



## Profesor Madya Dr. Arman Shah bin Abdullah

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- ☎ 05-4505404
- 📍 Faculty Of Technical And Vocational  
Universiti Pendidikan Sultan Idris (UPSI)

### BIOGRAPHY

A lecturer from the Faculty Of Technical And Vocational , Universiti Pendidikan Sultan Idris, Tanjung Malim, Perak, Malaysia.

### ACADEMIA INFO

Scopus ID :  
24459417300  
Google Scholar :  
Arman Shah Abdullah

### ACADEMIC QUALIFICATION

- 2015 **IJAZAH DOKTOR FALSAFAH (PhD) (MECHANICAL ENGINEERING)**  
UNIVERSITI TEKNOLOGI MALAYSIA (SKUDAI)
- 2010 **MEKANIKAL (TEKNOLOGI PEMBUATAN TERMAJU) (MEKANIKAL)**  
Universiti Teknologi Malaysia
- 2009 **IJAZAH SARJANA MUDA KEJURUTERAAN PEMBUATAN (REKABENTUK PEMBUATAN) (KEJURUTERAAN PEMBUATAN)**  
UNIVERSITI TEKNIKAL MALAYSIA MELAKA

### AREAS OF EXPERTISE

Kejuruteraan Mekanikal  
(Bahan dan Pembuatan)

### SUPERVISION

**PhD**  
Completed : 1  
Ongoing : 4  
**Master**  
Completed : 6  
Ongoing : 0

### RESEARCH

- 1 Synthesis And Characterization Of Thermal Oxidation Behaviour Of Ti-Mo-Zr-Nb Alloy For Improvement Of Biomedical Implant  
2019 **Leader** | Kementerian Pengajian Tinggi
- 2 Pembangunan Dan Keberkesanan Penggunaan Mesin Sambal Hitam Untuk Kegunaan Industri Kecil Dan Sederhana  
2019 **Leader** | Universiti Pendidikan Sultan Idris
- 3 Pembangunan Dan Keberkesanan M-Pembelajaran Terhadap Pencapaian Pelajar Untuk Mata Pelajaran Reka Bentuk Dan Teknologi  
2019 **Leader** | Universiti Pendidikan Sultan Idris
- 4 Mechanism Of Hydroxyapatite Based Poly-3-Hydroxybutyrate (P3HB) Coating On Titanium Alloy  
2022 **Leader** | Kementerian Pengajian Tinggi
- 5 Deposition Of Hydroxyapatite Coating On Oxide Interlayer Via Sol Gel Method On Ti-Mo-Zr-Nb Alloy For Biomedical Applications  
2019 **Leader** | Universiti Pendidikan Sultan Idris

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## RESEARCH

- 6 Surface Treatment Of Biomedical Grade Titanium Alloy Using Ultrasonic Vibration  
2017 Leader Universiti Pendidikan Sultan Idris
- 7 The Elucidation Of Low Performing Secondary Students? Behavioral Intention In Learning Science Through STEM Education Based Lesson  
2021 Member Kementerian Pengajian Tinggi
- 8 Pembangunan Model Penerimaan Pensyarah Terhadap Sistem E–Pembelajaran UPSI Dan UNY  
2020 Member Universiti Pendidikan Sultan Idris
- 9 Pembangunan Gajet Elektrik Berfungsi Bagi Mata Pelajaran Reka Bentuk Dan Teknologi Di Sekolah Menengah Sains Tapah, Perak  
2019 Member Universiti Pendidikan Sultan Idris
- 10 The Usage Of Mobile Learning: Comparative Studies Among Technical And Vocational Education Students In Selected University  
2019 Member Universiti Pendidikan Sultan Idris
- 11 Comparative Studies On The Conductivity Of Sulfonic Acids Based Polyacrylamide Gel Polymer Electrolytes Assembled In Zinc–Air And Tin–Air Batteries  
2018 Member Universiti Pendidikan Sultan Idris
- 12 Blended Learning Among Polytechnical Mechanical Engineering Students Via Mobile Application  
2017 Member Universiti Pendidikan Sultan Idris
- 13 Model Kurikulum Berasaskan Keperluan Industri 4.0 Bagi Program Teknologi Kimpalan Di Kolej Vokasional Malaysia  
2024 Member Kementerian Pengajian Tinggi
- 14 PEMBANGUNAN MODEL PRAKTIS STUDIO SERAMIK MENERUSI MANIPULASI PENGGUNAAN SEMULA MENDAKAN TANAH LUMPUR SUNGAI (MTLS) SEBAGAI JASAD TANAH LIAT ALTERNATIF.  
2023 Member Kementerian Pengajian Tinggi
- 15 Investigation On Pullout Strength Between Different Design Of Cannulated Pedicle Screw And Osteoporosis Bones To Obtain An Optimum Design  
2021 Member Kementerian Pengajian Tinggi
- 16 Bioactivity Performances Of PLA/Hydroxyapatite On Co–Cr–Mo Alloy By Dip Coating Method For Biomedical Application  
2021 Member Kementerian Pengajian Tinggi
- 17 Parameter Optimization Of Cannulated Pedicle Screw And Osteoporosis Bones Fixation Through Finite Element Method  
2020 Member Universiti Malaysia Pahang

