Ts. Rosdi Bin Daud

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Biography

Currently, he is a Professional Technologist, member of International Assoc. of Engineer and member of Institute of Material Malaysia. He actively involves in product design & development, biomechanics & artificial intelligent research activities.

Education Background

2017 – 2018	Executive Diploma in Product Design & Analysis CADD Centre, Selangor
2001 – 2002	M.Sc. (Advanced Manufacturing Technology) *Portsmouth University, United Kingdom*
1996 – 2000	B.Eng. (Hons) Mechanical Engineering, UKM, *Faculty of Engineering, Universiti Kebangsaan Malaysia*

Career/Academic Appointments

2009 – present	Senior Lecturer *Faculty of Mechanical & Automotive Engineering Technology, Universiti Malaysia Pahang*
2006 – 2009	Head of Technical *Faculty of Mechanical Engineering, Universiti Malaysia Pahang*
2004 – 2009	Lecturer Faculty of Mechanical Engineering, Universiti Malaysia Pahang
2000 – 2004	Technical Training Officer German Malaysian Institute, Cheras
1999 – 2000	Lecturer Kolej Negeri, Seremban

Courses Taught

BMM3663	CAE & Failure Analysis
BMM2613	Computer Aided Design
BMM2623	Advanced Computer Aided Design
BMM3611	Manufacturing Process Lab
BMF4733	CADCAM
BMF1543	Strength of Material

BHA1602	Technical Drawing
DMM2941	Mechanical Technology Lab 4
DMM1523	Engineering Materials
DMM1412	Engineering Drawing
DMM1413	Engineering Drawing & CAD
DMM3011	Occupational Safety & Health
DMM3663	CNC Technology
DMM1532	Static
DMM1432	Metrology
DMM2623	Hydraulic & Pneumatic Technology
DMM1222	Chemistry

Professional Affiliation

Malaysia Board of Technologists (MBOT)	Professional Technologist (PT18050410)
Institute of Materials, Malaysia (IMM)	Member (IMM4742)
International Association of Engineers (IAENG)	Member (IAENG101583)
International Society of Artificial Intelligence (ISAI)	Member (ISAI101583)
International Society of Mechanical Engineering (ISME)	Member (ISME101583)
Board of Engineers Malaysia (BEM)	Graduate Engineer (GE54435R)

Research Interests

Product Design & Development, Biomechanics, Artificial Intelligent, Structural Integrity & Failure Analysis, Cadcam

Postgraduate Supervision

Level	Name	Title	Status	Role
MEng.	Fadirul Amri Bin Nasaruddin	3D Finite Element Analysis of Bolted Flanged and Lens Ring Joint	Graduated	Co-supervisor

Research Grants

Title	Type of Grant	Role	Amount (RM)	Status
Investigation on pullout strength between different design of cannulated pedicle screw and osteoporosis bones to obtain an optimum design	FRGS	Leader	78,100	Active
Bioactivity performances of PLA/hydroxypatite on Co-Cr-Mo alloy by dip coating method for biomedical application	FRGS	Member	60,000	Active
Investigation on Initial Peak Force and Energy Absorption of High Strength Steel Crash Box Having Notch as Initial Trigger Mechanism	FRGS	Member	99,440	Ended
Mechanism of Hydroxyapatite Based Poly-3-Hydroxybutyrate (P3HB) Coating on Titanium Alloy	FRGS	Member	88,200	Active
Performance Evaluation and Optimization of Manufacturing Process	UTM Collaboration Research Grant Scheme	Member	20,000	Active

New Approach of Ankle Morphometric Measurements for Total Ankle Arthroplasty (TAR) Design	UMP Internal Research Grant	Leader	23,500	Ended
Development of a Lightweight Front Lower Control Arm using Polyetheretherketone(PEEK)	UMP Internal Research Grant	Leader	29,000	Ended
Parameter Optimization of Cannulated Pedicle Screw and Osteoporosis Bones Fixation through Finite Element Method	UMP Internal Research Grant	Leader	24,200	Ended
Investigation of TAA Implant Life Cycle using Finite Element Method	UMP Internal Research Grant	Member	27,800	Active
Interaction Mechanism of Modified Graphene to Enhance Properties of Epoxy Nanocomposites	UMP Internal Research Grant	Member	32,900	Active
Effects of biodegradable PLA on hydroxyapatite coating to improve adhesion properties on Co-Cr-Mo alloy	UMP Internal Research Grant	Member	34,500	Ended
Hydroxyapatite Coating with Oxide Interlayer on Biomedical Grade Cobalt Based Alloy	UMP Internal Research Grant	Member	32,000	Ended
Statistical and artificial intelligent study to determine the effect of milling parameters on cutting force, stress and surface roughness when milling Aluminium and Nickel Superalloy	UMP Internal Research Grant	Member	15,400	Ended
Development of Prototype Automated Guided Vehicle For Dispatching Application	UMP Internal Research Grant	Member	18,000	Ended
Development of Laser Cutting and Engraving Machine Utilising PC-NC Controller	UMP Internal Research Grant	Member	78,000	Ended
Design and Develop Blow Mould Using Machining Optimization Parameters	UMP Internal Research Grant	Member	0	Ended

