

## CURRICULUM VITAE



**DR. NUR ILYANA BINTI ANWAR APANDI**  
**SENIOR LECTURER**  
**FAKULTI KEJURUTERAAN ELEKTRIK,**  
**UNIVERSITI TEKNIKAL MALAYSIA MELAKA (UTeM)**  
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YEAR	ACADEMIC QUALIFICATION	INSTITUTION
2017	KEDOKTORAN FALSAFAH (PH.D) (Electrical and Information Engineering)	THE UNIVERSITY OF SYDNEY, AUSTRALIA
2004	SARJANA (MASTERS) Modelling in Applied Mathematics	UNIVERSITY OF EAST ANGLIA, NORWICH, UK
2002	SARJANA MUDA KEPUJIAN (BACHELOR HONS) (Industrial Mathematics)	UNIVERSITI TEKNOLOGI MALAYSIA SKUDAI
2014 - 2022	PROFESSIONAL MEMBERSHIP	INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS (IEEE)
	PROFESSIONAL MEMBERSHIP	MALAYSIAN MATHEMATICAL SCIENCES SOCIETY (PERSAMA)- LIFETIME MEMBER

### RESEARCH FUNDING/LIST OF GRANTS

YEAR AWARDED	Reference No	TITLE OF PROJECT	TYPE OF GRANT	AMOUNT	ROLE
2022		AN ULTRA-LOW LATENCY MILLIMETER-WAVE NETWORK ALGORITHM BASED ON STOCHASTIC OPTIMISATION FOR FUTURE NEXT GENERATION INTERNET OF THINGS	GERAN FRGS (NATIONAL)	RM 107750	MAIN RESEARCHER
2022	UTM (S).J.13.01/25.13/3/4C566/RA (13)	ANALYTICAL MODEL OF ELECTROMAGNETIC FIELD EXPOSURE FROM MILLIMETRE WAVE 5G CELLULAR NETWORKS	QUICKWIN (UTM)	RM 40 000	CO-RESEARCHER
2020	PJP/2020/FKE/TVET/S01807	I-WK MOBILE WEB APPS: ELECTRICAL ENGINEERING PROGRAMME OUTCOMES (PO) ATTAINMENT EVALUATION FOR A NEW MOBILE WEB APPLICATION BASED ON AN INTELLIGENT KNOWLEDGE PROFILE (I-WK)	SHORT TERM	RM 20 000	CO-RESEARCHER
2019 - COMPLETED	FRGS/2018/FKE-CERIA/F00355	AN ULTRA-LOW LATENCY NETWORK ALGORITHM BASED ON A QUANTIZATION METHOD FOR NEW INTERNET OF THINGS IN CLOUD-BASED RADIO ACCESS NETWORKS	GERAN FRGS (NATIONAL)	RM 50 140	MAIN RESEARCHER
2019	FRGS/2018/FTMK-CACT/F00393	A NEW TWO-LEVEL COOPERATIVE CO-EVOLUTIONARY ALGORITHM FOR MULTITIER MATERIALIZED VIEWS SELECTION PROBLEM IN CYBER MANUFACTURING DATA WAREHOUSES	GERAN FRGS (NATIONAL)	RM 53 500	CO-RESEARCHER
1 JULY 2011 - COMPLETED	PJP/2011/FKE(10D)/S00828	THE APPLICATION OF STRUCTURAL EQUATION MODELING TO TEST THE OVERALL SATISFACTION OF MATHEMATICS SUBJECTS, ENGINEERING SUBJECTS, AND NON ENGINEERING SUBJECTS IN UTEM	SHORT TERM	RM 10 000	CO RESEARCHER
1 JULY 2011 COMPLETED	PJP/2011/FKE(12C)/S00830	THE EFFECT OF MAPPING FUNCTION MODIFICATION TO GPS TROPOSPHERIC DELAY	SHORT TERM	RM 11 000	CO RESEARCHER
1 JULY 2011 COMPLETED	PJP/2011/FKE(14C)/S00832	STATISTICAL ANALYSIS OF SHORT TERM LOAD PROFILE IN THE UTILITY OF MALAYSIA	SHORT TERM	RM 9 700	CO RESEARCHER

