serving as judges will actively encourage student participation. EESS2016 also fosters the mentoring relationship among students and their advisors and professors. With the involvement from industrial panels, students will be exposed to the harsh but true reality of the workplace requirements. Simultaneously, it is anticipated that an entrepreneurial culture will be induced among students as well as the faculty researchers. The exhibition is expected to be an inspiration to the students who wish to extend their research experience to a higher level. The exhibition will provide the students with a rare opportunity to harness their talents which is desirable in their working life.

### OBJECTIVES

- To provide a platform for final year students to display their research projects through poster presentation and hardware demonstration
- To create awareness among students about the undergraduate and postgraduate research and development (RnD) activities in the faculty.
- To promote industry involvement in the activities in the institutions of higher learning, hence, exchange valuable feedbacks that can enhance the learning.
- To inculcate the culture of entrepreneurship among the members of the technology by providing the exposure to the needs of industry and business.
- To expose publication culture among postgraduate students in Faculty of Electrical Engineering by publishing the selected works into Jurnal Teknologi which is a Scopus indexed journal.



Figure 5.12 (a): Electrical Engineering Student Showcase 2016 poster sessions



Figure 5.12 (b): Electrical Engineering Student Showcase 2016 poster sessions and participants



Figure 5.12 (c): Electrical Engineering Student Showcase 2016 Prize Giving Ceremony by the Dean



## 5.12 International Conference on Electrical Electronics Communication and Control Engineering (ICEECC 2016)



Figure 5.13: Official banner for ICEECC2016



Figure 5.14(a): Committee members of ICEECC 2016



Figure 5.14(b): IEEE UTM Student committee member ICEECC 2016

Faculty of Electrical Engineering (FKE), UTM Skudai has organised the 2016 International Conference on Electrical Electronics Communication and Control Engineering (ICEECC 2016) from December 18 to 19, 2016 at the Faculty of Electrical Engineering, Universiti Teknologi Malaysia Skudai Johor. The conference chair, Prof. Dr Mohamad Kamal A Rahim said that the successful organization of ICEECC 2016 has

required talents, dedication and time of the conference committees, Dean of FKE, many volunteers from IEEE UTM student branch and strong support from sponsors.

The first conference of ICEECC 2016 is held at Faculty of Electrical Engineering UTMJB Johor, mainly to introduce and promoting the Faculty to be recognized as a world class center within the field of Electrical engineering. The conference is to provide an international platform for researchers, engineers, academicians as well as industrial professionals from all over the world to present their research results and developments in Electrical Engineering subject which include control and instrumentation, mechatronics, communication, electronics and power. Among the participants of the conference are from Japan, Nigeria, Indonesia France, Singapore, India, Libya, Pakistan, Korea and local institutions in Malaysia such as UM, UNIMAP, UNIMAS, UMP, UiTM, UTP, USM, UTeM, UTHM, UPM, UIAM, UNITEN, UniKL, Swinburne University of Technology Malaysia, Curtin University Sarawak Malaysia and industry MIMOS, to exchange new ideas and application experiences face to face, to establish business or research relations and to find global partners for future collaboration. A total of 224 papers have been submitted to this conference and only 154 papers are accepted for oral presentation after the reviewing process. The conference will continue to be held annually to ensure continuity in the endeavor for excellence for all the ICEECC participants, the sponsors and all the collaborators involved.

Four keynote speakers have been invited to this conference. The first keynote speaker is Prof Mohamed Himdi from University of Rennes which is also the visiting professor for the faculty. The second keynote is Prof Ben M Chan from National University of Singapore. The third keynote speaker is Prof Toshihisa Funabashi from Nagoya University Japan and the last keynote speaker is Prof. Mohamad Khalil Hani from University Teknologi Malaysia.

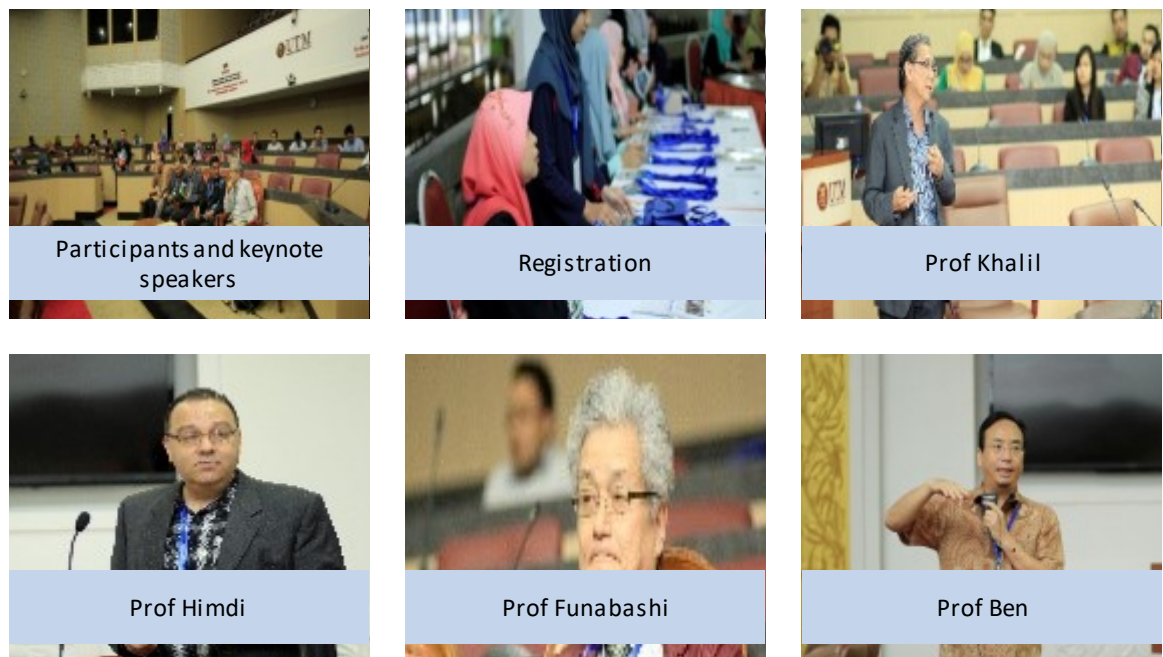


Figure 5.14: Pictures from the ICEECC2016 conference

## 6.0 COMMUNITY ACTIVITIES

### 6.1 Study on the effectiveness of learning through the PAK-21 for Sekolah Menengah Teknik Peninsular Malaysia students

**Duration:** 01/01/2016 until 01/08/2016

**Location:** Faculty of Electrical Engineering, Universiti Teknologi Malaysia

**Project Leader:** Dr. Jasrul Jamani Jamian

Volt-tech: The Journey Begins Here” is a program held by Jurutek (the Student Association of the Faculty of Electrical Engineering, Universiti Teknologi Malaysia) under the advisory of Dr. Jasrul Jamani Jamian. The main objective of this program is to study on the effectiveness of learning through the PAK-21 for Sekolah Menengah Teknik Peninsular Malaysia students. The participants were 114 students majoring in electrical engineering from 7 technical secondary schools (Sekolah Menengah Teknik), which are Sekolah Menengah Teknik Tuanku Jaafar (Negeri Sembilan), Sekolah Menengah Teknik Tunku Abdul Rahman Putra (Penang), Sekolah Menengah Teknik Kuala Lumpur (Wilayah Persekutuan), Sekolah Menengah Teknik Johor Bahru (Johor), Sekolah Menengah Teknik Kuantan (Pahang), Sekolah Menengah Teknik Alor Setar (Kedah) and Sekolah Menengah Teknik Bukit Piatu (Melaka). During the program, the students were exposed to the university’s learning environment – through university-styled lectures in lecture halls, lecture rooms and laboratories. In addition, the effectiveness of learning via PAK-21 approach was analyzed by conducting some activities through analogy, group discussion and observation so that it can enhance the understanding and academic achievement of students on the electrical engineering concept. The event was sponsored by Bahagian Pendidikan Teknik dan Vokasional, Kementerian Pelajaran Malaysia and some other parties with a total grant of RM 18,680.00



Figure 6.1(a): Facilitator explaining to the students



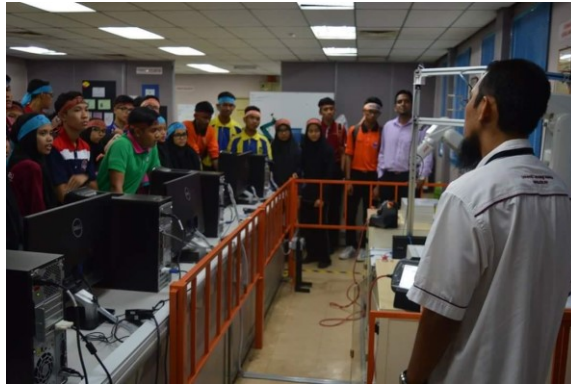


Figure 6.1(b):FKE lecturer explaining to the students



Figure 6.1(c): Group photo



Figure 6.1(d): One of the session of the program

## 6.2 Unveiling the Potential of Solar System for Indigenous, Off-grid Community at Pucur Village, Kluang, Johor

Solar power system is an alternative electricity production for areas that are too far from power lines utility, Tenaga Nasional Berhad (TNB). In Malaysia, there are several villages, including the indigenous village of Kahang, Kluang that have been supplied by the solar power system - either by TNB, NGOs or institutions of higher learning - as a contribution to the basic needs of the community. However, without a general knowledge of how the solar energy system works well and how to simply maintain the system, the system is typically will not last due to breakdown or abandoned issues. The project took the initiative to implement a series of technical knowledge exposure of solar energy systems to the indigenous of Kampung Orang Asli Pucur, Kahang.

Through this project, the general knowledge of solar energy system among indigenous people in Kampung Pucur could be improved. This project plays an important role in easily and effectively exposing the knowledge to the community. The project is not only create a knowledgeable community regarding the maintenance of the solar energy system but somehow, indirectly some of them were developing their technical expertise in maintaining and repairing the system. It will eventually reduce the dependence of local communities against the government or the utility company if there are problems related to solar energy systems and consequently, continuous electrical power supply can be benefited by local communities for their convenience.

In terms of sustainability, the project will be the initial triggering knowledge transfer related to the solar energy system to indigenous communities in Kampung Pucur. It will also indirectly increases the confidence of other parties or stakeholders in contributing towards 24-hour electricity to the whole village in the future. In addition, the knowledge transfer project is not only limited to the villagers themselves, but also has great potential to be extended to an overall of 29 indigenous villages in 7 districts in the state of Johor.



Figure 6.2: First site visit with Mdm Azlinda, Development Officer of JAKOA Kluang to Kampung Sungai Peroh, Kahang in August 2016.





Figure 6.3: Project discussion with Mr. Mohd Hafriz TNB Kluang in August 2016.



Figure 6.3 Site survey on the current status of electricity supply and loads at Kampung Pucur, Kahang in September 2016.



Figure 6.4 Project members with the Tok Batin of Kampung Pucur, Kahang after an introductory session to solar power system to the villagers in September 2016.



Figure 6.5: An introductory session to solar power system to the villagers in September 2016.



## 7.0 CONCLUSION

The Faculty performances for year 2016 give some improvement compared to the previous year 2015. Seven categories (or sections) of achievement which affect Faculty performance are discussed based on MyRa instrument. The report demonstrated that an excellent performance achieved by Sections D, E, G and H which indicate more than 100% each. However, there has been moderate performance in Section B, and low performances achieved in both C and F sections.

Faculty has always looking for good opportunities while seeking to build new partnership with government, industry and academia locally and around the world, in order to sustain the excellence and impact of our research and innovation, as a Research University.

## APPENDIX 1

## List of Publications

## Indexed Journal publications

NO.	AUTHORS	ARTICLE TITLE	JOURNAL NAME	TYPE
1	Amiri I.S., Alavi S.E., Soltanian M.R.K., Penny R., Supa'at A.S.M., Faisal N., Ahmad H.	2 × 2 MIMO-OFDM-RoF generation and transmission of double V-Band signals using a microring resonator system	Optical And Quantum Electronics	Q3
2	Bhatti A.R., Salam Z., Aziz M.J.B.A., Yee K.P.	A comprehensive overview of electric vehicle charging using renewable energy	International Journal Of Power Electronics And Drive Systems	Scopus
3	Bhatti, Abdul Rauf; Salam, Zainal; Aziz, Mohd Junaidi Bin Abdul; Yee, Kong Pui	A critical review of electric vehicle charging using solar photovoltaic	International Journal Of Energy Research	Q1
4	Sabapathy, Thennarasan; Jusoh, Muzammil; Ahmad, R. Badlishah; Kamarudin, Muhammad Ramlee; Soh, Ping Jack	A Ground-Plane-Truncated, Broadly Steerable Yagi-Uda Patch Array Antenna	IEEE Antennas And Wireless Propagation Letters	Q2
5	Khalili, Amelia Ahmad; Ahmad, Mohd Ridzuan; Takeuchi, Masaru; Nakajima, Masahiro; Hasegawa, Yasuhisa; Zulkifli, Razauden Mohamed	A Microfluidic Device for Hydrodynamic Trapping and Manipulation Platform of a Single Biological Cell	Applied Sciences-Basel	Q2
6	Nordin, Nur Dalilah; Rahman, Hasimah Abdul	A novel optimization method for designing stand alone photovoltaic system	Renewable Energy	Q1
7	M. Sabri M.F., Danapalasingam K.A., Rahmat M.F.	A review on hybrid electric vehicles architecture and energy management strategies	Renewable And Sustainable Energy Reviews	Q1
8	Alik R., Jusoh A., Sutikno T.	A simple checking algorithm with perturb and observe maximum power point tracking for partially shaded photovoltaic system	Telkomnika (Telecommunication Computing Electronics And Control)	Scopus
9	Ab Ghani S., Muhamad N.A., Chairul I.S., Jamri N.	A study of moisture effects on the breakdown voltage and spectral characteristics of mineral and palm oil-based insulation oils	ARPN Journal Of Engineering And Applied Sciences	Scopus
10	Wangsupphaphol A., Nik Idris N.R.	Acceleration-based design of electric vehicle auxiliary energy source	IEEE Aerospace And Electronic Systems Magazine	Scopus
11	Lee Y.H., Khalil-Hani M., Marsono M.N.	An FPGA-Based Quantum Computing Emulation Framework Based on Serial-Parallel Architecture	International Journal Of Reconfigurable Computing	Scopus
12	Maghsoudi, Mohammad Javad; Mohamed, Z.; Husain, A. R.; Tokhi, M. O.	An optimal performance control scheme for a 3D crane	Mechanical Systems And Signal Processing	Q1
13	Jannati, M.; Monadi, A.; Idris, N. R. N.; Faudzi, A. A. M.	Analytical calculation of the RFOC method in single-phase induction motor	International Journal Of Electronics	Q4
14	Akbari, Elnaz; Buntat, Zolkafle; Shahraki, Elmira; Parvaz, Ramtin; Kiani, Mohammad Javad	Analytical investigation of bilayer lipid biosensor based on graphene	Journal Of Biomaterials Applications	Q2
15	Akbari E., Buntat Z., Afroozeh A., Zeinalinezhad A., Khaleidian M.	Analytical investigation of CO2 sensor based on carbon strand	International Journal Of Environmental Science And Technology	Q2

16	Akbari, Elnaz; Buntat, Zolkafle; Afroozeh, Abdolkarim; Zeinalinezhad, Alireza; Kiani, M. J.; Abadi, M. H. Shahrokh	Analytical investigations of gas-sensor using methane decomposition system	Environmental Earth Sciences	Q2
17	Akbari E., Buntat Z., Shahraki E., Zeinalinezhad A., Nilashi M.	ANFIS modeling for bacteria detection based on GNR biosensor	Journal Of Chemical Technology And Biotechnology	Scopus
18	Muhamad W.A.W., Ngah R., Jamlos M.F., Soh P.J., Jamlos M.A., Lago H.	Antenna array bandwidth enhancement using polymeric nanocomposite substrate	Applied Physics A: Materials Science And Processing	Scopus
19	Majid, H. A.; Rahim, M. K. A.; Hamid, M. R.; Murad, N. A.; Samsuri, N. A.; Yusof, M. F. M.; Kamarudin, M. R.	Band-notched reconfigurable CPW-fed UWB antenna	Applied Physics A-Materials Science & Processing	Q2
20	Sukur, M. I. A.; Rahim, M. K. A.; Murad, N. A.	BANDWIDTH ENHANCEMENT OF RECTANGULAR DIELECTRIC RESONATOR ANTENNA USING CIRCULAR SLOT COUPLED TECHNIQUE	Microwave And Optical Technology Letters	Q4
21	Taibin Y., Mandela A.A., Idrus S.M., Zulkifli N.	Channel monitored channel duplexer for optimization of bidirectional passive optical network	Jurnal Teknologi	Scopus
22	Islam, M. S.; Mohammad, A. B.; Al-Gailani, Samir A.	Characteristics of free space optics communication link in an unusual haze	Indian Journal Of Pure & Applied Physics	Q4
23	Osman, M. N.; Rahim, M. K. Abdul; Hamid, M. R.; Yusoff, M. F. M.; Majid, H. A.	Compact Dual-Port Polarization-Reconfigurable Antenna With High Isolations for MIMO Application	IEEE Antennas And Wireless Propagation Letters	Q2
24	Al-Aboosi Y.Y., Bin Sha'ameri A.Z., Khamis N.H.H.	Comparison of methodologies for signal detection in underwater acoustic noise in shallow tropical waters	ARPN Journal Of Engineering And Applied Sciences	Scopus
25	Khairi, Mohd Taufiq Mohd; Ibrahim, Sallehuddin; Yunus, Mohd Amri Md; Faramarzi, Mahdi	Contact and non-contact ultrasonic measurement in the food industry: a review	Measurement Science And Technology	Q2
26	Bahri, Nur Ayuni Shamsul; Azli, Naziha Ahmad; Abu Samah, Narina	Determining the elements of problem solving strategies in project-based laboratory (PB Lab) course	International Journal Of Engineering Education	Q4
27	Rasheed, Nadia; Amin, Shamsudin H. M.	Developmental and Evolutionary Lexicon Acquisition in Cognitive Agents/Robots with Grounding Principle: A Short Review	Computational Intelligence And Neuroscience	Q4
28	Ali M.S.M., Rahim S.K.A., Sabran M.I., Abedian M., Eteng A., Islam M.T.	Dual band miniaturized microstrip slot antenna for WLAN applications	Microwave And Optical Technology Letters	Q4
29	Ayop, Osman; Rahim, Mohamad Kamal A.; Murad, Noor Asniza; Samsuri, Noor Asmawati	Dual-resonant polarization-independent and wide-angle metamaterial absorber in X-band frequency	Applied Physics A-Materials Science & Processing	Q2
30	Faghirinejadfard A., Mahdiyar A., Marsono A.K., Mohandes S.R., Omrany H., Tatabaee S., Tap M.M.	Economic comparison of industrialized building system and conventional construction system using building information modeling	Jurnal Teknologi	Scopus
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32	Muhamedin F.L., Piah M.A.M., Othman N.A., Algeelani N.A.	Effect of contaminant flow-rate and applied voltage on the current density and electric field of polymer tracking test	International Journal Of Electrical And Computer Engineering	Scopus
33	Bhatti, Abdul Rauf; Salam, Zainal; Aziz, Mohd Junaidi Bin Abdul; Yee, Kong Pui; Ashique, Ratil H.	Electric vehicles charging using photovoltaic: Status and technological review	Renewable And Sustainable Energy Reviews	Q1

