



**TS. DR. MOHD SUKHAIRI BIN MAT RASAT (00800A)**  
PENSYARAH KANAN (TETAP)  
FACULTY OF EARTH SCIENCE  
UNIVERSITI MALAYSIA KELANTAN KAMPUS JELI  
KAMPUS JELI, BEG BERKUNCI NO.100  
JELI

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## A. PERSONAL DETAILS

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| UMK JOIN DATE                             | 09-Sep-2012  |
| DATE OF APPOINTMENT FOR CURRENT POSITION  | 09-Sep-2012  |
| DATE OF CONFIRMATION FOR CURRENT POSITION | 25-Oct-2016  |
| EDUCATION(S)                              | <ul style="list-style-type: none"><li>• () INTERNATIONAL ENGLISH LANGUAGE TESTING SYSTEM</li><li>• (2022) UNIVERSITI MALAYSIA KELANTAN IJAZAH DOKTOR FALSAFAH SAINS KELESTARIAN</li><li>• (2011) UNIVERSITI MALAYSIA SABAH IJAZAH SARJANA SAINS PERHUTANAN BIO KOMPOSIT</li><li>• (2009) UNIVERSITI MALAYSIA SABAH Sains Perhutanan Teknologi &amp; Bioindustri Serat Kayu</li><li>• (2002) KOLEJ MELAYU KUALA KANGSAR SPM</li></ul>   |
| GROUP OF EXPERTISE                        | <ul style="list-style-type: none"><li>• Biomass Fuel and Energy</li><li>• Pyrolysis</li></ul>  |
| AWARD(S)                                  | <ul style="list-style-type: none"><li>• Award Name: <b>Anugerah Gemilang UMK Tahun 2015 (Kategori Penerbitan) (2016)</b><br/>Awarded by: Universiti Malaysia Kelantan</li><li>• Award Name: <b>Anugerah Perkhidmatan Cemerlang 2013 (2014)</b><br/>Awarded by: Universiti Malaysia Kelantan</li><li>• Award Name: <b>Anugerah Gemilang UMK-Penyelidikan &amp; Inovasi Muda Tahun 2013 (2014)</b><br/>Awarded by: Universiti Malaysia Kelantan</li></ul>                              |
| WORKING EXPERIENCE(S)                     | <ul style="list-style-type: none"><li>• Enumerator   FRIM<br/>01-Apr-2007-01-Jul-2007</li><li>• Enumerator   UMS<br/>01-Jan-2008-01-Jun-2008</li><li>• Pembantu Penyelidik   UMS<br/>01-Jul-2008-01-Jun-2009</li><li>• Pegawai Penyelidik   UMS<br/>01-Jul-2009-01-Jun-2011</li><li>• Pensyarah Sambilan Sepenuh Masa   UiTM<br/>01-Jul-2011-01-Aug-2012</li><li>• Pensyarah   UMK<br/>01-Sep-2012-01-Nov-2019</li><li>• Pensyarah Kanan   UMK<br/>01-Dec-2019-01-Oct-2022</li></ul> |
| PROFESIONAL MEMBERSHIP(S)                 | <ul style="list-style-type: none"><li>• LEMBAGA TEKNOLOGIS MALAYSIA   MEMBER   NATIONAL<br/>01-Jul-2025-01-Jul-2026</li></ul>  |