1 JULY 2011 COMPLETED	PJP/2011/FKE(25C)/S00942	MATHEMATICAL MODELLING OF SOLITONS IN OPTICAL TELECOMUNICATION SYSTEM	SHORT TERM	RM 7 500	CO RESEARCHER
1 NOV 2011 COMPLETED	PJP/2011/FKE(37D)/S00985	THE ANALYSIS OF STUDENTS PERFORMANCE, MARKETABILITY AND SATISFACTION WITH DATABASED SYSTEM MANAGEMENT.	SHORT TERM	RM 11 400	CO RESEARCHER
1 JULY 2010 COMPLETED	PJP/2010/FKE (25C) S726	RESEARCH AND DEVELOPMENT ON MOTION CONTROL FOR ONE LEGGED TYPE HOPPING ROBOT	SHORT TERM	RM 12 000	CO RESEARCHER
MARCH 2010 - COMPLETED	PJP/2010/FKE (2A) S00633	STUDY ON MATHEMATICAL MODELING OF BOUNDARY LAYER FLOW AND HEAT TRANSFER OF VISCOELASTIC FLUID	SHORT TERM	RM 10 000	PRINCIPLE
MARCH 2010 - MARCH 2011	PJP/2010/FKE (25C) S00644	A COMPARATIVE ANALYSIS OF ELECTRICITY MARKET MODELS IN COMPETITIVE ELECTRICITY MARKET	SHORT TERM	RM 14 000	CO RESEARCHER
1 MAC 2009 - 31 MAC 2010	PJP/2009/FKE (11C) S519	GYROSCOPE-INTEGRATED MOBILE ROBOT	SHORT TERM	-	CO RESEARCHER
OCT 2009 - 31 OCT 2010	78338(UTM)	MATHEMATICAL MODELING OF BOUNDARY LAYER FLOW OF VISCOELASTIC FLUID	FRGS	-	MEMBER

## JOURNAL PUBLICATIONS

YEAR	TITLE	NAME OF JOURNAL	AUTHORS
2022	Task Scheduling Based on Genetic Algorithm for Robotic System in 5G Manufacturing Industry	International Journal of Electrical Engineering and Applied Sciences, vol. 5, no.1, 2022.	W. S. Wan, N. I. A. Apandi, and N. Muhammad
2022	COMPARATIVE STUDY ON CURRICULUM IMPLEMENTATION FOR BACHELOR OF ELECTRICAL ENGINEERING STUDENTS' PERFORMANCES	THE GLOBAL JOURNAL OF ENGINEERING EDUCATION (GJEE)	AZIAH KHAMIS, NUR ILYANA ANWAR APANDI
2021	STOCHASTIC GEOMETRY ANALYSIS OF ELECTROMAGNETIC FIELD EXPOSURE IN COEXISTING SUB-6 GHZ AND MILLIMETER WAVE NETWORKS	IEEE ACCESS	NOR AISHAH MUHAMMAD, NORHUDAH SEMAN, NUR ILYANA ANWAR APANDI, CHUA TIEN HAN, YONGHUI LI, OLAKUNLE ELIJAH
2021	ENERGY HARVESTING IN SUB-6 GHZ AND MILLIMETER WAVE HYBRID NETWORKS	IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY	NOR AISHAH MUHAMMAD, NORHUDAH SEMAN, NUR ILYANA BINTI ANWAR APANDI, YONG HUI
2021	INDUSTRY 4.0 WITH INTELLIGENT MANUFACTURING 5G MOBILE ROBOT BASED ON GENETIC ALGORITHM	INDONESIAN JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE	MOHD ZARIFITRI KASIM HAWARI, NUR ILYANA ANWAR APANDI
2021	MATHEMATICAL MODELING ON APPLICATION OF WIRELESS NETWORKS FOR INDUSTRIAL AUTOMATION-FACTORY AUTOMATION	JOURNAL OF PHYSICS: CONFERENCE SERIES	MING, W. H., HAWARI, HAWARI, MOHD ZARIFITRI KASIM, AND NUR ILYANA ANWAR APANDI.
2020	UPLINK PERFORMANCE ANALYSIS FOR MILLIMETER WAVE CELLULAR NETWORKS WITH CLUSTERED USERS	IEEE TRANSACTIONS ON VEHICULAR TECHNOLOGY	NOR AISHAH MUHAMMAD, NUR ILYANA BINTI ANWAR APANDI, YONG HUI, NORHUDAH SEMAN
2019	EFFICIENCY RATIO OPTIMIZATION ON UPLINK TRANSMISSION POWER FOR CLOUD-BASED RADIO ACCESS NETWORK	JOURNAL OF PHYSICS: CONFERENCE SERIES	NUR ILYANA BINTI ANWAR APANDI, KEVIN GOH YU HAN
2019	THE INTEGRATION OF FUZZY LOGIC SYSTEM FOR OBSTACLE AVOIDANCE BEHAVIOR OF MOBILE ROBOT	INTERNATIONAL JOURNAL OF ELECTRICAL ENGINEERING AND APPLIED SCIENCES	NUR ILYANA BINTI ANWAR APANDI, AARON MARTIN
2018	ANALYSIS OF SPINAL ELECTROMYOGRAPHY SIGNAL WHEN LIFTING AN OBJECT	INTERNATIONAL JOURNAL OF ENGINEERING & TECHNOLOGY (UAE)	MOHD BAZLI BIN BAHAR; MUHAMMAD FAHMI BIN MISKON; NUR ILYANA BINTI ANWAR APANDI; NUR LATIF AZYZE BIN MOHD SHAARI AZYZE; MOHD SHAHRIEEL BIN MOHD ARAS; FARIZ BIN ALI @ IBRAHIM;
2018	ENERGY EFFICIENCY OF CLOUD PROCESSORS FOR SMALL CELL NETWORKS	JOURNAL OF TELECOMMUNICATION, ELECTRONIC AND COMPUTER ENGINEERING	AZIAH BINTI KHAMIS NUR ILYANA BINTI ANWAR APANDI;
2016	PARALLEL OPTIMIZATION FRAMEWORK FOR CLOUD-BASED SMALL CELL NETWORKS	IEEE TRANSACTIONS ON WIRELESS COMMUNICATIONS	NUR ILYANA BINTI ANWAR APANDI, WIBOWO HARDJAWANA, BRANKA VUCENIC

