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MOKHZAINI BIN
AZIZAN

PENSYARAH UNIVERSITI DS14

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FACULTY
Fakulti Kejuruteraan Dan Alam Bina

SUPERVISION

PhD	2 COMPLETED	0 ONGOING
Master	0 COMPLETED	1 ONGOING

AREAS OF EXPERTISE

- Power Quality
- Energy Efficiency
- Artificial Intelligence And Optimisation Methods

ACADEMIC QUALIFICATION

- 2013 PhD - Kejuruteraan Elektrik Dan Elektronik
- 2009 Master - Kejuruteraan Elektrik Dan Elektronik
- 2006 Bachelor - Kejuruteraan (kuasa Industri)

RESEARCH

1. INVESTIGATION OF THE IMPACT OF CORROSIVE SULFUR ON THE DIELECTRIC PERFORMANCE OF SUSTAINABLE ESTER-BASED TRANSFORMER OILS

2026

GERAN PENYELIDIKAN FUNDAMENTAL

ON GOING

CO-RESEARCHER
2. ADVANCING BATTERY MONITORING SYSTEM WITH STATE-OF-HEALTH METRIC AT JAYALAX RESOURCES

2025

GERAN KPT

ON GOING

CO-RESEARCHER
3. INTEGRATING BATTERY MONITORING SYSTEM WITH THE STATE-OF-HEALTH METRIC AT JAYALAX RESOURCES

2025

GERAN PENYELIDIKAN INDUSTRI

ON GOING

CO-RESEARCHER
4. QURANIC SIGN LANGUAGE DETECTION SYSTEM USING LSTM NEURAL NETWORK

2024

GERAN PENYELIDIKAN USIM

ON GOING

CO-RESEARCHER
5. FORMULATING THE ISLAMIC ENERGY GARDEN (IEG) FRAMEWORK FOR SUSTAINABLE LIVING IN MALAYSIAN CAMPUSES BASED ON MAQASID SHARIAH.

2024

GERAN PENYELIDIKAN USIM

ON GOING

CO-RESEARCHER

RESEARCH

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

2023

GERAN PENYELIDIKAN KHAS

ON GOING

CO-RESEARCHER

7. DEVELOPMENT OF DATA BASED ENERGY EFFICIENCY MANAGEMENT SYSTEM AT KAMPUS BAROKAH USIM FOR COST EFFECTIVE PRACTISE USING PREDICTIVE AND MACHINE LEARNING CAPABILITY

2022

GERAN PENYELIDIKAN USIM

ON GOING

MAIN RESEARCHER

8. BATTERY MONITORING SYSTEM FOR GENERATOR SETS

2022

GERAN PENYELIDIKAN AGENSI KERAJAAN

COMPLETED

CO-RESEARCHER

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

2022

GERAN PENYELIDIKAN AGENSI KERAJAAN

COMPLETED

CO-RESEARCHER

10. CORROSION-IMPACT MODELLING FOR IMPACT PERFORMANCE INDEX FORMULATION ON OVERHEAD CONDUCTORS

2022

GERAN KPT

ON GOING

CO-RESEARCHER

11. SOLAR GREEN FACADE AND IOT - BASED SYSTEM FOR INDOOR AIR QUALITY TOWARDS A SUSTAINABLE LIFE OF 'SAKINAH'

2021

GERAN PENYELIDIKAN FLAGSHIP

ON GOING

CO-RESEARCHER

PUBLICATION

1. THERMAL CHARACTERISTICS OF TRAPEZOIDAL OVERHEAD CONDUCTORS EXPOSED TO GALVANIC CORROSION

JOURNAL OF ADVANCED RESEARCH IN FLUID MECHANICS AND THERMAL SCIENCES

2025

JOURNAL

OTHER DATABASE

CORRESPONDING AUTHOR

2. EVALUATION OF SURGE PROTECTIVE DEVICES (SPD) ON PHOTOVOLTAIC (PV) SYSTEM INSTALLATIONS: MITIGATING THE IMPACT OF LIGHTNING STRIKES

