



MARIYAM JAMEELAH GHAZALI

Principal Investigator

Advanced Materials & Processing Integrity (AMPI)

Associate Professor

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Date of birth: 16th March 1975

FIELD OF SPECIALISATION

- Wear of materials
- Surface engineering
- Materials processing

EDUCATION AND ACADEMIC QUALIFICATION

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|-------------------------------|---------------------------|------|
| • University of Sheffield, UK | Ph. D. | 2005 |
| • Universiti Sains Malaysia | M. Sc. | 2000 |
| • Universiti Sains Malaysia | B. Eng. (Hons) Mater. Eng | 1999 |

PROFESSIONAL AFFILIATIONS

- Member, Working Group of PVC-Pipes & Fittings for SIRIM (2006-2009)
- Member, Technical Committee on Fine Ceramics for SIRIM (2007–to date)
- Member, Working Group of Eco-labelling criteria for adhesives and water-based adhesives (WG/Z/9-5) SIRIM (2010- to date)
- Graduate Member, Board of Engineers Malaysia (August 2008–to date) – ref: 70728
- Council Member, Asia Tribologists (ASIATRIB) (2007–to date)
- Member, Institute of Materials (IOM) UK (2003–2006)
- Member, Society of Tribology & Lubricant Engineers (STLE) (2005-2007)
- Associate Member, Institute of Materials Malaysia (IMM) (2006–to date) ref: 1187
- Life Member, Electron Microscopy Society of Malaysia (EMSM) (2006–to date)
- Secretary & Life Member, Malaysian Tribology Society (MYTRIBOS) (2007-to date)
- Member (Student Pilot), Malaysian Experimental Aircraft Association (MEAA) (2003-2004).
- Member, Advanced Materials Processing & Integrity (AMPI) Group, UKM (2007-to date).
- Committee, Scientific Research for Perbadanan Adat Melayu dan Warisan Negeri Selangor (PADAT) (2010 – to date).
- Member, Malaysian Society for Engineering & Technology (MySET) – 00353

CAREER HISTORY

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|-----------------------|--|----------------|
| • Associate Professor | Dept. of Mech. & Mater. Engineering
Faculty of Engineering & Built Environment, UKM | 2010 – present |
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- Senior Lecturer Dept. of Mech. & Mater. Engineering 2007 – 2010
Faculty of Engineering & Built Environment, UKM
- Lecturer Dept. of Mech. & Mater. Engineering 2005 – 2007
Faculty of Engin. & Built Environment, UKM
- Tutor Dept. of Mech. & Matls. Engineering 2002 - 2005
Faculty of Engineering, UKM

PROFESSIONAL APPOINTMENTS (SELECTED)

- Reviewing Committee of WTC (World Tribology Conference) 2013
- Secretariate of FEOFS (International Conference on Fracture and Strength of Solids) 2010
- Chairman of RTC (Regional Tribology Conference) 2010
- Secretariate of MITC (Malaysian International Tribology Conference) 2013
- Scientific Panel, Student Assessment Centre (SAC) for JPA Sponsorship 2013
- Technical Panel, National Science Foundation (NSF) by MOSTI 2010
- Chief Editor, Ensiklopedia Kejuruteraan Alam Melayu (ATMA) 2013
- Co-Founder & Secretary for Malaysian Tribology Society (MYTRIBOS) (2007-to date)

RESEARCH AWARDS & RECOGNITIONS

- 2nd best poster competition: *Dry Sliding Wear Behaviour of Aluminium Alloys* at the 14th International Conference of Wear of Materials (WOM) by Elsevier Inc., Washington D.C., 2003.
- Travel Grants to attend and present: *Dry Sliding Wear Behaviour of some Wrought Rapidly Solidified Powder Metallurgy Aluminium Alloys* at the 15th International Conference of Wear of Materials (WOM) in San Diego, USA by the Royal Academy Engineering U.K., 2005.
- Best Paper Award, *Concurrent Approach in Design Synthesis: Application to the Engineering Design Project* at the National Conference on Design & Concurrent Engineering (DECON) in Melaka, Malaysia by KUTKM & IEM, 2006.
- Travel Grants to attend and present: *Work Hardening Effect of Worn Aluminium Alloys against Steel and Alumina: A Comparison at Nano-scale* at the International Nanotribology Forum: The Hoi An Discussion, Hoi An, Vietnam by Nanosurf AG Switzerland, 2007.
- 2nd Runner up in KIK Competition on Multi Purpose ENT Scope Storage, 27 October 2010, Universiti Kebangsaan Malaysia.
- Silver Medal, Malaysia Technology Expo (MTE) for 'ENTRAP: Ergonomic Solution for Ballistic Protection'. (Group: Che Husna Azhari, Andanastuti Muchtar, Mariyam Jameelah Ghazali, Noraiham Mohamad and Iylia Arif Elias) (2011).
- Gold Medallist in Shell Eco-Marathon 2010 – Best Alternative Fuel
- 2nd Runners Up in Best Engineering & Design Award– Perodua Eco Challenge 2012
- Best Research Group Award (AMPI), 2011 & 2012. Universiti Kebangsaan Malaysia.
- Best Research Group Award (Cabaran Membina Negara-Bangsa), 2013. Universiti Kebangsaan Malaysia.
- Top 4: Best Research 2010 (Fundamental Research Grant Scheme) – Ministry of Higher Education.
- International Symposium on Advanced Materials in Defence 2014, Universitas Jenderal Achmad Yani, Indonesia
- Malaysian-Tribology Symposium 2014, Malaysia-Japan Institute of Technology, UTM-KL.
- Malaysia International Tribology Conference 2015, Pulau Pinang.
- Guest speaker, IQRA' TV-UK, London, UK. 2015.

