



## PROF. MADYA TS. DR. M NORAZIZI SHAM BIN MOHD SAYUTI

PENSYARAH UNIVERSITI DS14

### CONTACT

**Phone:** 88730

**E-mail:**  
azizi@usim.edu.my

**Faculty:** Fakulti  
Kejuruteraan Dan Alam  
Bina

### SUPERVISION

PhD - Completed: 2, Ongoing: 1

Master - Completed: 0,  
Ongoing: 1

### AREAS OF EXPERTISE

Industrial Optimisation And Control

System-on-chip (soc)

Embedded Systems

Neural, Evolutionary And Fuzzy Computation

Mathematical Programming And Optimisation

Machine Learning

### ACADEMIC QUALIFICATION

PhD (2015)

Master in Software Engineering (2004)

Bachelor in Electronic Engineering (2001)

### RESEARCH

#### 1. UNCERTAINTY MODELLING WITH STOCHASTIC PROCESS FOR ROBUST REAL-TIME SCHEDULABILITY ANALYSIS

2023 GERAN PENYELIDIKAN USIM ON GOING MAIN RESEARCHER

#### 2. DEVELOPMENT OF MOBILE APPLICATION FOR WOMEN'S "PRELOVED" BUSINESS PLATFORM: FASHION ARCADE (FACADE)

2022 GERAN PENYELIDIKAN AGENSI KERAJAAN COMPLETED CO-RESEARCHER

#### 3. AI-BASED STUDENT ATTENDANCE AND ENGAGEMENT ALGORITHM IN SOC-FPGA

2022 BIDUNI MIZANNIYAH COMPLETED MAIN RESEARCHER

#### 4. AUTONOMOUS HUMAN DETECTION AND LOCALIZATION USING MACHINE LEARNING

2021 GERAN KPT (KKP) COMPLETED CO-RESEARCHER

**5. BALANCED COVER AUDIO SUGGESTION FOR AUDIO  
STEGANOGRAPHY ALGORITHM BASED ON NSGA-II,  
SEGMENTATION AND CHAOTIC MAP**

2020

GERAN KPT

COMPLETED

CO-RESEARCHER

# RESEARCH

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## 6. MODELLING AND CONTROL OF AN AERIAL TRANSPORTATION SYSTEM CARRYING SUSPENDED PAYLOAD

2020 GERAN PENYELIDIKAN USIM RACER COMPLETED CO-RESEARCHER

## 7. MODELLING AND ANALYSIS OF COVID-19 SPREADING PROCESS ON COMPLEX NETWORKS

2020 GERAN PENYELIDIKAN COVID-19 COMPLETED MAIN RESEARCHER

## 8. DEVELOPMENT OF HOME LELECTROCARDIOGRAM ASSESMENT REALIABLE TOOL (HEART) : A CLOUD BASED, WEARABLE, WIRELESS, SINGLE-LEAD ELECTROCARDIOGRAM

