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## A. PERSONAL DETAILS

UMK JOIN DATE	28-Dec-2009
DATE OF APPOINTMENT FOR CURRENT POSITION	22-Jun-2015
DATE OF CONFIRMATION FOR CURRENT POSITION	22-Aug-2017
EDUCATION(S)	<ul style="list-style-type: none"><li>• <b>(2015) DELFT UNIVERSITY OF TECHNOLOGY, NETHERLANDS</b> IJAZAH DOKTOR FALSAFAH CIVIL ENGINEERING</li><li>• <b>(2009) UNIVERSITI TEKNOLOGI MALAYSIA</b> IJAZAH SARJANA ENVIRONMENTAL BIOSAINS</li><li>• <b>(2007) UNIVERSITI TEKNOLOGI MALAYSIA</b> IJAZAH SARJANA MUDA SAINIS BIOLOGI INDUSTRI</li></ul>
GROUP OF EXPERTISE	<ul style="list-style-type: none"><li>• Disinfection</li><li>• Reclamation, Reuse and Recycling</li><li>• Wastewater Treatment</li><li>• Water</li><li>• Water Filtration</li><li>• Water Resources Management/ Integrated Water Resources Management</li><li>• Water Treatment</li><li>• Water and Wastewater Treatment Technology</li></ul>
AWARD(S)	<ul style="list-style-type: none"><li>• Award Name: <b>Anugerah Gemilang Universiti Tahun 2018 - Kategori Penerbitan (2019)</b> Awarded by: Universiti Malaysia Kelantan</li><li>• Award Name: <b>Anugerah Gemilang UMK Tahun 2017- Penyelidikan dan Inovasi (2018)</b> Awarded by: Universiti Malaysia Kelantan</li><li>• Award Name: <b>Anugerah Gemilang UMK Tahun 2016- Perundingan (2017)</b> Awarded by: Universiti Malaysia Kelantan</li><li>• Award Name: <b>Anugerah Perkhidmatan Cemerlang 2015 (2016)</b> Awarded by: Universiti Malaysia Kelantan</li></ul>
WORKING EXPERIENCE(S)	<ul style="list-style-type: none"><li>• research student grant   universiti teknologi malaysia 04-Jul-2007-30-Jun-2008</li><li>• pembantu felo   universiti teknologi malaysia 30-Jun-2008-30-Jun-2009</li><li>• pegawai kerahan pentauliahan   Tentera Darat Malaysia 22-May-2009-22-Jun-2009</li><li>• Laboratory Manager   Universiti Malaysia Kelantan 01-Jun-2015-01-Jul-2017</li><li>• Deputy Dean of Research and Innovation   Universiti Malaysia Kelantan 01-Jul-2017-01-Jan-2020</li><li>• Dean   Universiti Malaysia Kelantan 01-Jan-2020-01-Dec-2021</li><li>• Assoc. Prof.   Universiti Malaysia Kelantan 01-Aug-2020-01-Aug-2045</li></ul>
PROFESIONAL MEMBERSHIP(S)	

## B. TEACHING-LEARNING ACTIVITIES

<b>COURSES TAUGHT</b>	<ul style="list-style-type: none"> <li>• BNT2123 - RESOURCES AND SOIL ECOSYSTEM</li> <li>• EFT2143 - RESEARCH METHODOLOGY AND SCIENTIFIC WRITING</li> <li>• EKE33203 - RIVER WATER QUALITY MANAGEMENT</li> <li>• EKE4233 - WATER TREATMENT TECHNOLOGIES</li> <li>• EKT2043 - EDUCATION FOR SUSTAINABLE DEVELOPMENT</li> <li>• EKT2073 - SUSTAINABLE AGRICULTURE</li> <li>• EKT3083 - ENVIRONMENTAL RISK ASSESSMENT</li> <li>• EKT3123 - RESEARCH PROJECT I</li> <li>• EKT4133 - RESEARCH PROJECT II</li> <li>• EKT4178 - INDUSTRIAL TRAINING</li> <li>• FFT1083 - MICROBIOLOGY</li> <li>• FPT3163 - WATER SCIENCE</li> </ul>
