



DR. SOFINA BINTI TAMAM

PENSYARAH UNIVERSITI DS13

CONTACT

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sofinatamam@usim.edu.my

Faculty: Fakulti Sains
Dan Teknologi

SUPERVISION

PhD - Completed: 0, Ongoing: 1

Master - Completed: 0,
Ongoing: 2

AREAS OF EXPERTISE

Medical Imaging Physics

Behavioural Neuroscience

Medical Biomaterial

ACADEMIC QUALIFICATION

PhD in Medical Physics (2016)

Master in Medical Physics (2011)

Bachelor in Applied Science (medical Physics) (2006)

RESEARCH

1. EVALUATING THE EFFECTIVENESS OF THE NEUROTRACT MODEL IN ENHANCING MEDICAL STUDENTS' UNDERSTANDING OF THE SPINAL CORD: A PILOT STUDY USING A MULTIMETHOD RESEARCH DESIGN

2026

BIDUNI MIZANNIYAH

ON GOING

CO-RESEARCHER

2. EXAMINING VISUOSPATIAL WORKING MEMORY THROUGH STUDENTS' COMPREHENSION OF SPINAL CORD NEURONAL PATHWAYS USING A 3D-PRINTED MODEL.

2026

GERAN PENYELIDIKAN FUNDAMENTAL

ON GOING

CO-

RESEARCHER

3. AUGMENTING FLUID INTELLIGENCE IN UNDERPRIVILEGED CHILDREN WITH HIGH-RISK OF DEPRESSION VIA EEG NEUROFEEDBACK AND COGNITIVE GAMIFICATION

2025

GERAN ANTARABANGSA

ON GOING

CO-RESEARCHER

4. THE INVESTIGATION OF SURATUL QURAN ONTO COGNITIVE FUNCTIONAL BY BRAINWAVE PATTERN EVALUATION AMONG UNIVERSITY STUDENTS

2024

GERAN PENYELIDIKAN TRANSDISIPLINARI

ON GOING

MAIN

RESEARCHER

5. ISLAH (INDEX OF SPIRITUALITY HEALTH): HARNESSING AI
FOR EARLY DETECTION AND PERSONALIZED INTERVENTION
FOR SPIRITUAL WELLBEING FOR MUSLIM YOUTH

2024 GERAN PENYELIDIKAN USIM ON GOING CO-RESEARCHER

RESEARCH

6. PROGRAM : THE INVESTIGATION OF SURATUL QURAN ONTO COGNITIVE FUNCTIONAL BY BRAINWAVE PATTERN EVALUATION AMONG UNIVERSITY STUDENTS PROJEK: AN EXPOSITION OF THE CORRELATION BETWEEN QURAN THERAPY IMPLEMENTATION ONTO COGNITIVE CONCENTRATION & ATTENTION

2024 GERAN PENYELIDIKAN TRANSDISIPLINARI ON GOING CO-RESEARCHER

7. EVALUATION OF ANTIBACTERIAL AND PERIODONTAL REGENERATION ACTIVITIES OF BENZYL ISOTHIOCYANATE (BITC) FROM SALVADORA PERSICA (SP) IN CHITOSAN HYDROGEL

2024 GERAN KPT ON GOING CO-RESEARCHER

8. EXPLORING THE NEUROPHYSIOLOGICAL CORRELATES OF FRAGRANCE-INDUCED CALMNESS THROUGH EEG ANALYSIS: AN EMPIRICAL INVESTIGATION

2023 BIDUNI MIZANNIYAH ON GOING MAIN RESEARCHER

9. ASSESSMENT OF COMPETENCY GAP TO ENHANCE WORKFORCE PERFORMANCE IN 5G VERTICAL AREAS AND APPLICATIONS

2022 GERAN PENYELIDIKAN AGENSI KERAJAAN COMPLETED CO-RESEARCHER

10. RELIGIOUS COPING MECHANISM DURING COVID-19 PANDEMIC AND THE TENDENCY TO ATTEMPT MURTAD AMONG UNIVERSITY STUDENTS

2021 GERAN PENYELIDIKAN KHAS COMPLETED CO-RESEARCHER

11. THE FACTORS AND BRAIN CONNECTIVITY OF LOVE HURTS PHENOMENON AMONG UNMARRIED FEMALES USING FMRI EXTENDED BAYESIAN MODEL ANALYSIS