2019 GERAN SEPADAN INDUSTRI ON GOING CO-RESEARCHER

## 9. SECURITY-HARDENED DESIGN SPACE EXPLORATION FOR HARD REAL-TIME EMBEDDED NOC IN CYBER-PHYSICAL SYSTEMS

2018 GERAN PENYELIDIKAN USIM COMPLETED CO-RESEARCHER

## 10. EVOLUTIONARY MULTI-OBJECTIVE OPTIMIZATION FOR COVER AUDIO SELECTION IN AUDIO STEGANOGRAPHY

2017 GERAN KPT COMPLETED CO-RESEARCHER

## 11. A NEW MODEL FOR CONTENT UNDERSTANDING AND KNOWLEDGE DISSEMINATION OF THE QURAN USING INTELLIGENT DATA MODEL

2016 GERAN KPT COMPLETED CO-RESEARCHER

## 12. A NEW CRYPTOGRAPHHY ALGORITHM DERIVED FROM QURANIC MAQAMAT FOR PREVENTING ACCOUSTIC ATTACKS.

2016 GERAN KPT COMPLETED CO-RESEARCHER

## 13. ANALYSIS OF ACOUSTIC EMANATION BEHAVIOURAL CHARACTERISTICS AND QURANIC MAQAMAT ON AES-BASED BLOCK CIPHER

2016 GERAN KPT COMPLETED MAIN RESEARCHER

## 14. SIMULANEOUS EXPLORATION OF MAPPING AND ROUTING ON HARD REAL-TIME EMBEDDED NETWORKS-ON-CHIP

2016 GERAN JANGKA PENDEK FASA 1 COMPLETED MAIN RESEARCHER

## 15. THE DESIGN AND EVALUATION OF AN INTERACTIVE QIRAAT MOBILE APPLICATION

2015 GERAN PENYELIDIKAN JANGKA PENDEK COMPLETED CO-RESEARCHER

## 16. A NEW MULTI-RELATIONAL LATENT SEMANTIC ANALYSIS MODEL FOR EXTRACTING PROPHETIC HADITH CONCEPT

2014 GERAN KPT COMPLETED CO-RESEARCHER

## 17. SECURING CRYPTOGRAPHIC KEY USING FINGER VEIN BASED FUZZY VAULT

2011 GERAN PENYELIDIKAN FUNDAMENTAL COMPLETED CO-RESEARCHER

## 18. SEGEMENTATION OF MALARIA PARASITES ON STAINED BLOOD FILMS

2011 GERAN PENYELIDIKAN FUNDAMENTAL COMPLETED CO-RESEARCHER

## 19. DESIGN OF AN IMPROVED SECURE KEY MANAGEMENT PROTOCOL IN MULTICAST COMMUNICATION

2011 GERAN PENYELIDIKAN FUNDAMENTAL COMPLETED CO-RESEARCHER

## 20. COMPARISON STUDY BETWEEN EXPECTATION & EXPERIENCE OF ICT PROVISION IN UNIVERSITY

2009 GERAN PENYELIDIKAN PANTAS BAWAH SETAHUN COMPLETED MAIN RESEARCHER

## 21. KAJIAN PEMBANGUNAN KANDUNGAN PROJEK SISTEM PENGURUSAN FATWA (FMS) INFAD

2008 GERAN KPT COMPLETED CO-RESEARCHER

# PUBLICATION

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## 1. TOWARD PREDICTABLE DEFLECTION ROUTING IN ROUTERLESS NOCS FOR REAL-TIME SYSTEMS

2025 IEEE 18TH INTERNATIONAL SYMPOSIUM ON EMBEDDED MULTICORE/MANY-CORE SYSTEMS-ON-CHIP (MCSOC)

2025 PROCEEDING SCOPUS MAIN AUTHOR

## 2. A CNN PLASTIC DETECTION MODEL FOR EMBEDDED PLATFORM OF ROV

1ST INTERNATIONAL CONFERENCE ON ADVANCES IN MACHINE INTELLIGENCE, AND CYBERSECURITY TECHNOLOGIES (AMICT)

2024 PROCEEDING WOS CO-AUTHOR

## 3. IMPROVING DYNAMIC SECURITY OF THE LEAST SIGNIFICANT BIT USING BLOCK-BASED CHAOTIC MULTI-LEVEL LSB (BCM-LSB)

THE 9TH INTERNATIONAL CONFERENCE ON CYBER SECURITY, PRIVACY IN COMMUNICATION NETWORKS (ICCS 2023)

2024 PROCEEDING SCOPUS CORRESPONDING AUTHOR

## 4. OPTIMISED COVER SELECTION FOR AUDIO STEGANOGRAPHY USING MULTI-OBJECTIVE EVOLUTIONARY ALGORITHM

JOURNAL OF INFORMATION AND COMMUNICATION TECHNOLOGY

2023 JOURNAL SCOPUS CO-AUTHOR

## 5. A METHOD OF COVER AUDIO SELECTION FOR EMBEDDING BASED ON VARIOUS CRITERIA

1ST INTERNATIONAL CONFERENCE ON ADVANCES IN MACHINE INTELLIGENCE, AND CYBERSECURITY TECHNOLOGIES (AMICT2023)

