

## CURRICULUM VITAE

**MUHAMMAD JAMSHaid**

**Assistant Professor**

36302-3320909-9

PAKISTAN

DEPARTMENT OF MECHANICAL ENGINEERING,

BAHAUDDIN ZAKARIYA UNIVERSITY, MULTAN

+92321 6350069

muhammad.jamshaid@bzu.edu.pk



### EDUCATION

Universiti Malaya (UM), Malaysia

**Doctor of Philosophy (Mechanical Engineering) (PhD)**

2017 - 2021

Thesis Title: *Production Optimization, Engine Performance and Tribological study of cottonseed oil methyl ester blends as alternative fuels*

Field of Study: *Energy (Tribology, IC Engine), Process Optimization*

**PhD studies Sponsored by**

- a) Higher Education Commission (HEC), Islamabad, Pakistan (Fully Funded Scholarship)
- b) Bahauddin Zakariya University (BZU), Multan, Pakistan (Study Leave)

National University of Science and Technology (NUST), Pakistan

**Master of Science (Engineering) (MSc)**

2010 - 2012

Field of study: Industrial and Manufacturing Engineering

Thesis Title: *Effect of Machining on fatigue life of Aerospace Grade Aluminum Alloy (Al 6082-T6)*

CGPA: 3.85

Bahauddin Zakariya University (BZU), Pakistan

**Bachelor of Science (Mechanical Engineering) (B.Sc.)**

2004 - 2009

Division: 1<sup>st</sup>

### WORKING EXPERIENCES (Industrial)

**Mechanical Engineer (Turbine and Procurement Section)**

Sep 2009 - Dec 2011

Atta Chemicals (Pvt) Ltd, Industrial Estate, Multan

- Management of Procurement Section
- Maintenance of pumps and Turbine

**Pakarab Fertilizers Limited, Multan, Pakistan**

July 2008 - Aug 2008

Industrial Trainee (Internship Program)

Mechanical and Control Systems Department

Mechanical and Machine Workshops

Compressors and Turbine Section

Utility Department

### TEACHING EXPERIENCES (Academia)

**Lecturer (Permanent)**

Jan 2012 - May 2013

Department of Mechanical Engineering, University of Central

Punjab (UCP), Lahore, Pakistan

- Thermodynamics-II (2<sup>nd</sup> year Undergraduate course)
- Thermodynamics-I (1<sup>st</sup> year Undergraduate course)

#### Assistant Professor (Permanent)

May 2013 - present

Department of Mechanical Engineering, Bahauddin Zakariya University (BZU) Multan, Pakistan

#### Postgraduate Courses Instructor

M. Sc. Mechanical Engineering Mixed Mode Program, BZU

(Coursework with Research Thesis)

- Advanced Stress Analysis (Sem 1, Sessions 2021, 2022, 2023, 2024)
- Advanced Thermodynamics (Sem 2, Sessions 2021,2022)

#### Undergraduate Courses Instructor

B. Sc. Mechanical Engineering, Bahauddin Zakariya University (BZU)

- Mechanics of Materials-III (4<sup>th</sup> year Undergraduate course)
- Heat and Mass Transfer (4<sup>th</sup> year Undergraduate course)
- Tribology (4<sup>th</sup> year Undergraduate course)
- Advanced Stress Analysis (4<sup>th</sup> year Undergraduate course)
- Systems and Control (3<sup>rd</sup> year Undergraduate course)
- Refrigeration and Air Conditioning (3<sup>rd</sup> year Undergraduate course)
- Thermodynamics-II (2<sup>nd</sup> year Undergraduate course)
- Thermodynamics-I (1<sup>st</sup> year Undergraduate course)

B. Sc. Food Science & Technology, Bahauddin Zakariya University (BZU)

- Quantitative Reasoning-I (1<sup>st</sup> year Undergraduate course)

B.Sc. Information & Communication Technology (ICT), Bahauddin Zakariya University (BZU)

- Zero Mathematics (1<sup>st</sup> year Undergraduate course)

#### Lab Demonstrator

Department of Mechanical Engineering, Bahauddin Zakariya University (BZU)

- Mechanics of Materials-III (4<sup>th</sup> year Undergraduate course)
- Heat and Mass Transfer (4<sup>th</sup> year Undergraduate course)
- Tribology (4<sup>th</sup> year Undergraduate course)
- Systems and Control (3<sup>rd</sup> year Undergraduate course)
- Refrigeration and Air Conditioning (3<sup>rd</sup> year Undergraduate course)
- Thermodynamics-I (1<sup>st</sup> year Undergraduate course)
- Thermodynamics-II (2<sup>nd</sup> year Undergraduate course)

#### Research Project Supervising

- Undergraduate Final Year Project Students (36 in total)
- Masters by Coursework with Research Thesis Students (2 in total)