34	Rashid, Wan Norhisyam Abd; Mohamad, Elmy Johana; Rahim, Ruzairi Abdul; Abdullah, Jaafar; Ameran, Hanis Liyana Mohmad	Electrical capacitance tomography: a review on portable ECT system and hardware design	Sensor Review	Q4
35	Jamil W.J., Rahman H.A., Baharin K.A.	Experiment-based study on the impact of soiling on PV system's performance	International Journal Of Electrical And Computer Engineering	Scopus
36	Mirsaiedi S., Said D.M., Mustafa M.W., Habibuddin M.H., Ghaffari K.	Fault location and isolation in micro-grids using a digital central protection unit	Renewable And Sustainable Energy Reviews	Scopus
37	Ahmad Radzi, Syafeeza; Khalil-Hani, Mohamed; Bakhteri, Rabia	Finger-vein biometric identification using convolutional neural network	Turkish Journal Of Electrical Engineering And Computer Sciences	Q4
38	Liew, Shan Sung; Khalil-Hani, Mohamed; Ahmad Radzi, Syafeeza; Bakhteri, Rabia	Gender classification: a convolutional neural network approach	Turkish Journal Of Electrical Engineering And Computer Sciences	Q4
39	Lau K.Y., Muhammad N.A., Arief Y.Z., Tan C.W., Yatim A.H.M.	Grid-connected photovoltaic systems for Malaysian residential sector: Effects of component costs, feed-in tariffs, and carbon taxes	Energy	Scopus
40	Jannati M., Sutikno T., Idris N.R.N., Aziz M.J.A.	High performance vector control of 3-phase im drives under open-phase fault based on EKF for rotor flux estimation	International Journal Of Electrical And Computer Engineering	Scopus
41	Al-Geelani N.A., Piah M.A.M., Saeh I., Othman N.A., Muhamedin F.L., Kasri N.F.	Identification of acoustic signals of internal electric discharges on glass insulator under variable applied voltage	International Journal Of Electrical And Computer Engineering	Scopus
42	Yusof, Nuzaihan Mhd; Ishak, Norlela; Adnan, Ramli; Sam, Yahaya Md; Tajjudin, Mazidah; Rahiman, Mohd Hezri Fazalul	IDENTIFICATION OF ELECTRO-HYDRAULIC ACTUATOR USING FRACTIONAL MODEL	International Journal On Smart Sensing And Intelligent Systems	Scopus
43	El Gayar A.I., Abdul-Malek Z.	Induced voltages on a gas pipeline due to lightning strikes on nearby overhead transmission line	International Journal Of Electrical And Computer Engineering	Scopus
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45	Azmi A.I., Abdullah A.S., Mohd Noor M.Y., Mohd Supa'at A.S., Kassim N.M., Ngajikin N.H.	Intensity-modulated temperature sensor based on fiber interferometer with optical bandpass filtering	Microwave And Optical Technology Letters	Q4
46	Mohamed Z., Khairudin M., Husain A.R., Subudhi B.	Linear matrix inequality-based robust proportional derivative control of a two-link flexible manipulator	Jvc/Journal Of Vibration And Control	Q1
47	Mirsaiedi, Sohrab; Said, Dalila Mat; Mustafa, Mohammad Wazir; Habibuddin, Mohammad Hafiz; Ghaffari, Kimia	MICROPROCESSOR-BASED PROTECTION FOR DIFFERENT TYPE MICROGRID FAULTS	Electronics World	Q4
48	Selvan, Krishna Veni; Ali, Mohamed Sultan Mohamed	Micro-scale energy harvesting devices: Review of methodological performances in the last decade	Renewable & Sustainable Energy Reviews	Q1
49	Zubair, Suleiman; Yusoff, Sharifah Kamilah Syed; Faisal, Norsheila	Mobility-enhanced reliable geographical forwarding in cognitive radio sensor networks	Sensors (Switzerland)	Q1
50	Emhemed A.A.A., Ma mat R.B., Mohd Faudzi A.A., Johary M.R., Osman K.	Modified predictive control for a class of electro-hydraulic actuator	International Journal Of Electrical And Computer Engineering	Scopus
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53	Eteng A.A., Abdul Rahim S.K., Leow C.Y.	Numerical study on the distance-dependence of optimal loop size-ratios for inductive coupling links	ARPN Journal Of Engineering And Applied Sciences	Scopus
54	Baharudin, Zikri Abadi; Cooray, Vernon; Rahman, Mahbubur; Hettiarachchi, Pasan; Ahmad, Noor Azlinda	On the characteristics of positive lightning ground flashes in Sweden	Journal Of Atmospheric And Solar-Terrestrial Physics	Q3
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56	Loo, H. R.; Joseph, S. B.; Marsono, M. N.	Online Incremental Learning for High Bandwidth Network Traffic Classification	Applied Computational Intelligence And Soft Computing	Scopus
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59	Elmagzoub, M. A.; Mohammad, Abu Bakar; Shaddad, Redhwan Q.; Al-Gailani, Samir A.	Polarization multiplexing of two MIMO RoF signals and one baseband signal over a single wavelength	Optics And Laser Technology	Q2
60	Alqadami, Abdulrahman Shueai Mohsen; Jamlos, Mohd Faizal; Soh, Ping Jack; Kamarudin, Muhammad Ramlee	Polymer (PDMS-Fe <sub>3</sub> O <sub>4</sub> ) magneto-dielectric substrate for a MIMO antenna array	Applied Physics A: Materials Science And Processing	Q2
61	Miveh, Mohammad Reza; Rahmat, Mohd Fadli; Mustafa, Mohd Wazir; Ghadimi, Ali Asghar	PROGRESS IN CONTROLLING AUTONOMOUS MICROGRIDS	Electronics World	Q4
62	Das, Himadry Shekhar; Yatim, A. H. M.; Tan, Chee Wei; Lau, Kwan Yiew	Proposition of a PV/tidal powered micro-hydro and diesel hybrid system: A southern Bangladesh focus	Renewable And Sustainable Energy Reviews	Q1
63	Nor N.M., Jamaluddin M.H., Kamarudin M.R., Khalily M.	Rectangular dielectric resonator antenna array for 28 GHz applications	Progress In Electromagnetics Research C	Scopus
64	Rahman, Hisyam Abdul; Xiang, Khor Kang; Fai, Yeong Che; Ming, Eileen Su Lee; Narayanan, Aqilah Leela T.	Robotic assessment modules for upper limb stroke assessment: Preliminary study	Journal Of Medical Imaging And Health Informatics	Q4
65	Rozali S.M., Rahmat M.F., Husain A.R., Kamarudin M.N.	Robust controller design for position tracking of nonlinear system using backstepping-GSA approach	ARPN Journal Of Engineering And Applied Sciences	Scopus
66	Yaakob S., Mahdaliza Idrus S., Md Samsuri N., Zamzuri Abdul Karim M., Salleh M.S., Chang G.-K.	Selective delivery of broadband wireless and wired services in an integrated ROF-PON system using dual-sideband optical carrier suppression	Microwave And Optical Technology Letters	Scopus
67	Alsifyani, Ibrahim Mohd; Idris, Nik Rumzi Nik	Simple Flux Regulation for Improving State Estimation at Very Low and Zero Speed of a Speed Sensorless Direct Torque Control of an Induction Motor	IEEE Transactions On Power Electronics	Q1
68	Qazi, Hummad Habib; bin Mohammad, Abu Bakar; Ahmad, Harith; Zulkifli, Mohd Zamani; Harun, Sulaiman Wadi	Single-mode D-shaped optical fiber sensor for the refractive index monitoring of liquid	Journal Of Modern Optics	Q3

69	Khatir, Nadia Mahmoudi; Abdul-Malek, Zulkumain; Zak, Ali Khorsand; Akbari, Abolghasem; Sabbagh, Farzaneh	Sol-gel grown Fe-doped ZnO nanoparticles: antibacterial and structural behaviors	Journal Of Sol-Gel Science And Technology	Q2
70	Zahedi, Yasser; Ngah, Razali; Mokayef, Mastaneh; Zahedi, Khalid	Stationarity Regions for Ultrawideband Channels	IEEE Antennas And Wireless Propagation Letters	Q2
71	Wooi C.L., Abdul-Malek Z., Ahmad N.A., Mokhtari M., Salimi B.	Statistical analysis on preliminary breakdown pulses of positive cloud-to-ground lightning in Malaysia	International Journal Of Electrical And Computer Engineering	Scopus
72	Bahrami, Nima; Khamis, Nor Hisham Haji; Bin Baharom, Ameruddin	Study of Underwater Channel Estimation Based on Different Node Placement in Shallow Water	IEEE Sensors Journal	Q2
73	Chagharvand, Sahar; Hamid, M. R.; Kamarudin, M. R.; Ghanem, F.	Switchable slot dipole to tapered slot antenna for wideband and multi-band applications with directional beam patterns	Microwave And Optical Technology Letters	Q4
74	Lee S.S., Chu B., Idris N.R.N., Goh H.H., Heng Y.E.	Switched-Battery Boost-Multilevel Inverter with GA Optimized SHEPWM for Standalone Application	IEEE Transactions On Industrial Electronics	Scopus
75	Jannati M., Idris N.R.N., Aziz M.J.A., Sutikno T., Ghanbari M.	Switching FOC method for vector control of single-phase induction motor drives	International Journal Of Electrical And Computer Engineering	Scopus
76	Amiri I.S., Alavi S.E., Supa'at A.S.M., Ali J., Ahmad H.	Temporal soliton: Generation and applications in optical communications	Jurnal Teknologi	Scopus
77	Amiri I.S., Alavi S.E., Supa'at A.S.M., Ali J., Ahmad H.	The analysis of phase, dispersion and group delay in InGaAsP/InP microring resonator	Jurnal Teknologi	Scopus
78	Hamidinezhad, Habib; Ashkarran, Ali Akbar; Abdul-Malek, Zulkurnain	The role of silane gas flow rate on PECVD-assisted fabrication of silicon nanowires	Applied Physics A-Materials Science & Processing	Q2
79	Bindhaiq S., Zulkifli N., Supa'at A.M.	The transmission of symmetric 40 Gb/s TWDM-based NG-PON2 utilizing delay interferometer (DI) for RSOA bandwidth enhancement	Optical Fiber Technology	Scopus
80	Alavi, S. E.; Soltanian, M. R. K.; Amiri, I. S.; Khalily, M.; Supa'at, A. S. M.; Ahmad, H.	Towards 5G: A Photonic Based Millimeter Wave Signal Generation for Applying in 5G Access Fronthaul	Scientific Reports	Q1
81	Marcus, Tay Ching En; Ibrahim, Mohd Haniff; Ngajikin, Nor Hafizah; Azmi, Asrul Izam	Transmittance optimization for high sensitivity ozone concentration measurement	Sensors And Actuators B-Chemical	Q1
82	Azini, Alyaa Syaza; Kamarudin, Muhammad Ramlee; Jusoh, Muzammil	Transparent antenna for Wi-Fi application: RSSI and throughput performances at ISM 2.4 GHz	Telecommunication Systems	Q3
83	Al-Gailani S.A., Mohammad A.B., Islam M.S., Sheikh U.U., Shaddad R.Q.	Tropical temperature and humidity modeling for free space optical link	Journal Of Optics (India)	Scopus
84	Eteng, Akaa Agbaeze; Rahim, Sharul Kamal Abdul; Leow, Chee Yen; Chew, Beng Wah; Vandenbosch, Guy A. E.	Two-Stage Design Method for Enhanced Inductive Energy Transmission with Q-Constrained Planar Square Loops	Plos One	Q1
85	Bahrami N., Khamis N.H.H., Baharom A., Yahya A.	Underwater channel characterization to design wireless sensor network by Bellhop	Telkomnika (Telecommunication Computing Electronics And Control)	Scopus
86	Rahman S., Rahman H.A.	Use of photovoltaics in microgrid as energy source and control method using MATLAB/SIMULINK	International Journal Of Electrical And Computer Engineering	Scopus
87	Ayop, Osman; Rahim, Mohamad Kamal A.; Murad, Noor Asniza; Samsuri, Noor Asmawati	Wideband polarization-insensitive metamaterial absorber with perfect dual resonances	Applied Physics A: Materials Science And Processing	Q2



88	Shakoor, Rabia; Hassan, Mohammad Yusri; Raheem, Abdur; Rasheed, Nadia	Wind farm layout optimization using area dimensions and definite point selection techniques	Renewable Energy	Q1
89	Ahmad S., Mat Tahar R., Muhammad-Sukki F., Munir A.B., Abdul Rahim R.	Application of system dynamics approach in electricity sector modelling: A review	Renewable And Sustainable Energy Reviews	Scopus
90	Raheem A., Hassan M.Y., Shakoor R.	Bioenergy from anaerobic digestion in Pakistan: Potential, development and prospects	Renewable And Sustainable Energy Reviews	Scopus
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92	Baharoon D.A., Rahman H.A., Fadhl S.O.	Personal and psychological factors affecting the successful development of solar energy use in Yemen power sector: A case study	Renewable And Sustainable Energy Reviews	Scopus
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94	Qazi, Sajid Hussain; Mustafa, Mohd Wazir	Review on active filters and its performance with grid connected fixed and variable speed wind turbine generator	Renewable And Sustainable Energy Reviews	Q1
95	Akbari E., Buntat Z., Nikoukar A., Kheirandish A., Khaleedian M., Afroozeh A.	Sensor application in Direct Methanol Fuel Cells (DMFCs)	Renewable And Sustainable Energy Reviews	Scopus
96	Ghazali R., Abdul Rahim H.	First derivative prediction of raw broiler's shear force using visible short wave near infrared spectroscopy	Jurnal Teknologi	Scopus
97	Othman M.A., Mat Safrin N., Zakaria N.	Ventricular arrhythmias classification and onset determination system	Jurnal Teknologi	Scopus
98	Muhammad B.B., Rahman M.H., Ahmad M.R., Bashir M.	A novel model of PZT actuator and its application in hysteresis and vibration controls	Jurnal Teknologi	Scopus
99	Jusoh M.Z., Din N.C., Dimon M.N.	Comparison of normal incident sound absorption coefficient of direct piercing carved wood panel for circular, geometry and floral design	Jurnal Teknologi	Scopus
100	Haidary S.M., Mohammed A.B., Córcoles E.P., Ali N.K., Ahmad M.R.	Effect of coatings and surface modification on porous silicon nanoparticles for delivery of the anticancer drug tamoxifen	Microelectronic Engineering	Q3
101	Hindia, M. N.; Rahman, T. A.; Ojukwu, H.; Hanafi, E. B.; Fattouh, A.	Enabling Remote Health-Caring Utilizing IoT Concept over LTE-Femtocell Networks	Plos One	Q1
102	Khairi, MTM; Ibrahim, S; Yunus, MAM; Faramarzi, M	Gas Bubbles Investigation in Contaminated Water Using Optical Tomography Based on Independent Component Analysis Method	International Journal Of Optics	Scopus
103	Bature A.A., Buyamin S., Ahmad M.N., Muhammad M., Abdullahi A.M.	Intelligent controllers for velocity tracking of two wheeled inverted pendulum mobile robot	Jurnal Teknologi	Scopus
104	Liau Q.Y., Leow C.Y., Ding Z.	Physical layer security using two-path successive relaying	Sensors (Switzerland)	Q1
105	Tang, Jia Wei; Shaikh-Husin, Nasir; Sheikh, Usman Ullah; Marsono, M. N.	FPGA-Based Real-Time Moving Target Detection System for Unmanned Aerial Vehicle Application	International Journal Of Reconfigurable Computing	Scopus
106	Sha'ameri A.Z., Kanaa A.	Robust multiple channel scanning and detection of low probability of intercept (LPI) communication signals	Defence S And T Technical Bulletin	Scopus
107	Mirsaiedi S., Said D.M., Mustafa M.W., Habibuddin M.H., Ghaffari K.	A Protection Strategy for Micro-Grids Based on Positive-Sequence Impedance	Distributed Generation And Alternative Energy Journal	Scopus

108	Mohamad Ishak N.A., Khalid P.I., Mahmood N.H., Harun M.	Determination of epoch length and regression model for 15-second segment of semg signal used in joint analysis of electromyography spectrum and amplitude	Jurnal Teknologi	Scopus
109	Majid N.A., Mohamed Z., Mohd Basri M.A.	Velocity control of a unicycle type of mobile robot using optimal pid controller	Jurnal Teknologi	Scopus
110	Hasbollah A., Ariffin S.H.S., Faisal N.	Mobility prediction method for vehicular network using Markov chain	Jurnal Teknologi	Scopus
111	Bassi J.S., Ru L.H., Ismail I., Khammas B.M., Marsono M.N.	Online peer-to-peer traffic identification based on complex events processing of traffic event signatures	Jurnal Teknologi	Scopus
112	Hisham A.A.B., Aujih A.B., Ishak M.H.I., Abidin M.S.Z.	Accuracy and quickness criterion-based driving skill metric for human adaptive mechatronics system	Jurnal Teknologi	Scopus
113	Omar Z., Hamzah N., Stathaki T.	Adaptive chebyshev fusion of vegetation imagery based on SVM classifier	Jurnal Teknologi	Scopus
114	Sanniyati, Che Nuru; Arief, Yanuar Z.; Adzis, Zuraimey; Muhamad, Nor Asiah; Ahmad, Mohd. Hafizi; Sidika, Muhammad Abu Bakar; Lau, K. Y.	Water Tree in Polymeric Cables: A Review	Malaysian Journal Of Fundamental And Applied Sciences	Scopus
115	Jamaludin J., Rahim R.A., Rahim H.A., Faizul Rahiman M.H., Mohd Muji S.Z., Rohani J.M.	Charge coupled device based on optical tomography system in detecting air bubbles in crystal clear water	Flow Measurement And Instrumentation	Scopus
116	Ismail R., Abdul Rahim H., Abd Rahim I.M., Ghazali R.	Near infrared spectroscopy (NIRS) applications in medical: Non-invasive and invasive leukemia screening	Jurnal Teknologi	Scopus
117	Abuzaiter A., Nafea M., Mohamed Ali M.S.	Development of a shape-memory-alloy micromanipulator based on integrated bimorph microactuators	Mechatronics	Scopus
118	Rehman T., Faudzi A.A.M., Dewi D.E.O., Suzumori K., Razif M.R.M., Nordin I.N.A.M.	Design and analysis of bending motion in single and dual chamber bellows structured soft actuators	Jurnal Teknologi	Scopus
119	Jannati M., Sutikno T., Idris N.R.N., Aziz M.J.A.	High performance speed control of single-phase induction motors using switching forward and backward EKF strategy	International Journal Of Power Electronics And Drive Systems	Scopus
120	Rahiman M.H.F., Rahim R.A., Rahim H.A., Green R.G., Zakaria Z., Mohamad E.J., Muji S.Z.M.	An evaluation of single plane ultrasonic tomography sensor to reconstruct three-dimensional profiles in chemical bubble column	Sensors And Actuators, A: Physical	Q2
121	Ghani K.A., Dimiyati K., Sha'ameri A.Z., Daud N.G.N.	Statistical modelling for missing and spurious pulses in pulse repetition interval (PRI) analysis	Defence S And T Technical Bulletin	Scopus
122	Al-Samman A.M., Rahman T.A., Ngah R.	UWB channel characterization in 28 ghz millimeter waveband for 5G cellular networks	Jurnal Teknologi	Scopus
123	Sulaiman S.F., Rahmat M.F., Faudzi A.A.M., Osman K.	Linear and nonlinear arx model for intelligent pneumatic actuator systems	Jurnal Teknologi	Scopus
124	Mokhtar M.R., Abdullah M.P., Hassan M.Y., Hussin F.	Application of PROMETHEE method for demand side management (DSM) options ranking	Jurnal Teknologi	Scopus
125	Nordin I.N.A.M., Faudzi A.A.M., Kamarudin M.Z., Dewi D.E.O., Rehman T., Razif M.R.M.	Grip force measurement of soft- Actuated finger exoskeleton	Jurnal Teknologi	Scopus
126	Badrul Hisham A.A., Aujih A.B., Izran Ishak M.H., Zainal Abidin M.S.	Car position and orientation based driving skill metric for analytical driving skill index evaluator	Jurnal Teknologi	Scopus