2023 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

## 6. REAL-TIME NETWORKS-ON-CHIP SYSTEM-LEVEL DESIGN SPACE EXPLORATION

2023 BOOK MAIN AUTHOR

## 7. INTEGRATED CIRCUIT CHIP FABRICATION

TECHNOLOGIES IN SCIENCE AND ENGINEERING A MULTIDISCIPLINARY APPROACH

2023 CHAPTER IN BOOK MAIN AUTHOR

## 8. A NEW METHOD TO ESTIMATE PEAK SIGNAL TO NOISE RATIO FOR LEAST SIGNIFICANT BIT MODIFICATION AUDIO STEGANOGRAPHY

PERTANIKA JOURNAL OF SCIENCE AND TECHNOLOGY

2022 JOURNAL ISI, SCOPUS AND ERA CO-AUTHOR

## 9. QURANIC ACOUSTIC AN ANALYSIS FOR CRYPTOGRAPHIC APPLICATION

2022 BOOK EDITOR

## 10. PROFILING OF QURANIC MAQAMAT USING AN ENHANCED AUDIO FEATURE EXTRACTION METHOD

QURANIC ACOUSTIC AN ANALYSIS FOR CRYPTOGRAPHIC APPLICATION

2022 CHAPTER IN BOOK CORRESPONDING AUTHOR

## 11. INTRODUCTION

QURANIC ACOUSTIC AN ANALYSIS FOR CRYPTOGRAPHIC APPLICATION

2022 CHAPTER IN BOOK MAIN AUTHOR

## 12. FAULT CRYPTANALYSIS ON ADVANCED ENCRYPTION STANDARD

QURANIC ACOUSTIC AN ANALYSIS FOR CRYPTOGRAPHIC APPLICATION

2022 CHAPTER IN BOOK CORRESPONDING AUTHOR

## 13. ESTABLISHING A CORRELATION BETWEEN ACOUSTICAL PROPERTIES IN MAQAMAT RECITATION AND MEANING OF SURAHS IN JUZ? AMMA USING AUDIO FEATURE EXTRACTION METHOD

QURANIC ACOUSTIC AN ANALYSIS FOR CRYPTOGRAPHIC APPLICATION

2022 CHAPTER IN BOOK CORRESPONDING AUTHOR

# PUBLICATION

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## 14. ESTABLISHING A CORRELATION BETWEEN ACOUSTICAL PROPERTIES IN MAQAMAT RECITATION AND MEANING OF SURAH JUZ' AMMA USING AUDIO FEATURE EXTRACTIO METHOD

QURANIC ACOUSTIC AN ANALYSIS FOR CRYPTOGRAPHIC APPLICATION

2022 CHAPTER IN BOOK CO-AUTHOR

## 15. CELSIUS TRACKER: A MOBILE APPLICATION TO EASE MOVEMENT CONTROL ORDER PROCEDURE DURING COVID-19 PANDEMIC

15TH INTERNATIONAL CONFERENCE ON OPEN SOURCE SYSTEMS AND TECHNOLOGIES (ICOSST)

2021 PROCEEDING NON-INDEX MAIN AUTHOR

## 16. A NEW METHOD TO ESTIMATE PEAK SIGNAL TO NOISE RATIO FOR LEAST SIGNIFICANT BIT MODIFICATION AUDIO STEGANOGRAPHY

INTERNATIONAL CONFERENCE ON RECENT ADVANCEMENTS OF SCIENCE AND TECHNOLOGY

2020 PROCEEDING NON-INDEX CO-AUTHOR

## 17. ON SELECTED ISSUES OF BOOLEAN FUNCTION APPLICATION IN SYMMETRIC KEY CRYPTOGRAPHY AGAINST SIDE CHANNEL ATTACKS

JOURNAL OF PHYSICS: CONFERENCE SERIES

2019 JOURNAL SCOPUS CO-AUTHOR

## 18. TASK MAPPING AND ROUTING OPTIMIZATION FOR HARD REAL-TIME NETWORKS-ON-CHIP

BULLETIN OF ELECTRICAL ENGINEERING AND INFORMATICS

2019 JOURNAL SCOPUS MAIN AUTHOR

## 19. SUBSTITUTION BOX DESIGN BASED FROM SYMMETRIC GROUP COMPOSITION

JOURNAL OF PHYSICS: CONFERENCE SERIES

2019 JOURNAL SCOPUS CO-AUTHOR

## 20. BALANCING THE TRADE-OFF BETWEEN CAPACITY AND IMPERCEPTIBILITY FOR LEAST SIGNIFICANT BIT AUDIO STEGANOGRAPHY METHOD: A NEW PARAMETER