## CONFERENCE/ PROCEEDING PAPERS

YEAR	TITLE	NAME OF CONFERENCE	AUTHORS
2021	INDIVIDUAL PERFORMANCE STUDY BASED ON CORRELATION BETWEEN PROGRAMME OUTCOMES ATTAINMENT AND CGPA	INTRED 2021	AZIAH KHAMIS, NUR ILYANA ANWAR APANDI, MUHAMMAD SUHAIZAN SULONG, AZRITA ALIAS
2021	OPTIMIZATION OF A MOBILE ROBOT PATH FOR OBSTACLE AVOIDANCE USING GENETIC ALGORITHM	MUCET 2021	M. ZARIFITRI AND NUR ILYANA ANWAR APANDI
2021	MATHEMATICAL MODELING ON APPLICATION OF WIRELESS NETWORKS FOR INDUSTRIAL AUTOMATION-FACTORY AUTOMATION	SKSM28	WONG HAO MING, NUR ILYANA ANWAR APANDI
2020	INVESTIGATION ON TASK DISTRIBUTION ALGORITHM FOR ROBOTIC SYSTEM	MERD 2020	LEE JIAN PING, NUR ILYANA ANWAR APANDI
2019	PROGRAMME OUTCOMES ATTAINMENT MEASUREMENT METHOD FOR BACHELOR OF ELECTRICAL ENGINEERING	INTRED 2019	AZIAH KHAMIS, NUR ILYANA ANWAR APANDI, AZRITA ALIAS, MAASPALIZA AZRI, MOHD LUQMAN MOHD JAMIL
2019	COMPARATIVE STUDY FOR THE BACHELOR OF ELECTRICAL ENGINEERING STUDENTS' PERFORMANCES BASED ON DIFFERENT CURRICULAR STRUCTURE	INTRED 2018	AZIAH KHAMIS, NUR ILYANA ANWAR APANDI
2018	ON MODELLING AND ANALYSIS OF SMALL CELL POWER CONSUMPTION IN 5G NETWORK	SEMA 2018	PATRICK LAU HUI HON, NUR ILYANA ANWAR APANDI
2017	SHARPE RATIO FOR JOINT USER ASSOCIATION AND SUBCARRIER ALLOCATION DESIGN IN DOWNLINK HETEROGENEOUS CELLULAR NETWORKS	28TH IEEE PIMRC 2017	NUR ILYANA ANWAR APANDI, SHUANG TIAN, WIBOWO HARDJAWANA, PHEE LEP YEOH, BRANKA VUCETIC