## B. TEACHING-LEARNING ACTIVITIES

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| <b>COURSES TAUGHT</b> | <ul style="list-style-type: none"> <li>• EFT1023 - BIODIVERSITY</li> <li>• EFT1103 - BASIC PHYSICS</li> <li>• EFT4082 - STUDENT IN ENTERPRISE PROGRAMME</li> <li>• EKE2053 - ENERGY AND NATURAL RESOURCES</li> <li>• EKE4153 - GLOBAL RESOURCES AND CLIMATE CHANGES</li> <li>• EKT4093 - ECONOMY TRADE AND ENVIRONMENT</li> <li>• ENE22403 - BIOMASS ENERGY FROM NATURAL RESOURCES</li> <li>• ENE2263 - ANGIOSPERM BIOLOGY</li> <li>• ENE3223 - ETHNOBIOLOGY</li> <li>• ENE3303 - INVASIVE SPECIES MANAGEMENT</li> <li>• ENE4153 - ENERGY RESOURCES</li> <li>• ENT1233 - BIODIVERSITY</li> <li>• ENT2083 - NATURAL RESOURCES ECOLOGY</li> <li>• ENT3193 - RESEARCH PROJECT I</li> <li>• ENT4153 - ENERGY RESOURCES</li> <li>• ENT4183 - ENVIRONMENTAL ECONOMICS</li> <li>• ENT4203 - RESEARCH PROJECT II</li> <li>• ENT4228 - INDUSTRIAL TRAINING</li> <li>• ENT4388 - INDUSTRIAL TRAINING II</li> <li>• EWE3223 - FOREST MENSURATION AND SURVEY</li> <li>• EWT2013 - WOOD PHYSICAL AND MECHANICAL PROPERTIES</li> <li>• EWT2083 - DENDROLOGY</li> <li>• EWT2093 - SILVICULTURE</li> <li>• EWT3203 - FOREST RESOURCES BIOENERGY</li> <li>• FPE3213 - INDUSTRIAL ECOLOGY</li> </ul> |
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### C. RESEARCH AND DEVELOPMENT

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| <b>JOURNAL(S)</b> | <ol style="list-style-type: none"> <li>1. TREE RISK AND HAZARD ASSESSMENT AT UMK-TROPICAL RAINFOREST RESEARCH CENTRE (UMK-TRACE), PULAU BANDING, PERAK, MALAYSIA   CO   2024-12-16</li> <li>2. A POTENTIAL STUDY OF WASTE-TO-WEALTH PROGRAM IN DELTA TUMPAT, KELANTAN, MALAYSIA   CO   2024-10</li> <li>3. CHARACTERIZATION OF OIL PALM FRONDS PANEL AT DIFFERENT CONDITIONS AND POSITIONS WITH FORMALDEHYDE ADHESIVE   CO   2021-01-31</li> <li>4. EFFECT OF TORREFACTION PROCESS ON CRYSTALLINITY INDEX PROPERTIES OF EMPTY FRUIT BUNCH'S BIOCHAR   CORRESPNDG   2022</li> <li>5. THE POTENTIAL USE OF AZOLLA PINNATA AS AN ALTERNATIVE BIO-INSECTICIDE   CO   2020-12</li> <li>6. THE POTENTIAL USE OF AZOLLA PINNATA AS AN ALTERNATIVE BIO-INSECTICIDE   CO   2020-12</li> <li>7. CHARACTERIZATION ON MORPHOLOGICAL AND BONDING BEHAVIOR OF TORREFIED BIOCHAR FROM OIL PALM EMPTY FRUIT BUNCH   MAIN   2020</li> <li>8. CHEMICAL COMPOSITION AND LARVICIDAL ACTIVITY OF FLOWER EXTRACTS FROM CLITORIA TERNATEA AGAINST AEDES (DIPTERA: CULICIDAE)   CO   2020</li> <li>9. CHEMICAL COMPOSITION AND LARVICIDAL ACTIVITY OF FLOWER EXTRACTS FROM CLITORIA TERNATEA AGAINST AEDES (DIPTERA: CULICIDAE)   CO   2020</li> <li>10. AUGMENTATION OF THE DELAMINATION FACTOR IN DRILLING OF CARBON FIBRE-REINFORCED POLYMER COMPOSITES (CFRP)   CO   2020-11</li> <li>11. AUGMENTATION OF THE DELAMINATION FACTOR IN DRILLING OF CARBON FIBRE-REINFORCED POLYMER COMPOSITES (CFRP)   CO   2020-11</li> <li>12. INFLUENCE OF TORREFACTION PARAMETERS ON ELEMENTAL PROPERTIES OF TORREFIED OIL PALM EMPTY FRUIT BUNCH BIOCHAR   MAIN   2023</li> <li>13. TORREFACTION ON AGRICULTURAL RESIDUES EMPTY FRUIT BUNCH: EFFECT OF TORREFACTION PROCESSING FACTORS ON THERMAL PROPERTIES OF TORREFIED EMPTY FRUIT BUNCH BIOCHAR   MAIN   2023</li> <li>14. APPLICABILITY OF ORGANIC POLYMER FOR PHARMACEUTICAL REMOVAL   CO   2023</li> </ol> |
|                   | <ol style="list-style-type: none"> <li>1. BONDING PROPERTIES AND MORPHOLOGICAL CHARACTERISTICS OF TORREFIED PELLETISED BIOCHAR FROM PALM OIL INDUSTRY'S RESIDUES EMPTY FRUIT BUNCH   CORRESPNDG   2024</li> <li>2. FINITE ELEMENT ANALYSIS OF A ROBOTIC ARM FOR ELECTRONIC DEVICES TRANSPORTATION: DESIGN AND SIMULATION   CO   2024</li> <li>3. FLORISTIC COMPOSITION AND TREE SPECIES DIVERSITY WITH DBH <math>\geq</math> 5 CM AT GUNUNG STONG STATE PARK (GSSP), KELANTAN, PENINSULAR MALAYSIA   CO   2024</li> <li>4. IMPACT OF PELLETISATION ON TORREFIED OIL PALM EMPTY FRUIT BUNCH BIOCHAR   CORRESPNDG   2024</li> <li>5. THE POTENTIAL OF OIL PALM EMPTY FRUIT BUNCH (OPEFB) IN THE REMOVAL OF PARACETAMOL FROM WATER   CO   2024-01-15</li> <li>6. THE ROLE OF THE MALAYSIAN NATURE SOCIETY KELANTAN BRANCH IN RAISING AWARENESS OF MANGROVE TREE CONSERVATION AT DELTA KELANTAN, TUMPAT, KELANTAN   CO   2024</li> <li>7. TREE RISK AND HAZARD ASSESSMENT AT UMK-TROPICAL RAINFOREST RESEARCH CENTRE (UMK-TRACE), PULAU BANDING, PERAK, MALAYSIA   CO   2024</li> <li>8. COMPARISON OF CHEMICAL COMPOSITIONS BETWEEN TWO FAST GROWING SPECIES: ACACIA MANGIUM AND LEUCAENA LEUCOCHEPHALA   CORRESPNDG   2021-09</li> <li>9. TORREFACTION OF EMPTY FRUIT BUNCH (EFB) FIBRES ADOPTED IN MODIFIED MICROWAVE   CO   2021-09</li> <li>10. EVALUATION ON MECHANICAL PROPERTIES OF PLYWOOD FROM TWO FAST GROWING SPECIES: NEOLAMARCKIA CADAMBA AND PARASERIANTHES FALCATA   CO   2021-09</li> </ol>   |