2019 IEEE CONFERENCE ON APPLICATION, INFORMATION AND NETWORK SECURITY (AINS)

2019 PROCEEDING NON-INDEX CO-AUTHOR

## 21. OUTCOME-BASED EDUCATION FOR ENGINEERING PROGRAMME A CASE STUDY OF USIM

2019 BOOK CO-AUTHOR

## 22. HARD REAL-TIME EMBEDDED NOC DESIGN SPACE EXPLORATION

ADVANCES IN SUSTAINABLE LIVING ENGINEERING & BUILT ENVIRONMENT

2019 CHAPTER IN BOOK MAIN AUTHOR

## 23. A SYSTEMATIC REVIEW ON SEMANTIC-BASED ONTOLOGY FOR QURANIC KNOWLEDGE

INTERNATIONAL JOURNAL OF ENGINEERING AND TECHNOLOGY(UAE)

2018 JOURNAL SCOPUS CO-AUTHOR

## 24. FORMATIVE EVALUATION OF AN EDUCATIONAL MOBILE APPLICATION: AN INTERACTIVE MYQIRAAT APPLICATION

INTERNATIONAL JOURNAL OF ENGINEERING AND TECHNOLOGY(UAE)

2018 JOURNAL SCOPUS CO-AUTHOR

## 25. SIMULTANEOUS MULTI-OBJECTIVE OPTIMISATION FOR LOW-POWER REAL-TIME NETWORKS-ON-CHIP

4TH INTERNATIONAL CONFERENCE ON ELECTRICAL, ELECTRONICS AND SYSTEM ENGINEERING (ICEESE2018)

2018 PROCEEDING NON-INDEX MAIN AUTHOR

## 26. SIMULTANEOUS TASK MAPPING AND ROUTING OPTIMIZATION FOR SCHEDULING HARD REAL-TIME EMBEDDED NOCS

THE 4TH INTERNATIONAL CONFERENCE ON ELECTRONIC DESIGN (ICED 2018)

2018 PROCEEDING NON-INDEX MAIN AUTHOR

# PUBLICATION

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## 27. COMPACT U-SHAPED SLOTTED ANTENNA WITH CONDUCTOR-BACKED PLANE FOR ULTRA-WIDEBAND (UWB) APPLICATIONS

3RD INTERNATIONAL CONFERENCE ON ELECTRICAL, ELECTRONIC, COMMUNICATION AND CONTROL ENGINEERING (ICEECC 2018)

2018 PROCEEDING NON-INDEX CO-AUTHOR

## 28. THE DESIGN EVALUATION OF AN INTERACTIVE QIRAAT MOBILE APPLICATION

ADVANCED SCIENCE LETTERS

2017 JOURNAL SCOPUS CO-AUTHOR

## 29. CURRENT IMPLEMENTATION OF ADVANCE ENCRYPTION STANDARD (AES) S-BOX

JOURNAL OF FUNDAMENTAL AND APPLIED SCIENCES

2017 JOURNAL SCOPUS CO-AUTHOR

## 30. THE QURANIC PHILOSOPHY ON SUPERIORITY OF AUDIO SENSE AGAINST VISUAL SENSE BASED ON THE BOOK OF EXEGESIS AND SCIENCE REPORTS

ADVANCED SCIENCE LETTERS

2017 JOURNAL SCOPUS CO-AUTHOR

## 31. A SYSTEMATIC REVIEW ON SEMANTIC-BASED ONTOLOGY FOR QURANIC KNOWLEDGE

INTERNATIONAL CONFERENCE ON INFORMATION SYSTEMS & SECURITY (ICOISS)

2017 PROCEEDING NON-INDEX CO-AUTHOR

## 32. FORMATIVE EVALUATION OF AN EDUCATIONAL MOBILE APPLICATION: AN INTERACTIVE MYQIRAAT APPLICATION

INTERNATIONAL CONFERENCE ON INFORMATION SYSTEMS & SECURITY (ICOISS)

2017 PROCEEDING NON-INDEX CO-AUTHOR

## 33. THE DESIGN EVALUATION OF AN INTERACTIVE QIRAAT MOBILE APPLICATION

WORLD INTERNATIONAL CONFERENCE ON ISLAMIC SCIENCES (WICOIS)