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## C. RESEARCH AND DEVELOPMENT

<b>JOURNAL(S)</b>	<ol style="list-style-type: none"> <li>1. ASSESSING ENERGY-BASED CO<sub>2</sub> EMISSION AND WORKERS' HEALTH RISKS AT THE SHIPBREAKING INDUSTRIES IN BANGLADESH   CO   2020</li> <li>2. THE POTENTIAL USE OF AZOLLA PINNATA AS AN ALTERNATIVE BIO-INSECTICIDE   CO   2020-12</li> <li>3. THE POTENTIAL USE OF AZOLLA PINNATA AS AN ALTERNATIVE BIO-INSECTICIDE   CO   2020-12</li> <li>4. CHEMICAL COMPOSITION AND LARVICIDAL ACTIVITY OF FLOWER EXTRACTS FROM CLITORIA TERNAEA AGAINST AEDES (DIPTERA: CULICIDAE)   CO   2020</li> <li>5. CHEMICAL COMPOSITION AND LARVICIDAL ACTIVITY OF FLOWER EXTRACTS FROM CLITORIA TERNAEA AGAINST AEDES (DIPTERA: CULICIDAE)   CO   2020</li> <li>6. TRACE METALS CONTAMINATION POTENTIAL AND HEALTH RISK ASSESSMENT OF COMMONLY CONSUMED FISH OF PERAK RIVER, MALAYSIA   CO   2020</li> <li>7. TRACE METALS CONTAMINATION POTENTIAL AND HEALTH RISK ASSESSMENT OF COMMONLY CONSUMED FISH OF PERAK RIVER, MALAYSIA   CO   2020</li> <li>8. CHARACTERIZATION ON MORPHOLOGICAL AND BONDING BEHAVIOR OF TORREFIED BIOCHAR FROM OIL PALM EMPTY FRUIT BUNCH   CO   2020</li> <li>9. OPTIMIZATION OF PHYTOREMEDIATION OF NICKEL BY ALOCASIA PUBER USING RESPONSE SURFACE METHODOLOGY   CO   2020-09</li> <li>10. OPTIMIZATION OF PHYTOREMEDIATION OF NICKEL BY ALOCASIA PUBER USING RESPONSE SURFACE METHODOLOGY   CO   2020-09</li> <li>11. INITIALIZATION, ENHANCEMENT AND MECHANISMS OF AEROBIC GRANULATION IN WASTEWATER TREATMENT   CO   2021-04</li> <li>12. INITIALIZATION, ENHANCEMENT AND MECHANISMS OF AEROBIC GRANULATION IN WASTEWATER TREATMENT   CO   2021-04</li> <li>13. COMPARATIVE APPROACH OF DECISION TREE AND CWQI ANALYSIS FOR CLASSIFICATION OF GROUNDWATER WITH A SPECIAL REFERENCE TO FLUORIDE ION IN DROUGHT-PRONE BOUDH DISTRICT OF ODISHA, INDIA   CO   2021-12</li> <li>14. ANALYSIS OF CHEMICAL COMPOSITIONS AND LARVICIDAL ACTIVITY OF NUT EXTRACTS FROM ARECA CATECHU LINN AGAINST AEDES (DIPTERA: CULICIDAE)   CO   2021-11</li> <li>15. TURBID WATER TREATMENT USING DESHELLED CARICA PAPAYA SEED: ANALYSIS VIA FACTORIAL DESIGN   CO   2022-12</li> <li>16. IN VITRO AND IN VIVO ANTIBIOFILM POTENTIAL OF EICOSANE AGAINST CANDIDA ALBICANS   CO   2022</li> <li>17. IN VITRO AND IN VIVO ANTIBIOFILM POTENTIAL OF EICOSANE AGAINST CANDIDA ALBICANS   CO   2022</li> <li>18. MULTI-OMICS APPROACH IN AMELIORATION OF FOOD PRODUCTS   CO   2022</li> <li>19. MULTI-OMICS APPROACH IN AMELIORATION OF FOOD PRODUCTS   CO   2022</li> <li>20. STUDENT'S KNOWLEDGE IN SCIENCE: AN EVALUATION VIA HYDROPONIC KIT   CO   2022</li> <li>21. EFFECT OF TORREFACTION PROCESS ON CRYSTALLINITY INDEX PROPERTIES OF EMPTY FRUIT BUNCH'S BIOCHAR   