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| <b>PROCEEDING(S)</b> | <ol style="list-style-type: none"> <li>11. POTENTIAL OF OIL PALM TRUNK STARCH AS FLOCCULANT FOR CONTAMINANT OF EMERGING COMPOUND REMOVAL   CO   2021-09</li> <li>12. TORREFACTION OF EMPTY FRUIT BUNCHES (EFB) MATERIALS IN MODIFIED MICROWAVE SCALE REACTOR   CO   2022</li> <li>13. EFFECTS OF BG11, SKM AND MKM CULTURE MEDIA ON OPTICAL DENSITY OF SPIRULINA PLATENTIS CULTIVATION   CO   2022</li> <li>14. NATURAL-BASED POLYMERS FOR WASTEWATER TREATMENT   CO   2022</li> <li>15. REMOVAL OF NONSTEROIDAL ANTI-INFLAMMATORY DRUGS (NSAIDS) FROM WATER USING EMPTY FRUIT BUNCH (EFB) BASED BIO SORBENT   CO   2022</li> <li>16. EFFECT OF CELLULOSE NANOCRYSTALS (CNC) ON THERMAL PROPERTIES OF POLYVINYL ALCOHOL (PVA)/CNC BIOCOMPOSITES   CO   2022</li> <li>17. TORREFACTION'S OPTIMIZATION OF MULTIPLE RESPONSES ANALYSIS ON TORREFIED BIOCHAR FROM OIL PALM EMPTY FRUIT BUNCH   MAIN   2020-09</li> <li>18. PREPARATION AND CHARACTERIZATION OF CALCIUM HYDROXYPHOSPHATE (HYDROXYAPATITE) FROM TILAPIA FISH BONES AND SCALES VIA CALCINATION METHOD   CO   2020</li> <li>19. SYNTHESIS OF SODIUM ALGINATE GRAPHENE OXIDE THIN FILM FOR ADSORPTION APPLICATION   CO   2020-12-28</li> <li>20. ANALYSIS OF WATER STRESS INDEX (WSI) FOR DISTRICT SURROUNDING ULU SAT FOREST RESERVE, KELANTAN, MALAYSIA   CO   2020-09-22</li> <li>21. AGNPS-AZOLLA PINNATA EXTRACT AS LARVICIDAL AGAINST AEDES AEGYPTI (DIPTERA: CULICIDAE)   CO   2020-12-28</li> <li>22. EFFECTS OF TORREFACTION PROCESS ON CHEMICAL PROPERTIES OF SMALL DIAMETER ACACIA MANGIUM WOOD   MAIN   2023</li> <li>23. THE PROSPECT OF BIOCHAR BY OIL PALM EMPTY FRUIT BUNCH (OPEFB) IN THE REMOVAL OF CONTAMINANTS EMERGING CONCERN (CECS)   CO   2023</li> <li>24. GREENING SPIRULINA VALUE CHAIN TOWARDS ENVIRONMENTAL SUSTAINABILITY IN MALAYSIA   CO   2023</li> <li>25. ELUCIDATING ON TIME AND TEMPERATURE EFFECTS ON TORRIFIED MOLDY BREAD   CO   2023</li> </ol>   |
| <b>BOOK(S)</b>       |   |
| <b>CHAPTER(S)</b>    | <ol style="list-style-type: none"> <li>1. PROCESSING AND PROPERTIES OF OIL PALM FRONDS COMPOSITE BOARDS FROM ELAEIS GUINEENSIS   CO   2021-06</li> <li>2. BULETIN FSB EDISI JAN-JUN 2024   CO   2024</li> </ol>   |
| <b>OTHER(S)</b>      | <ol style="list-style-type: none"> <li>1. BULETIN FSB EDISI JAN-JUN 2024   CO   2024</li> <li>2. EBULETIN FSB EDISI JUL-NOV 2024   CO   2024-12</li> <li>3. FSB GLOBAL OUTREACH: INTERNATIONAL MOBILITY FOR DISCOVERING, NETWORKING AND LINKAGE   MAIN   2023</li> </ol>  |