2016 PROCEEDING NON-INDEX CO-AUTHOR

## 34. INDUSTRIAL TRAINING HANDBOOK FOR ENGINEERING PROGRAM

2016 BOOK MAIN AUTHOR

## 35. SIMULTANEOUS OPTIMISATION OF TASK MAPPING AND PRIORITY ASSIGNMENT FOR REAL-TIME EMBEDDED NOCS

23RD EUROMICRO INTERNATIONAL CONFERENCE ON PARALLEL, DISTRIBUTED AND NETWORK-BASED PROCESSING

2015 PROCEEDING NON-INDEX MAIN AUTHOR

## 36. A FUNCTION FOR HARD REAL-TIME SYSTEM SEARCH-BASED TASK MAPPING OPTIMISATION

REAL-TIME DISTRIBUTED COMPUTING (ISORC), 2015 IEEE 18TH INTERNATIONAL SYMPOSIUM ON

2015 PROCEEDING NON-INDEX MAIN AUTHOR

## 37. A CONSTRUCTIVE TASK MAPPING ALGORITHM FOR HARD REAL-TIME EMBEDDED NOCS

IEEE CONFERENCE ON SYSTEM, PROCESS & CONTROL (ICSPC2015)

2015 PROCEEDING NON-INDEX MAIN AUTHOR

## 38. INEXACT END-TO-END RESPONSE TIME ANALYSIS AS FITNESS FUNCTION IN SEARCH-BASED TASK ALLOCATION HEURISTICS FOR HARD REAL-TIME NETWORK-ON-CHIPS

9TH INTERNATIONAL SYMPOSIUM ON RECONFIGURABLE AND COMMUNICATION-CENTRIC SYSTEMS-ON-CHIP (RECOSEC)

2014 PROCEEDING NON-INDEX CO-AUTHOR

## 39. FINGER VEIN MINUTIAE POINTS EXTRACTION BASED ON MAXIMUM CURVATURE POINTS IN IMAGE PROFILE AND FINGER PRINT APPLICATION METHODS

AUSTRALIAN JOURNAL OF BASIC AND APPLIED SCIENCES

2013 JOURNAL WOS CO-AUTHOR

# PUBLICATION

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## 40. AN OPTIMISATION ALGORITHM FOR MINIMISING ENERGY DISSIPATION IN NOC-BASED HARD REAL-TIME EMBEDDED SYSTEMS

21ST INTERNATIONAL CONFERENCE ON REAL-TIME NETWORKS AND SYSTEMS

2013 PROCEEDING NON-INDEX MAIN AUTHOR

## 41. REAL-TIME LOW-POWER TASK MAPPING IN NETWORKS-ON-CHIP

IEEE COMPUTER SOCIETY ANNUAL SYMPOSIUM ON VLSI (ISVLSI)

2013 PROCEEDING NON-INDEX MAIN AUTHOR

## 42. COLOR IMAGE ENHANCEMENT USING CONTRAST STRETCHING ON A MOBILE DEVICE

INTERNATIONAL JOURNAL OF IMAGE PROCESSING AND VISUAL COMMUNICATION

2012 JOURNAL OTHER DATABASE CO-AUTHOR

## 43. THE IMPROVEMENT OF KEY MANAGEMENT BASED ON LOGICAL KEY HIERARCHY BY IMPLEMENTING DIFFIE HELLMAN ALGORITHM

JOURNAL OF EMERGING TRENDS IN COMPUTING AND INFORMATION SCIENCES

2012 JOURNAL OTHER DATABASE CO-AUTHOR

## 44. DESIGN OF IMPROVEMENT SECURE KEY MANAGEMENT IN MULTICAST COMMUNICATION

1ST AKEPT YOUNG RESEARCHERS CONFERENCE AND EXHIBITION

2011 PROCEEDING NON-INDEX CO-AUTHOR

## 45. A DESIGN OF GRID SUPPORTED SERVICES FOR MOBILE LEARNING SYSTEM

2ND INTERNATIONAL CONFERENCE ON COMPUTER RESEARCH AND DEVELOPMENT

2010 PROCEEDING NON-INDEX MAIN AUTHOR

## 46. EXPECTATION & EXPERIENCE OF ICT IN UNIVERSITY: A COMPARATIVE STUDY

18TH INTERNATIONAL CONFERENCE ON COMPUTERS IN EDUCATION

2010 PROCEEDING NON-INDEX MAIN AUTHOR

## 47. IMPROVING SOFTWARE MAINTENANCE PROCESS USING INTERRELATED SET FROM FOSS

3RD INTERNATIONAL CONFERENCE ON INFORMATICS AND TECHNOLOGY

2009 PROCEEDING NON-INDEX MAIN AUTHOR

# CONSULTATION

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## 1. INDKOM ENGINEERING ERP PROJECT

INDKOM ENGINEERING SDN. BHD.

