Aamer Shahzad

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About

Dr. Aamer Shahzad is working as Defence Faculty in the College of Aeronautical Engineering. Dr. Aamer Shahzad has a PhD in Mechanical Engg. Dr. Aamer Shahzad has published 49 research articles & conference papers having a citation count of 508, carried out 0 projects and filed 0 intellectual property.

Qualifications

PhD in Mechanical Engg University of New South Wales , Australia	2013 - 2017
MS in CS and E BSE, Karachi , pakistan (Duplicate)	2009 - 2011
BE in Aerospace BSE, Karachi , pakistan (Duplicate)	1999 - 2003
Experience	
Defence Faculty College of Aeronautical Engineering	2023- Present
Defence Faculty College of Aeronautical Engineering	2018 - 2023
Assistant Professor CAE NUST , NUST	2018 - 2022
Wing Commander PAF , PAF	1999 - 2022
Awards	
School/College Best Researcher Awards-2021	2022
T.F.C Lawrence Prize Awarded by Royal Aeronautical Society Canberra, for best performance by graduating PhD student in Aeronautical Science	2018
President's Gold Medal First position in MS computational science and engineering	2012
Professional Memberships	
HEC SUPERVISOR	Since 2019
PEC	Since 2009

Research Articles

Investigation of temperature assisted corrosion failure of an aircraft turbine blade

Asad Hameed Sara Khushbash Asad Mumtaz Haris Ali Khan Aamer Shahzad

Engineering Failure Analysis, Volume:167, Part A, ID:108909,

Impact Factor: $4.4 \mid$ Quartile: $1 \mid$ Citations: 1

DOI: https://doi.org/10.1016/j.engfailanal.2024.108909

Fluid-structure interaction for aerodynamic performance evaluation of flapping wing with passive pitching motion

2024

2025

Syed Baleegh Hussain Aamer Shahzad Muhammad Nafees Mumtaz Qadri Taimur Ali Shams Imran Shah Shuaib Salamat

Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, Pages 1-14	
Impact Factor: 2.0 Quartile: 3 Citations: 1 DOI: 10.1177/09544062231225024	
Effect of Gurney Flap on the Aerodynamic Performance of a Flapping Foil: Micro-Aerial Vehicle Application	2024
Umer Ali Zuberi Aamer Shahzad Dr Muhammad Nafees Mumtaz Qadri Taimur Ali Shams Fuwang Zhao	
Journal of Fluids Engineering, Volume 146, Issue 1, Article Number 011202 (11 pages)	
Impact Factor: 2.0 Quartile: 3 Citations: 2 DOI: https://doi.org/10.1115/1.4063261	
Flow physics of annular and semi-annular fanjet and integration scheme with aircraft wing	2023
Kashif Mehmood Aamer Shahzad Muhammad Nafees Mumtaz Qadri Shuaib Salamat Taimur Ali Shams Jehanzeb Masud Physics of Fluids, Volume 35, Issue 9, Article Number 097101	
Impact Factor: 4.6 Quartile: 1 Citations: 1 DOI: https://doi.org/10.1063/5.0165058	
Effects of wake interaction on energy extraction performance of tandem semi-active flapping foils	2023
Fuwang Zhao Zhaokun Wang Muhammad Nafees Mumtaz Qadri Omer Khan Adnan Munir Aamer Shahzad Hui Tang	
Physics of Fluids, Volume 35, Article Number 087112	
Impact Factor: 4.6 Quartile: 1 Citations: 13	
DOI: https://doi.org/10.1063/5.0155893	
Experimental investigation and analysis of proposed hybrid vertical axis wind turbine design	2023
Muhammad Ahmad Aamer Shahzad Syed Irteza Ali Shah	
Energy and Environment, Pages 1-30	
Impact Factor: 4.2 Quartile: 2 Citations: 3	
DOI: 10.1177/0958305X231181675	
Systematic investigation of power enhancement of Vertical Axis Wind Turbines using bio-inspired leading edge tubercles	2023
Syed Saddam ul Hassan M Tariq Javaid Umar Rauf Sheharyar Nasir Aamer Shahzad Shuaib Salamat	
Energy , Volume 270, Article Number 126978	
Impact Factor: 8.857 Quartile: 1 Citations: 22 DOI: https://doi.org/10.1016/j.energy.2023.126978	
Design optimization of bladeless ceiling fan using design of experiments	2023
Kashif Mehmood Dr Aamer Shahzad Dr Farooq bin Akram Dr Taimur Ali Shams Dr M Nafees Mumtaz Qadri Dr Jehanzeb Masud	
Journal of Wind Engineering and Industrial Aerodynamics, Volume 233, Article Number: 105313	
Impact Factor: 4.437 Quartile: 1 Citations: 2	
DOI: 10.1016/j.jweia.2023.105313	
Design, Analysis and Prototyping of One-DoF Drive Mechanism for Flapping Wing Micro-aerial Vehicle Application	2022
Rizwan Yousaf Aamer Shahzad Muhammad Nafees Mumtaz Qadri Farrukh Mazhar	
Iranian Journal of Science and Technology-Transactions of Mechanical Engineering, Pages 1-18	
Impact Factor: 1.530 Quartile: 4	
DOI: https://doi.org/10.1007/s40997-022-00552-7	
Design optimization of Double-Darrieus hybrid vertical axis wind turbine	2022
Muhammad Ahmad Aamer Shahzad M Farooq Bin Akram Fareed Ahmad Syed Irtiza Ali Shah	
Ocean Engineering, Volume 254, Article Number 111171	
Impact Factor: 3.795 Quartile: 1 Citations: 53	
DOI: 10.1016/j.oceaneng.2022.111171	
A novel solution methodology for longitudinal flight characterization of a Flying-Wing Micro Aerial Vehicle	2022
Taimur Ali Shams Syed Irtiza Ali Shah Aamer Shahzad Muzaffar Habib Farhat Asim Mohtashim Mansoor	
Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, Pages 1-19	
Impact Factor: 1.056 Quartile: 4 DOI: https://doi.org/10.1177/09544100221081845	
Determination of efficient configurations of vertical axis wind turbine using design of experiments	2022
Muhammad Ahmad Aamer Shahzad M Farooq Bin Akram Muhammad Nafees Mumtaz Qadri	2022

Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy, Pages 1-24

Impact Factor: 1.882 | Quartile: 3 | Citations: 8 DOI: 10.1177/09576509221095347 Vertical take-off and landing hybrid unmanned aerial vehicles: An overview 2022 Muhammad Rehan M Farooq Bin Akram Aamer Shahzad Taimur Ali Shams Qasim Ali The Aeronautical Journal, Pages 1-41 Impact Factor: 0.818 | Quartile: 4 | Citations: 20 DOI: https://doi.org/10.1017/aer.2022.29 Numerical estimation of longitudinal damping derivatives of a flying wing micro aerial vehicle 2022 Taimur Ali Shams Syed Irtiza Ali Shah Aamer Shahzad Kashif Mehmood Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering, Pages 1-20 Impact Factor: 1.056 | Quartile: 4 DOI: https://doi.org/10.1177/09544100221082856 Numerical analysis of bladeless ceiling fan: An effective alternative to conventional ceiling fan 2022 Kashif Mehmood Aamer Shahzad Jehanzeb Masud M Farooq Bin Akram Muhammad Nafees Mumtaz Qadri Taimur Ali Shams Journal of Wind Engineering and Industrial Aerodynamics, Volume 221, Article Number 104905 Impact Factor: 4.8 | Quartile: 1 | Citations: 6 DOI: 10.1016/j.jweia.2022.104905 Aerodynamic analysis of hummingbird-like hovering flight 2021 Naeem Haider Aamer Shahzad Muhammad Nafees Mumtaz Qadri Taimur Ali Shams Bioinspiration and Biomimetics, Volume 16, Number 6, Article Number 066018 Impact Factor: 2.956 | Quartile: 2 | Citations: 5 DOI: https://doi.org/10.1088/1748-3190/ac28eb 2021 Droplet impact on nano-textured bumps: Topology effects Shakeel Ahmad Jiyun Zhao Aamer Shahzad Muhammad Nafees Mumtaz Qadri Hui Tang Computers and Fluids, Volume 218, Article Number 104844 Impact Factor: 3.077 | Quartile: 2 | Citations: 5 DOI: https://doi.org/10.1016/j.compfluid.2021.104844 On the meshfree particle methods for fluid-structure interaction problems 2021 Farrukh Mazhar Ali Javed Jing Tang Xing Aamer Shahzad Mohtashim Mansoor Adnan Maqsood Syed Irteza Ali Shah Kamran Asim Engineering Analysis with Boundary Elements, Volume 124, Pages 14-40 Impact Factor: 3.250 | Quartile: 1 | Citations: 38 DOI: 10.1016/j.enganabound.2020.11.005 2020 Experimental Investigation of Propeller Induced Flow on Flying Wing Micro Aerial Vehicle for Improved **6DOF Modeling** Taimur Ali Shams Syed Irtiza Ali Shah Aamer Shahzad Ali Javed Kashif Mehmood IEEE Access, Volume 8, Pages 179626-179647 Impact Factor: 3.367 | Quartile: 2 | Citations: 10 DOI: https://doi.org/10.1109/ACCESS.2020.3026005 Investigating the effects of leading edge tubercles on the aerodynamic performance of insect-like 2020 flapping wing Muhammad Bilal Anwar Muhammad Nafees Mumtaz Qadri Aamer Shahzad Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, Pages 1-12 Impact Factor: 1.762 | Quartile: 3 | Citations: 9 DOI: https://doi.org/10.1177%2F0954406220946355 Recent progress in flapping wings for micro aerial vehicle applications 2020 Naeem Haider Aamer Shahzad Syed Irtiza Ali Shah Muhammad Nafees Mumtaz Qadri Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science, Pages 1-20 Impact Factor: 1.762 | Quartile: 3 | Citations: 42

