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Faculty: Fakulti
Kejuruteraan Dan Alam
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SUPERVISION

PhD - Completed: 0, Ongoing: 1

Master - Completed: 1,
Ongoing: 0

AREAS OF EXPERTISE

Other Communication Engineering N.e.c

Radio Frequency And Wireless Systems

Artificial Intelligence And Optimisation Methods

ACADEMIC QUALIFICATION

PhD in Electronics And Electrical Engineering (2019)

Master in Electrical - Electronics And Telecommunications
(2014)

Bachelor in Communication Engineering (2012)

RESEARCH

1. INTELLIGENT RNN-PID CONTROL OF A SELF-BALANCING WHEELCHAIR FOR MOBILITY ASSISTANCE

2026 GERAN PENYELIDIKAN FUNDAMENTAL ON GOING CO-RESEARCHER

2. QUANTUM-INSPIRED RESOURCE ALLOCATION FOR UAV-ASSISTED 6G NETWORKS

2026 GERAN PENYELIDIKAN FUNDAMENTAL ON GOING MAIN RESEARCHER

3. DEVELOPING A FUNDAMENTAL FRAMEWORK FOR AI-BASED TRANSFORMER FAULT DIAGNOSIS USING DISSOLVED GAS ANALYSIS

2026 GERAN PENYELIDIKAN FUNDAMENTAL ON GOING CO-RESEARCHER

4. FARMNET: DECENTRALIZED MONITORING AND CONTROL SYSTEM FOR POULTRY FARM MANAGEMENT

2026 GERAN ANTARABANGSA ON GOING MAIN RESEARCHER

5. PROTOTYPE DEVELOPMENT OF A REAL-TIME UAV-BASED DEEP LEARNING SYSTEM FOR AUTOMATED DURIAN DETECTION AND YIELD MONITORING

2025 GERAN PEMBANGUNAN INOVASI (GPI) ON GOING CO-RESEARCHER

RESEARCH

6. GOLD AUTHENTICATION SYSTEM

2025 GERAN PENYELIDIKAN INDUSTRI ON GOING CO-RESEARCHER

7. A NOVEL WATER QUALITY ANOMALIES SENSING AND FORECASTING METHOD USING TIME SERIES REGRESSION FOREST (TSRF) FOR SUSTAINABLE MODERN AGRICULTURE.

2024 GERAN KPT ON GOING CO-RESEARCHER

8. TAARIQ: DESIGN AND DEVELOPMENT OF AN AI-BASED HUMANOID ROBOT

2023 GERAN PENYELIDIKAN KHAS ON GOING CO-RESEARCHER

9. DEVELOPMENT AND APPLICATION OF LSTM AND GRU METHODS TO RECOGNIZE HAND MOVEMENTS, POSE AND FACE BASED ON REAL-TIME INTERPRETATION OF INDONESIAN - MALAYSIA SIGN LANGUAGE

2023 GERAN ANTARABANGSA ON GOING CO-RESEARCHER

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

2022 GERAN PENYELIDIKAN USIM ON GOING MAIN RESEARCHER

11. TAARIQ: AUTONOMOUS PERSON-FOLLOWING TELEPRESENCE ROBOT USING STEREO CAMERA AND DEEP LEARNING YOLO

2022 GERAN PENYELIDIKAN USIM ON GOING CO-RESEARCHER

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

2022 GERAN PENYELIDIKAN AGENSI KERAJAAN COMPLETED CO-RESEARCHER

13. INVARIANT KALMAN FILTERING FOR LOW-COST PEDESTRIAN NAVIGATION SYSTEM

2021 GERAN PENYELIDIKAN USIM ON GOING CO-RESEARCHER

14. AUTONOMOUS HUMAN DETECTION AND LOCALIZATION USING MACHINE LEARNING

2021 GERAN KPT (KKP) COMPLETED CO-RESEARCHER

15. MOBILITY AND HANDOVER OPTIMIZATION FOR DEEP LEARNING ASSISTED ULTRA-DENSE 6G HETEROGENEOUS NETWORKS

2021 GERAN KPT ON GOING CO-RESEARCHER

PUBLICATION

1. ENERGY EFFICIENT POWER CONTROL IN 6G NETWORKS FOR SMART GRID WIDE AREA NETWORK USING DEEP REINFORCEMENT LEARNING

2025 10TH INTERNATIONAL CONFERENCE ON COMPUTER AND COMMUNICATION ENGINEERING (ICCCCE)

