

Profile Image

DR. KHAIRUL NABILAH BINTI ZAINUL ARIFFIN

PENSYARAH UNIVERSITI DS13

CONTACT

Phone: 8783

E-mail:

nabilahzainul@usim.edu.my

Faculty: Fakulti Kejuruteraan
Dan Alam Bina

SUPERVISION

PhD - Completed: 0, Ongoing: 0

Master - Completed: 0, Ongoing: 2

AREAS OF EXPERTISE

Other Electircal And Electronic Engineering

ACADEMIC QUALIFICATION

PhD in Kejuruteraan Elektrik Dan Elektronik (2019)

Master in Kejuruteraan Elektronik (sistem Telekomunikasi)
(2013)

Bachelor in Kejuruteraan Elektronik (kejuruteraan Komputer)
(2012)

Diploma in Kejuruteraan Elektronik (2009)

RESEARCH

1. SMART AQUAGUARD: IOT-POWERED WATER QUALITY MONITORING FOR SUSTAINABLE AQUATIC MANAGEMENT

2025 GERAN KPT ON GOING MAIN RESEARCHER

2. MODELLING OF SILICON CARBIDE (SiC) SCHOTTKY BARRIER DIODE FOR HIGH-TEMPERATURE TERAHERTZ APPLICATIONS

2024 GERAN KPT ON GOING MAIN RESEARCHER

3. SALAH CHAIR

2023 GERAN PENYELIDIKAN LAB2MARKET ON GOING CO-
RESEARCHER

4. DEVELOPMENT OF UPPER LIMB EXOSKELETON SYSTEM

2023 GERAN PEMBANGUNAN INOVASI (GPI) ON GOING CO-
RESEARCHER

5. DEVELOPMENT OF MOBILE APPLICATION FOR "EDUCATIONAL GAMES FOR KIDS WITH LEARNING DISABILITIES: KID WONDERS - KINDERS"

2022 GERAN PENYELIDIKAN AGENSI KERAJAAN COMPLETED MAIN
RESEARCHER

RESEARCH

6. RESOURCE MANAGEMENT OPTIMIZATION IN 6G NETWORK FOR SMART GRID COMMUNICATIONS USING DEEP LEARNING

2022 GERAN PENYELIDIKAN USIM ON GOING CO-RESEARCHER

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

2022 GERAN PENYELIDIKAN AGENSI KERAJAAN COMPLETED CO-RESEARCHER

8. DEVELOPMENT OF LASER ILLUMINATION WARNING SYSTEM BASED ON LASER PHOTODIODE AND DETECTION TECHNOLOGY

2022 GERAN PENYELIDIKAN INDUSTRI COMPLETED CO-RESEARCHER

9. DEVELOPMENT OF INTELLIGENT WATER QUALITY MONITORING SYSTEM FOR AGRICULTURE SECTOR IN MALAYSIA

2022 GERAN SEPADAN AGENSI KERAJAAN ON GOING CO-RESEARCHER

10. FORMULATING A METHOD TO DETECT CONTAMINANT IN WATER BASED ON LIGHT PROPAGATION THEORY FOR CONSERVING NATURAL WATER RESOURCES

2021 GERAN KPT ON GOING CO-RESEARCHER

11. AUTOMATIC DISINFECTION CHAMBER

2020 GERAN PENYELIDIKAN COVID-19 COMPLETED CO-RESEARCHER

12. STUDY OF RAINFALL EFFECT TO OPTIMIZE POWER LINES PERFORMANCE

2020 GERAN PENYELIDIKAN USIM RACER COMPLETED CO-RESEARCHER

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

2020 GERAN PENYELIDIKAN USIM RACER COMPLETED CO-RESEARCHER

14. MODELLING OF QUANTUM BASED TUNNEL DIODE FOR THZ MEDICAL IMAGING

2019 GERAN PENYELIDIKAN USIM COMPLETED MAIN RESEARCHER

15. SURVIVORS IDENTIFICATION AND LOCALIZATION FOR SAR ROBOTICS SYSTEM USING MACHINE LEARNING

2019 GERAN SEPADAN AGENSI KERAJAAN COMPLETED CO-RESEARCHER

PUBLICATION

1. PERFORMANCE EVALUATION OF NATURAL ESTER OILS AS SUSTAINABLE DIELECTRIC FLUIDS FOR TRANSFORMERS: AI ENHANCED STATISTICAL ANALYSIS

IEEE TRANSACTIONS ON DIELECTRICS AND ELECTRICAL INSULATION

2024 JOURNAL ERA CO-AUTHOR

2. A COMSOL MULTIPHYSICS FOR POLY (VINYL-ALCOHOL) PVA HYDROGEL EFFECT ON PHOTOVOLTAIC SOLAR CELL BY USING HEAT TRANSFER MODULE