CO   2022</li> <li>22. CULTIVATION OF ARTHROSPIRA PLATENSIS AND HARVESTING USING EDIBLE FUNGI ISOLATED FROM MOULD SOYBEAN CAKE   CO   2023</li> <li>23. CULTIVATION OF ARTHROSPIRA PLATENSIS AND HARVESTING USING EDIBLE FUNGI ISOLATED FROM MOULD SOYBEAN CAKE   CO   2023</li> <li>24. INFLUENCE OF TORREFACTION PARAMETERS ON ELEMENTAL PROPERTIES OF TORREFIED OIL PALM EMPTY FRUIT BUNCH BIOCHAR   CO   2023</li> <li>25. TORREFACTION ON AGRICULTURAL RESIDUES EMPTY FRUIT BUNCH: EFFECT OF TORREFACTION PROCESSING FACTORS ON THERMAL PROPERTIES OF TORREFIED EMPTY FRUIT BUNCH BIOCHAR   CO   2023</li> <li>26. ANALYSIS OF SPATIAL DETERMINANTS OF POVERTY IN KELANTAN   CO   2020</li> <li>27. ULTRASOUND-ASSISTED EXTRACTION OF STARCH FROM OIL PALM TRUNK: AN OPTIMIZATION BY RESPONSE SURFACE METHODOLOGY   CO   2023</li> <li>28. BIOGENIC SILVER NANOPARTICLES (AGNPS) FROM TINOSPORACORDIFOLIA LEAVES: AN EFFECTIVE ANTIBIOFILM AGENT AGAINST STAPHYLOCOCCUS AUREUS ATCC 23235   CO   2023</li> <li>29. BIOGENIC SILVER NANOPARTICLES (AGNPS) FROM TINOSPORACORDIFOLIA LEAVES: AN EFFECTIVE ANTIBIOFILM AGENT AGAINST STAPHYLOCOCCUS AUREUS ATCC 23235   CO   2023</li> <li>30. APPLICABILITY OF ORGANIC POLYMER FOR PHARMACEUTICAL REMOVAL   MAIN   2023</li> <li>31. SIMULATION OF URBAN GREEN SPACE LANDSCAPE AND LAND SURFACE TEMPERATURE USING LAND CHANGE MODELER   CO   2020</li> <li>32. EPOXY-GRAPHENE COMPOSITE REINFORCED WITH BAMBOO BIOCHAR POWDER: EFFECT ON MECHANICAL PROPERTIES   CO   2023</li> </ol>
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<p><b>PROCEEDING(S)</b></p>	<ol style="list-style-type: none"> <li>1. WATER QUALITY STATUS OF PERGAU RESERVOIR WATER CATCHMENT AND LAKE, JELI, KELANTAN   CO   2020-09</li> <li>2. TORREFACTION S OPTIMIZATION OF MULTIPLE RESPONSES ANALYSIS ON TORREFIED BIOCHAR FROM OIL PALM EMPTY FRUIT BUNCH   CO   2020-09</li> <li>3. RELATIVE RISK FOR POVERTY IN KELANTAN-A BAYESIAN APPROACH   CO   2020-09</li> <li>4. PREPARATION AND CHARACTERIZATION OF CALCIUM HYDROXYPHOSPHATE (HYDROXYAPATITE) FROM TILAPIA FISH BONES AND SCALES VIA CALCINATION METHOD   CO   2020</li> <li>5. PADDY FARMERS PERCEIVED THE SOCIO-ECONOMIC IMPACTS OF CLIMATE CHANGE: A CASE STUDY IN PASIR MAS, KELANTAN   CO   2020-09</li> <li>6. EROSION AND SEDIMENTATION AT HEADWATER STREAM: A CASE STUDY FOR PERGAU WATER INTAKE   CO   2020-09</li> <li>7. GROUND LEVEL OZONE FLUCTUATIONAL CHARACTERISTICS WITHIN TWO INDUSTRIAL AREAS IN MALAYSIA   CO   2020-09</li> <li>8. IMPACT OF LAND USE CHANGES ON FOREST CATCHMENT AREA IN PERGAU LAKE, KELANTAN   CO   2020-09</li> <li>9. MINERAL IDENTIFICATION ON SEDIMENTS OF PERGAU DAM INTAKES   CO   2020-09</li> <li>10. A GIS-BASED FLOOD VULNERABILITY ASSESSMENT IN PASIR MAS, KELANTAN   CO   2020-09-22</li> <li>11. ANALYSIS OF WATER