127	Nordin N.M., Azli N.A., Idris N.R.N., Ramlan N.H., Sutikno T.	Constant frequency torque controller for DTC with multilevel inverter of induction machines	International Journal Of Power Electronics And Drive Systems	Scopus
128	Asa Esaa N.F., Abdullah M.P., Hassan M.Y., Hussin F.	Electricity consumption pattern disaggregation using non-intrusive appliance load monitoring method	Jurnal Teknologi	Scopus
129	Mohamad Roslan F.N., Othman M.A., Abdul Razak M.A.	UPC barcode apps for drug registered verification	Jurnal Teknologi	Scopus
130	Abdullahi A.M., Mohamed Z., Abidin M.S.Z., Akmeliawati R., Husain A.R., Bature A.A., Haruna A.	Negative imaginary theorem with an application to robust control of a crane system	Jurnal Teknologi	Scopus
131	Ahmad B., Abdul Wahab N., Rahman A.A.	Emergency shutdown valve reliability function test by a utomated Partial Stroke Testing System	Jurnal Teknologi	Scopus
132	Fadoul M.M., Leow C.Y.	Relay beamforming to mitigate inter-relay interference in multi-cell scenario	Jurnal Teknologi	Scopus
133	Nai Ho L., Abdul Wahab N., Shehu I.A., Alhassan A., Albool I., Ibnihajar N., Othman B.M., Zainal M.S., Ibrahim M.J., Rasol M.S.	Control of a coupled tank system using PI controller with a dvanced control methods	Jurnal Teknologi	Scopus
134	Chin V.J., Salam Z., Ishaque K.	An accurate modelling of the two-diode model of PV module using a hybrid solution based on differential evolution	Energy Conversion And Management	Scopus
135	Naderipour, A; Zin, AAM; Bin Habibuddin, MH	IMPROVED POWER-FLOW CONTROL SCHEME FOR A GRID-CONNECTED MICROGRID	Electronics World	Scopus
136	Khokhar S., Mohd Zin A.A., Mokhtar A.S., Zareen N.	Automatic pattern recognition of single and multiple power quality disturbances	Australian Journal Of Electrical And Electronics Engineering	Scopus
137	Orikumhi I., Leow C.Y.	Joint power allocation for DF concatenated MIMO successive relaying scheme under network power constraints	Jurnal Teknologi	Scopus
138	Hasim S.H., Mamat R., Sheikh U.U., Amin S.M.	Robust human detection with occlusion handling by fusion of thermal and depth images from mobile robot	Jurnal Teknologi	Scopus
139	Mohamad S.B., Leow C.Y., Rahman T.A.	Relay node positioning for inter-band carrier aggregation with asymmetrical coverage	Jurnal Teknologi	Scopus
140	Abdullah M.P., Nazar N.S.M., Hassan M.Y., Hussin F.	Optimizing time of use (ToU) electricity pricing in regulated market	Jurnal Teknologi	Scopus
141	Jaffar, J., Ksyusof, S., Ahmad, N., Mustapha, J.C.	Location assisted proactive channel in heterogeneous cognitive radio network	Journal Of Telecommunication, Electronic And Computer Engineering	Scopus
142	Amsyar Azman A., Abdul Rahim R., Ibrahim S., Azmi A., Arsad A., Md Yunus M.A.	Electrochemical impedance spectroscopy for palm cooking oil discriminator using planar electromagnetic sensor array	Jurnal Teknologi	Scopus
143	Maina I., Abd Rahman T., Khalily M., Zakwoi S.I.	Beam broadened radial line slot array antenna for fifth generation (5G) mobile broadband communication	Jurnal Teknologi	Scopus
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151	Bazyar M., Sudirman R.	A new data embedding method for mpeg layer III audio steganography	Jurnal Teknologi	Scopus
152	Syah I.F., Abdullah M.P., Syadli H., Hassan M.Y., Hussin F.	Data selection test method for better prediction of building electricity consumption	Jurnal Teknologi	Scopus
153	Wooi C.-L., Abdul-Malek Z., Ahmad N.-A., El Gayar A.I.	Statistical analysis of electric field parameters for negative lightning in Malaysia	Journal Of Atmospheric And Solar-Terrestrial Physics	Q3
154	Zainal N.A., Yamada Y., Kamarudin M.R.	Low sidelobe and wideband characteristics of density tapered arrays for 5G mobile systems	Jurnal Teknologi	Scopus
155	Liew, Shan Sung; Khalil-Hani, Mohamed; Bakhteri, Rabia	An optimized second order stochastic learning algorithm for neural network training	Neurocomputing	Q2
156	Heydarianasl M., Rahmat M.F.	A new method to optimize geometric design of electrostatic sensor electrodes using particle swarm optimization	Jurnal Teknologi	Scopus
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162	Kosnan H.Z., Mat Safri N., Zakaria N.A., Khalid P.I.	Characterization of young children with preferred and non-preferred graphic rule during drawing	Jurnal Teknologi	Scopus
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170	Muhammad, Bashir; Abu-Bakar, Syed Abd Rahman	Face detection in profile views using fast discrete curvelet transform (FDCT) and support vector machine (SVM)	International Journal On Smart Sensing And Intelligent Systems	Scopus
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179	Abdul-Kadir N.A., Mat Safri N., Othman M.A.	Dynamic ECG features for atrial fibrillation recognition	Computer Methods And Programs In Biomedicine	Q1
180	Ahmmad S.N.Z., Su Lee Ming E., Che Fai Y., Sood S., Gandhi A.	Objective measurement for surgical skill evaluation	Jurnal Teknologi	Scopus
181	Jamaludin J., Abdul Rahim R., Abdul Rahim H., Fazalul Rahiman H., Mohd Muji S.Z., Jumaah M.F., Mohd Fadzil N.S.	Optical tomography system: Application of Charge Coupled Device (CCD) for solid and transparent objects detection	Jurnal Teknologi	Scopus
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186	Zahedi, Yasser; Ngah, Razali; Nunoo, Solomon; Mokayef, Mastaneh; Alavi, S. E.; Amiri, I. S.	Experimental measurement and statistical analysis of the RMS delay spread in time-varying ultra-wideband communication channel	Measurement	Q2
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191	Akbari E., Afrozeh A., Tan M.L.P., Arora V.K., Ghadiry M.	Analytical assessment of carbon allotropes for gas sensor applications	Measurement: Journal Of The International Measurement Confederation	Q2
192	Ismail, M.; Yap, F. A. Halim; Sulaiman, N. N.; Ishak, M. H. I.	Hydrogen storage properties of a destabilized MgH <sub>2</sub> -Sn system with TiF <sub>3</sub> addition	Journal Of Alloys And Compounds	Q2
193	Sultana U., Kha iruddin A.B., Aman M.M., Mokhtar A.S., Zareen N.	A review of optimum DG placement based on minimization of power losses and voltage stability enhancement of distribution system	Renewable And Sustainable Energy Reviews	Q1
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195	Das, HS; Dey, A; Wei, TC; Yatim, AHM	Feasibility Analysis of Standalone PV/Wind/Battery Hybrid Energy System for Rural Bangladesh	International Journal Of Renewable Energy Research	<b>Scopus</b>
196	Shukor, NorAzimah Mohd; Seman, Norhudah	Enhanced Design of Two-Section Microstrip-Slot Branch Line Coupler with the Overlapped Lambda/4 Open Circuited Lines at Ports	Wireless Personal Communications	Q4
197	Faudzi A.A.M., Mat Lazim N.H.I., Suzumori K.	Modeling and force control of thin soft McKibben actuator	International Journal Of Automation Technology	Scopus
198	Hasan N.S., Hassan M.Y., Abdullah H., Rahman H.A., Omar W.Z.W., Rosmin N.	Improving power grid performance using parallel connected Compressed Air Energy Storage and wind turbine system	Renewable Energy	Q1
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202	Khan, Rizwan; Jamaluddin, Mohd H.; Kazim, Jalil Ur Rehman; Nasir, Jamal; Owais, Owais	Multiband-dielectric resonator antenna for LTE application	IET Microwaves Antennas & Propagation	Q3

203	Moradi kordalivand, Alishir; Leow, Chee Yen; Abd Rahman, Tharek; Ebrahimi, Sepideh; Tien Han Chua	Wideband MIMO antenna system with dual polarization for WiFi and LTE applications	International Journal Of Microwave And Wireless Technologies	Q4
204	Aulia; Ahmad, Mohd Hafizi; Abdul-Malek, Zulkurnain; Arief, Yanuar Z.; Lau, Kwan Yiew; Novizon	Partial Discharge Characteristics in LLDPE-Natural Rubber Blends: Correlating Electrical Quantities with Surface Degradation	Journal Of Electrical Engineering & Technology	Q4
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206	Eteng, AA; Rahim, SKA; Leow, CY; Chew, BW; Vandenbosch, GAE	Simple compensation for lateral misalignments in resonant inductive coupling links	Electronics Letters	Q3
207	Jannati, Mohammad; Idris, Nik Rumzi Nik; Aziz, Mohd Junaidi Abdul	Performance Evaluation of the Field-Oriented Control of Star-Connected 3-Phase Induction Motor Drives under Stator Winding Open-Circuit Faults	Journal Of Power Electronics	Q3
208	Shah M.B.N., Husain A.R., Aysan H., Punnekkat S., Dobrin R., Bender F.A.	Error Handling Algorithm and Probabilistic Analysis Under Fault for CAN-Based Steer-by-Wire System	IEEE Transactions On Industrial Informatics	Scopus
209	Shakoor, Rabia; Hassan, Mohammad Yusri; Raheem, Abdur; Wu, Yuan-Kang	Wake effect modeling: A review of wind farm layout optimization using Jensen's model	Renewable & Sustainable Energy Reviews	Q1
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215	El Gayar A.I., Abdul-Malek Z.	AC interference on gas pipelines due to phase to ground faults in overhead transmission lines	International Journal Of Electrical And Computer Engineering	Scopus
216	Bani N.A., Abdul-Malek Z., Muhammad-Sukki F., Abubakar Mas'Ud A., Muhtazaruddin M.N., Kamardin K., Jamian J.J., Ahmad H.	Modelling the effect of applied voltage and frequency on electroluminescence in polymeric material	International Journal Of Electrical And Computer Engineering	Scopus
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219	Miveh, Mohammad Reza; Rahmat, Mohd Fadli; Ghadimi, Ali Asghar; Mustafa, Mohd Wazir	Control techniques for three-phase four-leg voltage source inverters in autonomous microgrids: A review	Renewable & Sustainable Energy Reviews	Q1
220	Jamian, Jasrul Jamani; Muhtazaruddin, Mohd Nabil; Baharuddin, Muhammad Ariff	Penalty factor-based optimization algorithm for distributed generation sizing in distribution network	Turkish Journal Of Electrical Engineering And Computer Sciences	Q4



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222	Idris I.H., Hamid M.R., Kamardin K., Rahim M.K.A.	Wide to multiband reconfigurable antenna	Microwave And Optical Technology Letters	Q4
223	Jannati, Mohammad; Monadi, Ali; Nik Idris, Nik Rumzi; Mohd Faudzi, Ahmad Athif; Blaabjerg, Frede	Modeling and rotor field-oriented control of a faulty three-phase induction motor based on GSA for tuning of PI controllers	Turkish Journal Of Electrical Engineering And Computer Sciences	Q4
224	AbuZaiter A., Nafea M., Mohd Faudzi A.A., Kazi S., Mohamed Ali M.S.	Thermomechanical behavior of bulk NiTi shape-memory-alloy microactuators based on bimorph actuation	Microsystem Technologies	Q3
225	Hakimi S., Kamal Abdul Rahim S., Idzam Sabran M., Nyangwarimam Obadijah A., Mohamed H.	Compact MIMO antenna for indoor UWB applications	Microwave And Optical Technology Letters	Q4
226	Dewan R., Rahim M.K.A., Hamid M.R., Majid H.A., Yusoff M.F.M., Jalil M.E.	Reconfigurable antenna using capacitive loading to Artificial Magnetic Conductor (AMC)	Microwave And Optical Technology Letters	Q4
227	Chee, PS; Nafea, M; Leow, PL; Ali, MSM	Thermal analysis of wirelessly powered thermo-pneumatic micropump based on planar LC circuit	Journal Of Mechanical Science And Technology	Q3
228	Shaaban, Mohamed; Usman, Mohd. Dzulhafizi	Quantitative risk associated with intermittent wind generation	Turkish Journal Of Electrical Engineering And Computer Sciences	Q4
229	Lim Z.J., Mustafa M.W.	Evolved intelligent clustered bee colony for voltage stability prediction on power transmission system	Soft Computing	Q3
230	Khairi, MTM; Ibrahim, S; Yunus, MAM; Faramarzi, M; Yusuf, Z	Artificial Neural Network Approach for Predicting the Water Turbidity Level Using Optical Tomography	Arabian Journal For Science And Engineering	Scopus
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237	Baharin N.F., Sidek N., Musa S.M.A., Azmi A.I., Abdullah A.S., Noor M.Y.M., Roslan M.E.M.	Hollow-core photonic crystal fiber refractive index sensor based on modal interference	ARNP Journal Of Engineering And Applied Sciences	Scopus
238	Jamaludin, J; Rahim, RA	Online Optical Tomography System for Detecting and Measuring the Diameters of Solid and Transparent Objects	IEEE Sensors Journal	Q2
239	Vejasegaran R., Jusoh M., Kamarudin M.R., Rahim H.A., Malek F., Sabapathy T., Shakhirul M.S.	Embroidered dual band textile antenna for ISM band application on bending performance	ARNP Journal Of Engineering And Applied Sciences	Scopus



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241	Radwan A., D'Amico M., Din J., Gentili G.G., Verri V.	Bandwidth and gain enhancement of a graphene-based metamaterial antenna for the THz band	ARPN Journal Of Engineering And Applied Sciences	Scopus
242	Mustafa M.W., Mustapha M., Khalid S.N., Abubakar I.	Wavelet-based short-term load forecasting using optimized anfis	ARPN Journal Of Engineering And Applied Sciences	Scopus
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244	Mohd Zin A.A., Moradi M., Khairuddin A.B.	A statistical analysis on price elasticity of electricity demand using response surface methodology	ARPN Journal Of Engineering And Applied Sciences	Scopus
245	Mohd Zin A.A., Naderipour A., Habibuddin M.H., Khajehzadeh A., Moradi M.	Designed a new compensation current control method for three-phase grid-connected photovoltaic inverter	ARPN Journal Of Engineering And Applied Sciences	Scopus
246	Lee Y.S., Malek F., Cheng E.M., Liu W.-W., You K.Y., Wee K.Y., Zahid L., Rahim H.A.	Single layer microwave absorber based on rice husk-mwcnts composites	ARPN Journal Of Engineering And Applied Sciences	Scopus
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248	Khaledian, Mohsen; Ismail, Razali; Akbari, Elnaz	Band structures of graphene nanoscrolls and their dispersion relation near the Fermi point	RSC Advances	Q1
249	Lau K.Y., Vaughan A.S., Chen G., Hosier I.L., Ching K.Y., Quirke N.	Polyethylene/silica nanocomposites: Absorption current and the interpretation of SCLC	Journal Of Physics D: Applied Physics	Scopus
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251	Thol Yong L., Che Fai Y., Su Lee Ming E.	A review of sensor technology and sensor fusion methods for map-based localization of service robot	Jurnal Teknologi	Scopus
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254	Dahari N.A., Wahid H., Md. Yunus M.A., Abdul Rahim H., Sulaiman M.D.	A review on air pollutants measurement techniques and its future advancement	Jurnal Teknologi	Scopus
255	Esa N.F., Abdullah M.P., Hassan M.Y.	A review disaggregation method in Non-intrusive Appliance Load Monitoring	Renewable And Sustainable Energy Reviews	Scopus
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257	Sani Yahya, M., Rahim, S.K.A.	15 GHz grid array antenna for 5G mobile communications system	Microwave And Optical Technology Letters	Q4
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262	Mustafa, M.W., Abdilahi, A.M., Usman, J., Jamian, J.J., Abujarad, S., Mustapha, M.	A novel constraint handling approach for metaheuristic techniques in solving economic dispatch problems	ARN Journal Of Engineering And Applied Sciences	Scopus
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264	Zin, A.A.B.M., Moradi, M., Khairuddin, A.B.	An economic analysis of time-based Demand Response programs and facts devices implementation for congestion management	ARN Journal Of Engineering And Applied Sciences	Scopus
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270	AbuZaiter, A; Hikmat, OF; Nafea, M; Ali, MSM	Design and fabrication of a novel XYZ thetaz monolithic micro-positioning stage driven by NiTi shape-memory-alloy actuators	Smart Materials And Structures	Q1
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276	Mohd Zin, A.A., Naderipour, A., Hafiz Habibuddin, M., Guerrero, J.M.	Harmonic currents compensator GCI at the microgrid	Electronics Letters	Q3
277	Emami, H; Hajhashemi, M; Alavi, SE	Improved Sensitivity RF Photonics Doppler Frequency Measurement System	IEEE Photonics Journal	Q1
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290	Ramli, M.R., Rahim, S.K.A., Idzam, M., Samingan, M.L.	Performance analysis of microstrip grid array antenna on different substrates for 5G mobile communication	Journal Of Telecommunication, Electronic And Computer Engineering	Scopus
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329	E.J. Mohamada, R.A. Rahimb, M.H.F. Rahimanc, H.L.M. Amerana, S.Z.M. Mujid, O.M.F. Marwah	Measurement and analysis of water/oil multiphase flow using Electrical Capacitance Tomography sensor	Flow Measurement and Instrumentation	Q2
330	Obadiah, A. N.; Hamid, M. R.; Orikuhi, I.; et al	Reconfigurable Bandwidth Antenna for LTE Application	Arabian Journal For Science And Engineering	Q3
331	Cheng, EM; Malek, MFA; Khor, SF; You, KY; Lee, KY; Rojan, MA; Abu Bakar, S; Nasir, NFM; Zakaria, Z; Tan, WH	Reflection and dielectric measurement for salinity of water using microstrip loop antenna and dielectric probe	INTERNATIONAL JOURNAL OF GEOMATE	Scopus
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333	Sutikno, T. & Jidin, A.	High-speed computation using FPGA for excellent performance of direct torque control of induction machines	Telkomnika	Scopus
334	Sarafi, S., Aain, A. K. B. & Abbaszadeh,	Low-Voltage CMOS Switch for High-Speed Rail-To-Rail Sampling	Circuits, Systems, and Signal Processing.	Q3
335	Meshginqalam, B., Toloue, H., Ahmadi, M. T., Sabatyan, A., Centeno, A	Graphene embedded surface plasmon resonance based sensor prediction model	Optical and Quantum Electronics.	Q3
336	Kasani, H.; Ahmadi, M. Taghi; Khoda-Bakhsh, R.; Rezaei Ochbelagh, D.; Ismail, Razali	Influences of Sr-90 beta-ray irradiation on electrical characteristics of carbon nanoparticles	Journal Of Applied Physics	Q2

<b>337</b>	Lim, Ee Wah; Ahmadi, Mohammad Taghi; Ismail, Razali	Modeling and simulation of graphene-oxide-based RRAM	Journal Of Computational Electronics	Q2
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## Conference Proceedings

NO.	AUTHORS	DOCUMENT TITLE	SOURCE TITLE
<b>1</b>	Ashique R.H., Salam Z., Aziz M.J.A.	A high power density soft switching bidirectional converter using unified resonant circuit	2015 IEEE Conference on Energy Conversion, CENCON 2015
<b>2</b>	Abdullah M.A., Tan C.W., Yatim A.H.M.	A simulation comparison of PI and Linear Quadratic Regulator controllers in DC-DC converter	2015 IEEE Conference on Energy Conversion, CENCON 2015
<b>3</b>	Petinrin J.O., Shaaban M.	A voltage control scheme in a distribution feeder with wind energy sources	2015 IEEE Conference on Energy Conversion, CENCON 2015
<b>4</b>	Ashique R.H., Salam Z., Ahmed J.	An adaptive P&O MPPT using a sectionalized piece-wise linear P-V curve	2015 IEEE Conference on Energy Conversion, CENCON 2015
<b>5</b>	Alik R., Jusoh A., Shukri N.A.	An improved perturb and observe checking algorithm MPPT for photovoltaic system under partial shading condition	2015 IEEE Conference on Energy Conversion, CENCON 2015
<b>6</b>	Abubakar I., Khalid S.N., Mustafa M.W., Shareef H., Mustapha M.	An overview of Non-intrusive load monitoring methodologies	2015 IEEE Conference on Energy Conversion, CENCON 2015
<b>7</b>	Ramli R.M., Arief Y.Z., Aziz P.D.A.	Application of LED technology into public road lighting in Malaysia for replacing the high pressure sodium vapour lighting	Proceeding - 2015 International Conference on Sustainable Energy Engineering and Application: Sustainable Energy for Greater Development, ICSEEA 2015
<b>8</b>	Wooi C.-L., Abdul-Malek Z., Ahmad N.A., Mokhtari M.	Characteristic of preliminary breakdown preceding negative return stroke in Malaysia	2015 IEEE Conference on Energy Conversion, CENCON 2015
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<b>10</b>	Komaki S., Idrus S.M., Wakabayashi T., Muzahidul Islam A.K.M., Baharun S., Hassan W.H.	Performance analysis and prototype experiment for parallel RoF-MIMO system	Lecture Notes in Electrical Engineering
<b>11</b>	Liau Q.Y., Leow C.Y.	Secrecy outage probability of two-path successive relaying in physical layer security	Proceedings of the International Conference on Parallel and Distributed Systems - ICPADS
<b>12</b>	Li M., Abu-Rub H., Liu Y., Ge B., Salam Z.	SiC power devices and applications in quasi-Z-source converters/inverters	2015 IEEE Conference on Energy Conversion, CENCON 2015
<b>13</b>	Alamri Y.A., Idris N.R.N., Alsofyani I.M.	Sliding mode observer-based MRAS for direct torque control of induction motor	2015 IEEE Conference on Energy Conversion, CENCON 2015

14	Isa N.B.M., Wei T.C., Yatim A.H.M.	Smart grid technology: Communications, power electronics and control system	Proceeding - 2015 International Conference on Sustainable Energy Engineering and Application: Sustainable Energy for Greater Development, ICSEEA 2015
15	Idris R.M., Nasir N., Ab Khalid N.S., Mustafa M.W., Arzeha N.A.	SMS conflict detection traffic light	2015 IEEE Conference on Energy Conversion, CENCON 2015
16	Monadi A., Jannati M., Idris N.R.N., Alavi S.E.	Speed estimation of faulty three-phase induction motor using model reference adaptive system	2015 IEEE Conference on Energy Conversion, CENCON 2015
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18	Abdul Rahim M., Abdul Ghani A.N., Che Munaaim M.A., Sidik M.A.B., Zulkeflee Z.	The temperature effect to the concrete due to the single strike of high electric current	Materials Science Forum
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21	Arif, M.S., Ayob, S.M., Salam, Z.	Decomposed Fuzzy PID controller for power inverters regulation: An overview	Conference Proceedings of 2015 2nd International Conference on Knowledge-Based Engineering and Innovation, KBEI 2015
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23	Shakhrul, M.S., Jusoh, M., Ismail, A.H., Kamarudin, M.R., Rahim, H.A., Sabapathy, T.	Reconfigurable frequency with circular polarization for on-body wearable textile antenna	2016 10th European Conference on Antennas and Propagation, EuCAP 2016
24	Baharudin N.N., Ayob S.M.	Brushless DC motor drive control using Single Input Fuzzy PI Controller (SIFPIC)	2015 IEEE Conference on Energy Conversion, CENCON 2015
25	Ayat, S.O., Khalil-Hani, M., Bakhteri, R.	OpenCL-based hardware-software co-design methodology for image processing implementation on heterogeneous FPGA platform	Proceedings - 5th IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2015
26	Yusri, I; Ghazaly, MM; Alandoli, EA; Rahmat, MF; Abdullah, Z; Ali, MAM; Ranom, R	Force optimization of the permanent magnet switching flux (PMSF) and switching reluctance (SR) actuators using Finite Element Analysis	PROCEEDINGS OF MECHANICAL ENGINEERING RESEARCH DAY 2016
27	Abdul-Kadir, N.A., Safri, N.M., Othman, M.A.	DSP ASIC module Design for natural frequency of ECG signal	Proceeding - 2015 IEEE International Circuits and Systems Symposium, ICSyS 2015
28	Naderipour A., Zin A.A.M., Habibuddin M.H., Khokhar S., Kazemi A.	Improved control of shunt active power filter using harmony search algorithm	2015 IEEE Conference on Energy Conversion, CENCON 2015
29	Muhammad, B., Abu-Bakar, S.A.R.	A hybrid skin color detection using HSV and YCgCr color space for face detection	IEEE 2015 International Conference on Signal and Image Processing Applications, ICSIPA 2015 - Proceedings
30	Mahmud, M.S.A., Abidin, M.S.Z., Mohamed, Z.	Development of an autonomous crop inspection mobile robot system	2015 IEEE Student Conference on Research and Development, SCORd 2015