| <b>RESEARCH(S)</b>   | <ol style="list-style-type: none"> <li>1. ASSESSMENT OF CONSERVATION VALUE FOR ECOTOURISM RESOURCES AT TAMAN NEGARA KUALA KOH, GUA MUSANG, KELANTAN.   MEMBER   SGJP   2017</li> <li>2. AUGMENTATION OF THE DELAMINATION FACTOR IN DRILLING OF CARBON FIBRE REINFORCED POLYMER (CFRP) COMPOSITES   MEMBER   SGJP   2017</li> <li>3. CHARACTERIZATION OF LEUCAENA LEUCOCEPHALA AND ACACIA MANGIUM SPECIES AS FUEL PELLETS BIOMASS FOR ENERGY SOURCES   HEAD   FRGS   2013</li> <li>4. CHARACTERIZATION OF MOLDY BREAD AND TUBER PEEL WASTES FOR SOLID BIOFUEL PRODUCTION   MEMBER   UMK-FUND   2021</li> <li>5. DEVELOPMENT OF TILAPIA POND SMART WATER QUALITY MONITORING SYSTEM BASED ON INTERNET OF THINGS (IOT)   MEMBER   SGJP   2017</li> <li>6. ENHANCED ANAEROBIC AND AEROBIC BIOGRANULATION SYSTEM FOR TREATING PALM OIL MILL EFFLUENT: DEVELOPMENT AND CHARACTERIZATION OF THE NEWLY DEVELOPED NATURAL COAGULANT SUITABLE FOR THE PRE-TREATMENT OF POME   MEMBER   UMK-MATCH   2021</li> <li>7. EXTRACTION OF NANOCELLULOSE FROM AGRICULTURAL WASTE DEVELOPMENT OF ORGANIC BIODEGRADABLE PLACTIC   MEMBER   SGPPU   2015</li> <li>8. FILLING AND CAPPING MACHINE OF MULTIPURPOSE SEASONING (PERENCAH SERBAGUNA)   HEAD   PPRN   2017</li> <li>9. FUNDAMENTAL STUDY OF SCHIZOSTACHYUM BRACHYLADUM AND BAMBUSA VULGARIS ON CHEMICAL COMPOSITION, PHYSICAL PROPERTIES AND CELL WALL STRUCTURE   MEMBER   FRGS   2013</li> <li>10. GERAN PEMBANGUNAN MODUL SOFTSKILL BAGI BWI PLKK FTC   MEMBER   GRANT(I/A)   2023</li> <li>11. NEW ALLOMETRIC MODELS OF GROUND BIOMASS AND CARBON STOCK OF PERMANENT FOREST RESERVE IN KELANTAN USING REMOTE SENSING DATA   MEMBER   FRGS   2013</li> <li>12. OPTIMISATION AND CHARACTERISATION OF MULTIPLE RESPONSES ANALYSIS ON TORREFIED BIOCHAR FROM OIL PALM RESIDUE AS SOLID FUEL   HEAD   UMK-FUND   2022</li> <li>13. OPTIMISATION AND CHARACTERIZATION OF MULTIPLE RESPONSES ANALYSIS ON TORREFIED BIOCHAR FROM OIL PALM RESIDUE AS SOLID FUEL   HEAD   UMK-FUND   2022</li> <li>14. PROGRAM SUPERFOOD SPIRULINA: LANGKAH LESTARI UNTUK MENGATASI MALNUTRISI KOMUNITI   MEMBER   MOF   2020</li> <li>15. PEMBANGUNAN EKOSISTEM PEMROSESAN TOTAL MIXED RATION UNTUK PENTERNAKAN RUMINAN (E-RUMINAN)   MEMBER   GRANT(I/A)   2023</li> <li>16. PERFORMANCE STUDY OF SMALL SCALE MOULD STICK MACHINE FOR FISH CARCKER PRODUCTION   HEAD   SGPL-MYRA   2016</li> <li>17. PORTABLE ROTI JOHN' MULTITASKING MACHINE   MEMBER   PPRN   2017</li> <li>18. PROGRAM SUPERFOOD SPIRULINA: LANGKAH LESTARI UNTUK MENGATASI MALNUTRISI KOMUNITI   MEMBER   MOF   2022</li> </ol> |