2024 IEEE INTERNATIONAL CONFERENCE ON APPLIED ELECTRONICS AND ENGINEERING (ICAEE)

2024 PROCEEDING SCOPUS MAIN AUTHOR

3. AUTONOMOUS MOBILE TROLLEY ROBOT (AMTRO): INT-CART

2024 POSTGRADUATE AND INDUSTRY RESEARCH COLLOQUIUM (PIRC)

2024 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

4. SURFACE PLASMON RESONANCE BASED PCF SENSOR FOR DOM DETECTION

2024 IEEE INTERNATIONAL CONFERENCE ON APPLIED ELECTRONICS AND ENGINEERING

2024 PROCEEDING NON-INDEX MAIN AUTHOR

5. PALM OIL AS A TRANSFORMER INSULATING FLUID: A REVIEW

2024 POSTGRADUATE AND INDUSTRY RESEARCH COLLOQUIUM (PIRC)

2024 PROCEEDING NON-INDEX CO-AUTHOR

6. TORQUE ASSESSMENT FOR LOW VOLTAGE AERIAL BUNDLE CABLE (ABC) INSULATED PIERCING CONNECTOR (IPC) USING AI ANALYSIS

2024 IEEE INTERNATIONAL CONFERENCE ON APPLIED ELECTRONICS AND ENGINEERING

2024 PROCEEDING SCOPUS CO-AUTHOR

7. SINGLE MODE FIBER BASED SPR SENSOR FOR THE DETECTION OF AIR CONTAMINANTS

SEMINAR ANTARABANGSA ISLAM DAN SAINS 2024

2024 PROCEEDING OTHER DATABASE MAIN AUTHOR

8. DETECTION OF CONTAMINATION IN WATER USING SPECTROSCOPY.

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024 CHAPTER IN BOOK CO-AUTHOR

9. REDESIGNING THE LASER WARNING SYSTEM FOR MILITARY APPLICATIONS

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024 CHAPTER IN BOOK CORRESPONDING AUTHOR

10. A5/1 STREAM CIPHER IN GLOBAL SYSTEM FOR MOBILE (GSM) (EMPIRICAL PERSPECTIVES)

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024 CHAPTER IN BOOK CO-AUTHOR

11. MODELLING BACKSCATTERED LIGHT IN FIBRE OPTIC BASED ON LIGHT PROPAGATION

ASM SCIENCE JOURNAL

2023 JOURNAL SCOPUS CO-AUTHOR

12. IOT BASED INDOOR AIR AND WATER QUALITY MONITORING SYSTEM USING NODE-RED

9TH INTERNATIONAL CONFERENCE ON COMPUTER AND COMMUNICATION ENGINEERING (ICCCE 2023)

2023 PROCEEDING SCOPUS MAIN AUTHOR

13. ADVANCEMENTS IN MONITORING WATER QUALITY BASED ON VARIOUS SENSING METHODS: A SYSTEMATIC REVIEW

INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH

2022 JOURNAL ERA CO-AUTHOR

PUBLICATION

14. SMART AUTOMATIC COOLING SYSTEM WITH REDUCED HUMIDITY EFFECT FOR PET HOUSE DURING COVID-19 CRISIS

ASM SCIENCE JOURNAL

2022 JOURNAL SCOPUS CO-AUTHOR

15. AN ILLEGAL DUMPING DETECTION SYSTEM BASED ON IMAGE PROCESSING IN OPENALPR

ASM SCIENCE JOURNAL

2021 JOURNAL SCOPUS CO-AUTHOR

16. DELAY-AWARE 5G MILLIMETER-WAVE CELLULAR NETWORKS

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2021

2021 PROCEEDING NON-INDEX CO-AUTHOR

17. BLUEPRINT KELESTARIAN USIM: MENYEMARAKKAN KAMPUS BARAKAH

2021 BOOK CO-AUTHOR

18. ANALYSIS OF CURRENT-VOLTAGE CHARACTERISTICS ASSOCIATED TO THE QUANTUM STRUCTURE OF ASYMMETRIC SPACER LAYER TUNNEL DIODE (ASPAT): A PROMISING TERAHERTZ DEVICES

ADVANCE IN SUSTAINABLE LIVING: ENGINEERING & TECHNOLOGY

2021 CHAPTER IN BOOK CORRESPONDING AUTHOR

19. ENERGY EFFICIENT DEVICE-TO-DEVICE COMMUNICATIONS UNDERLAYING CELLULAR NETWORKS FOR SMART GRID NEIGHBOURHOOD AREA NETWORKS