STRESS INDEX (WSI) FOR DISTRICT SURROUNDING ULU SAT FOREST RESERVE, KELANTAN, MALAYSIA   CO   2020-09-22</li> <li>12. AGNPS AZOLLA PINNATA EXTRACT AS LARVICIDAL AGAINST AEDES AEGYPTI (DIPTERA: CULICIDAE)   CO   2020-12-28</li> <li>13. PRELIMINARY STUDY ON MINERAL IDENTIFICATION IN SEDIMENT FROM SUNGAI NAL, ULU SAT FOREST, KELANTAN, MALAYSIA   CO   2020-12-28</li> <li>14. SYNTHESIS OF SODIUM ALGINATE GRAPHENE OXIDE THIN FILM FOR ADSORPTION APPLICATION   CO   2020-12-28</li> <li>15. SYNTHESIS OF SODIUM ALGINATE GRAPHENE OXIDE-SILVER FILM FOR ANTIBACTERIAL ACTIVITY   CO   2020-12-28</li> <li>16. DIVERSITY AND ECOLOGY OF ARACEAE IN THE WATER CATCHMENT AREA OF ULU SAT, KELANTAN, PENINSULAR MALAYSIA   CO   2021-05</li> <li>17. TORREFACTION OF EMPTY FRUIT BUNCH (EFB) FIBRES ADOPTED IN MODIFIED MICROWAVE   CO   2021-09</li> <li>18. COMPARISON OF CHEMICAL COMPOSITIONS BETWEEN TWO FAST GROWING SPECIES: ACACIA MANGIUM AND LEUCAENA LEUCOCHEPHALA   CO   2021-09</li> <li>19. MANAGING AND PROTECTING OF ENDANGERED RAFFLESIA SPECIES IN KELANTAN, PENINSULAR MALAYSIA   CO   2021-09</li> <li>20. OPTIMISATION AND GROWTH KINETIC ANALYSIS OF MICROALGAE, ARTHROSPIRA PLATENSIS IN 2-L PHOTOBIOREACTORS   CO   2021-09</li> <li>21. EVALUATION ON MECHANICAL PROPERTIES OF PLYWOOD FROM TWO FAST GROWING SPECIES: NEOLAMARCKIA CADAMBA AND PARASERIANTHES FALCATA   CO   2021-09</li> <li>22. POTENTIAL OF OIL PALM TRUNK STARCH AS FLOCCULANT FOR CONTAMINANT OF EMERGING COMPOUND REMOVAL   CORRESPNDG   2021-09</li> <li>23. SPATIAL FRAMEWORK OF ZERO COVID 19 OUTBREAK FOR SUSTAINABLE HEALTH IN   CO   2021-12</li> <li>24. HARVESTING OF FRESHWATER MICROALGAE, ARTHROSPIRA SP. USING FLOCCULATION METHOD   CO   2022</li> <li>25. IN-SITU STERILIZATION OF MICROALGAE PHOTOBIOREACTOR VIA OZONE-RICH MACROBUBBLES   CO   2022</li> <li>26. TORREFACTION OF EMPTY FRUIT BUNCHES (EFB) MATERIALS IN MODIFIED MICROWAVE SCALE REACTOR   CO   2022</li> <li>27. EFFECTS OF BG11, SKM AND MKM CULTURE MEDIA ON OPTICAL DENSITY OF SPIRULINA PLATENTIS CULTIVATION   CORRESPNDG   2022</li> <li>28. NATURAL-BASED POLYMERS FOR WASTEWATER TREATMENT   CORRESPNDG   2022</li> <li>29. PREPARATION AND OPTIMIZATION OF ANTIBACTERIAL ACTIVITY OF GRAPHENE OXIDE SILVER NANOCOMPOSITE   CO   2022</li> <li>30. ARECA CATECHU LINN AS A POTENTIAL INSECTICIDE FOR MOSQUITOES   CO   2022</li> <li>31. ASSESSMENT OF GROUNDWATER QUALITY IN THE COASTAL AQUIFERS OF BACHOK USING HYDROGEOCHEMICAL ANALYSIS   CO   2022</li> <li>32. REMOVAL OF NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDS) FROM WATER USING EMPTY FRUIT BUNCH (EFB) BASED BIO SORBENT   CO   2022</li> <li>33. SPATIAL CHARACTERIZATION OF GREEN SPACE LANDSCAPE STRUCTURE IN KOTA BHARU FOR SUSTAINABLE TOURISM PLANNING   CO   2022</li> <li>34. EFFECT