

## Jawad Aslam

Associate Professor

School of Mechanical & Manufacturing Engineering

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## About

Dr. Jawad Aslam is working as Associate Professor in the School of Mechanical & Manufacturing Engineering. Dr. Jawad Aslam has a PhD in Vehicle Engineering. Dr. Jawad Aslam has published 38 research articles & conference papers having a citation count of 264, carried out 2 projects and filed 6 intellectual property.

## Qualifications

<b>PhD in Vehicle Engineering</b> Beijing University of Aeronautics and Astronautics , China	2013 - 2017
<b>Post Grad Diploma in Control Theory and Control Engineering</b> Beijing University of Aeronautics and Astronautics , China	2010 - 2012
<b>BE in Mechatronic</b> NUST, Islamabad , Pakistan	2005 - 2009

## Experience

<b>Associate Professor</b> School of Mechanical & Manufacturing Engineering	2023- Present
<b>Associate Professor</b> School of Mechanical & Manufacturing Engineering	2022 - 2023
<b>Assistant Professor</b> School of Mechanical & Manufacturing Engineering	2021 - 2022
<b>Assistant Professor</b> School of Mechanical & Manufacturing Engineering	2016 - 2021
<b>Assistant Professor</b> School of Mechanical & Manufacturing Engineering	2016 - 2016
<b>Lecturer</b> School of Mechanical & Manufacturing Engineering	2012 - 2016

## Professional Memberships

PEC	Since 2019
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## Research Projects

<b>National Projects</b>	
<b>Computational Aeroacoustics Analysis and Measurement of Wind Turbine Airfoil in a Low Speed Wind Tunnel</b> Funding Agency: NESCOM Amount: PKR 100,000.00 Status: Completed	2020
<b>Sustainable Construction 3D-Printer</b> Funding Agency: NUST Amount: PKR 1,000,000.00 Status: Completed	2021

