

CURRICULUM VITAE

MUHAMMAD JAMSHAIID

Assistant Professor

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PAKISTAN

DEPARTMENT OF MECHANICAL ENGINEERING,

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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: 1st

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 (2nd year Undergraduate course)
- Thermodynamics-I (1st 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 (4th year Undergraduate course)
- Heat and Mass Transfer (4th year Undergraduate course)
- Tribology (4th year Undergraduate course)
- Advanced Stress Analysis (4th year Undergraduate course)
- Systems and Control (3rd year Undergraduate course)
- Refrigeration and Air Conditioning (3rd year Undergraduate course)
- Thermodynamics-II (2nd year Undergraduate course)
- Thermodynamics-I (1st year Undergraduate course)

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

- Quantitative Reasoning-I (1st year Undergraduate course)

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

- Zero Mathematics (1st year Undergraduate course)

Lab Demonstrator

Department of Mechanical Engineering, Bahauddin Zakariya University (BZU)

- Mechanics of Materials-III (4th year Undergraduate course)
- Heat and Mass Transfer (4th year Undergraduate course)
- Tribology (4th year Undergraduate course)
- Systems and Control (3rd year Undergraduate course)
- Refrigeration and Air Conditioning (3rd year Undergraduate course)
- Thermodynamics-I (1st year Undergraduate course)
- Thermodynamics-II (2nd 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 March 2026,

- Google Scholar: H-index - 15, Citations - 628
- Web of Science: Verified Peer Reviews - 52, Verified Editor Records - 03 (*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., 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)
3. 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)
4. 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*.

5. **Jamshaid, M.**, Kalam, M. A., Masjuki, H. H., Zulkifli, N. W. M., Arslan, A., & Zulfattah, Z. M. (2024). Cottonseed Oil Biodiesel: Production, Properties, Engine Performance, Emissions, Tribological, and Life Cycle Assessment. *Industrial Bioresource Engineering*, 81-101.
6. 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.
7. 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)
8. 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)
9. 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)
10. Qureshi, A.A., Javed, S., Javed, H.M.A., Akram, A., **Jamshaid, M.** and Shaheen, A., 2020. Strategic design of Cu/TiO₂-based photoanode and rGO-Fe₃O₄-based counter electrode for optimized plasmonic dye-sensitized solar cells. *Optical Materials*, 109, p.110267. (ISI-Indexed) (IF = 3.08)
11. **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)
12. 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/TiO₂ ternary nanocomposite based photoanode approaches to highly-efficient plasmonic dye-sensitized solar cells. *Optics Communications*, 453, p.124408. (ISI-Indexed) (IF = 2.31)
13. 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)
14. **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)
15. 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)
16. 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)
17. Khuong, L. S., Masjuki, H. H., Zulkifli, N. W. M., Mohamad, E. N., Kalam, M. A., Alabdulkarem, A., ... & **Jamshaid, M.** (2017). Effect of gasoline-bioethanol blends on the properties and lubrication characteristics of commercial engine oil. *RSC advances*, 7(25), 15005-15019. (ISI-Indexed) (IF = 3.9)
18. Arslan, A., Masjuki, H.H., Kalam, M.A., Varman, M., Mosarof, M.H., Mufti, R.A., Quazi, M.M., Khuong, L.S., Liaqat, M., **Jamshaid, M.** and Alabdulkarem, A., 2017. Investigation of laser texture density and diameter on the tribological behavior of hydrogenated DLC coating with line contact configuration. *Surface and Coatings Technology*, 322, pp.31-37. (ISI-Indexed) (IF = 5.4)

REFERENCES

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