2025 IEEE 5TH INTERNATIONAL CONFERENCE IN POWER ENGINEERING APPLICATIONS (ICPEA)

2025

PROCEEDING

SCOPUS

CO-AUTHOR

3. CLEMD, A CIRCUIT-LEVEL ELECTRICAL MEASUREMENTS DATASET FOR ELECTRICAL ENERGY MANAGEMENT

SCIENTIFIC DATA

2024

JOURNAL

ISI

CO-AUTHOR

4. A KINETIC STUDY OF EX-SITU SOIL REMEDIATION BY NICKEL EXTRACTION USING NATURAL DEEP EUTECTIC SOLVENT

ENVIRONMENTAL TECHNOLOGY

2024

JOURNAL

OTHER DATABASE

CO-AUTHOR

5. ANALYSIS OF ELECTRIC FIELD ON OVERHEAD DISTRIBUTION LINE DUE TO LIGHTNING STRIKE

2024 POSTGRADUATE AND INDUSTRY RESEARCH COLLOQUIUM (PIRC)

2024

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

2024 POSTGRADUATE AND INDUSTRY RESEARCH COLLOQUIUM (PIRC)

2024

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7. DEVELOPMENT OF BATTERY MONITORING SYSTEM FOR POWER GENERATORS: INSIGHTS AND EXPERIENCE

2024 POSTGRADUATE AND INDUSTRY RESEARCH COLLOQUIUM (PIRC)

2024

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8. POWER QUALITY - NEW INSIGHTS

2024

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9. HIGH-TEMPERATURE LOW SAG CONDUCTOR: THE NEW TREND TO TRANSMIT ELECTRICITY

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024

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10. HIGH-TEMPERATURE LOW SAG CONDUCTOR: THE NEW TREND TO TRANSMIT ELECTRICITY

ADVANCEMENT IN ENGINEERING AND TECHNOLOGY

2024

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CO-AUTHOR

11. TRIMODALITY IMAGE REGISTRATION OF ULTRASOUND, CARDIAC COMPUTED TOMOGRAPHY, AND MAGNETIC RESONANCE IMAGING FOR TRANSCATHETER AORTIC VALVE IMPLANTATION AND REPLACEMENT IMAGE GUIDANCE

HEALTH AND TECHNOLOGY

2023

JOURNAL

SCOPUS

CO-AUTHOR

12. FLEXIBLE SECTOR DETECTOR-BASED MISMATCH SUPPLY VOLTAGE IN DIRECT TORQUE CONTROL DOUBLY FED INDUCTION MACHINE: AN EXPERIMENTAL VALIDATION

AEJ - ALEXANDRIA ENGINEERING JOURNAL

2023

JOURNAL

SCOPUS

CORRESPONDING AUTHOR

13. OPTIMAL SIZING OF STANDALONE FOR HYBRID RENEWABLE ENERGY SYSTEM BY USING PSO OPTIMIZATION TECHNIQUE

INTERNATIONAL JOURNAL OF POWER ELECTRONICS AND DRIVE SYSTEMS

2023

JOURNAL

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CO-AUTHOR

14. ARTIFICIAL INTELLIGENCE-ASSISTED AIR QUALITY MONITORING FOR SMART CITY MANAGEMENT

PEERJ COMPUTER SCIENCE

2023

JOURNAL

OTHER DATABASE

CO-AUTHOR

15. AN IMPLEMENTATION FRAMEWORK OVERVIEW OF NON-INTRUSIVE LOAD MONITORING

JOURNAL OF SUSTAINABLE DEVELOPMENT OF ENERGY, WATER AND ENVIRONMENT SYSTEMS

2023

JOURNAL

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CO-AUTHOR

16. A STACKED ENSEMBLE DEEP LEARNING APPROACH FOR IMBALANCED MULTI-CLASS WATER QUALITY INDEX PREDICTION

COMPUTERS, MATERIALS AND CONTINUA

2023

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17. POWER QUALITY - NEW INSIGHT

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18. INTRODUCTORY CHAPTER

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2023

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19. ARTIFICIAL INTELLIGENCE ENABLED PERSONALISED ASSISTIVE TOOLS TO ENHANCE EDUCATION OF CHILDREN WITH NEURODEVELOPMENTAL DISORDERS?A REVIEW