31	Aulia, A., Arief, Y.Z., Abdul-Malek, Z., Muhamad, N.A., Ahmad, M.H., Makmud, M.Z.H.	Partial discharge monitoring technique for research purpose on solid insulating material	2015 IEEE Conference on Energy Conversion, CENCON 2015
32	Shahroom H., Buntat Z., Sidik M.A.B., Nawawi Z., Jambak M.I.	Atmospheric electric field measurement advances in Southern peninsular Malaysia	2015 IEEE Conference on Energy Conversion, CENCON 2015
33	Bhayo M.A., Yatim A.H.M., Khokhar S., Aziz M.J.A., Idris N.R.N.	Modeling of Wind Turbine Simulator for analysis of the wind energy conversion system using MATLAB/Simulink	2015 IEEE Conference on Energy Conversion, CENCON 2015
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36	Ling, N.H., Sam, Y.M.	Active torque control of electric power steering system using composite nonlinear feedback control	2015 IEEE Student Conference on Research and Development, SCORED 2015
37	Aspar, Z., Shaikh-Husin, N., Khalil-Hani, M.	Algorithm to convert programmable logic controller Ladder Logic Diagram models to Petri Net models	2015 IEEE Student Conference on Research and Development, SCORED 2015
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39	Orabi H., Shaikh-Husin N., Sheikh U.U.	Low cost pipelined FPGA architecture of Harris Corner Detector for real-time applications	The 10th International Conference on Digital Information Management, ICDIM 2015
40	Salem M., Jusoh A., Idris N.R.N., Alhamrouni I.	Extension of Zero Voltage Switching range for series resonant converter	2015 IEEE Conference on Energy Conversion, CENCON 2015
41	Al-Samman, A.M., Rahman, T.A., Azmi, M.H., Zulkefly, N.R., Mataria, A.M.S.	Path loss model for outdoor environment at 17 GHz mm-wave band	Proceeding - 2016 IEEE 12th International Colloquium on Signal Processing and its Applications, CSPA 2016
42	Liau Q.Y., Leow C.Y.	Physical layer security in two-path successive relaying	2015 IEEE 20th International Workshop on Computer Aided Modelling and Design of Communication Links and Networks, CAMAD 2015
43	Majed A., Salam Z.	Multilevel D-STATCOM for sag and swell mitigation using modulation index control	2015 IEEE Conference on Energy Conversion, CENCON 2015
44	Facta M., Hermawan, Umiati N.A.K., Salam Z., Buntat Z.	Implementation of photovoltaic and simple resonant power converter for high frequency discharge application	ICITACEE 2015 - 2nd International Conference on Information Technology, Computer, and Electrical Engineering: Green Technology Strengthening in Information Technology, Electrical and Computer Engineering Implementation, Proceedings
45	Ibrahim S., Yunus M.A.M., Khairi M.T.M., Sidik M.A.B.	Two phase flow imaging using infra red tomography	ICITACEE 2015 - 2nd International Conference on Information Technology, Computer, and Electrical Engineering: Green Technology Strengthening in Information Technology, Electrical and Computer Engineering Implementation, Proceedings

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47	Hakimi, S., Rahim, S.K.A., Yamada, Y., Michishita, N.	Mobile base station antenna composed of a cylindrical dielectric lens radome	Proceedings of the 2015 IEEE 4th Asia-Pacific Conference on Antennas and Propagation, APCAP 2015
48	Shehu, M., Ahmad, M.R., Shehu, A., Alhassan, A.	LQR, double-PID and pole placement stabilization and tracking control of single link inverted pendulum	Proceedings - 5th IEEE International Conference on Control System, Computing and Engineering, ICCSCE 2015
49	Suria A.K., Idris R.M.	Dual-axis solar tracker based on predictive control algorithms	2015 IEEE Conference on Energy Conversion, CENCON 2015
50	Naderipour, A., Zin, A.A.M., Habibuddin, M.H., Guerrero, J.M.	A control scheme to improve the power quality with the absence of dedicated compensation devices in microgrid	2015 IEEE Student Conference on Research and Development, SCOREd 2015
51	Hong, H.A., Sheikh, U.U.	Automatic detection, segmentation and classification of abdominal aortic aneurysm using deep learning	Proceeding - 2016 IEEE 12th International Colloquium on Signal Processing and its Applications, CSPA 2016
52	Liew S.S., Khalil-Hani M., Bakhteri R.	Distributed B-SDLM: Accelerating the training convergence of deep neural networks through parallelism	Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)
53	Othman N.A., Piah M.A.M., Adzis Z.	Leakage current and trapped charge characteristics for glass insulator string under contaminated conditions	2015 IEEE Conference on Energy Conversion, CENCON 2015
54	Naeem B., Ngah R., Hashim S.Z.M.	Handovers in small cell based heterogeneous networks	2016 International Conference on Computing, Electronic and Electrical Engineering, ICE Cube 2016 - Proceedings
55	Shaban M., Salam M.A., Ang S.P., Sidik M.A.B., Buntat Z., Voon W.	Assessing induced sheath voltage in multi-circuit cables: Revising the methodology	2015 IEEE Conference on Energy Conversion, CENCON 2015
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57	Sulaiman, S.F., Rahmat, M.F., Faudzi, A.A.M., Osman, K.	Disturbance rejection using Model Predictive control for pneumatic actuator system	Proceeding - 2016 IEEE 12th International Colloquium on Signal Processing and its Applications, CSPA 2016
58	Ghazali, R., Rahim, H.A.	Prediction of raw broiler shear force using visible and short wave Near Infrared Spectroscopy	Proceeding - 2016 IEEE 12th International Colloquium on Signal Processing and its Applications, CSPA 2016
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99	Ayop, O., Rahim, M.K.A., Murad, N.A., Samsuri, N.A.	Dual resonance circular ring-shaped metamaterial absorber with wide operating angle	2015 International Symposium on Antennas and Propagation, ISAP 2015
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115	Zaid, AFM; Yu, LC; Kamarudin, MR	CPW Fed WLAN Monopole Antenna with Gain Improvement	International Electrical Engineering Congress (iEECON)
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## Book Chapters

NO	AUTHORS	BOOK TITLE	CHAPTER TITLE	PUBLISHER
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36	Mohamad Shukri Zainal Abidin, Salinda Buyamin	Conceive Design Implement Operate Capstone Project Series 4 Urban Farming	Self-Plant Watering System	Penerbit UTM Press
37	Salinda Buyamin, Zaharuddin Mohamed	Conceive Design Implement Operate Capstone Project Series 4 Urban Farming	Automated Gardening Care System (Agcs)	Penerbit UTM Press
38	Mohd Ridzuan Ahmad, Nasarudin Ahmad	Conceive Design Implement Operate Capstone Project Series 4 Urban Farming	Rotating Garden	Penerbit UTM Press
39	Nasarudin Ahmad, Mohd Ridzuan Ahmad	Conceive Design Implement Operate Capstone Project Series 4 Urban Farming	Automated Plant Caretaker (Autopcare)	Penerbit UTM Press
40	Salwa Mokhsin, Mohamad Shukri Zainal Abidin	Conceive Design Implement Operate Capstone Project Series 4 Urban Farming	Capilalry Irrigation System For Urban Farming	Penerbit UTM Press
41	Mohammad Yusri Hassan, Tan Wen Shan	Implementation Features of Incorporating Renewable Energy Sources in Power Grids	A Multi Population Genetic Algorithm For The Allocation and Sizing Of Distributed Generation In Distribution Systems	Penerbit UTM Press
42	Mohammad Yusri Hassan, Mubarak Nadwiy Suharto	Implementation Features of Incorporating Renewable Energy Sources in Power Grids	Optimal Generation Location Using Particle Swarm Optimization	Penerbit UTM Press
43	Tan Wen Shan, Mohammad Yusri Hassan,	Implementation Features of Incorporating Renewable Energy Sources in Power Grids	Allocation And Sizing Of Dgs In Power Grids Using Cuckoo Search Algorithm	Penerbit UTM Press
44	Hasimah Abdul Rahman, Mohamed Almakhtar, Mohammad Yusri Hassan	Implementation Features of Incorporating Renewable Energy Sources in Power Grids	Effect Of Losses Resistances, Module Temperature Variation, And Partial Shading On Photovoltaic Output Power	Penerbit UTM Press
45	Hasimah Abdul Rahman, Raja Nursyazana Raja Mukhtaruddin, Mohammad Yusri Hassan	Implementation Features of Incorporating Renewable Energy Sources in Power Grids	Economic And Environmental Analysis Of Grid-Connected And Stand- Alone Hybrid Photovoltaic - Wind System In Malaysia	Penerbit UTM Press
46	Norhaliza A. Wahab, Lim Cheng Siong, Anita Ahmad	Conceive-Design-Implement-Operate Capstone Series 3	Baby Child Safety Warning System	Penerbit UTM Press
47	Leow Pei Ling , Shafishuhaza Sahlan	Conceive-Design-Implement-Operate Capstone Series 3	Child Passenger Safety Warning System	Penerbit UTM Press
48	Shafishuhaza Sahlan, Khairul Hamimah Abas	Conceive-Design-Implement-Operate Capstone Series 3	"Plug And Play" Child Safety Warning System	Penerbit UTM Press
49	Mohd Amri Md. Yunus, Sallehudin Ibrahim, Zaharuddin Mohamed	Conceive-Design-Implement-Operate Capstone Series 3	Utm Officer-Surveillance System (Utm-Oss)	Penerbit UTM Press
50	Salinda Buyamin, Anita Ahmad, Mohamad Noh Ahmad	Conceive-Design-Implement-Operate Capstone Series 3	Surveillance System In Construction Site	Penerbit UTM Press
51	Mohd Ridzuan Ahmad, Md. Habibur Rahman, Masaru Takeuchi	Advanced Mechatronics and Mems Devices ii, Microsystems and Nanosystems	Microfluidics for Mass Measurement of Miniature Object Like Single Cell and Single Microparticle	Springer

Masahiro Nakajima,  
Yasuhisa Hasegawa  
Toshio Fukuda

## APPENDIX 2

## List of Research Grants

Vot	Project Leader	Department	RG	COE	Approved Amount	Sponsor Category (University, National, Private etc.)	Grant Name (ScienceFund/FRGS etc.)
4S126	AB AL-HADI BIN AB RAHMAN	ECE	DSIP	RG	242,550.00	Nasional	Sciencefund
12J51	ABD HAMID BIN AHMAD	ECE	BMIE	RG	20,000	Universiti	Tier 2
4L117	ABDUL HALIM BIN MOHAMED YATIM	POWER	COE	WCC	108,000.00	Nasional	Exploratory Research Grant Scheme
4F329	ABDUL RASHID BIN HUSAIN	CMED	ACRG	RG	72,000.00	Nasional	Fundamental Research Grant Scheme
10H58	ABDULLAH ASUHAIMI BIN MOHD ZIN	POWER	PERG	RG	50,000.00	Universiti	Tier 1
09H76	ABU BAKAR BIN MOHAMMAD	COMM	LCRG	RG	49,000.00	Universiti	Tier 1
3C064	ABU KHARI BIN A'AIN	ECE	VeCAD	RG	110,000.00	Industri	Contract
4L147	ABU SAHMAH BIN MOHD SUPA'AT	COMM	LCRG	RG	6,850,000.00	Nasional	MYLAB
4B179	AHMAD 'ATHIF BIN MOHD FAUDZI	CMED	COE	CAIRO	35,546.66	Antarabangsa	Others
12J82	AHMAD SHAHIDAN BIN ABDULLAH	COMM	ATTRG	RG	20,000.00	Universiti	Tier 2
12J50	AHMAD SHARMI BIN ABDULLAH	COMM	LCRG	RG	20,000.00	Universiti	Tier 2
4B183	AHMAD ZURI B SHA'AMERI	ECE	DSIP	RG	136,400.00	Industri	Others
12J55	ALIAS BIN MOHD	COMM	ATTRG	RG	20,000.00	Universiti	Tier 2
15H29	ANITA BINTI AHMAD	CMED	PROTOM-i	RG	40,000.00	Universiti	Tier 1
4F432	ASRUL IZAM BIN AZMI	COMM	LCRG	RG	118,200.00	Nasional	Fundamental Research Grant Scheme
07H82	AWANG BIN JUSOH	POWER	PEDG	RG	90,000.00	Universiti	Tier 1
12J09	CAMALLIL BIN OMAR	ECE	BMIE	RG	20,000.00	Universiti	Tier 2
4J216	CHUA TIEN HAN	COMM	COE	WCC	119,910.00	Nasional	HICOE Research Grant
10H64	DALILA BINTI MAT SAID	POWER	COE	CEES	49,990.00	Universiti	Tier 1
12H34	EILEEN SU LEE MING	ECE	BMIE	RG	50,000.00	Universiti	Tier 1
02K57	FARID BIN ZUBIR	COMM	ARFMRG	RG	20,000.00	Universiti	Potential Academic Staff

06H04	FATIMAH SHAM BT. ISMAIL	CMED	COE	CAIRO	90,000.00	Universiti	Tier 1
07H54	HASIMAH BTE ABDUL RAHMAN	POWER	COE	CEES	75,941.10	Universiti	Tier 1
4L184	HAZLINA BINTI SELAMAT	CMED	COE	CAIRO	684,500.00	Nasional	MYLAB
12H20	HERLINA BINTI ABDUL RAHIM	CMED	PROTOM-i	RG	50,000.00	Universiti	Tier 1
11H49	HERMAN BIN WAHID	CMED	PROTOM-i	RG	50,000.00	Universiti	Tier 1
4L182	ISMAHANI BINTI ISMAIL	ECE	BMIE	RG	39,150.00	Industri	Demad-Driven Innovation
12J78	ISMAIL BIN ARIFFIN	ECE	BMIE	RG	20,000.00	Universiti	Tier 2
4C062	JAFRI BIN DIN	COMM	COE	WCC	43,700.00	Antarabangsa	Contract
15H89	JASRUL JAMANI BIN JAMIAN	POWER	PERG	RG	40,000.00	Universiti	Tier 1
12J64	JOHARI HALIM SHAH BIN OSMAN	CMED	ACRG	RG	20,000.00	Universiti	Tier 2
12J66	KAMALUDIN BIN MOHAMAD YUSOF	COMM	ATTRG	RG	20,000.00	Universiti	Tier 2
4F615	KHAIRUL HAMIMAH BINTI ABAS	CMED	PROTOM-i	RG	52,000.00	Nasional	Fundamental Research Grant Scheme
4C050	KUMERESAN A/L A.DANAPALASINGAM	CMED	COE	CAIRO	86,187.00	Industri	Contract
4F707	LAU KWAN YIEW	POWER	COE	IVAT	127,200.00	Nasional	Fundamental Research Grant Scheme
4F818	LEOW CHEE YEN	COMM	COE	WCC	71,000.00	Nasional	FRGS
4F462	LEOW PEI LING	CMED	PROTOM-i	RG	71,000.00	Nasional	Fundamental Research Grant Scheme
4F314	LIM CHENG SIONG	CMED	ACRG	RG	91,400.00	Nasional	Fundamental Research Grant Scheme
4J218	MARWAN HADRI BIN AZMI	COMM	COE	WCC	119,910.00	Nasional	HICOE Research Grant
03G23	MASTURA SHAFINAZ BINTI ZAINAL ABIDIN	ECE	MNSE	RG	20,000.00	Universiti	Flagship-Research Group
4F746	MD PAUZI BIN ABDULLAH	POWER	COE	CEES	58,500.00	Nasional	Fundamental Research Grant Scheme
05H64	MICHAEL TAN LOONG PENG	ECE	CONE	RG	86,000.00	Universiti	Tier 1
12J56	MITRA BINTI MOHD ADDI	ECE	BMIE	RG	20,000.00	Universiti	Tier 2
4F682	MOHAMAD AMIR BIN SHAMSUDIN	CMED	PROTOM-i	RG	150,000.00	Nasional	Fundamental Research Grant Scheme
4F691	MOHAMAD HAFIS IZRAN BIN ISHAK	CMED	PROTOM-i	RG	36,400.00	Nasional	Fundamental Research Grant Scheme
4L811	MOHAMAD KAMAL B. A. RAHIM	COMM	ARFMRG	RG	1,200,000.00	Nasional	Long Term Research Grant Scheme
10H08	MOHAMAD RIJAL BIN HAMID	COMM	ARFMRG	RG	50,000.00	Universiti	Tier 1



4F759	MOHAMAD SHUKRI BIN ZAINALABIDIN	CMED	ACRG	RG	104,800.00	Nasional	Fundamental Research Grant Scheme
4F751	MOHAMED AFENDI BIN MOHAMED PIAH	POWER	COE	IVAT	114,200.00	Nasional	Fundamental Research Grant Scheme
4S116	MOHAMED KHALIL BIN HJ MOHD HANI	ECE	VeCAD	RG	226,000.00	Nasional	Sciencefund
4C067	MOHAMED SULTAN BIN MOHAMED ALI	CMED	PROTOM-i	RG	60,000.00	Antarabangsa	Contract
07H57	MOHAMMAD YUSRI BIN HASSAN	POWER	COE	CEES	81,667.35	Universiti	Tier 1
4J208	MOHD AFZAN BIN OTHMAN	ECE	BMIE	RG	100,000.00	Universiti	UTM R&D Fund
4S098	MOHD AMRI BIN MD. YUNUS	CMED	PROTOM-i	RG	198,100.00	Nasional	Sciencefund
15H39	MOHD ARIFFANAN BIN MOHD BASRI	CMED	ACRG	RG	40,000	Universiti	Tier 1
4F761	MOHD AZHAR BIN ABDUL RAZAK	ECE	BMIE	RG	67,200.00	Nasional	Fundamental Research Grant Scheme
09H83	MOHD FAIRUS BIN MOHD YUSOFF	COMM	ARFMRG	RG	50,000.00	Universiti	Tier 1
05H57	MOHD FUA'AD BIN RAHMAT	CMED	PROTOM-i	RG	89,500.00	Universiti	Tier 1
4F599	MOHD HAFIZI BIN AHMAD	POWER	COE	IVAT	116,200.00	Nasional	Fundamental Research Grant Scheme
4F733	MOHD HAIZAL BIN JAMALUDDIN	COMM	COE	WCC	99,200.00	Nasional	Fundamental Research Grant Scheme
4F317	MOHD HANIFF BIN IBRAHIM	COMM	LCRG	RG	102,000.00	Nasional	Fundamental Research Grant Scheme
4L126	MOHD JUNAIDI BIN ABDUL AZIZ	POWER	PEDG	RG	127,000.00	Nasional	Exploratory Research Grant Scheme
4L640	MOHD RIDZUAN BIN AHMAD	CMED	MNSE	RG	233,000.00	Nasional	Prototype Development Research Grant Scheme
02G16	MOHD RODHI BIN SAHID	POWER	PEDG	RG	90,000.00	Universiti	Flagship-Research Group
4F439	MOHD WAZIR BIN MUSTAFA	POWER	PERG	RG	88,000.00	Nasional	Fundamental Research Grant Scheme
4F486	MOKHTAR HARUN	COMM	ARG	RG	60,000.00	Nasional	Fundamental Research Grant Scheme
01K79	MONA RIZA BINTI MOHD ESA	POWER	COE	IVAT	20,000.00	Universiti	Potential Academic Staff
4L168	MUHAMMAD ARIF BIN ABDUL RAHIM	ECE	STAR	RG	50,000.00	Industri	Demad-Driven Innovation
02K62	MUHAMMAD ARIFF BIN BAHARUDIN	COMM	ATTRG	RG	20,000.00	Universiti	Potential Academic Staff
4B176	MUHAMMAD NADZIR BIN MARSONO	ECE	VeCAD	RG	692,657.00	Industri	Others
4J211	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	119,910.00	Nasional	HICOE Research Grant
01K71	MUHAMMAD YUSOF BIN MOHD NOOR	COMM	LCRG	RG	20,000.00	Universiti	Potential Academic Staff
4L197	MUSA BIN MOHD MOKJI	ECE	DSIP	RG	25,000.00	Industri	Demad-Driven Innovation
4F407	NADIATULHUDA BINTI ZULKIFLI	CMED	LCRG	RG	79,700.00	Nasional	Fundamental Research Grant Scheme
11H42	NASARUDIN BIN AHMAD	CMED	PROTOM-i	RG	50,000.00	Universiti	Tier 1