#### PROFESSIONAL MEMBERSHIPS

**Pakistan Engineering Council (PEC)**

Active

Registered Engineer

Branch - Mechanical

Registration No: MECH/22041

#### My Editor Roles

**Guest Associate Editor**

Since July 2022

**In Tribology**

**Research Topic:** Production optimization, Engine Performance and Tribological Characteristics of Biofuels and their Blends in Internal Combustion Engines as Alternative Fuels

Journal and Section

1. Frontiers in Mechanical Engineering

- a. Engine and Automotive Engineering
- b. Tribology
2. Frontiers in Energy Research
  - a. Bioenergy and Biofuels
  - b. Advanced Clean Fuel Technologies

#### Guest Associate Editor

Since Nov 2023

#### In Carbon-Based Objects and Devices

**Research Topic:** Enhancing Carbon Filters for Emerging Contaminant Removal in Water Treatment

Journal and Section

3. Frontiers in Carbon
  - a. Carbon-Based Objects and Devices

## SKILLS

### IT Proficiency

- Microsoft Office Applications (word processing, spreadsheet and slide show)
- Optimization tools (DesignExpert software)
- Basic C++ and Python programming skills (Data Science)
- Good with Windows OS and Macintosh OS

### Speaking and Writing Proficiency

- Urdu - Excellent
- English - Good

## RESEARCH GRANTS CONTRIBUTIONS

1. GA017-2019 - Dynamometer-Engine Endurance Testing Using B30 Palm Biodiesel  
PI: Prof Md Abul Kalam  
Funder: Malaysian Palm Oil Board (MPOB), RM480,000.00. (*Government Agency*)  
*Role: Provided preliminary data and wrote grant proposal and application. Involved in grant management and project assistant.*
2. FP142-2019A - Controlling Corrosion Rate of Biodiesel Fueled Engines Via Cyclic Regeneration of Weak Base Within Diesel Engine Oil  
PI: Prof Md Abul Kalam  
Funder: FRGS - MOHE, RM145,000.00. (*Government*)  
*Role: Wrote grant proposal and application. Involved in grant management and project assistant.*

## RESEARCH EXPERIENCES

As of June 2026,

- Google Scholar: H-index - 15, Citations - 669
- Web of Science: Verified Peer Reviews - 57, Verified Editor Records - 04 (*Researcher ID: AAZ-2527-2021*)

### List of some Publications

1. M. Arslan, Hamid Ayyub, **M. Jamshaid**, A.Arslan, **M. A. Kalam** and Farah Ahmad, **2025**. Production, performance and emission of biodiesel from a mixture of castor oil and neem oil. *RSC Advances*, 15(42), 35296 - 35311. (*ISI-Indexed*) (IF = 4.6)
2. **Jamshaid, M.**, Kalam, M. A., Masjuki, H. H., Zulkifli, N. W. M., Arslan, A., & Zulfattah, Z. M. (**2026**). Cottonseed Oil Biodiesel: Production, Properties, Engine Performance, Emissions, Tribological, and Life Cycle Assessment. *Industrial Bioresource Engineering*, 81-101.
3. Raza, Y., Raza, H., Ahmed, A., Quazi, M. M., **Jamshaid, M.**, Anwar, M. T., ... & Soudagar, M. E. M. (**2025**). Integration of response surface methodology (RSM), machine learning (ML), and artificial intelligence (AI) for enhancing properties of polymeric nanocomposites-A review. *Polymer Composites*.
4. Ayyub, H., Arslan, **M.**, **Jamshaid, M.**, Qureshi, A. A., Ahmed, A., Masjuki, H. H., ... & Khallidoon, M. U. (**2024**). Esterification and Transesterification Optimization Processes of Nonedible (Castor and Neem) Oils for the Production of Biodiesel. *Fuels*, 5(4), 782-802.