INTERNATIONAL JOURNAL OF ENVIRONMENTAL RESEARCH AND PUBLIC HEALTH

2022

JOURNAL

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CORRESPONDING AUTHOR

20. COMPARISON TECHNIQUES FOR OPTIMIZATION SWITCHING FREQUENCY IN ENERGY ENCRYPTION OF WIRELESS POWER TRANSFER SYSTEM

JOURNAL OF ADVANCED RESEARCH IN APPLIED SCIENCES AND ENGINEERING TECHNOLOGY

2022

JOURNAL

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CORRESPONDING AUTHOR

21. OPTIMAL SIZING OF A HYBRID SYSTEM THROUGH PARTICLE SWARM OPTIMIZATION FOR RURAL AREAS IN IRAQ

INDONESIAN JOURNAL OF ELECTRICAL ENGINEERING AND COMPUTER SCIENCE

2022

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MAIN AUTHOR / CONTACT PERSON IN USIM

22. ASSESSMENT OF RENEWABLE ENERGY SOURCES TO GENERATE ELECTRICITY FOR REMOTE AREAS, SOUTH IRAQ

INTERNATIONAL JOURNAL OF POWER ELECTRONICS AND DRIVE SYSTEMS

2022

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MAIN AUTHOR / CONTACT PERSON IN USIM

23. MICROCALCIFICATION DISCRIMINATION IN MAMMOGRAPHY USING DEEP CONVOLUTIONAL NEURAL NETWORK: TOWARDS RAPID AND EARLY BREAST CANCER DIAGNOSIS

FRONTIERS IN PUBLIC HEALTH

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24. MACHINE LEARNING APPROACH REGARDING THE CLASSIFICATION AND PREDICTION OF DOG SOUNDS: A CASE STUDY OF SOUTH INDIAN BREEDS

APPLIED SCIENCES-BASEL

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25. WATER QUALITY INDEX USING MODIFIED RANDOM FOREST TECHNIQUE: ASSESSING NOVEL INPUT FEATURES

CMES-COMPUTER MODELING IN ENGINEERING & SCIENCES

2022

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26. COVID-19 ISOLATION CONTROL PROPOSAL VIA UAV AND UGV FOR CROWDED INDOOR ENVIRONMENTS: ASSISTIVE ROBOTS IN THE SHOPPING MALLS

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PUBLICATION

27. RLMD-PA: A REINFORCEMENT LEARNING-BASED MYOCARDITIS DIAGNOSIS COMBINED WITH A POPULATION-BASED ALGORITHM FOR PRETRAINING WEIGHTS

CONTRAST MEDIA & MOLECULAR IMAGING

2022

JOURNAL

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CORRESPONDING AUTHOR

28. TOWARDS INTEGRATED AIR POLLUTION MONITORING AND HEALTH IMPACT ASSESSMENT USING FEDERATED LEARNING: A SYSTEMATIC REVIEW

FRONTIERS IN PUBLIC HEALTH

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29. SYSTEMATIC REVIEW ON COVID-19 READMISSION AND RISK FACTORS: FUTURE OF MACHINE LEARNING IN COVID-19 READMISSION STUDIES

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30. PREDICTING OCCUPATIONAL INJURY CAUSAL FACTORS USING TEXT-BASED ANALYTICS: A SYSTEMATIC REVIEW

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31. AN AUTOMATED SOLID WASTE DETECTION USING THE OPTIMIZED YOLO MODEL FOR RIVERINE MANAGEMENT

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JOURNAL

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32. DEEP EUTECTIC SOLVENTS FOR THE REMOVAL OF LEAD CONTAMINANTS IN MANGROVE SOIL

JOURNAL OF ENVIRONMENTAL CHEMICAL ENGINEERING

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CO-AUTHOR

33. PROSTATE CANCER MONITORING USING MRI MONOMODAL FEATURE-BASED REGISTRATION

JURNAL FIZIK MALAYSIA

2022

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CORRESPONDING AUTHOR

34. COMPARISON TECHNIQUES FOR OPTIMIZATION SWITCHING FREQUENCY IN ENERGY ENCRYPTION OF WIRELESS POWER TRANSFER SYSTEM

JOURNAL OF ADVANCED RESEARCH IN APPLIED SCIENCES AND ENGINEERING TECHNOLOGY

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CO-AUTHOR

35. NON INTRUSIVE LOAD MONITORING BASED ON BAGGING DECISION TREES AND THE SELECTIVE FEATURES FOR COMMERCIAL BUILDING LOADS