2019

Impact Factor: 1.762 | Quartile: 3 | Citations: 42 **DOI:** https://doi.org/10.1177%2F0954406220917426

Upwind skewed radial basis functions (USRBF) for solution of highly convective problems over meshfree nodes

Ali Javed Ali Asadullah Baig Kamal Djidjeli Aamer Shahzad Asad Hameed

Engineering with Computers, Pages 1–17

Impact Factor: 3.938 | Quartile: 1 | Citations: 7

DOI: 10.1007/s00366-019-00873-3

An Experimental Investigation of a Passively Flapping Foil in Energy Harvesting Mode	2019
Muhammad Nafees Mumtaz Qadri Aamer Shahzad F. Zhao H. Tang	
Journal of Applied Fluid Mechanics, Volume 12, Issue 5, Pages 1547-1561 Impact Factor: 0.689 Quartile: 4 Citations: 18	
DOI: 10.29252/jafm.12.05.29648	
Numerical Analysis of High Aspect Ratio Flexible Wings in Flapping Motion	2019
Aamer Shahzad Shakeel Ahmed Muhammad Nafees Mumtaz Qadri	
Journal of Applied Fluid Mechanics, Vol. 12, No. 6, Pages 1979-1988	
Impact Factor: 0.689 Quartile: 4 Citations: 7 DOI: 10.29252/jafm.12.06.29792	
Effects of hawkmoth-like flexibility on the aerodynamic performance of flapping wings with different	2018
shapes and aspect ratios	
Aamer Shahzad Fang-Bao Tian John Young Joseph Lai	
Physics of Fluids, Volume 30, Issue 9, Article Number 091902 Impact Factor: 2.627 Quartile: 3 Citations: 61	
DOI: 10.1063/1.5044635	
Effects of flexibility on the hovering performance of flapping wings with different shapes and aspect ratios	2018
Aamer Shahzad Fang-Bao Tian John Young Joseph Lai	
Journal of Fluids and Structures, Volume 81, Pages 69-96	
Impact Factor: 3.070 Quartile: 1 Citations: 62 DOI: 10.1016/j.jfluidstructs.2018.04.019	
Investigation of Corrugated Wing in Unsteady Motion	2017
A. Shahzad H. R. Hamdani A. Aizaz	
Journal of Applied Fluid Mechanics, Volume 10, Issue 3, Pages 833-845	
Impact Factor: 1.090 Quartile: 3	
DOI: 10.18869/acadpub.jafm.73.238.26425	
Effects of wing shape, aspect ratio and deviation angle on aerodynamic performance of flapping wings in hover	2016
Aamer Shahzad Fang-Bao Tian John Young Joseph Lai Physics of Fluids, Volume 28, Issue 11, Article Number 111901	
Impact Factor: 3.521 Quartile: 1 Citations: 75	
DOI: 10.1063/1.4964928	
Conference Proceedings	
Investigation of Temperature Assisted Corrosion Failure of an Aircraft Turbine Blade	2024
SARA KHUSHBASH Asad hameed ASAD MUMTAZ BHATTI Haris Ali Khan Aamer Shahzad Farooq bin akram	
10th International Conference on Engineering Failure Analysis, res.country(88,)	
Citations: N/A DOI: not given yet	
Experimental Investigation of Wing Rock on a Low Aspect Ratio Flying Wing Micro Aerial Vehicle using	2023
Pyramidal Balance Taimur Ali Shams Irtiza Ali Shah Ayaz Ahmad Aamer Shahzad Tauqeer Ul Islam Zahid Mehmood	
AIAA SciTech Forum 2023, res.country(233,)	
Citations: N/A	
DOI: 10.2514/6.2023-0814	
Sloshing Analysis of a Supersonic Fuel Tank of an Aircraft Farrukh Igbal Ali Javed Aamer Shahzad	2021
International Conference on Applied and Engineering Mathematics (ICAEM), res.country(177,)	
Citations: N/A	
DOI: 10.1109/ICAEM53552.2021.9547090	
Design and computational study of main body of bird like flapping wing Mav	2021
Muhammad Bilal Muhammad Nafees Mumtaz Qadri Aamer Shahzad Nadeem Hussain Shah	
2021 International Conference on Applied and Engineering Mathematics (ICAEM), res.country(177,) Citations: N/A	
DOI: 10.1109/ICAEM53552.2021.9547090	