4F799	NAZIHA BINTI AHMAD AZLI	POWER	PEDG	RG	102,700.00	Nasional	Fundamental Research Grant Scheme
11H60	NIK NOORDINI BT NIK ABD MALIK	COMM	ATTRG	RG	49,000.00	Universiti	Tier 1
4C014	NIK RUMZI BIN NIK IDRIS	POWER	PEDG	RG	50,000.00	Industri	Contract
4F277	NOOR ASMAWATI BINTI SAMSURI	COMM	ARFMRG	RG	99,000.00	Nasional	Fundamental Research Grant Scheme
10H04	NOOR ASNIZA BINTI MURAD	COMM	ARFMRG	RG	48,000.00	Universiti	Tier 1
4F672	NOOR AZLINDA BINTI AHMAD	POWER	COE	IVAT	68,000.00	Nasional	Fundamental Research Grant Scheme
12J93	NOR AINI BINTI ZAKARIA	ECE	BMIE	RG	20,000.00	Universiti	Tier 2
4F515	NOR ASIAH BINTI MUHAMAD	POWER	COE	IVAT	130,000.00	Nasional	Fundamental Research Grant Scheme
4F820	NOR HAFIZAH BINTI NGAIKIN	COMM	LCRG	RG	81,500.00	Nasional	Fundamental Research Grant Scheme
05H41	NOR HISHAM BIN KHAMIS	COMM	STAR	RG	90,000.00	Universiti	Tier 1
12J63	NORHAFIZAH BT RAMLI	ECE	BMIE	RG	20,000.00	Universiti	Tier 2
4F425	NORHALIZA BINTI HAJI ABD WAHAB	CMED	ACRG	RG	106,400.00	Nasional	Fundamental Research Grant Scheme
4J212	NORHUDAH BINTI SEMAN	COMM	COE	WCC	119,910.00	Nasional	HICOE Research Grant
12J06	NORLAILI BINTI MAT SAFRI	ECE	BMIE	RG	20,000.00	Universiti	Tier 2
11J03	NORLINA BINTI PARAMAN	ECE	VeCAD	RG	20,000.00	Universiti	Encouragement Grant
4F794	NORZANAH BINTI ROSMIN	POWER	COE	CEES	108,200.00	Nasional	Fundamental Research Grant Scheme
02K48	NURUL ADILLA BT. MOHDSUBHA	CMED	ACRG	RG	20,000.00	Universiti	Potential Academic Staff
11J12	NURUL EZAILA BINTI ALIAS	ECE	CONE	RG	20,000.00	Universiti	Encouragement Grant
4F641	NURUL MU'AZZAH BINTI ABDUL LATIFF	COMM	ATTRG	RG	49,000.00	Nasional	Fundamental Research Grant Scheme
02K47	NURZAL EFFIYANA BINTI GHAZALI	COMM	ATTRG	RG	20,000.00	Universiti	Potential Academic Staff
4F870	PUSPA INAYAT BT. KHALID	ECE	BMIE	RG	60,500.00	Nasional	Fundamental Research Grant Scheme
4F485	RASHIDAH@SITI SAEDAH BINTI ARSAT	COMM	ARG	RG	112,000.00	Nasional	Fundamental Research Grant Scheme
4F866	RASYIDAH BINTI MOHAMAD IDRIS	POWER	PERG	RG	64,000.00	Nasional	Fundamental Research Grant Scheme
4F477	RAZALI BIN ISMAIL	ECE	CONE	RG	123,800.00	Nasional	Fundamental Research Grant Scheme
4S066	RAZALI BIN NGAH	COMM	COE	WCC	265,700.00	Nasional	Sciencefund
4C023	ROZEHA BT. A. RASHID	COMM	ATTRG	RG	65,000.00	Industri	Contract
4S094	RUBITA BINTI SUDIRMAN	ECE	BMIE	RG	166,600.00	Nasional	Sciencefund

10H07	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	49,500.00	Universiti	Tier 1
07H08	SAIFULNIZAM BIN ABD. KHALID	POWER	PERG	RG	80,688.79	Universiti	Tier 1
11H31	SALINDA BINTI BUYAMIN	CMED	ACRG	RG	50,000.00	Universiti	Tier 1
15H85	SALLEHUDDIN BIN IBRAHIM	CMED	PROTOM-i	RG	40,000.00	Universiti	Tier 1
12J92	SAMURA BIN ALI	COMM	ATTRG	RG	20,000.00	Universiti	Tier 2
10J97	SAYEDEHSAN ALAVI GHAFEROKHI	COMM	ATTRG	RG	20,000.00	Universiti	Encouragement Grant
4S087	SEVIA MAHDALIZA BT. IDRUS SUTAN NAMEH	COMM	LCRG	RG	139,500.00	Nasional	Sciencefund
09H82	SHAFISHUHAZA SAHLAN	CMED	PROTOM-i	RG	34,000.00	Universiti	Tier 1
4F638	SHAHARIN FADZLI BIN ABD RAHMAN	ECE	MNSE	RG	103,200.00	Nasional	Fundamental Research Grant Scheme
12J52	SHAH DAN BIN SUDIN	CMED	ACRG	RG	20,000.00	Universiti	Tier 2
02G11	SHAH RIN BIN MD AYOB	POWER	PEDG	RG	90,000.00	Universiti	Flagship-Research Group
4S093	SHAIKH NASIR @ NASIR BIN SHAIKH HUSIN	ECE	VeCAD	RG	150,000.00	Nasional	Sciencefund
4L632	SHARIFAH HAFIZAH BINTI SYED ARIFFIN	COMM	ATTRG	RG	85,000.00	Nasional	Prototype Development Research Grant Scheme
4F463	SHARIFAH KAMILAH BT SYED YUSOF	COMM	ATTRG	RG	119,200.00	Nasional	Fundamental Research Grant Scheme
4B151	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	362,360.00	Industri	Others
11J65	SOPHAN WAHYUDI BIN NAWAWI	CMED	ACRG	RG	20,000.00	Universiti	Tier 2
4F269	SUHAILA BINTI ISAAK	ECE	CONE	RG	67,000.00	Nasional	Fundamental Research Grant Scheme
4F482	SUHANA BINTI MOHAMED SULTAN	ECE	CONE	RG	114,000.00	Nasional	Fundamental Research Grant Scheme
4F596	TAN CHEE WEI	POWER	PEDG	RG	91,000.00	Nasional	Fundamental Research Grant Scheme
4S105	THAREK BIN ABD RAHMAN	COMM	COE	WCC	242,500.00	Nasional	Sciencefund
4F461	USMAN ULLAH SHEIKH	ECE	DSIP	RG	49,200.00	Nasional	Fundamental Research Grant Scheme
4F333	YAHAYA BIN MD SAM	CMED	ACRG	RG	83,000.00	Nasional	Fundamental Research Grant Scheme
4F398	YANUAR ZULARDIANSYAH ARIEF	POWER	COE	IVAT	92,000.00	Nasional	Fundamental Research Grant Scheme
4B133	YEONG CHE FAI	CMED	COE	CAIRO	497,800.00	Industri	Others
15H30	YOU KOK YEOW	COMM	ARG	RG	40,000.00	Universiti	Tier 1
12J10	YUSMEERAZ BINTI YUSOF	ECE	CONE	RG	20,000.00	Universiti	Tier 2

<b>11H10</b>	YUSRI B MD. YUNOS	CMED	PROTOM-i	RG	50,000.00	Universiti	Tier 1
<b>4F620</b>	ZAHARAH BINTI JOHARI	ECE	CONE	RG	81,000.00	Nasional	Fundamental Research Grant Scheme
<b>4S103</b>	ZAHARUDDIN B MOHAMED	CMED	ACRG	RG	100,840.00	Nasional	Sciencefund
<b>12H72</b>	ZAID BIN OMAR	ECE	DSIP	RG	50,000.00	Universiti	Tier 1
<b>4S119</b>	ZAINAL BIN SALAM	POWER	COE	CEES	168,000.00	Nasional	Sciencefund
<b>4L666</b>	ZOLKAFLE BIN BUNTAT	POWER	COE	IVAT	175,000.00	Nasional	Prototype Development Research Grant Scheme
<b>4C086</b>	ZULFAKAR BIN ASPAR	ECE	VeCAD	RG	50,000.00	Industri	Demad-Driven Innovation
<b>4F613</b>	ZULKARNAIN BIN AHMAD NOORDEN	POWER	COE	IVAT	114,000.00	Nasional	Fundamental Research Grant Scheme
<b>10H61</b>	ZULKURNAIN B. ABD. MALEK	POWER	COE	IVAT	50,000.00	Universiti	Tier 1
<b>12J98</b>	ZURAIMY BIN ADZIS	POWER	COE	IVAT	20,000.00	Universiti	Tier 2

Vot	Project Leader	Department	RG	COE	Research Title	Sponsor Category (University, National, Private etc.)	Grant Name (ScienceFund/FRGS etc.)	Amount Received for the Year
02K47	NURZAL EFFIYANA BINTI GHAZALI	COMM	ATTRG	RG	DYNAMIC HANDOVER DECISION IN HETEROGENEOUS NETWORK USING ANALYTIC HIERARCHY PROCESS	UNIVERSITY	POTENTIAL ACADEMIC STAFF	20,000.00
02K48	NURUL ADILLA BT. MOHD SUBHA	CMED	ACRG	RG	External Consensus Protocol for Heterogeneous Networked Multi-agent System (NMAS) with Communication Delay	UNIVERSITY	POTENTIAL ACADEMIC STAFF	20,000.00
02K57	FARID BIN ZUBIR	COMM	ARFMRG	RG	DIRECT INTEGRATION OF POWER AMPLIFIER AND ANTENNA	UNIVERSITY	POTENTIAL ACADEMIC STAFF	20,000.00
02K62	MUHAMMAD ARIFF BIN BAHARUDIN	COMM	ATTRG	RG	ADAPTIVE HANDOVER TRIGGERING VIA VELOCITY AND TRAVEL DISTANCE ESTIMATIONS ENHANCEMENTS	UNIVERSITY	POTENTIAL ACADEMIC STAFF	20,000.00
03E05	THAREK BIN ABD RAHMAN	COMM	COE	WCC	Coexistence Model for Compatibility Between Mobile 5th Generation and other Wireless Communication Services	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	65,000.00
03E08	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM- i	RG	A STUDY ON WIRELESS METAL WALLED VESSEL ULTRASONIC SYSTEM IN PROCESS TOMOGRAPHY	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	66,600.00
03E11	MOHD RIDZUAN BIN AHMAD	CMED	MNSE	RG	Fabrication of Microfluidic Systems in Nano- Textured Quartz/PDMS for Controlling Cancer Cell Attachment and Proliferation.	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	65,000.00
03E20	MOHAMAD KAMAL B. A. RAHIM	COMM	ARFMRG	RG	Diagnosis and Recovery of Faulty Sensors in GSM Array Antenna Using Compressed Sensing and Heuristic Computation Techniques	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	65,000.00
03G33	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	Design of Unequally Microstrip Linear Array Antenna for 5G Applications	UNIVERSITY	FLAGSHIP	50,000.00
03G41	NORHUDAH BINTI SEMAN	COMM	COE	WCC	The Characterization and Modeling of Human Body Simulating Liquid for Electromagnetic Field Radiation Investigation	UNIVERSITY	FLAGSHIP	34,400.00
03G47	MOHD RIDZUAN BIN AHMAD	CMED	MNSE	RG	IMPEDANCE-BASED MICROFLUIDIC SYSTEM FOR POINT-OF-CARE DIAGNOSIS.	UNIVERSITY	FLAGSHIP	26,600.00
03G59	MOHD HAIZAL BIN JAMALUDDIN	COMM	COE	WCC	Wideband Dielectric Resonator Antenna for 5G Application	UNIVERSITY	FLAGSHIP	30,000.00
07H04	SHARIFAH KAMILAH BT SYED YUSOF	COMM	ATTRG	RG	MODELING OF DIFFUSION BASED MOLECULAR NANO COMMUNICATION SYSTEM	UNIVERSITY	TIER 1	36,100.00

07H50	JAFRI BIN DIN	COMM	COE	WCC	MORPHOLOGICAL STRUCTURES OF EQUATORIAL PRECIPITATION AND THEIR IMPACT ON ADVANCED SATELLITE COMMUNICATIONS SYSTEMS	UNIVERSITY	TIER 1	19,500.00
08H31	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	DUAL MODALITY TOMOGRAPHY USING UTT/ERT FOR IMAGING TWO PHASE LIQUID AND GAS	UNIVERSITY	TIER 1	45,200.00
09H61	RAZALI BIN NGAH	COMM	COE	WCC	Application of Artificial Neural Network to Switched Beam Smart Antenna	UNIVERSITY	TIER 1	12,000.00
09H74	MOHAMAD SHUKRI BIN ZAINAL ABIDIN	CMED	ACRG	RG	A STUDY ON INFILTRATION PHENOMENON IN FIBROUS-SOIL IRRIGATION SYSTEM FOR WATER SAVING AGRICULTURE	UNIVERSITY	TIER 1	11,200.00
09H75	ZAID BIN OMAR	ECE	DSIP	RG	ALGORITHMS FOR SIGN LANGUAGE RECOGNITION ON A MOBILE PLATFORM	UNIVERSITY	TIER 1	14,300.00
09H77	ABU SAHMAH BIN MOHD SUPA'AT	COMM	LCRG	RG	Point to Multi-point indoor broadcasting utilizing visible free space optic integrated in powerline communication	UNIVERSITY	TIER 1	7,500.00
09H78	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	Development of MIMO Antenna for high speed 5G Mobile Communication system	UNIVERSITY	TIER 1	14,800.00
10H04	NOOR ASNIZA BINTI MURAD	COMM	ARFMRG	RG	EXTERNAL OMNIDIRECTIONAL ANTENNA TO ENHANCE 3G/GSM SIGNAL RECEPTION FOR IN VEHICLE ADVERTISING DEVICES	UNIVERSITY	TIER 1	21,600.00
10H07	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	ELECTRICAL RESISTANCE TOMOGRAPHY (ERT)	UNIVERSITY	TIER 1	21,000.00
10H16	HERLINA BINTI ABDUL RAHIM	CMED	PROTOM-i	RG	A Novel Transformer Fault Diagnosis Method Using Dielectric Response Techniques	UNIVERSITY	TIER 1	21,000.00
10H24	THAREK BIN ABD RAHMAN	COMM	COE	WCC	Wireless Industry Emission(WIE): Mobile Base Station EMF Monitoring and Exposure Analysis	UNIVERSITY	TIER 1	13,320.00
10H38	ASRUL IZAM BIN AZMI	COMM	LCRG	RG	OPTIMIZED HEAT SINK DESIGN FOR LED STREET LANTERN APPLICATION	UNIVERSITY	TIER 1	16,500.00
10H40	MOHAMED SULTAN BIN MOHAMED ALI	CMED	PROTOM-i	RG	DEVELOPMENT OF TUNABLE 3D SPIRAL-COIL INDUCTOR BY LOCALIZED BIMORPH MICROACTUATION	UNIVERSITY	TIER 1	26,000.00
10H58	ABDULLAH ASUHAIMI BIN MOHD ZIN	POWER	PERG	RG	Distance Protection for Circuits with cable Section and overhead lines.	UNIVERSITY	TIER 1	8,100.00
10H62	MOHD WAZIR BIN MUSTAFA	POWER	PERG	RG	ENHANCING POWER SYSTEM OSCILLATION STABILITY WITH FACTS DEVICES USING FUZZY LOGIC AND BEES ALGORITHM	UNIVERSITY	TIER 1	17,000.00
11H10	YUSRI B MD. YUNOS	CMED	PROTOM-i	RG	FPGA(FIELD PROGRAMMABLE GATE ARRAY) IMPLEMENTATION IN OPTICAL TOMOGRAPHY SYSTEM	UNIVERSITY	TIER 1	24,000.00
11H31	SALINDA BINTI BUYAMIN	CMED	ACRG	RG	ANALYSIS OF ENVIRONMENT FACTORS FOR MUSHROOM CULTIVATION USING ONLINE MANAGEMENT SYSTEM	UNIVERSITY	TIER 1	25,900.00
11H44	SUHAILA BINTI ISAAK	ECE	CONE	RG	OPTIMIZED OPTICAL SENSOR AND SPECTROSCOPY MEASUREMENT ON SOIL NUTRIENTS LEVEL	UNIVERSITY	TIER 1	24,000.00

11H49	HERMAN BIN WAHID	CMED	PROTOM-i	RG	OPTICAL SPECTROSCOPY BASED SENSING CONFIGURATION FOR A LOW COST ESTIMATOR OF AIR POLLUTANT GASES	UNIVERSITY	TIER 1	25,200.00
11J65	SOPHAN WAHYUDI BIN NAWAWI	CMED	ACRG	RG	A NOVEL METHODOLOGY TO MEASURE OUTDOOR QUADCOPTER SYSTEM LATENCY USING MOTION ANALYSIS SENSOR	UNIVERSITY	TIER 2	20,000.00
12H20	HERLINA BINTI ABDUL RAHIM	CMED	PROTOM-i	RG	Blood Glucose Monitoring and Classification Using Near Infrared Spectroscopy.	UNIVERSITY	TIER 1	13,600.00
12H72	ZAID BIN OMAR	ECE	DSIP	RG	A NOVEL MEDICAL IMAGE FUSION ALGORITHM FOR CARDIAC IMAGE-GUIDED SURGERY	UNIVERSITY	TIER 1	29,000.00
12J06	NORLAILI BINTI MAT SAFRI	ECE	BMIE	RG	Cognition of young children during basic geometric drawing and its association with graphic rule	UNIVERSITY	TIER 2	17,000.00
12J09	CAMALLIL BIN OMAR	ECE	BMIE	RG	Profiling of Effective Study based on Mental Task Electroencephalography towards Sound Stimulation Environment	UNIVERSITY	TIER 2	20,000.00
12J10	YUSMEERAZ BINTI YUSOF	ECE	CONE	RG	BIOSENSING BEHAVIORS OF MULTILAYER GRAPHENE WITH CONTROLLED DEFECT	UNIVERSITY	TIER 2	20,000.00
12J50	AHMAD SHARMI BIN ABDULLAH	COMM	LCRG	RG	Investigation of Supermode Interference in Multicore Optical Fiber For Enhanced Multi-Parameter Sensing	UNIVERSITY	TIER 2	20,000.00
12J52	SHAH DAN BIN SUDIN	CMED	ACRG	RG	AUTONOMOUS UAV COLLISION AVOIDANCE BASED ON POTENTIAL FIELD METHOD (PFM) USING OMNIDIRECTIONAL RANGE SENSOR	UNIVERSITY	TIER 2	20,000.00
12J78	ISMAIL BIN ARIFFIN	ECE	BMIE	RG	Automated Platelet Counting Device using Cloud-based Technology and Mobile Application	UNIVERSITY	TIER 2	17,850.00
12J82	AHMAD SHAHIDAN BIN ABDULLAH	COMM	ATTRG	RG	JOINT CHANNEL-NETWORK CODING FOR MULTIMEDIA DATA IN RESOURCE CONSTRAINED WIRELESS NETWORKS	UNIVERSITY	TIER 2	20,000.00
12J92	SAMURA BIN ALI	COMM	ATTRG	RG	NETWORK CODING USING PROBABLISTIC APPROACH IN VANET	UNIVERSITY	TIER 2	20,000.00
13H08	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	MICROWAVE GRID ARRAY ANTENNA FOR MIMO 5G MOBILE COMMUNICATION NETWORKS	UNIVERSITY	TIER 1	24,400.00
13H12	LAU KWAN YIEW	POWER	COE	IVAT	EFFECT OF FILLER CALCINATION ON THE BREAKDOWN PROPERTIES OF POLYMER COMPOSITES	UNIVERSITY	TIER 1	34,400.00
13H14	ZOLKAFLE BIN BUNTAT	POWER	COE	IVAT	EFFECT OF COLD PLASMA TREATMENT ON SEED GERMINATION, GROWTH AND PRODUCTION YIELD OF VEGETABLE PLANTS	UNIVERSITY	TIER 1	34,000.00
13H24	SHARIFAH HAFIZAH BINTI SYED ARIFFIN	COMM	ATTRG	RG	CONTEXT-AWARE SYSTEM FOR SUNGAI LAYANG RESERVOIR	UNIVERSITY	TIER 1	28,300.00
13H25	RUBITA BINTI SUDIRMAN	ECE	BMIE	RG	Stress Management by Sound Stimulation for Memorizing and Studying Purposes	UNIVERSITY	TIER 1	25,500.00
13H26	MOHD HAIZAL BIN JAMALUDDIN	COMM	COE	WCC	DEVELOPMENT OF DIELECTRIC RESONATOR ANTENNA ARRAY FOR 5G APPLICATIONS	UNIVERSITY	TIER 1	44,000.00