2022 IEEE INTERNATIONAL CONFERENCE ON POWER AND ENERGY PECON2022

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36. COMPARISON OF NON-INTRUSIVE LOAD MONITORING SUPERVISED METHODS USING HARMONICS AS FEATURE

2022 INTERNATIONAL CONFERENCE ON ELECTRICAL, COMPUTER AND ENERGY TECHNOLOGIES (ICECET)

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37. ACHIEVING CARBON BALANCED ECOSYSTEM: CASE STUDY OF CARBON SEQUESTRATION ANALYSIS IN UNIVERSITI MALAYA

6TH KUALA LUMPUR INTERNATIONAL CONFERENCE ON BIOMEDICAL ENGINEERING 2021 PROCEEDINGS OF BIOMED2021

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CO-AUTHOR

38. SURFACE WATER QUALITY ASSESSMENT: A CASE STUDY OF MERBOK RIVER, KUALA MUDA, KEDAH

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39. SUSTAINABLE ENERGY AND POWER ENGINEERING

PROCEEDINGS OF THE 6TH INTERNATIONAL CONFERENCE ON ELECTRICAL, CONTROL AND COMPUTER ENGINEERING

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CHAPTER IN BOOK

CO-AUTHOR

40. FEASIBILITY OF PV?WIND?DIESEL HYBRID RENEWABLE ENERGY POWER SYSTEM FOR OFF-GRID RURAL ELECTRIFICATION IN IRAQ: A CASE STUDY

JOURNAL OF ENGINEERING SCIENCE AND TECHNOLOGY

2021

JOURNAL

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MAIN AUTHOR / CONTACT PERSON IN USIM

41. WATER, SOIL AND AIR POLLUTANTS? INTERACTION ON MANGROVE ECOSYSTEM AND CORRESPONDING ARTIFICIAL INTELLIGENCE TECHNIQUES USED IN DECISION SUPPORT SYSTEMS - A REVIEW

IEEE ACCESS

2021

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MAIN AUTHOR / CONTACT PERSON IN USIM

42. PRIORITISATION ASSESSMENT AND ROBUST PREDICTIVE SYSTEM FOR MEDICAL EQUIPMENT: A COMPREHENSIVE STRATEGIC MAINTENANCE MANAGEMENT

FRONTIERS IN PUBLIC HEALTH

2021

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43. MULTISTAGE OPTIMIZATION USING A MODIFIED GAUSSIAN MIXTURE MODEL IN SPERM MOTILITY TRACKING

COMPUTATIONAL AND MATHEMATICAL METHODS IN MEDICINE

2021

JOURNAL

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MAIN AUTHOR / CONTACT PERSON IN USIM

44. A SYSTEMATIC REVIEW OF MEDICAL EQUIPMENT RELIABILITY ASSESSMENT IN IMPROVING THE QUALITY OF HEALTHCARE SERVICES

FRONTIERS IN PUBLIC HEALTH

2021

JOURNAL

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MAIN AUTHOR / CONTACT PERSON IN USIM

45. OBJECT DETECTION AND MOVEMENT TRACKING USING TUBELETS AND FASTER RCNN ALGORITHM WITH ANCHOR GENERATION

WIRELESS COMMUNICATIONS AND MOBILE COMPUTING

2021

JOURNAL

WOS

MAIN AUTHOR / CONTACT PERSON IN USIM

46. BRAIN TUMOUR TEMPORAL MONITORING OF INTERVAL CHANGE USING DIGITAL IMAGE SUBTRACTION TECHNIQUE

FRONTIERS IN PUBLIC HEALTH

2021

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CO-AUTHOR

PUBLICATION

47. SURFACE WATER QUALITY ASSESSMENT: A CASE STUDY OF MERBOK RIVER, KUALA MUDA, KEDAH

THE 6TH INTERNATIONAL CONFERENCE ON BIOMEDICAL ENGINEERING

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48. ACHIEVING CARBON-BALANCED ECOSYSTEM: CASE STUDY OF CARBON SEQUESTRATION ANALYSIS IN UNIVERSITI MALAYA