Consultation Projects (please delete this section if you don't have consultation projects)

Project Title	Customer	Amount (RM)
Provision of Design and Analysis of Reactor R501A Inlet Flange and Gasket Modification	FPG Oleochemicals Sdn. Bhd.	13,000
The Provision of Fitness for Service through Finite Element Analysis for V-5425 Flare Scrubber	PETRONAS Carigali Sdn. Bhd	9,900
Angsi-B Crane B-7020 Structural Analysis	PETRONAS Carigali Sdn. Bhd	12,000

Journal Publications

[1] **Rosdi Daud**, A. Asyraf, H. Mas Ayu, A. Shah, S.H. Tomadi, "Investigation on Pullout Strength between Different Design of Cannulated Pedicle Screw and Osteoporosis Bones to Obtain an Optimum Design", 2020, Journal of TEST Engineering & Management, Volume 83, Pages 1097-1103.

[2] **Rosdi Daud**, A.A. Almor, H. Mas Ayu, M. Safwan, A. Shah, S.H. Tomadi, "Design Optimization of Lightweight Lower Control Arm using Finite Element Method", 2020, Journal of TEST Engineering & Management, Volume 83, Pages 1285-1291.

[3] H Mas Ayu, MM Mustaqieem, **R Daud**, A Shah, A Arafat, MS Dambatta, "Effect of Polylactic Acid/Hydroxyapatite Coating on Dental Implant Using Finite Element Method, 2020, Material Science Forum, Volume 995, Pages 103-108.

[4] SKA Bakar, **R Daud**, HM Ayu, MS Salwani, A Shah, "Prediction of Fatigue Failure Location on Lower Control Arm Using Finite Element Analysis (Stress Life Method)", Advances in Material Sciences and Engineering, 2020, Pages 33-39.

[5] H Mas Ayu, **R Daud**, T Kurniawan, J Alias, S Izman, A Shah, M Anwar, "Improving biocompatibility of cobalt based alloy using chemical etching and mechanical treatment", Materialwissenschaft und Werkstofftechnik, 2019, Volume 50, Pages 254-259.

[6] BI Baddar, A Shah, HM Ayu, **R Daud**, MS Dambatta , "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, Volume 62, Pages 138-150.

[7] V Ganapathy, T Kurniawan, HM Ayu, YP Asmara, **R Daud**, N Prastomo,, "Aluminum alloy AA2024 coated with ZrO2 using a sol-gel-assisted dip-coating technique and its corrosion performance", Journal of Engineering Science and Technology, 2018, Volume 13, Pages 1713-1721.

[8] A Shah, S Izman, S Ismail, H Mas Ayu, C Che Kob, **R Daud**, "The Influence of Ultrasonic Vibration Frequency on the Properties of TiN Coated Biomedical Ti–13Zr–13Nb", Metals, 2018, Volume 8, Pages 317.

[9] A Shah, S Izman, SNF Ismail, H Mas-Ayu, **R Daud**, "Study on adhesion strength of tin coated biomedical Ti-13Zr-13Nb alloy", Jurnal Teknologi, 2018, Volume 80, Pages 27-35.

[10] Mas Ayu, H., Izman, S., **Daud, R.**, Shah, A., Anwar, M., Krishnamurithy, G. and Kamarul, T., "In-vitro biocompatibility study of hydroxyapatite coated on Co-Cr-Mo with oxide interlayer", 2018, Jurnal Teknologi, Volume 80, Issue 1, Pages 35-42.

[11] H Mas-Ayu, **R Daud**, A Shah, HM Hazwan, SH Tomadi, MS Salwani, "Effect of Thermal Oxidation and Carbon Concentrations on Co-Cr-Mo Alloy in Enhanced Corrosion Protection", Materials Science Forum, 2018, Volume 916, Pages 170-176.

[12] A Shah, SNF Ismail, MA Hasan, **R Daud**, "Surface Modification on Titanium Alloy for Biomedical Application", Ref. Modul. Mater. Sci. Mater. Eng., 2018, Pages 1-9.

[13] **Rosdi Daud**, Sulaiman Suaidah, H Mas-Ayu, Siti Haryani Tomadi, MS Salwani, Arman Shah, Mohammed Rafiq Abdul-Kadir, "Neural Network as an Assisting Tool in Designing Talus Implant", Materials Science Forum, 2018, Volume 916, Pages 153-160.

[14] H Mas Ayu, S Izman, **R Daud**, G Krishnamurithy, A Shah, SH Tomadi, MS Salwani, "Surface Modification on CoCrMo Alloy to Improve the Adhesion Strength of Hydroxyapatite Coating", 2017, Procedia Engineering, Volume 184, Pages 399-408.

[15] SH Tomadi, JA Ghani, CH Che Haron, H Mas Ayu, **R Daud**, "Effect of Cutting Parameters on Surface Roughness in End Milling of AlSi/AlN Metal Matrix Composite", 2017, Procedia Engineering, Volume 184, Pages 58-69.