13H57	FATIMAH SHAM BT. ISMAIL	CMED	COE	CAIRO	DEVELOPMENT OF INTELLIGENT FUZZY SEGMENTATION ALGORITHM FOR OPTIMAL PINEAPPLE HARVESTING	UNIVERSITY	TIER 1	28,000.00
13H70	NORHALIZA BINTI HAJI ABD WAHAB	CMED	ACRG	RG	MODELLING AND OPTIMIZATION OF MEMBRANE BIOREACTOR SYSTEM USING RESPONSE SURFACE METHODOLOGY FOR INDUSTRIAL EFFLUENT PLANT.	UNIVERSITY	TIER 1	24,000.00
13H78	HAZLINA BINTI SELAMAT	CMED	COE	CAIRO	Optimal Eco-Driving Control for Internal Combustion Engine (ICE) Vehicles	UNIVERSITY	TIER 1	34,400.00
13H86	MOHAMAD HAFIS IZAN BIN ISHAK	CMED	PROTOM-i	RG	REAL TIME MOBILE GPS FOR A BUS TRACKING SYSTEM	UNIVERSITY	TIER 1	34,000.00
13H87	ABU SAHMAH BIN MOHD SUPA'AT	COMM	LCRG	RG	TEMPERATURE AND STRAIN SENSING UTILIZING FLUORESCENT IN ERBIUM-DOPED PHOTONIC CRYSTAL FIBER	UNIVERSITY	TIER 1	40,000.00
13H96	NOOR AZLINDA BINTI AHMAD	POWER	COE	IVAT	LIGHTNING IMPACT TO COMMUNICATION NETWORK IN GHZ REGION.	UNIVERSITY	TIER 1	26,000.00
13H98	MOHD HAFIZI BIN AHMAD	POWER	COE	IVAT	ENHANCEMENT OF DIELECTRIC PERFORMANCE OF LDPE NANOCOMPOSITES AS HIGH VOLTAGE INSULATING MATERIAL USING NON-THERMAL ATMOSPHERIC PLASMA	UNIVERSITY	TIER 1	40,000.00
14H02	HASIMAH BTE ABDUL RAHMAN	POWER	COE	CEES	OPTIMAL LOCATION OF ENERGY STORAGE SYSTEM IN A DISTRIBUTED RENEWABLE ENERGY GENERATION USING META-HEURISTIC TECHNIQUES	UNIVERSITY	TIER 1	23,331.00
14H27	MICHAEL TAN LOONG PENG	ECE	CONE	RG	DEVICE MODELING OF ULTRATHIN MONOLAYER TWO-DIMENSIONAL TRANSITION METAL DICHALCOGENIDE WITH BENCHMARKING AGAINST GRAPHENE FIELD-EFFECT TRANSISTORS	UNIVERSITY	TIER 1	31,500.00
14H31	MOHAMED SULTAN BIN MOHAMED ALI	CMED	PROTOM-i	RG	Development of Monolithic Micro-Positioning Stage Driven by Niti Shape-Memory-Alloy Microactuator	UNIVERSITY	TIER 1	28,000.00
14H35	ROZEHA BT. A. RASHID	COMM	ATTRG	RG	INTERNET-OF-THINGS (IOT) SOLUTION FOR REAL-TIME AUTONOMOUS SMART GUARD TOURING SYSTEM	UNIVERSITY	TIER 1	49,700.00
14H79	HERLINA BINTI ABDUL RAHIM	CMED	PROTOM-i	RG	EARLY SCREENING OF LEUKEMIA USING NIR SPECTROSCOPY VIA PLSR MODEL	UNIVERSITY	TIER 1	31,100.00
14H80	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	WIRELESS METAL WALLED VESSEL ULTRASONIC SYSTEM IN PROCESS TOMOGRAPHY	UNIVERSITY	TIER 1	23,500.00
15H02	ZULKARNAIN BIN AHMAD NOORDEN	POWER	COE	IVAT	Pembangunan Garis Panduan Mudah Penyelenggaraan Sistem Solar bagi Masyarakat Orang Asli Kluang	UNIVERSITY	INSTITUT INOVASI STRATEGIK JOHOR	35,800.00
15H14	MOHAMAD HAFIS IZAN BIN ISHAK	CMED	PROTOM-i	RG	TEKNOLOGI INOVASI UNTUK MEMETIK BUAH MATA KUCING YANG SELAMAT DAN MUDAH	UNIVERSITY	INSTITUT INOVASI STRATEGIK JOHOR	30,900.00

15H29	ANITA BINTI AHMAD	CMED	PROTOM-i	RG	NATURAL COMPLEXITY MEASUREMENT IN TIME SERIES USING PERMUTATION ENTROPY APPROACH IN PERSISTENT ATRIAL FIBRILLATION STUDIES	UNIVERSITY	TIER 1	25,500.00
15H30	YOU KOK YEOW	COMM	ARG	RG	MONITORING DEGRADATION RATE OF OIL PALM RESIDUES IN FERTILIZER INDUSTRY PROCESSES USING MICROWAVE TECHNIQUES	UNIVERSITY	TIER 1	25,300.00
15H39	MOHD ARIFFANAN BIN MOHD BASRI	CMED	ACRG	RG	INTELLIGENT PID CONTROL DESIGN FOR AUTONOMOUS QUADROTOR HELICOPTER SUBJECTED TO WIND-GUST DISTURBANCE	UNIVERSITY	TIER 1	30,000.00
15H65	ABDULLAH ASUHAIMI BIN MOHD ZIN	POWER	PERG	RG	An Advanced Current Control Compensation Scheme to Improve the Microgrid Power Quality without Using Dedicated Compensation Devices	UNIVERSITY	TIER 1	40,000.00
15H88	LEOW PEI LING	CMED	PROTOM-i	RG	SUSTAINABLE TEMPERATURE CONTROL FOR BROILER HOUSE IN MALAYSIA	UNIVERSITY	TIER 1	20,000.00
15H89	JASRUL JAMANI BIN JAMIAN	POWER	PERG	RG	Passive Filter Size Optimization for Reducing the Harmonic Distortion Due To Electrical Vehicle Charging Station	UNIVERSITY	TIER 1	34,500.00
16H03	MOHD WAZIR BIN MUSTAFA	POWER	PERG	RG	FLEXIBILITY CONSTRAINED UNITCOMMITMENT PROBLEM FOR ENHANCED OPERATION OF LOW CARBON POWER SYSTEMS BY AN ENHANCED PRIORITY LIST BASED PARTICLE SWARM OPTIMIZATION TECHNIQUE	UNIVERSITY	TIER 1	30,000.00
4B133	YEONG CHE FAI	CMED	COE	CAIRO	Robotic Assessment of Motor Recovery after Stroke	PRIVATE	OTHERS	54,000.00
4B151	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	Near Field Communication Based Wireless Charging and Radio Frequency Energy Harvesting for Smart Phone Application	PRIVATE	OTHERS	38,690.00
4B176	MUHAMMAD NADZIR BIN MARSONO	ECE	VeCAD	RG	Fast SoC Prototyping Using Low Latency Hybrid Virtual Platform	PRIVATE	OTHERS	50,500.00
4B183	AHMAD ZURI B SHA'AMERI	ECE	DSIP	RG	Enhancement of signal parameters estimation for RF power sensors in the presence of 1/f noise	PRIVATE	OTHERS	51,150.00
00M94	AHMAD ZURI B SHA'AMERI	ECE	DSIP	RG	Differences in Problem Solving Ability Among Undergraduate Students Based on Brain Electrical Activities	UNIVERSITY	MATCHING GRANT	29,400.00
02E55	MOHAMED AFENDI BIN MOHAMED PIAH	POWER	COE	IVAT	Hybrid Wavelet Regrouping Particle Swarm Optimization Neural Networks for Characterization of Partial Discharge Acoustic Signals	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	1,320.36
02E70	ABU BAKAR BIN MOHAMMAD	COMM	LCRG	RG	Hybrid WDM/Multi-beam Free Space Optics in Tropical Weather.	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	65,000.00
02E87	ZOLKAFLE BIN BUNTAT	POWER	COE	IVAT	SENSOR MODELLING BASED ON NANO MATERIALS (GRAPHENE & CNT)	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	83,000.00
02E95	THAREK BIN ABD RAHMAN	COMM	COE	WCC	MODULATION TECHNIQUES OF MILIMETER WAVE FOR 5G WIRELESS	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	65,000.00

<b>4B244</b>	EILEEN SU LEE MING	ECE	BMIE	RG	Mini Heartcatcher - A smartphone application with native intelligent arrhythmia classifier	PRIVATE	OTHERS	106,622.00
<b>4C062</b>	JAFRI BIN DIN	COMM	COE	WCC	Measurement and Assessment of Second Order Statistics of Ka band SatCom Systems in Tropical Regions	INTERNATIONAL	CONTRACT	14,732.52
<b>4C100</b>	LIM CHENG SIONG	CMED	ACRG	RG	DEVELOPMENT OF HYDROCARBON GAS DETECTOR	PRIVATE	CONTRACT	5,000.00
<b>4F733</b>	MOHD HAIZAL BIN JAMALUDDIN	COMM	COE	WCC	Adaptive Beamforming Dielectric Resonator Antenna Algorithm with Higher Spatial Resolution of the Electromagnetic Energy	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	(1,000.00)
<b>4F817</b>	MOHD FUA'AD BIN RAHMAT	CMED	PROTOM-i	RG	Adaptive Sliding Mode Control with Disturbance Observer for an Electro-Hydraulic Actuator System	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	51,500.00
<b>4F818</b>	LEOW CHEE YEN	COMM	COE	WCC	Study of MIMO Cooperative Non-Orthogonal Multiple Access for 5G	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	49,100.00
<b>4F820</b>	NOR HAFIZAH BINTI NGAIKIN	COMM	LCRG	RG	Analysis of Fiber Fabry-Perot Displacement Sensor Utilizing UV Curable Polymer Micro Lens	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	56,100.00
<b>4F821</b>	NOR HISHAM BIN KHAMIS	COMM	STAR	RG	The Characterization of Frequency Distribution of Swiflet Sound	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	86,000.00
<b>4F828</b>	ZULKURNAIN B. ABD. MALEK	POWER	COE	IVAT	A NEW CIRCUIT-BASED TRANSIENT MODEL FOR GROUNDING ELECTRODES	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	38,600.00
<b>4F866</b>	RASYIDAH BINTI MOHAMAD IDRIS	POWER	PERG	RG	PARTIAL DISCHARGE MAPPING DIAGNOSTIC CABLE 11kV	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	64,000.00
<b>4F870</b>	PUSPA INAYAT BT.KHALID	ECE	BMIE	RG	DETERMINATION OF THE ONSET OF MUSCLE FATIGUE USING JOINT ANALYSIS OF ELECTROMYOGRAPHY SPECTRUM AND AMPLITUDE	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	32,500.00
<b>4F883</b>	NOOR ASMAWATI BINTI SAMSURI	COMM	ARFMRG	RG	THROUGH ANALYSIS OF WEARABLE ANTENNA PERFORMANCE AND SAR DUE TO VARIOUS SUBSTRATE MATERIALS FOR FLEXIBLE AND RELIABLE WIRELESS MEDICAL MONITORING APPLICATIONS	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	44,000.00
<b>4F900</b>	EILEEN SU LEE MING	ECE	BMIE	RG	Manual dexterity test for surgical skill using 3D virtual reality module and sensor-based measurement of psychomotor data	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	53,500.00
<b>4F901</b>	SHARUL KAMAL BIN ABDUL RAHMIM	COMM	COE	WCC	Study and Characterize Collobarative Beamforming Networks Using Meta-Heuristic Optimization in Cyber Security	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	58,200.00
<b>4F911</b>	ABDULLAH ASUHAIMI BIN MOHD ZIN	POWER	PERG	RG	CONGESTION MANAGEMENT IN POWER SYSTEM USING FACTS AND DEMAND RESPONSE PROGRAM	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	45,100.00
<b>4H028</b>	NOR HAFIZAH BINTI NGAIKIN	COMM	LCRG	RG	FABRICATION OF HOMECARE BIOSENSOR FOR URIC ACID DETECTION	NATIONAL	TECHNOFUND	14,999.89
<b>4J208</b>	MOHD AFZAN BIN OTHMAN	ECE	BMIE	RG	ECG features extraction for portable cardiac self-stress test	UNIVERSITY	UTM R&D FUND	65,500.00
<b>4J209</b>	THAREK BIN ABD RAHMAN	COMM	COE	WCC	Wideband and Narrowband Channel Measurements and Modelling	NATIONAL	HICOE RESEARCH GRANT	64,190.00

4J210	LEOW CHEE YEN	COMM	COE	WCC	Beamforming and Power Allocation for Wireless Powered Communication	NATIONAL	HICOE RESEARCH GRANT	74,690.00
4J211	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	Development of Phase Array Antenna for 5G Applications	NATIONAL	HICOE RESEARCH GRANT	74,690.00
4J212	NORHUDAH BINTI SEMAN	COMM	COE	WCC	Thermal Effect Investigation of Electromagnetic Field in Wireless Mobile Technologies concerning Allowable Power and Radiation Safety	NATIONAL	HICOE RESEARCH GRANT	74,690.00
4J213	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	FLEXIBLE SMART ANTENNA BEAMFORMING NETWORK FOR 5G MOBILE COMMUNICATION SYSTEM	NATIONAL	HICOE RESEARCH GRANT	74,690.00
4J215	RAZALI BIN NGAH	COMM	COE	WCC	ARTIFICIAL NEURAL NETWORK BASED ANTENNA BEAM SWITCHING ALGORITHM FOR 5G APPLICATION	NATIONAL	HICOE RESEARCH GRANT	45,402.00
4J220	MOHD HAIZAL BIN JAMALUDDIN	COMM	COE	WCC	DIELECTRIC RESONATOR ANTENNA ARRAY FOR 5G APPLICATION	NATIONAL	HICOE RESEARCH GRANT	74,690.00
4J221	JAFRI BIN DIN	COMM	COE	WCC	Electromagnetic Scattering from Rain Drop Size Distribution Measurement for 5G Networks	NATIONAL	HICOE RESEARCH GRANT	74,690.00
4J229	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	DEVELOPMENT OF FLEXIBLE ANTENNA FOR SMART ANTENNA 5G MOBILE COMMUNICATION SYSTEM	UNIVERSITY	UTM R&D FUND	20,000.00
4J255	SALLEHUDDIN BIN IBRAHIM	CMED	PROTOM-i	RG	PROJECT-BASED INTENSIVE ACADEMIC WRITING FOR ENGINEERING STUDENTS	UNIVERSITY	UTM R&D FUND	10,000.00
4L147	ABU SAHMAH BIN MOHD SUPA'AT	COMM	LCRG	RG	BORDER SECURITY SYSTEM ONSHORE COMPLIANCE OPERATIONS	NATIONAL	MYLAB	1,550,000.00
4L178	MOHAMAD SHUKRI BIN ZAINAL ABIDIN	CMED	ACRG	RG	Optimization of High Temperature Pasteurize and Packaging Process for Higher Volume Sup Merah Paste Production	PRIVATE	DEMAND-DRIVEN INNOVATION	41,400.00
4L182	ISMAHANI BINTI ISMAIL	ECE	BMIE	RG	Ingredient Mixing & Process Automation for Keropok Lekor Balls	PRIVATE	DEMAND-DRIVEN INNOVATION	39,150.00
4L184	HAZLINA BINTI SELAMAT	CMED	COE	CAIRO	Development of the Electronic Control Unit (ECU) Module for FuelGainKit (FGK)	NATIONAL	MYLAB	491,833.00
4L197	MUSA BIN MOHD MOKJI	ECE	DSIP	RG	Environment Control Automation for Mushroom Cultivation	PRIVATE	DEMAND-DRIVEN INNOVATION	22,500.00
4L662	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	Development of Flexible Antenna for Smart Antenna 5G Mobile Communication system	NATIONAL	PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME	73,000.00
4L665	THAREK BIN ABD RAHMAN	COMM	COE	WCC	COMPACT MIMO ANTENNA FOR 4G LTE-WLAN MOBILE HOTSPOT	NATIONAL	PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME	83,000.00
4L666	ZOLKAFLE BIN BUNTAT	POWER	COE	IVAT	Prototype Development of an Automated Ozone-Based Machine for Mushroom Substrate Sterilization	NATIONAL	PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME	151,000.00
4S088	MOHAMED SULTAN BIN MOHAMED ALI	CMED	PROTOM-i	RG	DEVELOPMENT OF WIRELESS IMPLANTABLE DRUG-DELIVERY DEVICE BASED ON INTEGRATED OUT-OF-PLANE SHAPEMEMORY- ALLOY MICROACTUATOR	NATIONAL	SCIENCEFUND	74,600.00

<b>4S116</b>	MOHAMED KHALIL BIN HJ MOHD HANI	ECE	VeCAD	RG	FPGA System-on-Chip Implementation of Advanced Face Recognition Technology for Biometric Verification and Identification at Airports	NATIONAL	SCIENCEFUND	79,300.00
<b>4S119</b>	ZAINAL BIN SALAM	POWER	COE	CEES	DESIGN, DEVELOPMENT AND CONSTRUCTION OF POWER CONVERTER FOR PHOTOVOLTAIC-GRID CHARGING SYSTEM FOR ELECTRIC VEHICLE	NATIONAL	SCIENCEFUND	68,500.00
<b>00M17</b>	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	initial investigation of ultrasonic technique for tomographic imaging of underwater concrete pillars	UNIVERSITY	MATCHING GRANT	-
<b>00M18</b>	MOHD FUA'AD BIN RAHMAT	CMED	PROTOM-i	RG	An Online Neuro Model System Identification for Nonlinear and Complex Dynamic System.	UNIVERSITY	MATCHING GRANT	-
<b>00M22</b>	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	Synthesization on nanonets devices using dye-sensitized solar cell technique for solar cloth green energy	UNIVERSITY	MATCHING GRANT	-
<b>00M23</b>	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	RF Radiation Behaviour of Rare Gas in Plasma State	UNIVERSITY	MATCHING GRANT	-
<b>00M29</b>	MOHAMAD KAMAL B. A. RAHIM	COMM	ARFMRG	RG	New Wireless MIMO Communication Channel Capacity Model Based On Physical Characterization For Multiple Altitude Diversity Configuration In Indoor Environment	UNIVERSITY	MATCHING GRANT	-
<b>00M33</b>	AHMAD ZURI B SHA'AMERI	ECE	DSIP	RG	A NEW LEAKAGE CURRENT ANALYSIS TECHNIQUE FOR INSULATING MATERIALS SURFACE CONDITION	UNIVERSITY	MATCHING GRANT	-
<b>00M38</b>	ZAINAL BIN SALAM	POWER	COE	CEES	INVESTIGATION ON THE IMPACT OF CLOUD-INDUCED TRANSIENTS ON GRID-CONNECTED PHOTOVOLTAIC SYSTEMS (GCPV) ON THE MALAYSIAN DISTRIBUTION GRID	UNIVERSITY	MATCHING GRANT	-
<b>00M39</b>	MOHAMMAD YUSRI BIN HASSAN	POWER	COE	CEES	A New Algorithm of Load Shedding Strategy Based on Adaptive Scheme for Islanded Microgrid System.	UNIVERSITY	MATCHING GRANT	-
<b>00M52</b>	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	Non-Invasive Evaluation of Steel Bar in Underwater Reinforced Concrete Structure using Magnetic Induction Tomography	UNIVERSITY	MATCHING GRANT	-
<b>00M53</b>	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	Advance Cross-Correlation implementation on Velocity Measurement of the Liquid-Solid Particle Flow in a Vertical Pipeline using Portable Segmented Capacitance Sensor	UNIVERSITY	MATCHING GRANT	-
<b>00M64</b>	MOHD FUA'AD BIN RAHMAT	CMED	PROTOM-i	RG	Investigation of the Motion and Force Characteristic of a 3-Phase Driven Rotary Electromagnetic Microactuator using FEM Analysis for High Thrust Force and Low Friction Motion	UNIVERSITY	MATCHING GRANT	-
<b>00M69</b>	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	INVESTIGATING THE INFLUENCE OF THE ELECTROMAGNETIC BANDGAP (EBG) ON WEARABLE ANTENNA FOR BODY AREA NETWORK (BAN)	UNIVERSITY	MATCHING GRANT	-