YEAR	AWARDS & HONORS RECEIVED
2021	Gold Medal for Poster award, Track 4: TVET Teaching and Learning, Nur Ilyana Anwar Apandi, Individual Performance Study Based on Correlation between Programme Outcomes Attainment and CGPA, Program InTRed'21, 9 Disember 2021.  Penghargaan Kecemerlangan dalam Penilaian Pengendalian Mata Pelajaran BENG 2143 Statistic Kejuruteraan Sem 2 2020/2021
2020	Anugerah Perkhidmatan Cemerlang  Penghargaan Kecemerlangan dalam Penilaian Pengendalian Mata Pelajaran BENG 2143 Statistic Kejuruteraan Sem 2 2019/2020
2019	Bronze Medal, Innovation and Technology Competition 2019, Kevin Goh Yu Han and Nur Ilyana Anwar Apandi, Investigation on Spectral Efficiency and Latency Optimization Scheme for Cloud-Based Radio Access Network, 25 Mac 2019  Silver Award, Sazuan Nazrah, Aziah Khamis, Aimie Nazmin, Nurul Ain, Nur Ilyana Anwar Apandi, Lee Qui Fang, Mohd Akhmal Syafi, Yeap Sheng Yi, Chuan Chuan You, Smart Reverse Vending Machine with IOT, Karnival Inovasi UTeMEx 2019, 9-10 October 2019
2018	Best Poster Award, INNOVATIVE TEACHING AND LEARNING RESEARCH DAY INTRED 2018, Aziah Khamis, Nur Ilyana Anwar Apandi, Nor Aishah Muhammad, 6 Sept 2018  Penghargaan Kecemerlangan dalam Penilaian Pengendalian Mata Pelajaran BEKA1233 Matematik Kejuruteraan Sem 2 2017/2018  Penghargaan Kecemerlangan dalam Penilaian Pengendalian Mata Pelajaran DEKA2342 Matematik Kejuruteraan Sem 2 2017/2018
2010	Anugerah Perkhidmatan Cemerlang

## POSTGRADUATE SUPERVISION

NO	NAME	LEVEL OF STUDY	ROLE	STATUS	TITLE	YEAR GRADUATED
1	MOHD ZARIFITRI BIN KASIM HAWARI	MASTERS	MAIN SUPERVISOR	ACTIVE	-	ACTIVE
2	FAISAL ALMUTHAIRI	DOCTORATE	CO SUPERVISOR	ACTIVE		

**BOOKS & MODULE**

- Engineering Mathematics (Modul P&P) ; Rahifa Ranom, Irma Wani Jamaludin, Norazlina Abd Razak, Nur Ilyana Anwar Apandi  
<https://shopee.com.my/penerbitutem/12943666813?smtt=0.0.3>
- Module 17: Teaching & Learning Series, FKE, Linear Algebra And Calculus, Nur Ilyana, Arfah Ahmad, Irma Wani Jamaludin
- Differential Equations Module
- Introduction to Linear Algebra Module

**TEACHING EXPERIENCE (last 5 years)****POSTGRADUATES**

SESSION	COURSE
2021/2022	MEKH5123 - APPLIED SYSTEM MODELLING AND SIMULATION
2020/2021	MEKH5123 - APPLIED SYSTEM MODELLING AND SIMULATION
2018/2019	MEKH5123 - APPLIED SYSTEM MODELLING AND SIMULATION