## International Projects

- Laser surface texture for enhancement of tribological performance of AISI 5115 steel engine valve train components** 2025  
*Junqi Xue Cai Yukui Jawad Aslam Xiaoliang Liang Xing Li Yunqing Tang Zhanqiang Liu*  
*Optics and Laser Technology*, Volume 192, Part A, Article Number 113456  
**Impact Factor:** 5.00 | **Quartile:** 1  
**DOI:** <https://doi.org/10.1016/j.optlastec.2025.113456>
- A novel approach to measure rotational dynamics of valvetrain components in production engines using miniature GMR chip** 2025  
*Sehrish Shah Nawaz Riaz Ahmed Mufti Mian Ashfaq Ali Rehan Zahid Jawad Aslam Muhammad Rizwan Siddiqui Muhammad Usman Bhutta*  
*Measurement*, Volume 256, Part D, Article Number 118455  
**Impact Factor:** 5.600 | **Quartile:** 1  
**DOI:** <https://doi.org/10.1016/j.measurement.2025.118455>
- Fatigue performance of Ti6Al4V alloy treated with laser-assisted burnishing** 2025  
*Cai Yukui Kuanxin Tang Haotian Zhang Junqi Xue Jawad Aslam Xiaoliang Liang Qinghua Song Zhanqiang Liu*  
*Journal of Fatigue*, Volume 193, Article Number 108788  
**Impact Factor:** 5.700 | **Quartile:** 1 | **Citations:** 2  
**DOI:** <https://doi.org/10.1016/j.ijfatigue.2024.108788>
- Friction and Wear Properties of Phosphonium Based Ionic Liquid Used as Additive in Synthetic and Bio Based Lubricants** 2024  
*Nouman Haider Muhammad Moneeb Butt Rehan Zahid Mian Ashfaq Ali Jawad Aslam Riaz Ahmed Mufti Muhammad Usman Bhutta*  
*Tribology in Industry*, Volume 46, No. 4, Pages 611-623  
**Impact Factor:** N/A | **Citations:** 1  
**DOI:** [10.24874/ti.1648.03.24.08](https://doi.org/10.24874/ti.1648.03.24.08)
- Effect of micro-surface-texturing on the friction between cam/tappet interface of a commercial vehicle engine** 2024  
*Muhammad Rizwan Siddiqui Mian Ashfaq Ali Riaz Ahmed Mufti Jawad Aslam Muhammad Usman Bhutta Rehan Zahid Muhammad Khuram*  
*Proceedings of the Institution of Mechanical Engineers, Part J: Journal of Engineering Tribology*, Pages 1-19  
**Impact Factor:** 1.600 | **Quartile:** 3 | **Citations:** 2  
**DOI:** <https://doi.org/10.1177/13506501241266116>
- Surface integrity analysis of Si3N4 under cryogenic assisted femtosecond laser ablation** 2024  
*Xitong Yu Yukui Cai Liping Jiang Qinghua Song Jawad Aslam Bing Wang Zhanqiang Liu*  
*Ceramics International*, Volume 50, Issue 13, Part B, Pages 23896-23905  
**Impact Factor:** 5.100 | **Quartile:** 1 | **Citations:** 2  
**DOI:** <https://doi.org/10.1016/j.ceramint.2024.04.119>
- Femtosecond laser precision machining of carbon film based on aramid paper substrate** 2024  
*Chunyi Zheng Yukui Cai Pin Zhang Teng Zhang Jawad Aslam Qinghua Song Zhanqiang Liu*  
*Journal of Manufacturing Processes*, Volume 119, Pages 57-65  
**Impact Factor:** 6.100 | **Quartile:** 1 | **Citations:** 2  
**DOI:** <https://doi.org/10.1016/j.jmapro.2024.03.061>
- Cryogenic assisted femtosecond laser ablation of polycrystalline diamond** 2024  
*Donglin Zhang Yukui Cai Jawad Aslam Kuanxin Tang Zhidong Huang Qinghua Song Bing Wang Zhanqiang Liu*  
*Diamond and Related Materials*, Volume 144, Article Number 110902  
**Impact Factor:** 4.300 | **Quartile:** 2  
**DOI:** <https://doi.org/10.1016/j.diamond.2024.110902>
- Experimental Investigation of Engine Valve Train Friction Considering Effects of Operating Conditions and WPC Surface Treatment** 2023  
*Muhammad Usman Bhutta Muhammad Huzafa Najeeb Muhammad Usman Abdullah Sami Ur Rahman Shah Muhammad Khuram Riaz Ahmed Mufti Kiyotaka Ogawa Jawad Aslam Rehan Zahid Mian Ashfaq Ali Muazzam Arshad*  
*Materials*, Volume 16(9), Article Number 3431  
**Impact Factor:** 3.748 | **Quartile:** 1 | **Citations:** 4  
**DOI:** <https://doi.org/10.3390/ma16093431>
- Simplistic Comparative Analytical Methodology for Accuracy Determination of In-Cylinder Convective Heat Transfer Coefficient Models of Diesel Engine Operating with Water Injection using Experimental Pressure Signals** 2023

Asad Asghar Janjua Sami Ur Rahman Shah Emad Ud Din Jawad Aslam Muhammad Zeeshan Ali Khan Xavier Tazua  
Arabian Journal for Science and Engineering, Pages 1-14

**Impact Factor:** 2.807 | **Quartile:** 2 | **Citations:** 2  
**DOI:** <https://doi.org/10.1007/s13369-023-07627-w>

**Dissociation and Recombination Processes in Lactose Monohydrate Detected by THz Time-Domain Spectroscopy**

2022

Muhammad Adnan Alvi Zhaohui Zhang Xiaoyan Zhao Yang Yu Jawad Aslam  
Journal of Advanced Computational Intelligence and Intelligent Informatics, Volume 26, No.5, Pages 740-746  
**Impact Factor:** N/A | **Citations:** 4  
**DOI:** <https://doi.org/10.20965/jaciii.2022.p0740>

**Friction and Wear Performance Evaluation of Bio-Lubricants and DLC Coatings on Cam/Tappet Interface of Internal Combustion Engines**

2021

Rehan Zahid Muhammad Usman Bhutta Riaz Ahmad Mufti Muhammad Usman Abdullah Haji Hassan Masjuki Mahendra Varman Muhammad Abul Kalam  
Mian Ashfaq Ali Jawad Aslam Khalid Akhtar  
Materials , Volume 14(23), Article Number 7206  
**Impact Factor:** 3.623 | **Quartile:** 1 | **Citations:** 7  
**DOI:** <https://doi.org/10.3390/ma14237206>