2025 PROCEEDING NON-INDEX CO-AUTHOR

2. 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

3. DELAY OPTIMIZATION OF WI-FI MESH IN NEIGHBOURHOOD AREA NETWORK USING DEEP REINFORCEMENT LEARNING

2024 IEEE INTERNATIONAL CONFERENCE ON ADVANCED TELECOMMUNICATION AND NETWORKING TECHNOLOGIES (ATNT)

2024 PROCEEDING SCOPUS CORRESPONDING AUTHOR

4. ENERGY EFFICIENCY OPTIMIZATION IN HETNETS FOR SMART GRID WIDE AREA NETWORK USING DEEP REINFORCEMENT LEARNING

2024 IEEE INTERNATIONAL CONFERENCE ON ADVANCED TELECOMMUNICATION AND NETWORKING TECHNOLOGIES (ATNT)

2024 PROCEEDING SCOPUS CORRESPONDING AUTHOR

5. HANDOVER PERFORMANCE OF MOBILITY ROBUSTNESS OPTIMIZATION FOR BEYOND 5G NETWORKS

2024 IEEE 14TH SYMPOSIUM ON COMPUTER APPLICATIONS & INDUSTRIAL ELECTRONICS

2024 PROCEEDING SCOPUS CO-AUTHOR

6. OPTIMIZATIONS OF IOT-EDGE COMPUTING IN SMART GRID WIDE AREA NETWORK.

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024 CHAPTER IN BOOK MAIN AUTHOR

7. HANDOVER PARAMETER FOR SELF-OPTIMISATION IN 6G MOBILE NETWORKS: A SURVEY

AEJ - ALEXANDRIA ENGINEERING JOURNAL

2023 JOURNAL SCOPUS CO-AUTHOR

8. DURIAN DETECTION AND COUNTING SYSTEM USING DEEP LEARNING

JOURNAL OF ENGINEERING SCIENCE AND TECHNOLOGY

2023 JOURNAL ERA MAIN AUTHOR

9. SIMULATION STUDY OF ULTRASONIC TOMOGRAPHY APPROACH IN DETECTING FOREIGN OBJECT IN MILK PACKAGING

JOURNAL OF TOMOGRAPHY SYSTEM & SENSORS APPLICATION

2023 JOURNAL OTHER DATABASE MAIN AUTHOR

10. ENERGY EFFICIENCY OF IOT-EDGE COMPUTING IN SMART GRID USING DEEP REINFORCEMENT LEARNING

2023 IEEE INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE IN ENGINEERING AND TECHNOLOGY (IICAET)

2023 PROCEEDING WOS CORRESPONDING AUTHOR

11. DELAY OPTIMIZATION OF IOT-EDGE COMPUTING IN SMART GRID USING DEEP REINFORCEMENT LEARNING

2023 IEEE INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE IN ENGINEERING AND TECHNOLOGY (IICAET)

2023 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

12. TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 BOOK CO-EDITOR

13. THE SMART GRASS-CUTTING ROBOT WITH UPCYCLING SOLAR MODULE

TECHNOLOGIES IN SCIENCE AND ENGINEERING: A MULTIDISCIPLINARY APPROACH

2023 CHAPTER IN BOOK CO-AUTHOR

PUBLICATION

14. CONTROL SYSTEM IN FLUID DIFFERENTIATION AND NATURAL GAS COMPRESSOR SECTORS

TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 CHAPTER IN BOOK CO-AUTHOR

15. ENERGY EFFICIENCY MILLIMETER-WAVE COMMUNICATIONS FOR FLOATING PHOTOVOLTAIC IN SMART GRID

TECHNOLOGIES IN SCIENCE AND ENGINEERING

2023 CHAPTER IN BOOK MAIN AUTHOR

16. ENERGY EFFICIENT SCHEDULING IN SMART HOME USING DEEP REINFORCEMENT LEARNING

2022 IEEE INTERNATIONAL CONFERENCE ON ARTIFICIAL INTELLIGENCE IN ENGINEERING AND TECHNOLOGY (IICAET)

2022 PROCEEDING SCOPUS MAIN AUTHOR

17. RESOURCE ALLOCATION SCHEDULING FOR DELAY OPTIMIZATION IN 6G TERAHERTZ COMMUNICATION USING DEEP REINFORCEMENT LEARNING

SEMINAR ANTARABANGSA ISLAM DAN SAINS 2022

2022 PROCEEDING NON-INDEX MAIN AUTHOR

18. RUBY STONE LIGHT GRADE INSPECTION SYSTEM USING CCD LINEAR SENSOR ? A REVIEW

JOURNAL OF PHYSICS: CONFERENCE SERIES

2022 PROCEEDING NON-INDEX CO-AUTHOR

19. TOMOGRAPHY SYSTEM TOWARDS THE INDUSTRIAL REVOLUTION 4.0

JOURNAL OF TOMOGRAPHY SYSTEM & SENSORS APPLICATION

2021 JOURNAL OTHER DATABASE CO-AUTHOR

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

ASM SCIENCE JOURNAL

2021 JOURNAL SCOPUS CO-AUTHOR

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

SEMINAR ANTARABANGSA ISLAM DAN SAINS 2021 (SAIS 2021)