Design and Analysis of Flagging Wing Assessed	0001
Design and Analysis of Flapping Wing Apparatus Muhammad Aneeb Siddiqui Aamer Shahzad Dr M Nafees Mumtaz Qadri Rizwan Yousaf 2021 International Bhurban Conference on Applied Sciences and Technologies (IBCAST), res.country(177,) Citations: N/A	2021
DOI: 10.1109/IBCAST51254.2021.9393276	
Design, Analysis and Fabrication of RC Operated Flapping Wing Micro Aerial Vehicle Mimicking Natural Flyers Muhammad Muaaz Tariq Rizwan Yousaf Aamer Shahzad 2021 International Bhurban Conference on Applied Sciences and Technologies (IBCAST), res.country(177,) Citations: N/A DOI: 10.1109/IBCAST51254.2021.9393260	2021
	2021
Design and Transition of a Quad Rotor Tail-sitter VTOL UAV with Experimental Verification Syed Qasim Sohail Farooq Akram Nadeem Hussain Aamer Shahzad 18th International Bhurban Conference on Applied Sciences and Technologies, IBCAST 2021, res.country(177,) Citations: N/A DOI: 10.1109/IBCAST51254.2021.9393187	2021
An Overview of Stability and Performance Analysis of Hybrid Vertical Take-off and Landing Unmanned	2020
Aerial Vehicle Anas Manzoor Khan Aamer Shahzad Taimur Ali Shams 3rd Pak-Turk International Conference on Emerging Technologies in the field of Sciences and Engineering, res.country(177,) Citations: N/A DOI: https://www.giki.edu.pk/PakTurk/ImportantDates	
Optimization and Aerodynamic Design of a Soccer Ball Using Numerical Analysis	2020
Syed Baleegh Hussain Syed Irtiza Ali Shah Aamer Shahzad International Conference on Engineering and Emerging Technologies (ICEET), res.country(177,) Citations: N/A DOI: 10.1109/ICEET48479.2020.9048220	_0_0
Numerical Analysis of Multiphase Blood Flow within Carotid Artery & bifurcation using Mixture Model Theory Nabeel Bhatti Syed Irtiza Ali Shah Aamer Shahzad 15th International Conference on Emerging Technologies (ICET) 2019, res.country(177,)	2019
Citations: N/A DOI: 10.1109/ICET48972.2019.8994649	
Effects of Leading-Edge Tubercles on the Aerodynamic Performance of Wings	2019
Muhammad Bilal Anwar Aamer Shahzad Muhammad Nafees Mumtaz Qadri 3rd Multi-Disciplinary Student Research Conference, 26-27 Nov 2019, Wah Pakistan res.country(177,) Citations: N/A DOI: http://www.uow.edu.pk/ORIC/Publications/5th%20MDSRIC-369.pdf	
Static structural and modal analysis of Micro Air Vehicle flapping wing with varying stiffness	2019
structures Rizwan Yousaf Ali Javed Aamer Shahzad 2019 16th International Bhurban Conference on Applied Sciences and Technology (IBCAST), res.country(177,) Citations: N/A DOI: 10.1109/IBCAST.2019.8667150	20.0
Aerodynamic Hovering Performance of Rigid and Flexible Wing Planform Shapes Aamer Shahzad Fang-Bao Tian John Young Joseph Lai 20th Australasian Fluid Mechanics Conference, res.country(13,) Citations: N/A DOI: https://www.researchgate.net/publication/316094055_Aerodynamic_Hovering_Performance_of_Rigid_and_Flexible_Wing_Planform_Shapes	2016
Numerical study of rigid and flexible wing shapes in hover Aamer Shahzad Fang-Bao Tian John Young Joseph Lai Journal of Physics: Conference Series, Volume 822, Number 1, res.country(157,) Citations: N/A DOI: 10.1088/1742-6596/822/1/012007	2016