[16] SH Tomadi, JA Ghani, H Mas Ayu, **R Daud**, "Tool wear of uncoated carbide and PVD TiAlN coated carbide tools in end milling of AlSi/AlN metal matrix composite", 2017, International Journal of Advanced and Applied Sciences, Volume 4, Issue 9, Pages 150-155.

[17] H Mas Ayu, **R Daud**, A Shah, MY Faiz, HM Hazwan, MS Salwani, SH Tomadi, MS Reza, "Thermal oxidation process improved corrosion in cobalt chromium molybdenum alloys", 2017, International Journal of Advanced and Applied Sciences, Volume 4, Issue 9, Pages 144-149.

[18] R Hafsham, MS Salwani, H Mas-Ayu, **Daud Rosdi**, "Flexural Performance of the Heat-Treated Boron Alloyed Steel", 2017, Materials Science Forum, Volume 909, Pages 21-26.

[19] **R. Daud**, H. Mas Ayu, M.S. Salwani, S.H. Tomadi, Mohammed Rafiq Abdul Kadir, Hanumantharao Balaji Raghavendran, Tunku Kamarul, "Artificial Neural Network: The Alternative Method to Obtain the Dimension of Ankle Bone Parameters", 2017, Journal of Engineering and Applied Sciences, Volume 12, Issue 10, Pages 2782-2787.

[20] H Mas-Ayu, S Izman, A Kadir, M Rafiq, **R Daud**, A Shah, MFM Yusoff, "Influence of Carbon Concentrations in Reducing Co and Cr Ions Release in Cobalt Based Implant: A Preliminary Report", 2014, Advanced Material Research, Vol. 845 (2014), pp 462-466.

[21] **R.Daud**, MR. Abdul Kadir, S. Izman, APM Saad, MH Lee, Aminuddin Che Ahmad "Three Dimensional Morphometric study of Trapezium Shape of the Trochlea Tali", 2013, Journal of Foot & Ankle Surgery, Vol. 52, Page 426-431

[22] S Izman, MA Hassan, MRA Kadir, MR Abdullah, M Anwar, A Shah, **R.Daud** "Effect of Pretreatment Process on Thermal Oxidation of Biomedical Grade Cobalt Based Alloy", 2012 Advanced Material Research, Vol. 399-401, Page 1564-1567

[23] K. Kadirgama, M. M. Noor, N. M. Zuki, M. M. Rahman, K. A. Abou-El-Hossein, M. R. M. Rejab, **R. Daud** "Optimization of Cutting Force and Surface Roughness in End Milling on Mould Aluminium Alloys (AA6061-T6) using Response Surface Method and Radian Basis Function Network", July 2008, International Journal of Jordan Mechanical Engineering & Industry, Vol. 2, Page 209-214

[24] M. A. Hassan, H. Musa, **R. Daud**, S. Sharif, S. H. Tomadi, "Study of the Surface Integrity of the Machined Workpiece in the WEDM Tungsten Carbide", Journal Publication in Solid State Science & Technology, 2008, Volume 16, Pages 1 - 11 .

Conference Proceedings

[1] **R Daud**, MZH Jantan, HM Ayu, A Shah, "Investigation of Fatigue Failure Performance of Ankle Implant Mobile Bearing using Finite Element Method", IOP Conference Series: Material Science and Engineering, 2020, Volume 815.

[2] FT Pawi, **R Daud**, HM Ayu, T Kurniawan, SH Tomadi, MS Salwani, A Shah, "Design and analysis of lightweight polyetheretherketone (PEEK) front lower control arm", AIP Conference Proceedings, 2019, Volume 2059.

[3] ARN Izzah, MS Salwani, SW Tan, AH Mas, **D Rosdi**, "Effect of specimen geometry, quenching and trigger mechanism on crushing performance of single hat column", IOP Conference Series: Materials Science and Engineering, 2019, Volume 469 .

[4] ELS Jian, **R Daud**, HM Ayu, MH bin Yusoff, J Jamiluddin, A Shah, "Application of a finite element method to predict fatigue life of the knee mobile bearing", IOP Conference Series: Materials Science and Engineering, 2019, Volume 469.

[5] NMA Azam, **R Daud**, HM Ayu, J Ramli, MFB Hassan, A Shah, M Adib, "The Effect of Knee Flexion Angle on Contact Stress of Total Knee Arthroplasty", MATEC Web of Conferences, 2018, Volume 225.

[6] FA Zakaria, **R Daud**, HM Ayu, SH Tomadi, MS Salwani, MRA Kadir, "The Effect of Position and Different Size of Radial Hole on Performance of Cannulated Pedicle Screw", MATEC Web of Conferences, 2017, Volume 108.

[7] SM Salleh, B Sahari, A Ali, MA Hassan, **R Daud**, "Correlations between Axial and Oblique Loaded Column", MATEC Web of Conferences, 2017, Volume 95.

[8] MS Reza, MA Azmir, SH Tomadi, MA Hassan, **R Daud**, "Effects of polarity parameter on machining of tool steel workpiece using electrical discharge machining", Proceedings of the National Conference in Mechanical Engineering Research and Postgraduate Students, 2010