00M75	MUHAMMAD NADZIR BIN MARSONO	ECE	VeCAD	RG	HETEROGENEOUS MULTIPROCESSOR SYSTEM-ON-CHIP PROTOTYPING WITH RUN TIME DYNAMIC APPLICATION MAPPING	UNIVERSITY	MATCHING GRANT	-
00M78	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	5G Wireless Communication System on Antenna and Propagation.	UNIVERSITY	MATCHING GRANT	-
00M81	YEONG CHE FAI	CMED	COE	CAIRO	INTERACTIVE RESTAURANT SERVICE ROBOT	UNIVERSITY	MATCHING GRANT	-
00M83	MOHAMED SULTAN BIN MOHAMED ALI	CMED	PROTOM-i	RG	Patterning of Silicon using Electrical Discharge Machining	UNIVERSITY	MATCHING GRANT	-
01K79	MONA RIZA BINTI MOHD ESA	POWER	COE	IVAT	TIME-FREQUENCY PROFILE OF LIGHTNING EVENTS PRIOR TO THE FIRST RETURN STROKE IN MALAYSIA AND SWEDEN	UNIVERSITY	POTENTIAL ACADEMIC STAFF	-
02E35	SHARIFAH KAMILAH BT SYED YUSOF	COMM	ATTRG	RG	Development of Reliable Opportunistic Mobile Routing (ROMR) Protocol for Cognitive Radio Sensor Network	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	-
02E36	NIK RUMZI BIN NIK IDRIS	POWER	PEDG	RG	Using multi-objective optimization for improving state estimation of induction motor drives at low speed	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	-
02E37	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	Design and Analysis of a Low-Profile 28 GHz Beam Steering Antenna for Future 5G Cellular Application	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	-
02E41	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	Smart Antenna for fifth generation wireless communication	UNIVERSITY	PROFESSIONAL DEVELOPMENT RESEARCH UNIVERSITY	-
02G09	MOHD JUNAIDI BIN ABDUL AZIZ	POWER	PEDG	RG	Battery Management System for e-ATV	UNIVERSITY	FLAGSHIP	-
02G10	MOHAMAD HAFIS IZAN BIN ISHAK	CMED	PROTOM-i	RG	Safety Evaluation of Thermal Wearable Power Harvesting Device	UNIVERSITY	FLAGSHIP	-
02G11	SHAHRIIN BIN MD AYOB	POWER	PEDG	RG	Design and Development of Vehicle System Controller for e-ATV	UNIVERSITY	FLAGSHIP	-
02G12	HERMAN BIN WAHID	CMED	PROTOM-i	RG	Development of a High-Accuracy Signal Conditioning and an Energy Storage System for a Thermo-electric Power Harvester System	UNIVERSITY	FLAGSHIP	-
02G13	ANITA BINTI AHMAD	CMED	PROTOM-i	RG	Fabrication of Wearable Thermo-Electric Power Harvesting Device	UNIVERSITY	FLAGSHIP	-
02G15	NORHALIZA BINTI HAJI ABD WAHAB	CMED	ACRG	RG	MODELING AND SIMULATION OF WEARABLE THERMO-ELECTRIC ENERGY HARVESTING PROCESSES	UNIVERSITY	FLAGSHIP	-
02G16	MOHD RODHI BIN SAHID	POWER	PEDG	RG	LOW-COST CHARGING STATION FOR E-ATV	UNIVERSITY	FLAGSHIP	-
02G46	MOHD RIDZUAN BIN AHMAD	CMED	MNSE	RG	Multi-functional microfluidic device for single cell force adhesion and stiffness measurements for cell conditions differentiation.	UNIVERSITY	FLAGSHIP	-
02K06	MASTURA SHAFINAZ BINTI ZAINAL ABIDIN	ECE	MNSE	RG	Study on Metallic Contacts on Porous Silicon layers	UNIVERSITY	POTENTIAL ACADEMIC STAFF	-

02K15	MARWAN HADRI BIN AZMI	COMM	COE	WCC	Channel prediction for 5G communications	UNIVERSITY	POTENTIAL ACADEMIC STAFF	-
03G11	ZAINAL BIN SALAM	POWER	COE	CEES	DEVELOPMENT OF A PV-BASED BIDIRECTIONAL DC-DC CHARGER FOR PLUG-IN ELECTRIC VEHICLE	UNIVERSITY	FLAGSHIP	-
03G22	SHAHARIN FADZLI BIN ABD RAHMAN	ECE	MNSE	RG	Formation of graphene-coated porous silicon for single cell diagnosis	UNIVERSITY	FLAGSHIP	-
03G23	MASTURA SHAFINAZ BINTI ZAINAL ABIDIN	ECE	MNSE	RG	Novel Microfluidic Impedance-based Sensor for Single Cell Application	UNIVERSITY	FLAGSHIP	-
05H29	LEOW PEI LING	CMED	PROTOM-i	RG	On Chip Planar Tomography for Multiphase Fluid Dynamic Monitoring	UNIVERSITY	TIER 1	-
05H33	HAZLINA BINTI SELAMAT	CMED	COE	CAIRO	Crowd Modelling and Analysis Based on Complex System Theory and Reinforcement Learning	UNIVERSITY	TIER 1	-
05H35	MOHAMAD KAMAL B. A. RAHIM	COMM	ARFMRG	RG	CHIPLESS RFID TAG ANTENNA USING FLEXIBLE MATERIAL	UNIVERSITY	TIER 1	-
05H37	RUBITA BINTI SUDIRMAN	ECE	BMIE	RG	THE EFFECT OF EYE MASSAGING DEVICE TO ELECTROOCULOGRAPH SIGNAL BASED ON WAVELET APPROACH TO REDUCE STRESS LEVEL	UNIVERSITY	TIER 1	-
05H39	LEOW CHEE YEN	COMM	COE	WCC	OPPORTUNISTIC PRECODING WITH PARTIAL CSI FOR MASSIVE MIMO DOWNLINK	UNIVERSITY	TIER 1	-
05H40	SALINDA BINTI BUYAMIN	CMED	ACRG	RG	Design and Implementation of a Nonlinear system Identification of a Two Wheel Inverted Pendulum	UNIVERSITY	TIER 1	-
05H41	NOR HISHAM BIN KHAMIS	COMM	STAR	RG	STUDY ON ECHOLOCATION AND ACOUSTICS OF SWIFLETS FOR DETERMINATION OF OPTIMUM SOUND SYSTEM FOR SWIFLET BIRDHOUSE	UNIVERSITY	TIER 1	-
05H43	NORHUDAH BINTI SEMAN	COMM	COE	WCC	UNEQUAL SIZE OF WITRICITY DEVICE DESIGN THROUGH THE CHARACTERIZATION OF ITS COUPLING COEFFICIENT FOR WIRELESS COMMUNICATION APPLICATIONS	UNIVERSITY	TIER 1	-
05H44	NORHALIZA BINTI HAJI ABD WAHAB	CMED	ACRG	RG	INVERSE MODEL BASED PID COMPENSATION FOR ADAPTIVE NEURO-FUZZY INFERENCE SYSTEMS	UNIVERSITY	TIER 1	-
05H49	MOHD HANIFF BIN IBRAHIM	COMM	LCRG	RG	CAVITY RINGDOWN TECHNIQUE FOR SPECTROSCOPIC BASED OZONE SENSING	UNIVERSITY	TIER 1	-
05H57	MOHD FUA'AD BIN RAHMAT	CMED	PROTOM-i	RG	Nonlinear Disturbance Observer Design and Robust Precision Control for Hydraulic Actuator System.	UNIVERSITY	TIER 1	-
05H58	SHARIFAH HAFIZAH BINTI SYED ARIFFIN	COMM	ATTRG	RG	MOBILITY MANAGEMENT ALGORITHM BASED ON HUMAN BEHAVIOUR FOR MICROCELL NETWORK	UNIVERSITY	TIER 1	-
05H59	LIM CHENG SIONG	CMED	ACRG	RG	SIMULATION OF EMERGENCY MEDICAL SERVICES DELIVERY WITH ACTUAL TRAFFIC DATA	UNIVERSITY	TIER 1	-
05H60	ANITA BINTI AHMAD	CMED	PROTOM-i	RG	Evolution of the 3-Dimensional dominant frequency mapping of electrophysiological data in Atrial Fibrillation studies.	UNIVERSITY	TIER 1	-
05H62	MOHD HAIZAL BIN JAMALUDDIN	COMM	COE	WCC	DESIGN IMPLEMENTATION OF DIELECTRIC RESONATOR ANTENNA FOR HIGH SPEED MOBILE DEVICES APPLICATION	UNIVERSITY	TIER 1	-



<b>05H63</b>	HERLINA BINTI ABDUL RAHIM	CMED	PROTOM- i	RG	HALAL CHICKEN PROGRESSION MONITORING USING ARTIFICIAL INTELLIGENT TECHNIQUE	UNIVERSITY	TIER 1	-
<b>05H64</b>	MICHAEL TAN LOONG PENG	ECE	CONE	RG	QUANTUM DEVICE SIMULATOR OF QUASI BALLISTIC TRANSPORT IN NANOWIRE FIELD-EFFECT TRANSISTORS USING NONEQUILIBRIUM ARORA DISTRIBUTION FUNCTION	UNIVERSITY	TIER 1	-
<b>05H67</b>	SALLEHUDDIN BIN IBRAHIM	CMED	PROTOM- i	RG	INVESTIGATION OF AN ULTRASONIC TOMOGRAPHY SYSTEM IN IMAGING SOLID-GAS FLOW	UNIVERSITY	TIER 1	-
<b>06H04</b>	FATIMAH SHAM BT. ISMAIL	CMED	COE	CAIRO	STUDY AND DEVELOPMENT COLOR VISION DEFICIENCY ASSISTIVE DEVICE	UNIVERSITY	TIER 1	-
<b>06H77</b>	YANUAR ZULARDIANSYAH ARIEF	POWER	COE	IVAT	PREDICTION OF FLASHOVER VOLTAGE OF CONTAMINATED INSULATORS USING STATISTICAL ANALYSIS	UNIVERSITY	TIER 1	-
<b>06H78</b>	ZAINAL BIN SALAM	POWER	COE	CEES	Modified Perturb and Observed (P&O) Maximum Power Point Tracker (MPPT) for Photovoltaic Application	UNIVERSITY	TIER 1	-
<b>06H83</b>	ABDUL RASHID BIN HUSAIN	CMED	ACRG	RG	A NEW LYAPUNOV-KRASOVSKII STABILITY CONDITION FOR NETWORKED CONTROL SYSTEM AN APPLICATION TO CAN-BASED STEER-BY-WIRE SYSTEM	UNIVERSITY	TIER 1	-
<b>06H86</b>	YEONG CHE FAI	CMED	COE	CAIRO	WEARABLE WIRELESS SENSOR SYSTEM FOR BIOMECHANICAL ANALYSIS	UNIVERSITY	TIER 1	-
<b>07H08</b>	SAIFULNIZAM BIN ABD. KHALID	POWER	PERG	RG	The study of Unified Power Quality Conditioner Design Integrated with Smart Meter	UNIVERSITY	TIER 1	-
<b>07H13</b>	NOOR AZLINDA BINTI AHMAD	POWER	COE	IVAT	CORRELATIONAL STUDY OF LIGHTNING ISOKERAUNIC LEVEL WITH AIR POLLUTION IN JOHOR BAHRU.	UNIVERSITY	TIER 1	-
<b>07H54</b>	HASIMAH BTE ABDUL RAHMAN	POWER	COE	CEES	IMPACT OF SOILING AND VEGETATION ON PHOTOVOLTAIC SYSTEMS PERFORMANCE AND RELIABILITY	UNIVERSITY	TIER 1	-
<b>07H56</b>	ZOLKAFLE BIN BUNTAT	POWER	COE	IVAT	Development of Non-Thermal Plasma Needle for Bio-Medical Applications	UNIVERSITY	TIER 1	-
<b>07H57</b>	MOHAMMAD YUSRI BIN HASSAN	POWER	COE	CEES	Development of Artificial Intelligent Based Model for Building Electricity Consumption Forecasting	UNIVERSITY	TIER 1	-
<b>07H80</b>	MOHD WAZIR BIN MUSTAFA	POWER	PERG	RG	A SELF-CONFIGURING METHODOLOGY OF FUTURE SMART POWER GRID(A SOLUTION TOWARDS FUTURE POTENTIAL CHALLENGES)	UNIVERSITY	TIER 1	-
<b>07H82</b>	AWANG BIN JUSOH	POWER	PEDG	RG	FUNDAMENTAL STUDY OF MODIFIED PERTURB AND OBSERVE MAXIMUM POWER POINT TRACKING TECHNIQUE WITH TWO AXIS SOLAR TRACKER UNDER FAST WEATHER VARIATIONS.	UNIVERSITY	TIER 1	-
<b>09H76</b>	ABU BAKAR BIN MOHAMMAD	COMM	LCRG	RG	Bandwidth efficient line codes for free space optic link.	UNIVERSITY	TIER 1	-

<b>09H82</b>	SHAFISHUHAZA SAHLAN	CMED	PROTOM- i	RG	OPTIMIZATION OF KRYLOV SUBSPACE AND DIEM- ARNOLDI ON MICRO ELECTROMECHANICAL SYSTEM (MEMS); A MODEL ORDER REDUCTION TECHNIQUE	UNIVERSITY	TIER 1	-
<b>09H83</b>	MOHD FAIRUS BIN MOHD YUSOFF	COMM	ARFMRG	RG	COMPACT DUAL-BAND MICROSTRIP ANTENNA ARRAY FOR POINT TO POINT WIRELESS COMMUNICATION SYSTEM	UNIVERSITY	TIER 1	-
<b>10H08</b>	MOHAMAD RIJAL BIN HAMID	COMM	ARFMRG	RG	PATTERN RECONFIGURABLE ANTENNA FOR WIFI APPLICATION IN MOVING VEHICLE	UNIVERSITY	TIER 1	-
<b>10H61</b>	ZULKURNAIN B. ABD. MALEK	POWER	COE	IVAT	Ageing severity and end of life assessment of glass disc insulator using emitted ultra-violet and infra- red emissions	UNIVERSITY	TIER 1	-
<b>10H64</b>	DALILA BINTI MAT SAID	POWER	COE	CEES	COMPREHENSIVE MONITORING AND DIAGNOSTIC SYSTEM FOR POWER DISTRIBUTION SUBSTATION	UNIVERSITY	TIER 1	-
<b>10J87</b>	MOHD HAFIZI BIN AHMAD	POWER	COE	IVAT	ENHANCEMENT OF DIELECTRIC PROPERTIES OF OIL BASED NANOFLUIDS FOR POWER TRANSFORMER APPLICATION	UNIVERSITY	ENCOURAGEMENT GRANT	-
<b>10J94</b>	JASRUL JAMANI BIN JAMIAN	POWER	PERG	RG	FLEXIBLE FEED IN TARIFF SCHEME FOR PHOTOVOLTAIC IN RESIDENTIAL AREA BASED ON ARTIFICIAL NEURAL NETWORK PROJECTION	UNIVERSITY	ENCOURAGEMENT GRANT	-
<b>10J97</b>	SAYEDEHSAN ALAVI GHAHFEROKHI	COMM	ATTRG	RG	Solitonic W-Band OFDM Signal Generation using Microring Resonator and Transmission over Radio- over-Fiber link	UNIVERSITY	ENCOURAGEMENT GRANT	-
<b>11H21</b>	YANUAR ZULARDIANSYAH ARIEF	POWER	COE	IVAT	Plasma Treated Oil-based Nanofluids For Power Transformer Application	UNIVERSITY	TIER 1	-
<b>11H25</b>	NOR HAFIZAH BINTI NGAJIKIN	COMM	LCRG	RG	DEVELOPMENT OF FABRY PEROT FILTER FOR APPLICATION OF FLUORESCENCE SPECTROPHOTOMETER	UNIVERSITY	TIER 1	-
<b>11H42</b>	NASARUDIN BIN AHMAD	CMED	PROTOM- i	RG	An Experimental Study On Weight Measurement Of Moving Vehicle Using Acoustic Emission Technique	UNIVERSITY	TIER 1	-
<b>11H59</b>	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	DESIGN AND DEVELOPMENT OF PHASED ARRAY ANTENNA FOR 5G APPLICATIONS	UNIVERSITY	TIER 1	-
<b>11H60</b>	NIK NOORDINI BT NIK ABD MALIK	COMM	ATTRG	RG	ADAPTIVE COLLABORATIVE BEAMFORMING IN SOFTWARE DEFINED RADIO PLATFORM FOR WIRELESS SENSOR NETWORKS	UNIVERSITY	TIER 1	-
<b>11H73</b>	USMAN ULLAH SHEIKH	ECE	DSIP	RG	AUTOMATED VISION SYSTEM TO INSPECT COPLANARITY IN MAGNETIC COMPONENTS	UNIVERSITY	TIER 1	-
<b>11J00</b>	ZAHARAH BINTI JOHARI	ECE	CONE	RG	Investigation of Graphene Nanoconstriction Dimensionality Effect on Electronic and Transport Properties.	UNIVERSITY	ENCOURAGEMENT GRANT	-

<b>11J03</b>	NORLINA BINTI PARAMAN	ECE	VeCAD	RG	BUILT-IN SELF-TEST FOR FUNCTIONAL REGISTER-TRANSFER-LEVEL DESIGN USING ASSIGNMENT DECISION DIAGRAM	UNIVERSITY	ENCOURAGEMENT GRANT	-
<b>11J12</b>	NURUL EZAILA BINTI ALIAS	ECE	CONE	RG	STUDY OF DEVICE RELIABILITY AND VARIABILITY FROM PLANAR TO TWIN SI NANOWIRE FINFET (TSNWFET)	UNIVERSITY	ENCOURAGEMENT GRANT	-
<b>11J41</b>	LAU KWAN YIEW	POWER	COE	IVAT	INFLUENCE OF WATER ON THE BREAKDOWN PROPERTIES OF POLYETHYLENE/SILICA NANOCOMPOSITES	UNIVERSITY	ENCOURAGEMENT GRANT	-
<b>12H00</b>	NORZANAH BINTI ROSMIN	POWER	COE	CEES	SMART VOLTAGE CONTROL FOR AN OPTIMAL AND LOW-COST MICRO-WIND SYSTEM	UNIVERSITY	TIER 1	-
<b>12H05</b>	MOHD AMRI BIN MD. YUNUS	CMED	PROTOM-i	RG	AN EFFICIENT SOLAR TRACKING SYSTEM WITH FUZZY LOGIC METHOD FOR TROPICAL ENVIRONMENT	UNIVERSITY	TIER 1	-
<b>12H07</b>	MOHAMED AFENDI BIN MOHAMED PIAH	POWER	COE	IVAT	Electrical tracking and erosion resistance of newly polymer nanocomposites for high voltage insulating applications	UNIVERSITY	TIER 1	-
<b>12H08</b>	NOOR ASMAWATI BINTI SAMSURI	COMM	ARFMRG	RG	Wearable Millimeter-wave Antenna with Minimum Interference to the Implanted Medical Device for Future 5G System	UNIVERSITY	TIER 1	-
<b>12H09</b>	MOHAMAD KAMAL B. A. RAHIM	COMM	ARFMRG	RG	DESIGN AND DEVELOPMENT OF UHF TV ANTENNA FOR DIGITAL VIDEO BROADCASTING (DVB) SYSTEMT	UNIVERSITY	TIER 1	-
<b>12H30</b>	NIK RUMZI BIN NIK IDRIS	POWER	PEDG	RG	EXTENDED KALMAN FILTER SPEED ESTIMATOR WITH IMPROVED FLUX REGULATOR FOR ELECTRIC VEHICLE SYSTEM	UNIVERSITY	TIER 1	-
<b>12H34</b>	EILEEN SU LEE MING	ECE	BMIE	RG	Wireless Mobile ECG Development	UNIVERSITY	TIER 1	-
<b>12H35</b>	LEOW CHEE YEN	COMM	COE	WCC	Measurement and Analysis of Foliage Attenuation in Milimeter-Wave Band	UNIVERSITY	TIER 1	-
<b>12J51</b>	ABD HAMID BIN AHMAD	ECE	BMIE	RG	DEVELOPMENT OF MICROFLUIDIC DEVICE EMPLOYING PLANAR DIELECTROPHORETIC MICROELECTRODES FOR CELL SEPARATION.	UNIVERSITY	TIER 2	17,800.00
<b>12J55</b>	ALIAS BIN MOHD	COMM	ATTRG	RG	Interference Management of WiFi-enabled devices for Internet-of-Things (IoT) Applications	UNIVERSITY	TIER 2	20,000.00
<b>12J56</b>	MITRA BINTI MOHD ADDI	ECE	BMIE	RG	Development of A Portable Phototherapy Garment (PPG) for Neonatal Jaundice	UNIVERSITY	TIER 2	5,750.00
<b>12J63</b>	NORHAFIZAH BT RAMLI	ECE	BMIE	RG	THE EFFECT OF OPTICAL ATTENUATION IN CMOS LINEAR IMAGE SENSORS FOR PARTICLES CHARACTERISATION	UNIVERSITY	TIER 2	20,000.00
<b>12J66</b>	KAMALUDIN BIN MOHAMAD YUSOF	COMM	ATTRG	RG	Internet-of-Things Based Early Drowning Detection System	UNIVERSITY	TIER 2	15,940.00
<b>12J93</b>	NOR AINI BINTI ZAKARIA	ECE	BMIE	RG	Quantitative study of fall risk assessment using multimodal sensor	UNIVERSITY	TIER 2	13,200.00