2019 GERAN PENYELIDIKAN USIM COMPLETED MAIN RESEARCHER

12. EFFECT OF ISLAMIC THERAPY IN ENHANCING MEMORY BRAIN ACTIVATION OF PEOPLE WITH INTERNET ADDICTION DISORDER USING EEG

2019 PENYELIDIKAN TANPA BIAYA COMPLETED MAIN RESEARCHER

13. INVESTIGATION OF TRI-MODALITY IMAGE REGISTRATION FOR NAVIGATING CARDIOVASCULAR DISEASE TREATMENT PROCEDURE

2019 GERAN PENYELIDIKAN USIM COMPLETED CO-RESEARCHER

14. MICROSCALE CHEMISTRY KIT FOR SCHOOLS

2019 GERAN PENYELIDIKAN AGENSI KERAJAAN COMPLETED CO-RESEARCHER

15. AN INTELLIGENT QURANIC REPOSITORY RETRIEVAL MODEL

2016 GERAN PENYELIDIKAN TRANSLASIONAL COMPLETED CO-RESEARCHER

PUBLICATION

1. THE RELATIONSHIP BETWEEN BRAIN WAVE POWER VALUE OF PAIN PERCEPTION AND EMPATHY USING THE ELECTROENCEPHALOGRAPH (EEG)

MALAYSIAN JOURNAL OF SCIENCE, HEALTH & TECHNOLOGY (MJOSHT)

2025 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

2. A REVIEW OF THE TECHNOLOGICAL ADVANCEMENTS IN DETECTING LUNG CANCER SEVERITY

ASM SCIENCE JOURNAL

2025 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

3. IDENTIFICATION OF CHEMICAL PROFILES OF AROMATHERAPEUTIC COMPOUNDS IN COMMERCIAL FRAGRANCES AND THEIR POTENTIAL TO MODULATE EMOTIONAL STATES

MALAYSIAN JOURNAL OF SCIENCE, HEALTH & TECHNOLOGY

2025 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

4. LOVE HURTS? A BRAIN INSIGHT THROUGH FMRI NEUROIMAGING

2025 BOOK

5. REWARD-RELATED BRAIN ACTIVATION AMONG UNIVERSITY STUDENTS: AN FMRI STUDY

MALAYSIAN JOURNAL OF MEDICINE AND HEALTH SCIENCES

2024 JOURNAL SCOPUS CO-AUTHOR

6. A FUSION OF DISCRETE WAVELET TRANSFORM-BASED AND TIME-DOMAIN FEATURE EXTRACTION FOR MOTOR IMAGERY CLASSIFICATION

JORDANIAN JOURNAL OF COMPUTERS AND INFORMATION TECHNOLOGY

2024 JOURNAL OTHER DATABASE CO-AUTHOR

7. MARKETING THE 5G ECOSYSTEM READINESS AS A GAME-CHANGER FOR THE HEALTHCARE INDUSTRY: TRANSFORMING IDEAS INTO REALITY

INTERNATIONAL CONFERENCE ON BUSINESS, ACCOUNTING AND FINANCE: EMBRACING NEW BUSINESS PARADIGM SHIFTS

2024 PROCEEDING NON-INDEX MAIN AUTHOR

8. ASSESSMENT OF COMPETENCY GAP TO ENHANCE WORKFORCE PERFORMANCE IN 5G VERTICAL AREAS AND APPLICATIONS

MEDIA MATTERS VOLUME 6

2024 CHAPTER IN BOOK CO-AUTHOR

9. FEATURES EXTRACTION TECHNIQUE ANALYSIS OF EEG SIGNAL FOR MOTOR IMAGERY CLASSIFICATION

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

2023 PROCEEDING NON-INDEX CORRESPONDING AUTHOR

10. AKIDAH DAN MASYARAKAT SIRI 3

2023 BOOK

11. TAHAP KEBERGANTUNGAN KEPADA AGAMA ISLAM DALAM KALANGAN PELAJAR UNIVERSITI SEMASA PANDEMIK COVID-19

AKIDAH DAN MASYARAKAT SIRI 1

2023 CHAPTER IN BOOK CO-AUTHOR

12. STRATEGI DAYA TINDAK AGAMA SEMASA PANDEMIK COVID-19 DALAM KALANGAN PELAJAR UNIVERSITI

AKIDAH DAN MASYARAKAT SIRI 3

2023 CHAPTER IN BOOK CO-AUTHOR

13. THE DISRUPTION OF WHITE MATTER INTEGRITY AND ITS RELATIONSHIP WITH COGNITIVE FUNCTION IN NON-SEVERE TRAUMATIC BRAIN INJURY.