OF CELLULOSE NANOCRYSTALS (CNC) ON THERMAL PROPERTIES OF POLYVINYL ALCOHOL (PVA)/CNC BIOCOMPOSITES   CO   2022</li> <li>35. EFFECTS OF TORREFACTION PROCESS ON CHEMICAL PROPERTIES OF SMALL DIAMETER ACACIA MANGIUM WOOD   CO   2023</li> <li>36. THE PROSPECT OF BIOCHAR BY OIL PALM EMPTY FRUIT BUNCH (OPEFB) IN THE REMOVAL OF CONTAMINANTS EMERGING CONCERN (CECS)   CO   2023</li> <li>37. A MINI REVIEW AND BIBLIOMETRIC ANALYSIS OF PALM OIL MILL EFFLUENT IN PAST FIVE YEARS   CO   2023</li> <li>38. A MINI REVIEW AND BIBLIOMETRIC ANALYSIS OF PALM OIL MILL EFFLUENT IN PAST FIVE YEARS   CO   2023</li> <li>39. GREENING SPIRULINA VALUE CHAIN TOWARDS ENVIRONMENTAL SUSTAINABILITY IN MALAYSIA   CO   2023</li> <li>40. ELUCIDATING ON TIME AND TEMPERATURE EFFECTS ON TORRIFIED MOLDY BREAD   CO   2023</li> <li>41. THE INFLUENCE OF TIDAL ON WATER QUALITY IN SUNGAI SEMERAK, KELANTAN   CO   2023</li> </ol>
<p><b>BOOK(S)</b></p>	<ol style="list-style-type: none"> <li>1. LAPORAN TAHUNAN FSB 2020   CO   2020</li> </ol>
	<ol style="list-style-type: none"> <li>1. CHAPTER 7. METHYL ORANGE REMOVAL USING CORNCOB ACTIVATED CARBON   CO   2020-12-11</li> <li>2. CHAPTER 4 WATER QUALITY ANALYSIS ENUMERATION OF BACTERIA   MAIN   2023</li> </ol>

CHAPTER(S)	3. MODULE 6: BANK EROSION HAZARD INDEX (PART 2: WATER WATCH PROGRAMME FOR YOUNG LEADERS MODULES)   CO   2023
OTHER(S)	<ol style="list-style-type: none"> <li>1. COMMUNITY DEVELOPMENT MODEL FOR POVERTY ERADICATION OF INDIGENOUS PEOPLE IN MALAYSIA   CO   2020</li> <li>2. A STUDY OF LOCAL COMMUNITY PERCEPTION AND ATTITUDE ON ENVIRONMENTAL IMPACT OF ECOTOURISM AT KUALA KOH NATIONAL PARK (KKNP), KELANTAN   CO   2020</li> <li>3. SPATIAL FRAMEWORK OF ZERO COVID 19 OUTBREAK FOR SUSTAINABLE HEALTH IN KELANTAN   CO   2021-12</li> <li>4. PENA FSB   CO   2022-04</li> </ol>
RESEARCH(S)	<ol style="list-style-type: none"> <li>1. ARECA CATECHU L. EXTRACTS AGAINST AEDES (DIPTERA: CULICIDAE)   MEMBER   FRGS   2020</li> <li>2. ASSESSMENT OF CONSERVATION VALUE FOR ECOTOURISM RESOURCES AT TAMAN NEGARA KUALA KOH, GUA MUSANG, KELANTAN.   MEMBER   SGJP   2017</li> <li>3. ASSESSMENT OF INDOOR AIR QUALITY (IAQ) AND THERMAL COMFORT IN MECHANICALLY VENTILATED LECTURE HALL AND HOSTEL ROOM   MEMBER   SGJP   2016</li> <li>4. DEVELOPING A SUSTAINABLE FRY PRODUCTION AND POND MANAGEMENT ENTREPRENEURSHIP MODEL OF FRESHWATER FARMING INDUSTRY: CASE STUDY OF RED TILAPIA   HEAD   NRGS   2013</li> <li>5. DEVELOPING A SUSTAINABLE FRY PRODUCTION AND POND MANAGEMENT ENTREPRENEURSHIP MODEL OF FRESHWATER FARMING INDUSTRY: CASE STUDY OF RED TILAPIA   MEMBER   NRGS   2013</li> <li>6. DEVELOPMENT OF TILAPIA POND SMART WATER QUALITY MONITORING SYSTEM BASED ON INTERNET OF THINGS (LOT)   MEMBER   SGJP   2017</li> <li>7. ENHANCED ANAEROBIC AND AEROBIC