- 18 Effect Of Biodegradable Pla On Hydroxyapatite Coating To Improve Adhesion Properties On Co-Cr-Mo Alloy  
 2019 Member Universiti Malaysia Pahang
- 19 Development Of Lightweight Front Lower Control Arm Using Polyetheretherketone (Peek)  
 2019 Member Universiti Malaysia Pahang
- 20 Structural And Electrochemical Properties Of MgNiSiO<sub>4</sub> Cathode Material For Rechargeable Magnesium Battery Prepared Using Solid-state Reaction  
 2022 Member Universiti Pendidikan Sultan Idris

## PUBLICATIONS

- 1 **Hubungan Kreativiti Guru Terhadap Pencapaian Pelajar Berdasarkan Perspektif Guru dalam Amali Subjek Reka Bentuk dan Teknologi**  
 ANP Journal of Social Sciences and Humanities (ANP-JSSH)  
 2024 Google Scholar Co-Author  
 Correspondence Author
- 2 **The Significant Effect of Mechanical Treatment on Ceramic Coating for Biomedical Application**  
 Materials  
 2022 SCOPUS Correspondence Author
- 3 **Effectiveness of m-learning applications for design and technology subject**  
 International Journal of Interactive Mobile Technologies  
 2019 SCOPUS First Author
- 4 **Design and Development of Pahang Black Sambal Cooking Machine for Small and Medium Enterprises**  
 Journal of Advanced Research in Dynamical and Control Systems  
 2019 SCOPUS Correspondence Author
- 5 **The Influence of Ultrasonic Vibration Frequency on the Properties of TiN Coated Biomedical Ti13Zr13Nb Metals**  
 2018 SCOPUS First Author
- 6 **Performance Enhancement of Energy Saving and Machining Characteristic in Electrical Discharge Machining on Magnesium Alloy: A Review**  
 Journal of Advanced Research in Fluid Mechanics and Thermal Sciences  
 2020 SCOPUS Correspondence Author
- 7 **Influence of lecturers' motivations in entrepreneurship course teaching**  
 International Journal of Innovation, Creativity and Change  
 2019 SCOPUS Correspondence Author
- 8 **A review on wear and corrosion behavior of thermal oxidation on titanium-based alloy for biomedical application**  
 Journal of Advanced Research in Fluid Mechanics and Thermal Sciences  
 2019 SCOPUS Correspondence Author

- 9 **Hydroxyapatite and thermal oxidation as intermediate layer on metallic biomaterial for medical implant: A review**  
Journal of Advanced Research in Fluid Mechanics and Thermal Sciences  
2019 SCOPUS Correspondence Author
- 
- 10 **PHYSICAL VAPOUR DEPOSITION ON CORROSION RESISTANCE:A REVIEW**  
ARPN Journal of Engineering and Applied Sciences  
2018 SCOPUS First Author
- 
- 11 **STUDY ON ADHESION STRENGTH OF TIN COATED BIOMEDICAL TI-13ZR-13NB ALLOY**  
Jurnal Teknologi (Sciences and Engineering)  
2018 SCOPUS First Author
- 
- 12 **Influence of Substrate Temperature on Adhesion Strength of TiN Coating of Biomedical Ti-13Zr-13Nb Alloy**  
Arabian Journal for Science and Engineering  
2017 SCOPUS First Author
- 
- 13 **Influence of Bias Voltage on Corrosion Resistance of TiN coated on Biomedical TiZrNb Alloy**  
Advanced Materials Research  
2014 Excellent Research Australia (ERA) First Author
- 
- 14 **Optimization of chemical pretreatment for removing cobalt on tungsten carbide substrate using response surface methodology**  
Jurnal Teknologi (Sciences and Engineering)  
2016 SCOPUS First Author
- 
- 15 **Study on micro droplet reduction on tin coated biomedical TI-13ZR-13NB alloy**  
Jurnal Teknologi (Sciences and Engineering)  
2016 SCOPUS First Author
- 
- 16 **Influence of nitrogen flow rate in reducing tin microdroplets on biomedical TI-13ZR-13NB alloy**  
Jurnal Teknologi (Sciences and Engineering)  
2016 SCOPUS First Author
- 
- 17 **Canvas LMS Course Design: Create and Deliver Interactive Online Course on the Canvas Learning Management System**  
ASEAN Journal of Engineering Education  
2023 Google Scholar Co-Author
- 
- 18 **Geopolymer-Based Nepheline Ceramics: Effect of Sintering Profile on Morphological Characteristics and Flexural Strength**  
Crystals  
2022 SCOPUS Co-Author
- 
- 19 **Critical Thinking Skills in Performance-Based Assessment: Instrument Development and Validation**  
Journal of Technical Education and Training  
2022 SCOPUS Co-Author
-