**UNDERGRADUATES**

SESSION	COURSE
2020/2021	BEKA1233 - ENGINEERING MATHEMATICS
2020/2021	BENG2143 - ENGINEERING STATISTICS
2020/2021	BEKG2443 - ENGINEERING MATHEMATICS 2
2020/2021	BEKA2453 - STATISTICS AND NUMERICAL METHODS
2020/2021	DEKA1212 - ALGEBRA
2020/2021	BEKU3695 - INDUSTRIAL TRAINING
2019/2020	BEKG2443 - ENGINEERING MATHEMATICS 2
2019/2020	BEKG2462 - ENGINEERING MATHEMATICS & STATISTICS
2019/2020	BENG2143 - ENGINEERING STATISTICS
2019/2020	BMCG1013 - DIFFERENTIAL EQUATIONS
2019/2020	BMFG1113 - ENGINEERING MATHEMATICS
2019/2020	DEKA2342 - ENGINEERING MATHEMATICS
2018/2019	BEKG2443 - ENGINEERING MATHEMATICS 2
2018/2019	BEKU3695 - INDUSTRIAL TRAINING
2018/2019	BENG2143 - ENGINEERING STATISTICS
2018/2019	BMFG1113 - ENGINEERING MATHEMATICS
2018/2019	DEKA2342 - ENGINEERING MATHEMATICS
2017/2018	BEKA1123 - ALGEBRA & CALCULUS
2017/2018	BEKA1233 - ENGINEERING MATHEMATICS
2017/2018	BEKA2453 - STATISTICS AND NUMERICAL METHODS
2017/2018	BEKU3695 - INDUSTRIAL TRAINING
2017/2018	BENG2142 - STATISTICS
2017/2018	BMCG1013 - DIFFERENTIAL EQUATIONS
2017/2018	DEKA2342 - ENGINEERING MATHEMATICS

YEAR	MANAGEMENT/ POSITION
2022	Ketua Penyelaras Latihan Industri, FKE bagi Tahun 2022 AJK Latihan Industri Universiti Tahun 2022
2021	Timbalan Ketua Pasukan Pertandingan Indonesia International Mathematic Competition (IIMC) 2021 Ketua Penyelaras Latihan Industri, FKE bagi Tahun 2021 AJK Latihan Industri Universiti Tahun 2019 - 2021 Editor International Journal of Electrical Engineering and Applied Sciences (IJEEAS) 17 Ogos 2019 – 16 Ogos 2021 AJK FKE Industrial Webinar Series 2021
2020	Setiausaha, JK Latihan Industri Pelajar FKE bagi Tahun 2020 AJK Latihan Industri Universiti Tahun 2020 AJK 'FKE Industrial Exposure Fair' Nov 2020
2019	Setiausaha, JK Latihan Industri Pelajar FKE Tahun 2019 - 2020 JK Mobiliti Pelajar FKE 2019 Editor bagi International Journal of Electrical Engineering and Applied Sciences (IJEEAS) 17 Ogos 2019 – 16 Ogos 2020 AJK 'FKE Industrial Exposure Fair' 2019 - 2020 AJK SEMA 2018 AJK 'FKE Industrial Exposure Fair' 2018
2018	JK bagi Program Sarjana Kejuruteraan Mekatronik Secara Kerja Kursus 2018 JK Penyediaan Dokumen SAR BEKG 2018
2017	Setiausaha, JK Mobiliti Pelajar FKE 2017/2018 JK Seminar, Latihan & Lawatan Industri Pelajar FKE 2017/2018 JK e-Learning FKE 2017/2018 Setiausaha, Mobiliti Pelajar FKE 2017/2018 JK e-Learning FKE 2017/2018
2016	JK Seminar, Latihan & Lawatan Industri Pelajar FKE 2016/2017 Setiausaha, JK Seminar, Latihan & Lawatan Industri Pelajar FKE 2016/2017 JK Pelaksana Program IEEE Distinguished Lecturer Program, 30 Nov 2016