FRONTIERS IN NEUROLOGY

2022 JOURNAL ERA CO-AUTHOR

PUBLICATION

14. DISRUPTION OF WHITE MATTER INTEGRITY AND ITS RELATIONSHIP WITH COGNITIVE FUNCTION IN NON-SEVERE TRAUMATIC BRAIN INJURY

FRONTIERS IN NEUROLOGY

2022 JOURNAL ERA CO-AUTHOR

15. THE VARIATION IN IMAGING METHOD OF ACTIVATION DETECTION ASSOCIATED WITH PAINLOVE-EMPATHY BRAIN RESPONSES

PHYSICS AND TECHNOLOGY IN MEDICINE

2022 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

16. SUMBANGAN SAINS DAN TEKNOLOGI DALAM MEMBENDUNG JANGKITAN VIRUS COVID-19 DALAM NORMA BARU

NORMA BAHARU: USAHA SAINS MEMAHAMI KEPERLUAN MASYARAKAT

2022 CHAPTER IN BOOK CO-AUTHOR

17. PRELIMINARY STUDY OF MEMORY ENHANCEMENT OF USIM STUDENTS WITH INTERNET ADDICTION DISORDER BY THE EFFECT OF QURAN THERAPY IN TERMS OF EEG POWER SPECTRA

PHYSICS AND TECHNOLOGY IN MEDICINE

2020 JOURNAL OTHER DATABASE CORRESPONDING AUTHOR

18. INVESTIGATION OF TRANSMITTANCE AND HYDROPHOBIC PROPERTIES OF $\text{SiO}_2\text{:ZnO:SiO}_2$ AS A MULTILAYER COATING SUBSTANCE

SOLID STATE SCIENCE & TECHNOLOGY

2020 JOURNAL OTHER DATABASE CO-AUTHOR

19. THE HEALING POWER: A REVIEW ON THE VARIOUS ASPECTS OF THE LOVE-PAIN RELATIONSHIP

MALAYSIAN JOURNAL OF SCIENCE HEALTH & TECHNOLOGY

2019 JOURNAL OTHERS DATABASE MAIN AUTHOR

20. THE LOVE THAT KEEPS US FROM PAIN: A PSYCHOPHYSICAL INVESTIGATION

INTERNATIONAL MEDICAL JOURNAL

2019 JOURNAL SCOPUS MAIN AUTHOR

21. MODELLING BRAIN ACTIVATIONS AND CONNECTIVITY OF PAIN MODULATED BY HAVING A LOVED ONE NEARBY

RECENT ADVANCEMENT ON APPLIED PHYSICS, INDUSTRIAL CHEMISTRY AND CHEMICAL TECHNOLOGY

2018 JOURNAL SCOPUS MAIN AUTHOR

22. DE L'AMOUR ET DE LA DOULEUR (LOVE AND PAIN)

SCIENCES PSY

2018 JOURNAL OTHER DATABASE MAIN AUTHOR

23. LOVE AS A MODULATOR OF PAIN

MALAYSIAN JOURNAL OF MEDICAL SCIENCES (MJMS)

2017 JOURNAL SCOPUS MAIN AUTHOR

24. PAIN WHEN LOVE IS NEAR

10TH INTERNATIONAL SEMINAR ON MEDICAL PHYSICS AND 1ST AMDI INTERNATIONAL ONCOLOGY SYMPOSIUM (ISMP & IOS 2016)