ADVANCE IN SUSTAINABLE LIVING: ENGINEERING & TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

20. IMPROVING ELECTRO-THERMAL CALCULATION OF OVERHEAD LINES CONDUCTORS FOR MORE ON-GRID RENEWABLE ENERGY RESOURCES

ADVANCE IN SUSTAINABLE LIVING: ENGINEERING & TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

21. EFFECT OF THE DOPING CONCENTRATION AND JUNCTION DEPTH ON THE PERFORMANCE OF SOLAR CELLS

ADVANCE IN SUSTAINABLE LIVING: ENGINEERING & TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

22. EMOTION DETECTION BASED ON AUDIO/VOICE SIGNAL FOR AUTISM SPECTRUM DISORDER (ASD) USING CORRELATION METHOD

ADVANCE IN SUSTAINABLE LIVING: ENGINEERING & TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

23. RADIO OVER FIBRE FREE SPACE OPTICS (ROFSO) SYSTEM

ADVANCE IN SUSTAINABLE LIVING: ENGINEERING & TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

24. EFFECT OF THE SLOT SHAPE AND GROUND PLANE ON THE MICROSTRIP PATCH ANTENNA PERFORMANCE

ADVANCE IN SUSTAINABLE LIVING: ENGINEERING & TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

25. DESIGN OF A LOW-COST AUTOMATIC DISINFECTION CHAMBER

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2020

2020 PROCEEDING NON-INDEX CO-AUTHOR

26. IMPACT OF IDEALITY FACTOR AND SEMICONDUCTING MATERIAL ON PV MODULE PERFORMANCES

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2020

2020 PROCEEDING NON-INDEX CO-AUTHOR

PUBLICATION

27. PERFORMANCE OF ROFSO OFDM SYSTEM UNDER MALAYSIA CLIMATIC CONDITION FOR WIRELESS COMMUNICATION

KOLOKIUIM SISWAZAH FAKULTI SAINS DAN TEKNOLOGI 2020 (KOSIST 2020)

2020 PROCEEDING NON-INDEX CO-AUTHOR

28. DC ANALYSIS OF GAAS/ALAS SINGLE BARRIER ASYMMETRIC SPACER TUNNEL DIODE

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2020

2020 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

29. DRIVER BEHAVIOUR MONITORING AND ALERT SYSTEM BY USING MACHINE LEARNING

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2020

2020 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

30. NON-EQUILIBRIUM GREENS FUNCTION ON GAAS/ALAS DOUBLE BARRIER QUANTUM WELLS RESONANT TUNNELLING DIODE (RTD)

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2019

2019 PROCEEDING NON-INDEX MAIN AUTHOR

31. FINITE ELEMENT MODELING OF OVERHEAD LINE THERMAL RATING METHOD

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2019

2019 PROCEEDING NON-INDEX CO-AUTHOR

32. PERFORMANCE ANALYSIS OF SISO AND MIMO FSO COMMUNICATION UNDER MALAYSIA WEATHER CONDITION BY EMPLOYING OPTISYTEM

INTERNATIONAL SEMINAR ON ISLAM AND SCIENCE (SAIS) 2019

2019 PROCEEDING NON-INDEX CO-AUTHOR

CONSULTATION

1. Penggubal Soalan Basic Engineering 2

Kementerian Pendidikan Malaysia



2. Pentaksir Soalan Basic Engineering 1

Kementerian Pendidikan Malaysia



3. Pentaksir Soalan Electrical and Electronic Engineering 2

Kementerian Pendidikan Malaysia



4. Panel Penasihat Industri (Universiti Awam)

Universiti Teknikal Malaysia Melaka (UTeM)



AWARDS/RECOGNITION

1. MUSOLLI COMPANION

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITY BRONZE

2. CONCEPTUAL MODEL FOR A PORTABLE WRIST AND HAND REHABILITATION SYSTEM FOR STROKE PATIENTS

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITY SILVER

3. INT-CART: INTELLIGENT SHOPPING CART ROBOT

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITY GOLD

4. EMPLOYEE OF THE MONTH (JUN 2023)

2023 UNIVERSITY

5. ACADEMIC ADVISOR

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2023 NATIONAL

6. ACADEMIC ADVISOR

KEMENTERIAN PENDIDIKAN MALAYSIA (KPM)

2023 NATIONAL

7. ACADEMIC ADVISOR

KEMENTERIAN PENDIDIKAN MALAYSIA (KPM)

2023 NATIONAL

8. ACADEMIC ADVISOR

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2023 NATIONAL

9. CONCEPTUAL MODELLING FOR RECYCLING CO2 EMISSION WITH FLEXIBLE THIN FILM SOLAR

SCIENCE AND TECHNOLOGY RESERACH EXPO (SCITEX@20TH FST)