- 20 **The Innovative Use of Smartphone for Sound STEM Practical Kit: A Pilot Implementation for Secondary Classroom**  
Research in Science and Technological Education  
2021 SCOPUS Co-Author
- 
- 21 **Modelling and State Variable Feedback Control with Proportional Action of a One-Link Flexible Manipulator Incorporating Payload**  
International Journal of Acoustics and Vibrations  
2021 SCOPUS Co-Author
- 
- 22 **SYNTHESIZE OF GEL POLYMER ELECTROLYTES FOR HIGH CONDUCTIVITY AND GOOD CYCLIC VOLTAMMETRY**  
International Journal of Psychosocial Rehabilitation  
2020 Excellent Research Australia (ERA) Co-Author
- 
- 23 **HOW GOOD IS MYGURU: THE LECTURERS PERCEIVED USEFULNESS AND ATTITUDE**  
Jurnal Cakrawala Pendidikan  
2020 SCOPUS Co-Author
- 
- 24 **Construct Validity and Reliability of Manufacturing Industry: A Rasch Measurement Model Approaches for Pilot Study**  
International Journal of Academic Research in Business and Social Sciences  
2019 Excellent Research Australia (ERA) Co-Author
- 
- 25 **The Effect of using Learning Kit Material among Students**  
International Journal of Recent Technology and Engineering (IJRTE)  
2019 SCOPUS Co-Author
- 
- 26 **Effects of Learning Aid (KIT) on Student Performance for Electric Circuits Topics**  
International Journal of Academic Research in Business and Social Sciences  
2019 Excellent Research Australia (ERA) Co-Author
- 
- 27 **Generated Formula based on Index Learning Style among Engineering Students towards Academic Achievement at Polytechnic Malaysia**  
International Journal of Academic Research in Business and Social Sciences  
2019 Excellent Research Australia (ERA) Co-Author
- 
- 28 **The Validity of the Critical Thinking Instrument in the TIG Welding Training Modules based on Project Based Learning (PBP) in the Subject (DJJ3032) of the Mechanical Workshop Practice 3 in Malaysian Polytechnic**  
International Journal of Academic Research in Business and Social Sciences  
2019 Excellent Research Australia (ERA) Co-Author
- 
- 29 **Keberkesanan Alat Bantu Mengajar bagi Tangan Kiri Fleming dalam Pengajaran dan Pembelajaran TVET**  
Journal of Advanced Research in Social and Behavioural Sciences  
2018 Google Scholar Co-Author
- 
- 30 **Development and Validity of TIG Welding Training Modules Based on the Dick and Raiser Model Design in the Subject (DJJ3032) of Mechanical Workshop Practice 3 in Polytechnic Malaysia**  
International Journal of Academic Research in Business and Social Sciences  
2018 Excellent Research Australia (ERA) Co-Author