2016 PROCEEDING NON-INDEX MAIN AUTHOR

CONSULTATION

1. PROGRAM PENAJAAN/CUTI BELAJAR BERGAJI PENUH (CBBP) PERINGKAT KEDOKTORAN DAN SRJANA TAHUN 2018

BAHAGIAN TAJAAN PENDIDIKAN CYBERJAYA, KEMENTERIAN PENDIDIKAN MALAYSIA

2018

NATIONAL

2. PROGRAM PENAJAAN/CUTI BELAJAR BERGAJI PENUH (CBBP) PERINGKAT KEDOKTORAN DAN SRJANA TAHUN 2018

INSTITUT KEMAJUAN DESA (INFRA), BAHAGIAN TAJAAN PENDIDIKAN, KEMENTERIAN PEMDIDIKAN MALAYSIA

2018

NATIONAL

AWARDS/RECOGNITION

1. MULTI-CLASS CLASSIFICATION OF BRAIN CONDITIONS FROM USING MACHINE LEARNING

INTERNATIONAL CREATIVE INNOVATION IDEA COMPETITION (ICIIC), 2026

2026 ANTARABANGSA SILVER

2. ACADEMIC ADVISOR

UNIVERSITI KEBANGSAAN MALAYSIA (UKM)

2025 NATIONAL

3. VISITING LECTURER (PENSYARAH PELAWAT)

UNIVERSITI SAINS MALAYSIA

2025 NATIONAL

4. AUGMENTING FLUID INTELLIGENCE IN UNDERPRIVILEGED CHILDREN WITH HIGH-RISK OF DEPRESSION VIA EEG NEUROFEEDBACK AND COGNITIVE GAMIFICATION

INNOVATION BANK CHALLENGE 2025

2025 ANTARABANGSA SILVER

5. NEUROTRACTS: A 3D-PRINTED MODEL REVOLUTIONISING THE TEACHING OF SPINAL CORD PATHWAYS IN MEDICAL EDUCATION

International Learning Resources Festival 2025

2025 ANTARABANGSA

6. NEUROTRACTS: A 3D-PRINTED MODEL REVOLUTIONISING THE TEACHING OF SPINAL CORD PATHWAYS IN MEDICAL EDUCATION (INTERACTIVE LEARNING EXPERIENCE - PROFESSIONAL CATEGORY)

International Learning Resources Festival 2025

2025 ANTARABANGSA SILVER

7. LEVEL UP LEARNING : PENGALAMAN BAHARU PDP MELALUI DUNIA GAMIFIKASI)

VIRTUAL INNOVATION COMPETITION EXHIBITION 2025 (VICE '25)

2025 ANTARABANGSA GOLD

8. CHITOSENSE: INNOVATIVE CHITOSAN-BASED URIC ACID BIOSENSOR

VIRTUAL INNOVATION COMPETITION EXHIBITION 2025 (VICE '25)

2025 ANTARABANGSA GOLD

9. BRAIN BIOPSY PHANTOM FOR MEDICAL TRAINING

INNOMed Innovation Pitching 2024

2024 ANTARABANGSA GOLD

10. SELF-CLEANING COATING

SCEINCE AND TECHNOLOGY RESEARCH EXPO (SCITEX)

2024 UNIVERSITY BRONZE

11. CHITOSAN AND SALVADORA PERSICA FOR ANTI-MICROBIAL FUNCTION

SCEINCE AND TECHNOLOGY RESEARCH EXPO (SCITEX)

2024 UNIVERSITY BRONZE

12. COGNITIVE BOOSTER

SCEINCE AND TECHNOLOGY RESEARCH EXPO (SCITEX)

2024 UNIVERSITY SILVER

13. HEALLINK: WAITING LIST OUTLOOK FOR PATIENTS

SCEINCE AND TECHNOLOGY RESEARCH EXPO (SCITEX)

2024 UNIVERSITY GOLD

14. NEUROTRACTS: A 3D-PRINTED MODEL REVOLUTIONIZING THE TEACHING OF SPINAL CORD PATHWAYS IN MEDICAL EDUCATION

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024

UNIVERSITY

GOLD

AWARDS/RECOGNITION

15. INDEX ON SPIRITUAL HEALTH (ISLAH): AN AI EXPERT SYSTEM PROJECT ON SPIRITUAL WELL-BEING ASSESSMENT AND INTERVENTION MANAGEMENT

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITY GOLD

16. THE INFLUENCE OF SURATUL QURAN ONTO BRAINWAVE PATTERN AMONG USIM STUDENTS

4TH INNOVATION BANK CHALLENGE 2024 (IBC 2024)

2024 UNIVERSITY SILVER

17. TISSUE EQUIVALENT POLYMER GEL FOR MEDICAL SKIN PATCH

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITY CERTIFICATE OF APPRECIATION