THE 6TH INTERNATIONAL CONFERENCE ON BIOMEDICAL ENGINEERING

2021

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49. COMPARISON OF ALGEBRAIC RECONSTRUCTION TECHNIQUE METHODS AND GENERATIVE ADVERSARIAL NETWORK IN IMAGE RECONSTRUCTION OF MAGNETIC INDUCTION TOMOGRAPHY (MIT)

INTERNATIONAL CONFERENCE ON BIOMEDICAL ENGINEERING (ICOB 2021) 14, 15 SEPTEMBER 2021, UNIMAP, MALAYSIA (VIRTUAL)

2021

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CO-AUTHOR

CONSULTATION

1. TECHNICAL EVALUATOR SECARA FREELANCE

TNB LABS SDN BHD

2023

NATIONAL

2. TECHNICAL EVALUATOR SECARA FREELANCE UNTUK TNB LABS SDN BHD

TNB LABS SDN BHD

2022

NATIONAL

3. PROGRAM PENINGKATAN PERUSAHAAN SOSIAL ASAS B40 MELALUI TEKNOLOGI APLIKASI TELEFON IBOSS

IBOSS INNOVATIVES SDN BHD

2022

NATIONAL

4. Battery Storage Management System (BSMS) and Technical Knowledge Training

Technopreneur UniMAP Sdn Bhd

National

AWARDS/RECOGNITION

1. CURRICULUM ADVISOR (PENASIHAT KURIKULUM)

JABATAN PENDIDIKAN POLITEKNIK DAN KOLEJ KOMUNITI KEMENTERIAN PENDIDIKAN TINGGI

2025

NATIONAL

2. EDUGARDENXR: AN AR/VR-BASED ISLAMIC ENERGY GARDEN FOR SHARIAH-COMPLIANT SUSTAINABLE LEARNING

INNOVATION BANK CHALLENGE 2025

2025

ANTARABANGSA

GOLD

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3. BEST INNOVATION AWARD (CLASS A) - INDOOR COMFORT ENVIRONMENT ICE BOX

2024

INTERNATIONAL

4. ICE BOX

ICOMPEX 2024- international innovation and invention through exhibition 2024

2024

ANTARABANGSA

GOLD

5. INDOOR COMFORT ENVIRONMENT ICE BOX

ICOMPEX 2024- international innovation and invention through exhibition 2024

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CERTIFICATE OF APPRECIATION

6. INDOOR COMFORT ENVIRONMENT ICE BOX (BEST INNOVATION AWARD)

ICOMPEX 2024- international innovation and invention through exhibition 2024

2024

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7. ACADEMIC ADVISOR

POLITEKNIK UNGKU OMAR

2023

NATIONAL

8. ACADEMIC ADVISOR

UNIVERSITI MALAYSIA PAHANG AL-SULTAN ABDULLAH UMPSA

2023

NATIONAL

9. ACADEMIC ADVISOR

UNIVERSITI MALAYSIA PAHANG AL-SULTAN ABDULLAH (UMPSA)

2023

NATIONAL

10. ICE BOX (INDOOR, COMFORT, ENVIRONMENT)

34th INTERNATIONAL INVENTION & TECHNOLOGY EXHIBITION MALAYSIA (ITEX2023)

2023

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11. ANUGERAH PENULIS AKTIF (Q1/Q2)

2022

UNIVERSITY

12. VISITING PROFESOR

INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) SURABAYA, INDONESIA

2022

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13. VISITING PROFESOR

INSTITUT TEKNOLOGI SEPULUH NOPEMBER (ITS) SURABAYA, INDONESIA

2022

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14. SMART PARCEL DROP BOX

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRIIN 2022)

2022

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15. IOT- BASED BATTERY MONITORING SYSTEM

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRIIN 2022)

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16. ICE BOX (INDOOR, COMFORT, ENVIRONMENT)

Persidangan dan Ekspo Ciptaan Institusi Pengajian Tinggi Antarabangsa (PECIPTA22)

2022

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17. RUBBER TREE TRUNK HUMIDITY INSPECTOR

PERTANDINGAN REKACIPTA INOVASI INTERNASIONAL & NASIONAL 2022 (PRIIN 2022)

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