- 31 **Usage of Mobile Learning among Mechanical Engineering Students at Premier Polytechnics Malaysia**  
International Journal of Academic Research in Business and Social Sciences  
2017 Excellent Research Australia (ERA) Co-Author
- 
- 32 **The Mobile Robot Control in Obstacle Avoidance Using Fuzzy Logic Controller**  
Indonesian Journal of Science and Technology  
2020 SCOPUS Co-Author
- 
- 33 **Biogas Fed-fuel Cell Based Electricity Generation: A Life Cycle Assessment Approach**  
International Journal of Energy Economics and Policy  
2020 SCOPUS Co-Author
- 
- 34 **Phase Transitions in Casting Process of Beryllium Oxide Slip**  
Journal of Advanced Research in Fluid Mechanics and Thermal Sciences  
2020 SCOPUS Co-Author
- 
- 35 **Studies on Valued Components Extraction from TitaniumMagnesium Production Wastes**  
Journal of Advanced Research in Fluid Mechanics and Thermal Sciences  
2020 SCOPUS Co-Author
- 
- 36 **Improving biocompatibility of cobalt based alloy using chemical etching and mechanical treatment**  
Materialwissenschaft und Werkstofftechnik  
2019 SCOPUS Co-Author
- 
- 37 **LEARNING STYLES AMONG HIGHER ACHIEVERS STUDENT AT SEBERANG PERAI POLYTECHNIC MALAYSIA**  
Journal of Engineering Science and Technology Review  
2018 SCOPUS Co-Author
- 
- 38 **The Effect of Knee Flexion Angle on Contact Stress of Total Knee Arthroplasty**  
MATEC Web of Conferences  
2018 SCOPUS Co-Author
- 
- 39 **Dehalogenase producing bacteria from extreme environment: A review**  
Malaysian Journal of Microbiology  
2018 SCOPUS Co-Author
- 
- 40 **Neural Network as an Assisting Tool in Designing Talus Implant**  
Materials Science Forum  
2018 SCOPUS Co-Author
- 
- 41 **Effect of Thermal Oxidation and Carbon Concentrations on Co-Cr-Mo Alloy in Enhanced Corrosion Protection**  
Materials Science Forum  
2018 SCOPUS Co-Author
- 
- 42 **IN-VITRO BIOCOMPATIBILITY STUDY OF HYDROXYAPATITE COATED ON CO-CR-MO WITH OXIDE INTERLAYER**  
Jurnal Teknologi (Sciences and Engineering)  
2018 SCOPUS Co-Author
-



43 **Surface Modification on CoCrMo Alloy to Improve the Adhesion Strength of Hydroxyapatite Coating**  
Procedia Engineering

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2017 SCOPUS Co-Author

44 **EFFECT OF USING VARIOUS SUBSTRATES ON CULTIVATION OF PLEUROTUS SAJOR-CAJU**  
Journal of Engineering Science and Technology

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2017 SCOPUS Co-Author

45 **Thermal oxidation process improved corrosion in cobalt chromium molybdenum alloys**  
International Journal of Advanced and Applied Sciences

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2017 Web of Science Co-Author

46 **Influence of Carbon Concentrations in Reducing Co and Cr Ions Release in Cobalt Based Implant: A Preliminary Report**  
Advanced Materials Research

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2014 Excellent Research Australia (ERA) Co-Author

## SUPERVISION

- 1 Pembangunan Model Pemikiran Keusahawanan Sosial Bagi Guru Bidang Teknik Dan Vokasional Sekolah Menengah  
2025 PHD National Supervisor Presentation
- 2 Penilaian Kesediaan Pensyarah Program Kejuruteraan Dari Aspek Sikap, Motivasi, Pengetahuan, Asas Perniagaan Dan Keusahawanan Terhadap Pengajaran Kursus Keusahawanan  
2025 PHD National Supervisor Presentation
- 3 Development Of Learning Management System For Technical Vocational Education And Training Institutional  
2025 PHD National Supervisor In Progress
- 4 Pembangunan Modul Pembelajaran Berasaskan Projek (MPBP) Bagi Latihan Kimpalan Dalam Kursus Amalan Bengkel Mekanikal Dan Kesannya Terhadap Pencapaian Pelajar Politeknik  
2020 PHD National Co-Supervisor Completed
- 5 Artificial Intelligence Competence Of Skilled Workers In The Maritime Industry And Their Contributions Towards The Organisations' Digital Competitiveness In Peninsular Malaysia  
2025 PHD National Co-Supervisor Presentation
- 6 Effect Of Thermal Oxidation On Carrosion Resistance Of Ti-8Mo-4Nb-Zr Alloy For Biomedical Application  
2021 Master National Supervisor Completed
- 7 Evaluation Of Electrical Discharge Machining Parameters On Energy Saving And Machining Characteristic Enhancement Of Biodegradable AZ31 Magnesium Alloy  
2024 Master National Supervisor Completed
- 8 Pembangunan Perisian Pembelajaran M-SMAW Bagi Kursus Teknologi Kimpalan Di Kolej Vokasional Malaysia Zon Tengah  
2021 Master National Co-Supervisor Completed
- 9 Kompetensi Profesional Guru Mata Pelajaran Reka Cipta Sekolah Menengah Di Malaysia  
2019 Master National Co-Supervisor Completed
- 10 Pembangunan Kit Pemantau (Koswer) Bagi Kursus Pendawaian Elektrik Di Politeknik Premier Malaysia  
2021 Master National Co-Supervisor Completed
- 11 Kesan Pembelajaran Berasaskan Projek (PBPj) Terhadap Pencapaian Dan Motivasi Intrinsik Bagi Projek Tahun Akhir Dalam Kalangan Pelajar Kolej Vokasional  
2020 Master National Co-Supervisor Completed