BIOGRANULATION SYSTEM FOR TREATING PALM OIL EFFLUENT: DEVELOPMENT AND CHARACTERIZATION OF THE NEWLY DEVELOPED NATURAL COAGULANT SUITABLE FOR THE PRE-TREATMENT OF POME   HEAD   CRGUTM   2020</li> <li>8. EXTRACTION OF NANOCELLULOSE FROM AGRICULTURAL WASTE DEVELOPMENT OF ORGANIC BIODEGRADABLE PLACTIC   MEMBER   SGPPU   2015</li> <li>9. HEALTH RISK ASSESSMENT OF HEAVY METAL VIA CONSUMPTION OF ASIAN SWAMP EEL IN KELANTAN PADDY CULTIVATION AREA   MEMBER   SGJP   2017</li> <li>10. OPTIMISATION AND CHARACTERISATION OF MULTIPLE RESPONSES ANALYSIS ON TORREFIED BIOCHAR FROM OIL PALM RESIDUE AS SOLID FUEL   MEMBER   UMK-FUND   2022</li> <li>11. OPTIMISATION AND CHARACTERISATION OF MULTIPLE RESPONSES ANALYSIS ON TORREFIED BIOCHAR FROM OIL PALM RESIDUE AS SOLID FUEL   MEMBER   FRGS   2022</li> <li>12. PEMBANGUNAN MODUL SOFTSKILL BAGI BWI PLKK FTC   HEAD   GRANT(I/A)   2023</li> <li>13. PROGRAM SUPERFOOD SPIRULINA: LANGKAH LESTARI UNTUK MENGATASI MALNUTRISI KOMUNITI   HEAD   MOF   2020</li> <li>14. PROGRAM SUPERFOOD SPIRULINA: LANGKAH LESTARI UNTUK MENGATASI MALNUTRISI KOMUNITI   HEAD   MOF   2022</li> <li>15. PURE DEW MODULE: ATMOSPHERIC WATER HAVERSTER   HEAD   SGJP   2016</li> <li>16. REMOVAL OF ORGANIC CONTAMINANT FROM AQUEOUS SOLUTION BY USING BIO-ADSORBENT POUCH   MEMBER   SGJP   2017</li> <li>17. SISTEM MAKLUMAT PENILAIAN KUALITI JASAD BATUAN TERLINDUNG MENGGUNAKAN PENGINTEGRASIAN KAEDAH PEMETAAN GEOLOGI DAN SURVEI KEBERINTANGAN GEOELEKTRIK BAGI PENGURANGKAN RISIKO GEOBENCANA (DISASTER RISK REDUCTION) DI MALAYSIA. A(III). KEYWORD   MEMBER   FRGS   2020</li> <li>18. STUDY ON THE POTENTIAL AND MECHANISM(S) OF ALOCASIA PUBER (ARACEAE) FOR THE TREATMENT OF HEAVY METALS CONTAMINATION IN WATER AND SOILS   MEMBER   FRGS   2016</li> <li>19. STUDY ON POTENTIAL ACTION MODE OF AZOLLA PINNATA AS BIO-INSECTICIDE AGAINST AEDES AEGYPTI AND AEDES ALBOPICTUS   HEAD   FRGS   2017</li> <li>20. TREATMENT OF POLLUTED WATER BY CATALYTIC REDUCTION METHOD IN PRESENCE OF NEWLY PREPARED PD CATALYST   MEMBER   FRGS   2015</li> <li>21. UMK GROUNDWATER PROJECT: REALTIME WATER QUALITY MONITORING SYSTEM (WMS)   HEAD   UMK-FUND   2020</li> <li>22. UMK GROUNDWATER PROJECT: REALTIME WATER QUALITY MONITORING SYSTEM (WMS)   HEAD   UMKSIR   2020</li> <li>23. UMK GROUNDWATER PROJECT:GROUNDWATER POTENTIAL SOURCES IDENTIFICATION IN UMK BACHOK USING GIS APPROACH   MEMBER   UMK-FUND   2020</li> <li>24. UNESCO WORLD HERITAGE VOLUNTEER 2023   HEAD   GRANT(I/A)   2023</li> </ol>
SUPERVISION	<ul style="list-style-type: none"> <li>• <b>DEVELOPMENT OF BIOCARBON BASED ACTIVE FILTERING WATER RECIRCULATION SYSTEM FOR AQUALCULTURE</b>   CO SUPERVISOR FOR A PHD'S STUDENT</li> <li>• <b>SPIRULINA EFFECTIVENESS STUDY ON CHILD MALNUTRITION IN KELANTAN</b>   CO SUPERVISOR FOR A MASTER'S STUDENT</li> <li>• <b>STUDY OF ZNO CONCENTRATION ON PVA/CELLULOSE CRYSTAL/ZNO NANOCOMPOSITE FOR POTENTIAL OPTICAL SENSOR APPLICATION.</b>   CO SUPERVISOR FOR A MASTER'S STUDENT</li> </ul>