2021 PROCEEDING NON-INDEX CO-AUTHOR

22. UTILITY FUNCTION BASED RESOURCE BLOCK SCHEDULING IN WIRELESS NETWORKS

2021 26TH IEEE ASIA-PACIFIC CONFERENCE ON COMMUNICATIONS (APCC)

2021 PROCEEDING NON-INDEX CO-AUTHOR

23. VIDEO TRANSMISSION IN IEEE 802.15.4 WIRELESS SENSOR NETWORK USING ASYNCHRONOUS TDMA

2021 INTERNATIONAL CONFERENCE ON SOFTWARE ENGINEERING & COMPUTER SYSTEMS AND 4TH INTERNATIONAL CONFERENCE ON COMPUTATIONAL SCIENCE AND INFORMATION MANAGEMENT (ICSECS-ICOCSIM)

2021 PROCEEDING NON-INDEX CO-AUTHOR

24. ADVANCES IN SUSTAINABLE LIVING - ENGINEERING AND TECHNOLOGY

2021 BOOK CO-EDITOR

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

ADVANCES IN SUSTAINABLE LIVING: ENGINEERING AND TECHNOLOGY

2021 CHAPTER IN BOOK MAIN AUTHOR

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

ADVANCES IN SUSTAINABLE LIVING: ENGINEERING AND TECHNOLOGY

2021 CHAPTER IN BOOK CO-AUTHOR

PUBLICATION

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

SEMINAR ANTARABANGSA ISLAM DAN SAINS (SAIS 2020)

2020 PROCEEDING NON-INDEX CO-AUTHOR

28. DELAY-AWARE ENERGY-EFFICIENT JOINT POWER CONTROL AND MODE SELECTION IN DEVICE-TO-DEVICE COMMUNICATIONS FOR FREEDM SYSTEMS IN SMART GRIDS

IEEE ACCESS

2019 JOURNAL ISI MAIN AUTHOR

29. CHANNEL ACCESS AND POWER CONTROL FOR ENERGY- EFFICIENT DELAY-AWARE HETEROGENEOUS CELLULAR NETWORKS FOR SMART GRID COMMUNICATIONS USING DEEP REINFORCEMENT LEARNING

IEEE ACCESS

2019 JOURNAL SCOPUS MAIN AUTHOR

30. JOINT RESOURCE ALLOCATION AND POWER CONTROL IN HETEROGENEOUS CELLULAR NETWORKS FOR SMART GRIDS

IEEE GLOBECOM 2018

2018 PROCEEDING NON-INDEX MAIN AUTHOR

31. DELAY-OPTIMAL RELAY SELECTION IN DEVICE-TO-DEVICE COMMUNICATIONS FOR SMART GRID

2017 IEEE INTERNATIONAL CONFERENCE ON SMART GRID COMMUNICATIONS (SMARTGRIDCOMM)

2017 PROCEEDING NON-INDEX MAIN AUTHOR

AWARDS/RECOGNITION

1. STAF CONTOH MEI 2025

2025 UNIVERSITY

2. STRESS MONITOR CHICKEN: TEMPERATURE ALERT SYSTEM

INTERNATIONAL FUTURE INNOVATORS CHALLENGE 2025 (IFIC 2025)

2025 ANTARABANGSA SILVER

3. REBAN PINTAR ? THE AUTONOMOUS AND SUSTAINABLE SMART CHICKEN COOP SYSTEM

INTERNATIONAL FUTURE INNOVATORS CHALLENGE 2025 (IFIC 2025)

2025 ANTARABANGSA SILVER

4. EV?KAPCAI

FUTURISTIC DESIGN VEHICLE COMPETITION

2025 KEBANGSAAN GOLD

5. STAFF CONTOH BULANAN

2024 UNIVERSITY

6. ANUGERAH E-PEMBELAJARAN

2024 UNIVERSITY

7. ACADEMIC ADVISOR

AI SINGAPORE

2024 INTERNATIONAL

8. ANUGERAH KARYA SUNTINGAN TERBAIK

2023 NATIONAL

9. DELAY AND ENERGY EFFICIENCY OF IOT-EDGE COMPUTING IN SMART GRID WAN

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITI SILVER

10. STAF CONTOH BULANAN

2022 UNIVERSITY

11. SMART PARCEL DROP BOX

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRIIN 2022)

2022 ANTARABANGSA SILVER

12. E-PROSUMER: SMART PRECISION FERTIGATION SYSTEM

Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA22)

2022 ANTARABANGSA SILVER