YEAR	CONTRIBUTIONS TO PROFESSIONAL BODIES AND SOCIETIES
2021	Penyelaras Akademik Program Sarjana Kejuruteraan Elektrik Secara Pesisir di Poli KK bagi tahun 2021 Juri PROGRAM EDTECH HACKATHON@UKM; 26 Jun 2021 Lantikan Timbalan Ketua Pasukan Pertandingan Indonesia International Mathematics Competition (IIMC) 2021, 27 Julai – 1 Ogos 2021 Lantikan Pensyarah BEKG2443 Engineering Mathematics bagi Program Separa Masa BEKG (Melaka 1 dan 2) Sem 1 Sesi 2021/2022 Lantikan Pensyarah BMCG1013 Differential Equation bagi Program Separa Masa BEKG (Melaka 1 dan 2) Sem 3 Sesi 2020/2021 Manuscript reviewer of " Design and Implementation of Control Two-Wheeled Robot Using MRAC," for the Journal of Telecommunication, Electronic and Computer Engineering (JTEC) – July 2021 Manuscript reviewer of entitled: Using Virtual Reaction Scheme in the Multiple Time Scales System for Stochastic Modelling for Journal: Applications of Modelling and Simulation (AMS) – Sept 2021
2020	Penyelaras Akademik Program Sarjana Kejuruteraan Elektrik Secara Pesisir di Poli KK bagi tahun 2020 Fasilitator Webinar Sharing Session on Online T&L anjuran CAES, 21 Mei 2020 Panel Penilai Dalam INOTEK 2019; 5 April 2020 Panel Penilai Sesi Proposal Defense Pelajar MEKG FKE, 21 Julai 2020. Juri STEM YOUTUBER CHALLENGE UTEM 2020; 9 Disember 2020 Lantikan Pensyarah BENG2143 Statistik Kejuruteraan bagi Program Separa Masa BEKG (Melaka 1 dan 2) Sem 1 Sesi 2019/2020 Manuscript reviewer for IJEEAS – Oct 2020 Manuscript reviewer for the Journal of Telecommunication, Electronic and Computer Engineering (JTEC) – March 2020 Pengacara Majlis Kursus Rekabentuk Program Pengajian Inovatif anjuran CAES, FTK, Feb 2020 Wakil Fakulti ke Sesi Lawatan Penanda Aras Program DEK di FKE, UiTM Cawangan Dungun Terengganu, 28 Jan 2020

- Wakil Fakulti ke Sesi Promosi Program MEKG dan MEKH secara pesisir di Politeknik Sultan Mizan Abidin Dungun dan Politeknik KT, Terengganu, 29 Jan 2020
- 2019 Penyelaras Akademik Program Sarjana Kejuruteraan Elektrik Secara Pesisir di Poli KK bagi Tahun 2019 - 2020
- Panel Penilai Dalam INOTEK 2019; 5 April 2019
- Ahli Kumpulan Inovatif dan Kreatif (KIK) UTeM 2019
- Manuscript reviewer for the IEEE Transactions on Communications – May 2019
- Manuscript reviewer for the Journal of Telecommunication, Electronic and Computer Engineering (JTEC) – October 2019
- Manuscript reviewer for the JTEC – August 2019
- Article reviewer of "Automatic Microwave Antenna Alignment System Using ZigBee Technology," for IJEEAS – Sept 2019
- Article reviewer of "Comparative Analysis between OFDMA and SCFDMA: Model, Features and Applications," for IJEEAS – August 2019
- Article reviewer of "Automatic Microwave Antenna Alignment System Using ZigBee Technology," for IJEEAS – Sept 2019
- 2018 Lantikan Pensyarah BMCG1013 Persamaan Pembezaan bagi Program Separa Masa BEKG (Perak 1) Sem 2 Sesi 2018/2019
- Proofreader artikel bagi Penerbitan IJEEAS bagi terbitan April 2018
- Pengerusi Sesi Pembentangan (session chair) bagi Symposium on Electrical, Mechatronics and Applied Science 2018 (SEMA2018).
- Manuscript reviewer of "Bent-Sequences Infinite Families Construction Method" for Journal of Telecommunication, Electronic and Computer Engineering (JTEC).2018
- Article reviewer of "Numerical Discretization Estimation for Ordinary Differential Equation Via Hybrid Discretization," for Applications of Modelling and Simulation (AMS) 2018
- Paper reviewer for SEMA2018
- 2017 Penceramah bagi bengkel perisian Microsoft pada 16-17 Oktober 2017 anjuran PSTP
- Paper Presenter for 2017 International Conference on Telecommunication, Electronic and Computer Engineering (ICTEC) 27 - 28 Nov 2017
- Wakil FKE bagi Bola Tampar Wanita SAJ 2017