**Robust fuzzy sliding mode controller for a skid-steered vehicle subjected to friction variations**

2021

Jawad Aslam Yasir Mehmood Nasim Ullah Ahmed A. Alsheikhy Emad uddin Jamshed Iqbal  
PLoS One , Volume 16(11), Article Number e0258909  
**Impact Factor:** 3.240 | **Quartile:** 2 | **Citations:** 10  
**DOI:** [10.1371/journal.pone.0258909](https://doi.org/10.1371/journal.pone.0258909)

**Synergy Analysis of the Influence of the Connection Cone on the Thermal Distribution during Regeneration**

2021

Jawad Aslam Mingfei Mu Lizhuang Dou Bisheng Chen  
Symmetry , Volume 13(6), Article Number 995  
**Impact Factor:** 2.940 | **Quartile:** 2 | **Citations:** 1  
**DOI:** [10.3390/sym13060995](https://doi.org/10.3390/sym13060995)

**UAVs-UGV Leader Follower Formation Using Adaptive Non-Singular Terminal Super Twisting Sliding Mode Control**

2021

Jawad Aslam Nasim Ulla Yasir Mehmood Amjad Ali Jamshed Iqbal  
IEEE Access , Volume 9, Pages 74385-74405  
**Impact Factor:** 3.476 | **Quartile:** 2  
**DOI:** [10.1109/ACCESS.2017.DOI](https://doi.org/10.1109/ACCESS.2017.DOI)

**Adaptive Robust Trajectory Tracking Control of Multiple Quad-Rotor UAVs with Parametric Uncertainties and Disturbances**

2021

Jawad Aslam Yasir Mehmood Nasim Ullah Md. Shahariar Chowdhury Kuaanan Techato Ali Nasser Alzaed Nasim Ullah Md. Shahariar Chowdhury Kuaanan  
Techato Ali Nasser Alzaed Nasim Ullah Md. Shahariar Chowdhury Kuaanan Techato Ali Nasser Alzaed  
Sensors , Volume 21(7), Article Number 2401  
**Impact Factor:** 3.275 | **Quartile:** 2 | **Citations:** 32  
**DOI:** <https://doi.org/10.3390/s21072401>

**Experimental electro-hydrodynamic investigation of flag-based energy harvesting in the wake of inverted C-shape cylinder**

2021

Usman Latif Emad Uddin Muhammad Yamin Younis Jawad Aslam Zaib Ali Muhammad Sajid A. Abdelkafi  
Energy , Volume 215, Part B, Article Number 119195  
**Impact Factor:** 8.857 | **Quartile:** 1 | **Citations:** 46  
**DOI:** <https://doi.org/10.1016/j.energy.2020.119195>

**Development of a Linear Acoustic Array for Aero-Acoustic Quantification of Camber-Bladed Vertical Axis Wind Turbine**

2020

Abdul Hadi Butt Bilal Akbar Jawad Aslam Naveed Akram Manzoore Elahi M Soudagar Fausto Pedro García Márquez Muhammad Yamin Younis Emad Uddin  
Sensors , Volume 20(20), Article Number 5954  
**Impact Factor:** 3.576 | **Quartile:** 1 | **Citations:** 13  
**DOI:** <https://doi.org/10.3390/s20205954>

**Improving fuel cell performance via optimal parameters identification through fuzzy logic based-modeling and optimization**

2020

Waqas Hassan Hegazy Rezk Ahmed Nassef Mohammad Ali Abdelkareem Ben Kolosz K. Karuppasamy Jawad Aslam Syed Omer Gilani

Energy , Volume 204, Article Number 117976

**Impact Factor:** 7.147 | **Quartile:** 1 | **Citations:** 58

**DOI:** <https://doi.org/10.1016/j.energy.2020.117976>

**Effect of vortices on power output of vertical axis wind turbine (VAWT)**

2020

Ammar Naseem Emad Uddin Zaib Ali Jawad Aslam Sami Ur Rahman Shah Muhammad Sajid Syed Ali Abbas Zaidi Adeel Javed Muhammad Yamin Younis