5. Shehzad, A., Arslan, A., Rehman, F., Quazi, M. M., Butt, S. I., & Jamshaid, M. (2023). Corrosion behavior of copper, aluminium, and stainless steel 316L in chicken fat oil-based biodiesel-diesel blends. *Sustainable Energy Technologies and Assessments*, 56, 103089. (ISI-Indexed) (IF = 8.0)
6. Qureshi, A. A., Javed, S., Adnan, M., Jamshaid, M., Aftab Akram, M., & Ali, U. (2023). Strategic optimization of annealing parameters for efficient and low hysteresis triple cation perovskite solar cell. *ChemistrySelect*, 8(24), e202300342. (ISI-Indexed) (IF = 2.0)
7. Bashir, M. N., Khan, A. F., Bashir, S., Bashir, M. B. A., Jamshaid, M., Javed, I., & Ali, I. (2023). Effect of Zn nanoparticle doped flux on electromigration damages in SAC305 solder joint. *Journal of Materials Science: Materials in Electronics*, 34(5), 351. (ISI-Indexed) (IF = 2.8)
8. Jamshaid, M., Masjuki, H.H., Kalam, M.A., Zulkifli, N.W.M., Arslan, A. and Qureshi, A.A., 2022. Experimental investigation of performance, emissions and tribological characteristics of B20 blend from cottonseed and palm oil biodiesels. *Energy*, 239, p.121894. (ISI-Indexed) (IF = 9.0)
9. Qureshi, A.A., Javed, S., Javed, H.M.A., Jamshaid, M., Ali, U. and Akram, M.A., 2022. Systematic Investigation of Structural, Morphological, Thermal, Optoelectronic, and Magnetic Properties of High-Purity Hematite/Magnetite Nanoparticles for Optoelectronics. *Nanomaterials*, 12(10), p.1635. (ISI-Indexed) (IF = 5.3)
10. Zulfattah, Z. M., Zulkifli, N. W. M., Masjuki, H. H., Harith, M. H., Syahir, A. Z., Norain, I., ... & Jamshaid, M. (2021). Friction and Wear Performance of Oleate-Based Esters With Two-, Three-, and Four-Branched Molecular Structure in Pure Form and Mixture. *Journal of Tribology*, 143(1), 011901. (ISI-Indexed) (IF = 2.5)
11. Shehzad, A., Ahmed, A., Quazi, M.M., Jamshaid, M., Ashrafur Rahman, S.M., Hassan, M.H. and Javed, H.M.A., 2021. Current research and development status of corrosion behavior of automotive materials in biofuels. *Energies*, 14(5), p.1440. (ISI-Indexed) (IF = 3.004)
12. Qureshi, A.A., Javed, S., Javed, H.M.A., Akram, A., Jamshaid, M. and Shaheen, A., 2020. Strategic design of Cu/TiO<sub>2</sub>-based photoanode and rGO-Fe<sub>3</sub>O<sub>4</sub>-based counter electrode for optimized plasmonic dye-sensitized solar cells. *Optical Materials*, 109, p.110267. (ISI-Indexed) (IF = 3.08)
13. Jamshaid, M., Masjuki, H. H., Kalam, M. A., Zulkifli, N. W. M., Arslan, A., & Zulfattah, Z. M. (2020). Effect of Fatty Acid Methyl Ester on Fuel-Injector Wear Characteristics. *Journal of Biobased Materials and Bioenergy*, 14(3), 327-339. (ISI-Indexed) (IF = 1.126)
14. Javed, H.M.A., Qureshi, A.A., Mustafa, M.S., Que, W., Mahr, M.S., Shaheen, A., Iqbal, J., Saleem, S., Jamshaid, M. and Mahmood, A., 2019. Advanced Ag/rGO/TiO<sub>2</sub> ternary nanocomposite based photoanode approaches to highly-efficient plasmonic dye-sensitized solar cells. *Optics Communications*, 453, p.124408. (ISI-Indexed) (IF = 2.31)
15. Alwi, A., Zulkifli, N.W., Sukiman, N.L., Yusoff, A., Zakaria, Z., Jamshaid, M., Hasnul, M.H. and Amzar, M.S., 2019. Evaluation of engine performance and exhaust emission characteristics in a diesel engine using isobutanol–Calophyllum inophyllum biodiesel–diesel ternary blends. *Environmental Science and Pollution Research*, 26(12), pp.11815-11826. (ISI-Indexed) (IF = 4.223)
16. Jamshaid, M., Masjuki, H. H., Kalam, M. A., Zulkifli, N. W. M., Arslan, A., Alwi, A., ... & Syahir, A. Z. (2019). Production optimization and tribological characteristics of cottonseed oil methyl ester. *Journal of Cleaner Production*, 209, 62-73. (ISI-Indexed) (IF = 11.1)
17. Zulfattah, Z. M., Zulkifli, N. W. M., Masjuki, H. H., Harith, M. H., Syahir, A. Z., Norain, I., Jamshaid, M., ... & Arslan, A. (2019). Effect of bio-based lubricant towards emissions and engine breakdown due to spark plug fouling in a two-stroke engine. *Journal of Cleaner Production*, 221, 215-223. (ISI-Indexed) (IF = 11.1)
18. Quazi, M.M., Ishak, M., Arslan, A., Fazal, M.A., Yusof, F., Sazzad, B.S., Bashir, M.N. and Jamshaid, M., 2018. Mechanical and tribological performance of a hybrid MMC coating deposited on Al-17Si piston alloy by laser composite surfacing technique. *RSC advances*, 8(13), pp.6858-6869. (ISI-Indexed) (IF = 3.9)

## REFERENCES

Prof. Md. Abul Kalam  
 PhD Supervisor  
 School of Civil and Environmental  
 Engineering, FEIT, University of  
 Technology, Sydney, Ultimo, NSW,  
 Australia  
 (hp) +60 163572049 (e)  
[kalam@um.edu.my](mailto:kalam@um.edu.my)  
[/mdabul.kalam@uts.edu.au](mailto:/mdabul.kalam@uts.edu.au)

Associate Prof. Dr. Nurin Wahidah Binti M  
 Zulkifli  
 PhD Supervisor  
 Department of Mechanical Engineering  
 Faculty of Engineering, Universiti Malaya,  
 Malaysia  
 (hp) +60 102312601  
 (e) [nurinmz@um.edu.my](mailto:nurinmz@um.edu.my)