18. THE DEVELOPMENT OF AN AUTOMATED TIME-SETTING SMART SYSTEM OF MECHANICAL DRUG DELIVERY

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITY CERTIFICATE OF APPRECIATION

19. TISSUE-MIMICKING BRAIN PHANTOM AS BIOPSY MODEL FOR MEDICAL TRAINING

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

2023 UNIVERSITY SILVER

20. THE EFFECTIVENESS OF NEW INVENTION FRAGRANCE STICK FOR AROMATHERAPY

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

2023 UNIVERSITY BRONZE

21. THE DEVELOPMENT OF AN AUTOMATED TIME-SETTING SMART SYSTEM OF MECHANICAL DRUG DELIVERY

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

2023 UNIVERSITY BRONZE

22. TISSUE EQUIVALENT POLYMER GEL FOR MEDICAL SKIN PATCH

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

2023 UNIVERSITY BRONZE

23. HEALLINK

INVENTOPIA 2023: FBM-SEREMBAN INTERNATIONAL INNOVATION COMPETITION (FBM-SIIC)

2023 ANTARABANGSA SILVER

24. TISSUE-MIMICKING BRAIN PHANTOM AS BIOPSY MODEL FOR MEDICAL TRAINING

International Materials Technology Challenge (iMTC 8.0) Innocreative Technology Challenge (ICTC 1.0)

2023 ANTARABANGSA GOLD

25. TISSUE-MIMICKING BRAIN PHANTOM AS BIOPSY MODEL FOR MEDICAL TRAINING

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITY SILVER

26. EXPLORING MOTOR IMAGERY-BASED BCL:FUSION OF DISCRETE WAVELET TRANSFORM (DWT)-BASED AND TIME-DOMAIN FEATURES EXTRACTION FROM A SINGLE-CHANNEL ELECTROENCEPHALOGRAM (EEG) SIGNAL

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITY SILVER

27. INVESTIGATING THE PSYCHOSPIRITUAL, COGNITIVE AND BRAINWAVE PATTERNS OF INDIVIDUALS WITH TENDENCY TOWARD APOSTASY.

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023 UNIVERSITY GOLD

28. EMPOWERING UNDERPRIVILEGED CHILDREN BY AUGMENTING FLUID INTELLIGENCE, A COMPREHENSIVE APPROACH CENTRED ON BRAIN MAPPING AND COGNITIVE ROBOTICS

INNOVATION BANK CHALLENGE 2023 (IBC2023)

2023

UNIVERSITY

GOLD

AWARDS/RECOGNITION

29. COLOUR DOSIMETER

INNOVATION BANK CHALLENGE (IBC 2022)

2022

UNIVERSITI

SILVER

30. MIND RACE

INNOVATION BANK CHALLENGE (IBC 2022)

2022

UNIVERSITI

GOLD

31. ZOOMFAST

MALAYSIA TECHNOLOGY EXPO 2022

2022

ANTARABANGSA

SILVER

32. ISLAMIC RELIGIOUS ATTACHMENT SCALE (IRAS)

INNOVATION FOR SOCIAL WELL-BEING (e-INNOVATION)

2021

KEBANGSAAN

GOLD

33. RADIATION GAME

INNOVATION BANK CHALLENGE (IBC 2021)

2021

UNIVERSITI

BRONZE

34. ZOOM FAST

INNOVATION BANK CHALLENGE (IBC 2021)

2021

UNIVERSITI

SILVER

35. STAF CONTOH BULANAN JANUARY 2020

2020

OTHERS

36. FAST LAB: EDUCATIONAL SCIENCE KIT

MALAYSIA TECHNOLOGY EXPO 2020 (THE 19th INTERNATIONAL EXPO ON INVENTIONS AND INNOVATIONS) MTE 2020

2020

ANTARABANGSA

GOLD

37. FAST LAB: SCIENCE EDUCATIONAL KIT

INTERNATIONAL CONFERENCE AND EXPOSITION ON INVENTIONS BY INSTITUTIONS OF HIGHER LEARNING (PECIPTA'19)

2019

ANTARABANGSA

GOLD

38. FAST LAB: EDUCATION SCIENCE KIT

30th INTERNATIONAL INVENTION, INNOVATION & TECHNOLOGY EXHIBITION 2019 (ITEX 2019)

2019

ANTARABANGSA

GOLD