*Sustainable Energy Technologies and Assessments*, Volume 37, Article Number 100586

**Impact Factor:** 5.353 | **Quartile:** 2 | **Citations:** 32

**DOI:** <https://doi.org/10.1016/j.seta.2019.100586>

**The effect of upstream low-drag vortex generators on juncture flows**

2019

Md.Y. Younis Hua Zhang Emaduddin Bo Hu Jawad Aslam

*Wind and Structures* , Volume 28, Issue 6 ,Pages 355-367

**Impact Factor:** 1.922 | **Quartile:** 2

**DOI:** 10.12989/was.2019.28.6.355

**Design of a hybrid magnetomotive force electromechanical valve actuator**

2017

Jawad Aslam Faira Kanwal Janjua Xing HU Li

*Frontiers of Information Technology & Electronic Engineering*, Volume 18, Issue 10, Pages 1635-1643

**Impact Factor:** 0.910 | **Quartile:** 4 | **Citations:** 9

**DOI:** 10.1631/FITEE.1601215

**THE DESIGN OF HYBRID ELECTROMECHANICAL VALVE ACTUATOR: EFFECTS OF CONSTRUCTION PARAMETERS**

2017

Xing Hu Li Hai Sun Jawad Aslam Hai Sun

*TRANSACTIONS OF THE CANADIAN SOCIETY FOR MECHANICAL ENGINEERING* , Volume 41, Issue 1, Pages 51-64

**Impact Factor:** 0.248 | **Quartile:** 4

**DOI:** [https://search.crossref.org/?](https://search.crossref.org/?q=THE+DESIGN+OF+HYBRID+ELECTROMECHANICAL+VALVE+ACTUATOR%3A+EFFECTS+OF+CONSTRUCTION+PARAMETERS)

q=THE+DESIGN+OF+HYBRID+ELECTROMECHANICAL+VALVE+ACTUATOR%3A+EFFECTS+OF+CONSTRUCTION+PARAMETERS

**Innovative technique of measuring follower rotation in real production engine using Gradiometer sensor and the effect of friction modifier**

2015

Riaz Ahmed Mufti Rehan Zahid Farrukh Qureshi Jawad Aslam

*Industrial Lubrication and Tribology* , Volume 67 Issue 4 Pages 285-291

**Impact Factor:** 0.406 | **Quartile:** 4 | **Citations:** 5

**DOI:** 10.1108/ILT-07-2013-0076

**Measuring the tribological performance of all the tappets in a production engine using magnetometer sensors and the effect of lubricant rheology**

2015

Riaz Ahmad Mufti Rehan Zahid Farrukh Qureshi Jawad Aslam Hafiz Malik Naqash Afzal Muhammad Usman Bhutta

*Lubrication Science* , Volume 27, Issue 4, Pages 251-263

**Impact Factor:** 1.384 | **Quartile:** 2 | **Citations:** 5

**DOI:** 10.1002/lis.1276

**Fuzzy sliding mode control algorithm for a four-wheel skid steer vehicle**

2014

Qin Shi Yin Muhammad Adnan Alvi Jawad Aslam Muhammad Adnan Alvi

*Journal of Mechanical Science and Technology* , Volume 28 Issue 8 Pages 3301-3310

**Impact Factor:** 0.838 | **Quartile:** 3 | **Citations:** 24

**DOI:** 10.1007/s12206-014-0741-y

## Conference Proceedings

**An Advanced Method for Measuring Shim and Tappet Dynamics and Analysing the Effects of Friction Modifiers in Engine Valvetrains**

2025

Sehrish Shahnawaz Riaz Ahmed Mufti Waleed Al-Sallami Mian Ashfaq Ali Rehan Zahid Jawad Aslam

*50th Leeds Lyon Symposium on Tribology*, res.country(231,)