## CONSULTATION

- 1 Program Pemindahan Kemahiran Penyelenggaraan Kenderaan Bermotor kepada Masyarakat Orang Asli di Kampung Chenggong Behrang Ulu  
2019 Masyarakat Orang Asli di Kampung Chenggong Behrang ulu In Progress
- 2 Coaching and Proofread 10 Paper  
2019 Akademi Kejahteraan Sosial, Yogyakarta In Progress
- 3 Pemialai artikel jurnal teknologi 2  
2018 Penerbit UTM Completed
- 4 Penilai Artikel jurnal teknologi 4  
2018 Penerbit UTM Completed
- 5 Penilai artikel jurnal Teknologi 1  
2018 Penerbit UTM Completed
- 6 Penilai Artikel Jurnal Teknologi bertajuk STRENGTH ANALYSIS OF BUS SUPERSTRUCTURE BASED ON ACCURACY IMPROVEMENT OF T-JUNCTION FLEXIBLE JOINT STIFFNESS  
2017 Universiti Teknologi Malaysia Completed
- 7 Penilai Artikel Jurnal Teknologi bertajuk THE EFFECT OF FLOW RATE AND TEMPERATURE ON CORROSION RATE OF CARBON STEEL IN OIL AND GAS ENVIRONMENT  
2017 Universiti Teknologi Malaysia Completed
- 8 Chief Editor Jurnal Teknologi  
2016 Universiti Teknologi Malaysia Completed
- 9 Pemeriksa Luar Tesis Sarjana Penyelidikan  
2021 Universiti Teknikal Malaysia Melaka Completed
- 10 Pengerusi VIVA-KomATHI d/o SOCKALINGAM  
2018 IPS UPSI Completed
- 11 Pengerusi VIVA Ratna Binti Razali  
2018 Institut Pengajian Siswazah Completed
- 12 Penilai proposal peringkat PhD Pelajar Chedi Jamilu Mustapha(P20151002211)  
2017 UPSI Completed
- 13 Penilai PRA VIVA Master(penyelidikan) Pelajar Muhammad Asri Bin Madmor(M20141001218)  
2017 UPSI Completed
- 14 Penilai proposal peringkat sarjana (penyelidikan) Pelajar Mohd zaini(M20161000833)  
2017 UPSI Completed
- 15 Pelantikan ebagai Pemeriksa Dalam Tesis Sarjana Hafizah Rajaa Bt Shaari(M20121001150)  
2017 UPSI Completed

- 16 Penilai proposal peringkat sarjana (penyelidikan) Pelajar MohAMAD RAZI(M20161000884)  
2017 upsi Completed
- 
- 17 Penilai PRA VIVA Master(penyelidikan) Pelajar Mohana Thas(M20131001743)  
2017 UPSI Completed
- 
- 18 Penilai proposal peringkat sarjana (penyelidikan) Pelajar Fatihah Anis Binti saifuddin(M20131001451)  
2016 UPSI Completed
- 
- 19 Penilai proposal peringkat sarjana (penyelidikan) Pelajar Farul Afendi(M20151000500)  
2016 UPSI Completed
- 
- 20 Penilai proposal peringkat sarjana (penyelidikan) Pelajar Mohana Thas A/L Maniarasu(M20131000743)  
2016 UPSI Completed
- 
- 21 Penilai proposal peringkat sarjana (penyelidikan) Pelajar Farul Afendi(M20151000500)  
2016 UPSI Completed
- 
- 22 Editorial Board for International Journal of Assessment and Evaluation in Education  
2023 Penerbit UPSI In Progress
- 
- 23 Appointment as Editorial Advisory Board for Journal of Vocational Education Studies (JOVES)  
2020 Penerbit Universiti Ahmad Dahlan (UAD) In Progress
- 
- 24 Pelantikan ahli jawatankuasa perancangan akademik FTV  
2023 Fakulti Teknikal Dan Vokasional In Progress
- 
- 25 Ahli Jawatankuasa perancang akademik(JKPA)- Ketua Program Ijazah Sarjana Pendidikan Teknikal dan Vokasional  
2017 upsi In Progress
- 
- 26 Ahli Jawatankuasa perancang akademik(JKPA)- Ketua Program ISMP Reka Cipta dengan kepujian  
2017 UPSI In Progress
-



## AWARD / RECOGNITION

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1 Anugerah Perkhidmatan Cemerlang 2016

2017 University Universiti Pendidikan Sultan Idris

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