Aamer Shahzad Fang-Bao Tian John Young Joseph Lai

19th Australasian Fluid Mechanics Conference, res.country(13,)

Citations: N/A

DOI:

https://www.researchgate.net/publication/270052319_Reynolds_Number_Effects_on_the_Aerodynamic_Performance_of_Wing_Planform_Shapes_in_Hover

Effect of Reynolds number on leading edge vortex for a wing in unsteady motion

2013

Aamer Shahzad Hossein Raza Hamdani Muhammad Nafees Mumtaz Qadri Khalid Parvez M.Aqib

2013 10th International Bhurban Conference on Applied Sciences & Technology (IBCAST), res.country(177,)

Citations: N/A

DOI: 10.1109/IBCAST.2013.6512152

Dynamic Stall Control through Passive Devices in Hybrid Configuration

2013

Nafees Mumtaz Qadri Aamer Shahzad H.R. Hamdan K.Parvez

51st AIAA Aerospace Sciences Meeting Including the New Horizons and Aerospace Exposition, res.country(233,)

Citations: N/A

DOI: 10.2514/6.2013-352

Parametric Study of Sweeping Corrugated Wing and Role of Spanwise Flow in Delayed Stall

2012

Aamer Shahzad Hossein Hamdani Khalid Parvez Muhammad Nafees Mumtaz Qadri

9th International Bhurban Conference on Applied Sciences and Technology (IBCAST) held from 9-12 Jan 2012 in Pakistan res.country(177,)

Citations: N/A

DOI: 10.1109/IBCAST.2012.6177557

Effect of Positioning of Leading Edge Vortex Generators on Dynamic Stall Phenomenon

2011

Muhammad Nafees Mumtaz Qadri Hossein Hamdani Khalid Parvez Aamer Shahzad

INTERNATIONAL CONFERENCE ON ADVANCED MODELING & SIMULATION - ICAMS 2011, res.country(177,)

Citations: N/A
DOI: N/A

Editorial Activities

Journal of Mechanical Engineering Science Reviewed Papers for Journals Impact Factor: 1.8	2025
Journal of Fluids and Structures Reviewed Papers for Journals Impact Factor: 3.4	2025
Journal of Fluids and Structures Reviewed Papers for Journals Impact Factor: 3.4	2025
Energy Sources, Part A: Recovery Reviewed Papers for Journals Impact Factor: 2.3	2024
Proceedings of the Institution of Mechanical Engineers, Part C Reviewed Papers for Journals Impact Factor: 1.8	2024
Journal of Fluids and Structures Reviewed Papers for Journals Impact Factor: 3.6	2023
Applied Sciences-Basel Reviewed Papers for Journals Impact Factor: 2.838	2023
Designs (Basel) Reviewed Papers for Journals Impact Factor: N/a	2022
Aerospace Reviewed Papers for Journals Impact Factor: 2.660	2022
Journal of Mechanical Engineering Science Reviewed Papers for Journals Impact Factor: 1.762	2022
PLOS ONE Reviewed Papers for Journals Impact Factor: 3.24	2022
Journal of Mechanical Engineering Science Reviewed Papers for Journals Impact Factor: 1.762	2021
Journal of Mechanical Engineering Science Reviewed Papers for Journals Impact Factor: 1.386	2020
PLOS ONE Reviewed Papers for Journals Impact Factor: 3.24	2020
PLOS ONE Reviewed Papers for Journals Impact Factor: 2.74	2019
Physics of Fluids Reviewed Papers for Journals Impact Factor: 2.99	2018
Physics of Fluids Reviewed Papers for Journals Impact Factor: 2.99	2018