	<ul style="list-style-type: none"> <li>• Product Name: Prediction of Urban Green Space Landscape Structure for Sustainable Planning Award: GOLD Role: Member Exhibition Name:Karnival Penyelidikan dan Inovasi (CRI) 2019</li> <li>• Product Name: Prediction of Urban Green Space Landscape Structure for Sustainable Planning Award: GOLD Role: Member Exhibition Name:ICOMPEX2020</li> </ul>

<b>RESEARCH AWARD (S)</b>	<ul style="list-style-type: none"> <li>• Product Name: Spatial Prediction of Ecosystem Service for Sustainable Cities in Malaysia Award: GOLD Role: Member Exhibition Name:Defence, Security and Sustainability DSS 2022</li> <li>• Product Name: Prediction of Urban Green Space Landscape Structure for Sustainable Planning Award: GOLD Role: Member Exhibition Name:PEREKA2020</li> <li>• Product Name: Tracing awareness WHV 2023 Award: GOLD Role: Member Exhibition Name:SUISS 2023</li> <li>• Product Name: CRI2022 Award: GOLD Role: Member Exhibition Name:CRI</li> <li>• Product Name: CRI 2021 Award: SILVER Role: Member Exhibition Name:CRI</li> <li>• Product Name: Spatial Prediction for Sustainable Cities Award: SILVER Role: Member Exhibition Name:EREKA 2023 UNIMAP</li> <li>• Product Name: Prediction of Urban Green Space Landscape Structure for Sustainable Planning Award: BRONZE Role: Member Exhibition Name:BIF</li> </ul>
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## D. CONSULTATION

<b>CONSULTATION(S)</b>	<ol style="list-style-type: none"> <li>1. GREEN MATERIAL FROM WASTE   HEAD   2020</li> <li>2. SISTEM SALIRAN BIO-EKOLOGI   MEMBER   2020</li> <li>3. PROJEK KAJIAN POTENSI EMAS DI DAERAH DABONG   MEMBER   2021</li> <li>4. KERJA GEOFIZIK ERI DI KAMPUS UM, BACHOK   MEMBER   2021</li> <li>5. PROJEK KAJIAN SEPARUH PENGGAL RANCANGAN PENGURUSAN HUTAN 2016-2025, JABATAN PERHUTANAN NEGERI PAHANG   MEMBER   2021</li> <li>6. PROJEK KAJIAN SEPARUH PENGGAL RANCANGAN PENGURUSAN HUTAN 2016-2025 JABATAN PERHUTANAN NEGERI PAHANG   MEMBER   2022</li> <li>7. KERJA PENYIASATAN TANAH BAGI ANALISIS BAWAH PERMUKAAN BAGI PENGENALPASTIAN POTENSI EMAS DI DABONG, KUALA KRAI   MEMBER   2022</li> <li>8. MINI WATER TREATMENT PLANT FEASIBILITY STUDY AT PEMBINAAN BANGUNAN GUNASAMA PERSEKUTUAN KOTA BHARU, TUNJONG, KELANTAN- GEOPHYSICAL STUDY   MEMBER   2022</li> <li>9. PROJEK KAJIAN SEPARUH PENGGAL RANCANGAN PENGURUSAN HUTAN 2016-2025 JABATAN PERHUTANAN NEGERI PAHANG   MEMBER   2022</li> </ol>
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## E. COMMUNITY SERVICES

<b>COMMUNITY SERVICES</b>	
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