SERVICE AWARDS

- Excellent Service Award 2007 (ref: UKM(S)3.6/111/137 Jld. 25 dated 30 Jun 2008)
- Excellent Teaching Award, 2012. Universiti Kebangsaan Malaysia.
- Sponsorship to Young World Materials Lecture Competition in Dublin, IMM (Institute of Materials Malaysia), 2015

RESEARCH GRANTS (PROJECT LEADER)

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| • Structural and Tribological Characterisations of Cu-based Alloys as Coating Materials for Connecting Rod Bearings in Automotive Engine (ScienceFund 03-01-02-SF0375, RM 128,000) | Aug 2007 – Aug 2009 |
| • Development of Ceramic Coating for Marine Structure Application (ScienceFund 04-01-02-SF0527, RM 220,720) | Aug 2008 – July 2010 |
| • Development of Alumina Micro-Coated Stainless Steel for Surgical Tools (UKM-KK-02-FRGS0031-2006, RM 24,296) | Mar 2007 – Feb 2009 |
| • Development of Low Cost Technique For Wear Monitoring of Connecting Rod Bore (UKM-GUP-BTT-07-25-160, RM 200,000) | Oct. 2007 – June 2010 |
| • Corrosion Resistance Performance of Submerged nanostructured Ceramic Coated Metallic Components Tropical Seawaters (UKM-KK-03-FRGS0120-2010, RM 40,000) | Mar 2010 – Mar 2013 |
| • Surface Treatment of Custom Made Plasma Sprayed Zirconia Coated Titanium Alloys for Dental Implants (ERGS/1/2012/STG05/UKM/02/7, RM 83,000) | June 2012 – May 2015 |
| • <i>Siri Ensiklopedia dalam Sains & Teknologi Alam dan Tamadun Melayu (Ensiklopedia Kejuruteraan Melayu) (II/008/2012, RM 110,000)</i> | June 2012 – Oct 2013 |
| • Tribological Analysis on lubricated sliding of alloys (UKM-DLP-2012-006, RM 100,000) | April 2012 – Mar 2013 |
| • Potentials and Characteristics of Rubber Seed Oil As Drilling Base Fluids (UKM-GUP-2011-050, RM 30,000) | Aug 2011 – Aug 2011 |
| • Pembangunan Sarung Kaki Bertekanan Teragih untuk Pesakit Diabetik Malaysia (KOMUNITI-2014-007, RM 84,800) | Mar. 2015 – Feb. 2017 |
| • Bio-adhesive effect of banana leaves for elevated temperature application (FRGS/2/2013/TK04/UKM/02/2, RM 129,000) | Dec. 2013 – Dec. 2016 |
| • Surface texturing of ceramic for mitigating biofouling and corrosion (DIP-2014-003, RM 200,000) | Aug. 2014 – 31 July 2016 |

SUPERVISION OF THESES & DiSSERTATIONS

No. Students					
Ph.D.		M.Sc.		M.Eng.	
In Progress	Graduate	In Progress	Graduate	In Progress	Graduate
12	10	8	8	-	13

* B.Eng. (Hons.) - More than 30 students had completed.

SELECTED 2015 PUBLICATIONS – current H-index: 14

1. K.S. Alhawari, M.Z. Omar, M.J. Ghazali, M.S. Salleh, M.N. Mohammed, Evaluation of the microstructure and dry sliding wear behaviour of thixoformed A319 aluminium alloy, *Materials and Design*, 2015, 76: 169–180. (Q1)
2. Rajabi A., Ghazali M.J., Daud A.R., Chemical composition, microstructure and sintering temperature modifications on mechanical properties of TiC-based cermet: A review, *Materials & Design*, 2015, 67:95-106. (Q1)
3. Kai Yuan Theng, Andanastuti Muchtar, Norziha Yahaya and Mariyam Jameelah Ghazali, Development of Translucent Zirconia for Dental Crown Applications, *Asian Journal of Scientific Research*, 2015, 8 (3): 342-350. (Q1)
4. A. Jemat, M.J. Ghazali, M. Razali, Y. Otsuka, Surface Modifications and Their Effects on Titanium Dental Implants, *BioMed Research International*, 2015 (ID 791725: in press). (Q1)
5. A. Rajabi, M.J. Ghazali, A.R. Daud, Effect of second phase morphology on wear resistance of Fe-TiC composites, *Jurnal Tribologi*, 2015, 4: 1-9.
6. A. Rajabi, M.J. Ghazali, A.R. Daud, Chemical composition, microstructure and sintering temperature modifications on mechanical properties of TiC based cermets: A review, *Materials & Design*, 2015, 67: 95-106. (Q1)
7. M.J. Ghazali, M. Daud, A. Muhammad, M.Z. Omar, C.H. Azhari, Microstructure Analyses of Malay Keris and its Relation to Mechanical Properties, *Acta Physica Polonica A*, 2015, 127: 1358-1362. (Q3)
8. M.J. Ghazali, S.M. Forghani, N. Hassanuddin, A. Muchtar, A.R. Daud, Comparative wear study of plasma sprayed TiO₂ and Al₂O₃-TiO₂ on mild steels, *Tribology International*, 2015, (doi:10.1016/j.triboint.2015.05.001: in press). (Q1)
9. A.F. Shamsul Baharin, M.J. Ghazali, J. Abdul Wahab, Laser Surface Texturing and Its Contribution to Friction and Wear Reduction: A Brief Review, *Industrial Lubrication Tribology*, 2015, (in press). (Q2)
10. Sulaiman, N.H., Ghazali, M.J., Majlis, B.Y., Yunas, J., Razali, M. Superparamagnetic calcium ferrite nanoparticles synthesized using a simple sol-gel method for targeted drug delivery, *Bio-Medical Materials and Engineering*, 2015, 26: 103-110. (Q3)