13H20	LIM CHENG SIONG	CMED	ACRG	RG	A DECISION SUPPORT TOOL FOR DYNAMIC AMBULANCE DEPLOYMENT IN MALAYSIA	UNIVERSITY	TIER 1	-
14H63	SUHANA BINTI MOHAMED SULTAN	ECE	CONE	RG	DEVELOPMENT OF NANO CRYSTALLINE GRAPHITE (NCG)/SI BASED SCHOTTKY DIODE GAS SENSOR	UNIVERSITY	TIER 1	-
15H85	SALLEHUDDIN BIN IBRAHIM	CMED	PROTOM-i	RG	AN ULTRASONIC SENSING SYSTEM FOR DETECTING UNWANTED FOREIGN BODY IN FOOD AND DRINKS	UNIVERSITY	TIER 1	23,980.00
3B022	ABU BAKAR BIN MOHAMMAD	COMM	LCRG	RG	Photonic Switch Development for All-Optical Network	PRIVATE	OTHERS	-
3C012	ZAINAL BIN SALAM	POWER	COE	CEES	Photovoltaic Inverter Quality Control Centre (IQCC) : For Malaysia Building Integrated PV (MBIPV) Project	NATIONAL	CONTRACT	-
3C055	ZAINAL BIN SALAM	POWER	COE	CEES	IEA-PVPS Task 13 Program	NATIONAL	CONTRACT	-
3C064	ABU KHARI BIN A'AIN	ECE	VeCAD	RG	Resistive Contacts & Resistive Open in CMOS	PRIVATE	CONTRACT	-
4B111	MD PAUZI BIN ABDULLAH	POWER	COE	CEES	AN ALGORITHM FOR OPTIMIZING VARIOUS DEMAND SIDE MANAGEMENT (DSM) TECHNOLOGIES TO REDUCE BUILDING'S ELECTRICITY CONSUMPTION	NATIONAL	OTHERS	-
4C014	NIK RUMZI BIN NIK IDRIS	POWER	PEDG	RG	Collaboration Agreement On The Establishment of Proton Satellite Laboratories : UTM-Proton Future Drive Laboratory	PRIVATE	CONTRACT	-
4C023	ROZEHA BT. A. RASHID	COMM	ATTRG	RG	An Open and Robust Architecture for Internet of Things Using a New Layered Protocol Approach	PRIVATE	CONTRACT	-
4C036	THAREK BIN ABD RAHMAN	COMM	COE	WCC	THE ESTABLISHMENT OF EMF REMOTE MONITORING STATION NEAR BASE STATION SITES	NATIONAL	CONTRACT	-
4C050	KUMERESAN A/L A.DANAPALASINGAM	CMED	COE	CAIRO	Development of an Automatic HDD Base Flatness Tweaking System	PRIVATE	CONTRACT	-
4C086	ZULFAKAR BIN ASPAR	ECE	VeCAD	RG	Solar Interchange Switching	PRIVATE	DEMAND-DRIVEN INNOVATION	-
4F261	LEOW CHEE YEN	COMM	COE	WCC	STUDY OF SECRECY CAPACITY IN MULTI-USER MIMO BROADCAST CHANNEL	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F269	SUHAILA BINTI ISAAK	ECE	CONE	RG	Fundamental Characterization on Passively Quenched Silicon Single Photon Avalanche Diode (Spad) Array for Photon Counting Application	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F277	NOOR ASMAWATI BINTI SAMSURI	COMM	ARFMRG	RG	A study on the textile sheet-like waveguide transmission performance and SAR as a new approach to an efficient wireless wearable body centric communication	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F283	MUHAMMAD RAMLEE BIN KAMARUDIN	COMM	COE	WCC	The Characterization of Dielectric Resonator For Long Term Evolution Through The Investigation of Electromagnetic Cavity	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-

<b>4F290</b>	MOHD FAIRUS BIN MOHD YUSOFF	COMM	ARFMRG	RG	CAPACITY IMPROVEMENT ANALYSIS THROUGH SIDELobe REDUCTION FOR RANDOM ANTENNA ARRAY SYSTEM	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F291</b>	ZULKURNAIN B. ABD. MALEK	POWER	COE	IVAT	CHARACTERISATION OF PROTECTION SYSTEM INCLUDING DYNAMIC GROUND UNDER HIGH FREQUENCY LIGHTNING	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F314</b>	LIM CHENG SIONG	CMED	ACRG	RG	Theoretical and Experimental Investigation of Potential Improvement on Emergency Medical Services in Malaysia	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F317</b>	MOHD HANIFF BIN IBRAHIM	COMM	LCRG	RG	A Feasibility Analysis Of Refractometric Optical Sensor Based On Polymer Multimode Interference Couplers	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F329</b>	ABDUL RASHID BIN HUSAIN	CMED	ACRG	RG	INVESTIGATION OF STABILITY AND PERFORMANCE OF NETWORKED DYNAMICAL SYSTEM UNDER STOCHASTIC FAULT CONDITION	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F333</b>	YAHAYA BIN MD SAM	CMED	ACRG	RG	Study on Actuator fault Control for Active Suspension Vehicle.	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F351</b>	MOHD RIDZUAN BIN AHMAD	CMED	MNSE	RG	Synthesis Of Germanium Quantum Dots Using Liquid GeCl <sub>4</sub> As A Precursor	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F356</b>	ABU SAHMAH BIN MOHD SUPA'AT	COMM	LCRG	RG	An investigation of humidity sensor based on Agarose coated fiber Bragg grating within D-shaped optical fibers	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F374</b>	SHAH DAN BIN SUDIN	CMED	ACRG	RG	A Random Selection to Improve Asynchronous Gravitational Search Algorithm	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F380</b>	NIK RUMZI BIN NIK IDRIS	POWER	PEDG	RG	Novel Direct Torque Controller with Optimum Efficiency for Electric Vehicle Application	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F382</b>	ZOLKAFLE BIN BUNTAT	POWER	COE	IVAT	Characterization Of Carbon Nano-Strands Grown By Ac Arc Discharge Technique For Cntfet Application	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F386</b>	MOHAMED SULTAN BIN MOHAMED ALI	CMED	PROTOM-i	RG	A Study and Analysis of Wireless Resonant Micro-Heaters: A Path for Wireless-Control of MEMS Actuators	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F392</b>	MOHAMED ABD EL-MONEIM SHAABAN	POWER	COE	CEES	A Novel Distributed Control Approach for Smart Power Grids Using Spectral Cluster Analysis	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F393</b>	NIK NOORDINI BT NIK ABD MALIK	COMM	ATTRG	RG	A Study of Meta-Heuristics Algorithm Applied to Collaborative Beamforming in Wireless Sensor Networks (WSNs)	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F394</b>	MUHAMMAD ARIF BIN ABDUL RAHIM	ECE	STAR	RG	A NEW WORKPIECE POSITIONING SYSTEM OF ELECTRICAL DISCHARGE MACHINING FOR MACHINING MICRO PITS ON METAL-ON-METAL HIP IMPLANT FOR LUBRICATION PURPOSE	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F397</b>	SHARIFAH HAFIZAH BINTI SYED ARIFFIN	COMM	ATTRG	RG	Self Organized Interference Mitigation in Irregular Cell Geometry Heterogeneous Networks	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-

<b>4F398</b>	YANUAR ZULARDIANSYAH ARIEF	POWER	COE	IVAT	Analysis of nanofiller-polymer interfaces and homogeneous dispersion using cold atmospheric pressure plasma treatment to enhance Electrical Treeing Inhibition in Power Cable Insulation.	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F407</b>	NADIATULHUDA BINTI ZULKIFLI	CMED	LCRG	RG	Green Optical Wireless Broadband Access Networks: Network Characterization And Analysis	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F413</b>	SHAFISHUHAZA SAHLAN	CMED	PROTOM- i	RG	Study Of A Novel Inverted Decoupling Control For A Quadraple Tank Process For Optimization Using Bees Algorithm And Firefly Algorithm	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F422</b>	MOHAMED KHALIL BIN HJ MOHD HANI	ECE	VeCAD	RG	Quantum Neural Network Models for Pattern Recognition using FPGA Hardware Emulation	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F425</b>	NORHALIZA BINTI HAJI ABD WAHAB	CMED	ACRG	RG	Fundamental Study on Modeling and Control of POME Membrane Bioreactor Filtration System Using Artificial Neural Network	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F432</b>	ASRUL IZAM BIN AZMI	COMM	LCRG	RG	INVESTIGATION OF RESONANT RESPONSE IN COATED FIBER LASER BASED HYDROPHONE	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F439</b>	MOHD WAZIR BIN MUSTAFA	POWER	PERG	RG	COORDINATED AND ROBUST DESIGN OF POWER SYSTEM STABILIZERS USING BEES ALGORITHM	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F461</b>	USMAN ULLAH SHEIKH	ECE	DSIP	RG	Novel Near Infrared Face Recognition Using Zernike Moments and Hermite Kernel	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F462</b>	LEOW PEI LING	CMED	PROTOM- i	RG	A Study of the Efficiency of Fixed Geometry Valveless Micropump For Bidirectional Flow in Lab-On-Chip Application	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F463</b>	SHARIFAH KAMILAH BT SYED YUSOF	COMM	ATTRG	RG	WIDEBAND COMPRESSIVE SPECTRUM SENSING FRAMEWORK FOR COGNITIVE RADIO SYSTEM	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F477</b>	RAZALI BIN ISMAIL	ECE	CONE	RG	The Dependence of Quantum Confinement Effects on the Performance of Uniaxial Strained Graphene Nanoribbons Field Effect Transistor (GNRFET)	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F482</b>	SUHANA BINTI MOHAMED SULTAN	ECE	CONE	RG	Fundamental Study to Produce Addressable ZnO Nanowire Field Effect Transistor: A Chemical Vapour Deposition Approach.	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F485</b>	RASHIDAH@SITI SAEDAH BINTI ARSAT	COMM	ARG	RG	Characterization of Multifunction Flexible Surface Acoustic Wave Device	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F486</b>	MOKHTAR HARUN	COMM	ARG	RG	THE FORMULATION OF MALAY SPEECH INTELLIGIBILITY MODEL USING ANALYTICAL HIERARCHY PROCESS	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F515</b>	HERLINA BINTI ABDUL RAHIM	CMED	PROTOM- i	RG	Correlation Study Between Physicochemical Property Changes With Breakdown Voltage Level of Palm-Based Power Transformer Insulation Oils at Difference Moisture Levels	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F540</b>	ZOLKAFLE BIN BUNTAT	POWER	COE	IVAT	INVESTIGATION PARTIAL DISCHARGE CHARACTERISTICS ON POLYMERIC MATERIAL	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-

					FILLED WITH GRAPHENE OXIDE NANOFILLER USING CIGRE METHOD II			
4F553	ZAHARUDDIN B MOHAMED	CMED	ACRG	RG	Investigations of adaptive input shaping control of a flexible dynamic system	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F565	SEVIA MAHDALIZA BT. IDRUS SUTAN NAMEH	COMM	LCRG	RG	Fundamental study on utilizing intensive stability of soliton pulses for ultrafast data transmission system at Tb/sec	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F589	THAREK BIN ABD RAHMAN	COMM	COE	WCC	Specific Absorption Rate (SAR) for 4G and 5G Communications in Relation to Biological Effects.	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F594	MOHD AMRI BIN MD. YUNUS	CMED	PROTOM-i	RG	A Study and Analysis of Cooking Oil Quality Determiner based on Planar Electromagnetic Sensor Array: An Approach for a Low Cost Quality Estimator of Cooking Oil	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F596	TAN CHEE WEI	POWER	PEDG	RG	A STUDY OF A NEW HYBRID ANTI-ISLANDING DETECTION APPROACH FOR GRID-CONNECTED PHOTOVOLTAIC ENERGY SYSTEMS	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F599	MOHD HAFIZI BIN AHMAD	POWER	COE	IVAT	Partial Discharge Characteristics of Cold Atmospheric Plasma Enhanced Epoxy Resin/Boron Nitride Nanocomposites as New High Voltage Insulating Material	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F613	ZULKARNAIN BIN AHMAD NOORDEN	POWER	COE	IVAT	ELECTROCHEMICAL CHARACTERIZATION OF GLASS WOOL AS SEPARATOR FOR SUPERCAPACITOR	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F615	KHAIRUL HAMIMAH BINTI ABAS	CMED	PROTOM-i	RG	Incorporating Non-Dominated Solutions to Improve Vector Evaluated Gravitational Search Algorithm (VEGSA) for Multi-Objective Optimization Problems	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F617	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	Study and Characterize Energy-Power Improvement Through Near Field Coupling Optimization for Wireless Power Transfer	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F620	ZAHARAH BINTI JOHARI	ECE	CONE	RG	Quantum Chemical Interaction of Gas Molecules on Imperfect Multiple Channel Graphene Nanoribbon	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F638	SHAHARIN FADZLI BIN ABD RAHMAN	ECE	MNSE	RG	Investigation of charge carrier modulation in aluminium gallium arsenide/gallium arsenide nanochannel array structure by graphene-wrap-gate	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F641	NURUL MU'AZZAH BINTI ABDUL LATIFF	COMM	ATTRG	RG	Energy Efficient Algorithm for Channel Access in Cognitive Radio Wireless Sensor Networks	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F646	MOHAMED SULTAN BIN MOHAMED ALI	CMED	PROTOM-i	RG	Harmony Search Algorithm: Study and Analysis towards Self-tuning Intelligent Control for Precise Positioning of Piezo-actuated Stage.	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F659	AB AL-HADI BIN AB RAHMAN	ECE	DSIP	RG	Novel Dataflow Actor Network Partitioning Algorithms for Multiple FPGAs Systems Implementation	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
4F672	NOOR AZLINDA BINTI AHMAD	POWER	COE	IVAT	COCONUT HUSK AS NEW ADDITIVE MATERIAL TO IMPROVE EARTHING SYSTEM PERFORMANCE	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-



<b>4F682</b>	MOHAMAD AMIR BIN SHAMSUDIN	CMED	PROTOM-i	RG	BIOMIMETIC SOFT ACTUATOR BASED BIONIC RIBBON FIN LOCOMOTION USING FEM AND CFD ANALYSIS	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F691</b>	MOHAMAD HAFIS IZRAN BIN ISHAK	CMED	PROTOM-i	RG	An improved and Centralised Aid and Relief Coordination via 2-way Intelligent Mobile Geospatial Reporting Algorithm for Flood Volunteers.	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F707</b>	LAU KWAN YIEW	POWER	COE	IVAT	Electrical Breakdown Characteristics of Non-isothermally Crystallized Nanostructured Polyethylene Blends	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F728</b>	ROZEHA BT. A. RASHID	COMM	ATTRG	RG	Solution Concept for Optimal Cognitive Radio-Wireless Sensor Network Topology Management Scheme in Enabling Internet Of Things	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F746</b>	MD PAUZI BIN ABDULLAH	POWER	COE	CEES	Optimal Time of Use (TOU) electricity pricing for future smart grid application in Malaysia	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F751</b>	MOHAMED AFENDI BIN MOHAMED PIAH	POWER	COE	IVAT	Characterization of Electrical Charge and Leakage Current Patterns on Contaminated Insulators under Severe Ambient Conditions	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F759</b>	MOHAMAD SHUKRI BIN ZAINAL ABIDIN	CMED	ACRG	RG	A Study on Adaptive Control Strategies for Infiltration Process in Fibrous-capillary System for Precision Water-saving Agriculture	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F761</b>	MOHD AZHAR BIN ABDUL RAZAK	ECE	BMIE	RG	A COMPUTATIONAL INVESTIGATION OF HYDRODYNAMIC FLOW IN MICROFLUIDIC BIOCHIP FOR BIOPARTICLE MANIPULATION	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F794</b>	NORZANAH BINTI ROSMIN	POWER	COE	CEES	Enhanced power conditioner of smarter current/voltage control for a low-cost optimum micro-wind system	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4F799</b>	NAZIHA BINTI AHMAD AZLI	POWER	PEDG	RG	Performance study on active power filters (APF) utilizing asymmetric multilevel inverters	NATIONAL	FUNDAMENTAL RESEARCH GRANT SCHEME	-
<b>4J143</b>	RUZAIRI BIN ABDUL RAHIM	CMED	PROTOM-i	RG	DESIGN A WIRE MESH TOMOGRAPHY SYSTEM	UNIVERSITY	UTM R&D FUND	-
<b>4J144</b>	HAZLINA BINTI SELAMAT	CMED	COE	CAIRO	ENHANCEMENT OF RETROFIT FUEL INJECTION KIT	UNIVERSITY	UTM R&D FUND	-
<b>4J148</b>	MOHD RIDZUAN BIN AHMAD	CMED	MNSE	RG	Single cell stiffness measurement based on novel design of microfluidics system.	UNIVERSITY	UTM R&D FUND	-
<b>4J216</b>	CHUA TIEN HAN	COMM	COE	WCC	Narrowband Measurement, Characterization and Modelling of Radiowave Propagation through Tropical Vegetation at Centimetre-wave and Millimetre-Wave Frequencies for 5G	NATIONAL	HICOE RESEARCH GRANT	74,690.00
<b>4J217</b>	JAFRI BIN DIN	COMM	COE	WCC	EMPIRICAL MEASUREMENT AND DEVELOPMENT OF MILLIMETER WAVE PROPAGATION MODEL FOR ROAD / HIGHWAY ENVIRONMENT	NATIONAL	HICOE RESEARCH GRANT	74,690.00

4J218	MARWAN HADRI BIN AZMI	COMM	COE	WCC	PHYSICAL LAYER TECHNIQUES FOR COOPERATIVE SPECTRUM SENSING SCHEMES IN 5G WIRELESS COMMUNICATION SYSTEMS	NATIONAL	HICOE RESEARCH GRANT	74,690.00
4L126	MOHD JUNAIDI BIN ABDUL AZIZ	POWER	PEDG	RG	Battery Management System for Lithium Ferro Phosphate	NATIONAL	EXPLORATORY RESEARCH GRANT SCHEME	-
4L158	ZULFAKAR BIN ASPAR	ECE	VeCAD	RG	A STUDY TO FIND AN ALGORITHM SUITABLE TO DETECT GAS FLOW	NATIONAL	DEMAND-DRIVEN INNOVATION	-
4L168	MUHAMMAD ARIF BIN ABDUL RAHIM	ECE	STAR	RG	Mini Automation System to create New Innovative Marker Tip	NATIONAL	DEMAND-DRIVEN INNOVATION	-
4L177	MUHAMMAD ARIF BIN ABDUL RAHIM	ECE	STAR	RG	Ingredient Mixing & Process Automation	NATIONAL	DEMAND-DRIVEN INNOVATION	-
4L550	SHARIFAH KAMILAH BT SYED YUSOF	COMM	ATTRG	RG	Mobile Wireless Sensor-Based Cyclist Monitoring and Tracking System	NATIONAL	SRGS	-
4L632	SHARIFAH HAFIZAH BINTI SYED ARIFFIN	COMM	ATTRG	RG	Water Quality Monitoring System Using Wireless Sensor Network Wifi Based for Aquaculture Farming	NATIONAL	PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME	-
4L640	MOHD RIDZUAN BIN AHMAD	CMED	MNSE	RG	Prototype of an integrated dual nanoprobe-microfluidic system for an instant and quantitative single cell viability detection.	NATIONAL	PROTOTYPE DEVELOPMENT RESEARCH GRANT SCHEME	-
4L811	MOHAMAD KAMAL B. A. RAHIM	COMM	ARFMRG	RG	MONITORING HAJJ CROWD: ADAPTIVE CROWD CONTROL with COGNITIVE EMBEDDED SYSTEM (ACCES)	NATIONAL	LONG TERM RESEARCH GRANT SCHEME	-
4L818	TAN CHEE WEI	POWER	PEDG	RG	Power Control Technology For Fuel Cell Vehicles	NATIONAL	LONG TERM RESEARCH GRANT SCHEME	-
4S066	RAZALI BIN NGAH	COMM	COE	WCC	MIMO-OFDM Radio over Fiber Integration for 4G Backhaul Heterogeneous Network	NATIONAL	SCIENCEFUND	-
4S068	HASIMAH BTE ABDUL RAHMAN	POWER	COE	CEES	Development of a smart microgrid energy management system	NATIONAL	SCIENCEFUND	-
4S070	ABDUL RASHID BIN HUSAIN	CMED	ACRG	RG	Real-time Multi-axis Motion Control System with Vibration Reduction Scheme	NATIONAL	SCIENCEFUND	-
4S081	USMAN ULLAH SHEIKH	ECE	DSIP	RG	Unmanned-Aerial-Vehicle (UAV) Thermal Video Content Analysis for Crowd Detection and Tracking Applied to Internal Security	NATIONAL	SCIENCEFUND	-
4S087	SEVIA MAHDALIZA BT. IDRUS SUTAN NAMEH	COMM	LCRG	RG	Adaptive Mitigating Technique For High Linear Laser Transmitter For Radio Frequency Signal Transceiver	NATIONAL	SCIENCEFUND	-
4S094	RUBITA BINTI SUDIRMAN	ECE	BMIE	RG	Biosignal Potential Identification of the Working memory and sensory through Electroencephalograph Signal for Children	NATIONAL	SCIENCEFUND	-
4S095	MUHAMMAD NADZIR BIN MARSONO	ECE	VeCAD	RG	A NETPGA BASED RECONFIGURABLE MIDDLEBOX FOR QUALITY-OF-SERVICE NETWORK TRAFFIC	NATIONAL	SCIENCEFUND	-

<b>4S098</b>	MOHD AMRI BIN MD. YUNUS	CMED	PROTOM-i	RG	CREATIVE SELECTIVE MEMBRANE FOR DETECTING NITRATE, PHOSPHATE, AND HEAVY METALS BASED ON PLANAR ELECTROMAGNETIC SENSORS	NATIONAL	SCIENCEFUND	-
<b>4S099</b>	SHARUL KAMAL BIN ABDUL RAHIM	COMM	COE	WCC	Development of Indoor Parameter Sensing using UWB-based System	NATIONAL	SCIENCEFUND	-
<b>4S101</b>	NOR ASIAH BINTI MUHAMAD	POWER	COE	IVAT	Development of Hybrid DGA Interpretation System For Power Transformer Condition Monitoring	NATIONAL	SCIENCEFUND	-
<b>4S103</b>	ZAHARUDDIN B MOHAMED	CMED	ACRG	RG	Optimal Energy-Efficient Control for Positioning and Sway Control of a Gantry Crane	NATIONAL	SCIENCEFUND	-
<b>4S105</b>	THAREK BIN ABD RAHMAN	COMM	COE	WCC	Design and Development of 4G LTE-WLAN CUSTOMER PREMISE EQUIPMENT	NATIONAL	SCIENCEFUND	-
<b>4S126</b>	AB AL-HADI BIN AB RAHMAN	ECE	DSIP	RG	ASIC DESIGN AND FABRICATION OF ACTOR-BASED SIGNAL PROCESSING SYSTEMS	NATIONAL	SCIENCEFUND	-





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