**Citations:** N/A

**DOI:** Nil

- Measurement of frictional torque of a directacting valvetrain using a shaft-to-shaft torque transducer to study the effect of Laser Surface Texturing on friction reductionMeasurement of frictional torque of a directacting valvetrain using a shaft-to-shaft torque transducer to study the effect of Laser Surface Texturing on friction reductionMeasurement of frictional torque of a directacting valvetrain using a shaft-to-shaft torque transducer to study the effect of Laser Surface Texturing on friction reductionMeasurement of frictional torque of a directacting valvetrain using a shaft-to-shaft torque transducer to study the effect of Laser Surface Texturing on friction reduction
- Muhammad Rizwan Siddiqui Mian Ashfaq Ali Riaz Ahmed Mufti Jawad Aslam Muhammad Usman Bhutta Rehan Zahid Muhammad Khurram  
2nd International Conference on Modern Technologies in Mechanical & Material Engineering, MTME 2024, GIKI, Pakistan (Best paper award)  
res.country(177,)
- Citations:** N/A  
**DOI:** <https://doi.org/10.1051/mateconf/202439801002>
- Effect of WPC Surface Treatment on the Performance of an Engine Valve Train
- Dr Muhammad Usman Bhutta Shahbaz Ahmad Samiur Rahman Shah Muhammad Khurram Riaz Ahmad Mufti Dr Muhammad Usman Abdullah Kiyo Ogawa  
Rehan Zahid Dr Jawad Aslam Mian Ashfaq Ali Tayyab Ul Islam  
Leeds-Lyon Symposium on Tribology , res.country(231,)
- Citations:** N/A  
**DOI:** Available after Publishing of Article
- Comparative analysis of thermal comfort surveys with CFD simulations
- Hassan Safdar Malik Waqas Khalid Absaar Ul Jabbar Adeel Waqas Ahmad Adnan Munir Jawad Aslam Hafiz Ali Haider Sehale  
11th Masters Conference: People and Buildings , res.country(231,)
- Citations:** N/A  
**DOI:** 10.5258/SOTON/P1086
- Numerical Simulation of Inline Arrangement of Spheroid Particles in Different Orientations
- Abuzar Jamil Emad Uddin Ali Abbas Zaidi Zaib Ali Jawad Aslam Omer Gilani Abuzar Jamil Emad Uddin Ali Abbas Zaidi Zaib Ali Jawad Aslam Omer Gilani  
ASME-JSME-KSME 8th Joint Fluids Engineering Conference , res.country(233,)
- Citations:** N/A  
**DOI:** <https://doi.org/10.1115/AJKFluids2019-4623>
- Automated Classification of Retinal Diseases in STARE Database Using Neural Network Approach
- Syed Omer Gilani jawad aslam Naireen Zaheer Adeeb Shehzaad Syed Ali Zaidi  
2019 IEEE Canadian Conference of Electrical and Computer Engineering (CCECE), res.country(38,)
- Citations:** 2  
**DOI:** 10.1109/CCECE.2019.8861588
- A comparison of lumped parameter models of modified hybrid electromechanical valve actuator
- Syed Omer Gilani jawad aslam Emad Waqas Hassan Tanveer Saad Ali Yamin Younis  
2019 IEEE Canadian Conference of Electrical and Computer Engineering (CCECE), res.country(38,)
- Citations:** N/A  
**DOI:** 10.1109/CCECE.2019.8861886
- A study of shape optimization method on connection cones for diesel particulate filter (DPF)
- Mu Ming Fei Li Xing Hu Jawad Aslam Yong Qiu Hao Yang Guiyue Kou  
ASME 2016 International Mechanical Engineering Congress and Exposition, res.country(233,)
- Citations:** N/A  
**DOI:** <https://doi.org/10.1115/IMECE2016-66080>
- The use of Giant Magneto Resistive sensors for measuring the performance of direct acting tappets and the effect of lubricant rheology
- Jawad Aslam Rehan Zahid Riaz Ahmad Mufti Farrukh Qureshi  
5th World Tribology Congress, res.country(109,)
- Citations:** N/A  
**DOI:** N/A

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Patents

Design and Development of parallel arm vertical disc brake balancing Machine	2021
Status: Filed	
Engine Direct Acting Follower Rotational Speed Measuring System	2013
Status: Filed	
Development of engine blow-by meter based on microcontroller and axel flow meter	2013
Status: Filed	
Technique and apparatus for engine tappet monitoring system	2013
Status: Filed	

Industrial Designs

Extruder of 3D printer	2023
Status: Filed	
Single motor driven differential drive for tendon based 3Dd printable soft exoskeletal glove class 3	2019
Status: Filed	

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