2015

NATIONAL

# AWARDS/RECOGNITION

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## 1. ANUGERAH MAKALAH JURNAL TERBAIK FKAB 2025

2025 UNIVERSITY

## 2. ANUGERAH SUKAN DAN REKREASI

2024 UNIVERSITY

## 3. ANUGERAH BUKU ILMIAH TERBAIK

2024 UNIVERSITY

## 4. ANUGERAH PERKHIDMATAN SETIA

2024 UNIVERSITY

## 5. ANUGERAH BUKU ILMIAH TERBAIK

2024 UNIVERSITY

## 6. ANUGERAH STAF CONTOH DISEMBER 2023

2024 UNIVERSITY

## 7. SELF DIAGNOSIS ALGORITHMS: LEVERAGING MACHINE LEARNING FOR PERSONALIZED HEALTHCARE SOLUTIONS

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITY SILVER

## 8. ANUGERAH IKON SUKAN FKAB

2023 UNIVERSITY

## 9. A NEW CRYPTOGRAPHY ALGORITHM DERIVED FROM QURANIC MAQAMAT FOR PREVENTING DIFFERENTIAL FAULT ANALYSIS

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITY SILVER

## 10. A METHOD OF COVER AUDIO SELECTION FOR EMBEDDING BASED ON VARIOUS CRITERIA

International Conference on Advances in Machine Intelligence and Cybersecurity Technologies (AMICT)

2023 ANTARABANGSA BEST PAPER AWARD

## 11. UTILIZING MULTI-CHARACTERISTIC-BASED COVER AUDIO SELECTION (MCAS) FOR SECURE COMMUNICATION

FINAL YEAR PROJECT & POSTGRADUATE: RESEARCH & INNOVATION POSTER COMPETITION (RIPC) SERIES 2/2022

2022 UNIVERSITY BRONZE

## 12. SMART BI-CAR

NATIONAL INNOVATION AND INVENTION COMPETITION 2022 (NIICE 2022)

2022 KEBANGSAAN SILVER

## 13. SMART BI-CAR

INTEGRATED DESIGN PROJECT SHORT VIDEO COMPETITION 2022

2022 KEBANGSAAN SILVER

## 14. COVER-SELECTION-BASED AUDIO STEGANOGRAPHY (CAS) BASED ON LEAST SIGNIFICANT BIT (LSB) FOR BALANCED PERFORMANCE

INNOVATION BANK CHALLENGE (IBC 2022)

2022 UNIVERSITY GOLD

# AWARDS/RECOGNITION

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## 15. VISITING SCHOLAR

MOHE INTEL ELITE INTERNSHIP PROGRAM

2021 INTERNATIONAL

## 16. COVID-19 BODY TEMPERATURE TRACKER: A MOBILE APPLICATION TO EASE MOVEMENT CONTROL ORDER

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021 ANTARABANGSA BRONZE

## 17. CELSIUS TRACKER

INNOVATION BANK CHALLENGE (IBC 2021)

2021 UNIVERSITI BRONZE

## 18. PENCAPAIAN PRESTASI CEMERLANG TAHUN 2018

2019 UNIVERSITY

## 19. STUDY OF PERFORMANCES OF ANTENNA DESIGN FOR ULTRA-WIDEBAND APPLICATIONS

INVENTION, INNOVATION & DESIGN EXPOSITION 2019 (iidex2019)

2019 ANTARABANGSA BRONZE

## 20. ANUGERAH PERKHIDMATAN CEMERLANG 2017

2018 UNIVERSITY

## 21. PENCAPAIAN PRESTASI CEMERLANG TAHUN 2017

2018 UNIVERSITY

## 22. VISITING SCHOLAR

ABDUS SALAM INTERNATIONAL CENTRE FOR THEORETICAL PHYSICS (ICTP)

2018 INTERNATIONAL

## 23. STAF CONTOH SEPTEMBER 2017

2017 UNIVERSITY

## 24. THE K. M. STOTT PRIZE

2015 UNIVERSITY

## 25. MALAYSIAN GOVERNMENT SCHOLARSHIP AWARD

2011 NATIONAL

## 26. MALAYSIAN GOVERNMENT SCHOLARSHIP AWARD

2000 NATIONAL