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| <p><b>SUPERVISION</b></p>        | <ul style="list-style-type: none"> <li>• <b>THE EVALUATION OF CARBON STOCK IN RUBBER TREES (HEVEA BRASILIENSIS) USING REMOTE SENSING, GEOGRAPHIC INFORMATION SYSTEM (GIS) &amp; CHNS/O ELEMENTAL ANALYZER   MAIN SUPERVISOR FOR A MASTER'S STUDENT</b></li> </ul>  |
| <p><b>RESEARCH AWARD (S)</b></p> | <ul style="list-style-type: none"> <li>• Product Name: SOY GROWTH BOOSTER- A HEALTHY AND ECONOMICAL FISH FEED FOR FRESHWATER FISH<br/>Award: GOLD<br/>Role: Member<br/>Exhibition Name:MTE</li> <li>• Product Name: Waste to wealth: A novel biodegradable composites from agriculture waste for drug delivery<br/>Award: GOLD<br/>Role: Member<br/>Exhibition Name:Carnival of Research and Innovation (CRI2021)</li> <li>• Product Name: Waste to wealth: A novel biodegradable composites from agriculture waste for drug delivery<br/>Award: GOLD<br/>Role: Member<br/>Exhibition Name:Virtual Innovation Competition 2021</li> <li>• Product Name: Waste to wealth: A novel biodegradable composites from agriculture waste for drug delivery<br/>Award: SPECIAL<br/>Role: Member<br/>Exhibition Name:Virtual Innovation Competition 2021</li> <li>• Product Name: SOY GROWTH BOOSTER- A HEALTHY AND ECONOMICAL FISH FEED FOR FRESHWATER FISH<br/>Award: SPECIAL<br/>Role: Member<br/>Exhibition Name:MTE</li> <li>• Product Name: SAGA-GIS: An alternative technique for landslide observation<br/>Award: SILVER<br/>Role: Member<br/>Exhibition Name:Pre-University Matriculation Innovation Competition (PIITRAM)</li> <li>• Product Name: Earth Camp: A platform for empowering and engaging student's competencies<br/>Award: BRONZE<br/>Role: Member<br/>Exhibition Name:International Teaching Enhancement &amp; Learning Innovation Carnival (i-TeLiC)</li> </ul> |

**D. CONSULTATION**

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| <p><b>CONSULTATION(S)</b></p> |  |
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**E. COMMUNITY SERVICES**

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| <p><b>COMMUNITY SERVICES</b></p> |  |
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