2023 UNIVERSITY BRONZE

10. ULTRASONIC TOMOGRAPHY TECHNIQUE FOR DETECTING FOREIGN OBJECTS BELOW 1 MILIMETRE IN MILK PACKAGING

Pertandingan Inovasi Halal Nasional 2023 (PIHAN'23)

2023 KEBANGSAAN GOLD

11. ACADEMIC ADVISOR

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2022 NATIONAL

12. ACADEMIC ADVISOR

PIALA INOVASI, PIALA MENTERI PENGAJIAN TINGGI 2022

2022 NATIONAL

13. SMART PARCEL DROP BOX

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRIIN 2022)

2022 ANTARABANGSA SILVER

14. IOT- BASED BATTERY MONITORING SYSTEM

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRIIN 2022)

2022 ANTARABANGSA SILVER

AWARDS/RECOGNITION

15. E-PROSUMER: SMART PRECISION FERTIGATION SYSTEM

Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA22)

2022

ANTARABANGSA

SILVER

16. RUBBER TREE TRUNK HUMIDITY INSPECTOR

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRIIN 2022)

2022

ANTARABANGSA

SILVER

17. IOT-BASED BATTERY MONITORING SYSTEM

PERTANDINGAN HASIL PERTANIAN INDUSTRI ASAS TANI DAN INOVASI

2022

UNIVERSITI

CERTIFICATE OF APPRECIATION

18. ANUGERAH E-PEMBELAJARAN USIM (PENSYARAH AKTIF)

2021

UNIVERSITY

19. EMPLOYEE OF THE MONTH (JANUARY 2021)

2021

UNIVERSITY

20. ANUGERAH PERKHIDMATAN CEMERLANG (APC)

2021

UNIVERSITY

21. WATER QUALITY DETECTION USING SMART DECISION

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021

ANTARABANGSA

SILVER

22. SMART WATER TURBIDITY SYSTEM

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021

ANTARABANGSA

GOLD

23. PICK SEPARATE THROW (PST)

GREEN SULAM COMPETITION 2021

2021

KEBANGSAAN

GOLD

24. CAP6-ARSIS (AGROBOT)

GREEN SULAM COMPETITION 2021

2021

KEBANGSAAN

BRONZE

25. CAP5-AQUA HYGIENE ROBOTICS

GREEN SULAM COMPETITION 2021

2021

KEBANGSAAN

SILVER

26. SMART VILLAGE

GREEN SULAM COMPETITION 2021

2021

KEBANGSAAN

CERTIFICATE OF APPRECIATION

27. E-PROSUMER: SMART PRECISION FERTIGATION SYSTEM

KARNIVAL INOVASI UTeMEX 2021 VIRTUAL

2021

KEBANGSAAN

SILVER

28. SMART VILLAGE A CONCEPT

KARNIVAL INOVASI UTeMEX 2021 VIRTUAL

2021

KEBANGSAAN

PLATINUM

AWARDS/RECOGNITION

29. GREEN GIVER FOR CLEAN ENVIRONMENT (GG FORCE): A CONCEPT

KARNIVAL INOVASI UTeMEX 2021 VIRTUAL

2021

KEBANGSAAN

BRONZE

30. SMART PRECISION FERTIGATION SYSTEM

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021

ANTARABANGSA

GOLD

31. SMART VILLAGE

PERTANDINGAN REKACIPTA INOVASI NASIONAL (PRIN) 2021

2021

ANTARABANGSA

GOLD

32. E-PROSUMER: SMART PRECISION FERTIGATION SYSTEM

INTERNATIONAL VIRTUAL EXPO OF INNOVATION PRODUCT AND SYSTEM DESIGN (In-VIDE) 2021

2021

ANTARABANGSA

SILVER

33. LAMAN PROSUMER CONTROL SYSTEM

GREEN SULAM COMPETITION 2021

2021

KEBANGSAAN

SILVER

34. SMART VILLAGE; A CONCEPT

KARNIVAL INOVASI UTeMEX 2021 VIRTUAL

2021

KEBANGSAAN

GOLD

35. ACADEMIC ADVISOR

KEMENTERIAN PENDIDIKAN MALAYSIA (KPM)

2020

NATIONAL

36. ACADEMIC ADVISOR

KEMENTERIAN PENDIDIKAN MALAYSIA (KPM)

2020

NATIONAL

37. ACADEMIC ADVISOR

UNIVERSITI TEKNIKAL MALAYSIA MELAKA

2020

NATIONAL

38. EMPLOYEE OF THE MONTH (OCTOBER 2019)

2019

OTHERS