

Aamer Shahzad

Defence Faculty
College of Aeronautical Engineering

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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	2013 - 2017
University of New South Wales , Australia	
MS in CS and E	2009 - 2011
BSE, Karachi , pakistan (Duplicate)	
BE in Aerospace	1999 - 2003
BSE, Karachi , pakistan (Duplicate)	

Experience

Defence Faculty	2023- Present
College of Aeronautical Engineering	
Defence Faculty	2018 - 2023
College of Aeronautical Engineering	
Assistant Professor	2018 - 2022
CAE NUST , NUST	
Wing Commander	1999 - 2022
PAF , PAF	

Awards

School/College Best Researcher Awards-2021	2022
T.F.C Lawrence Prize	2018
Awarded by Royal Aeronautical Society Canberra, for best performance by graduating PhD student in Aeronautical Science	
President's Gold Medal	2012
First position in MS computational science and engineering	

Professional Memberships

HEC SUPERVISOR	Since 2019
PEC	Since 2009

Research Articles

Investigation of temperature assisted corrosion failure of an aircraft turbine blade	2025
Asad Hameed Sara Khushbash Asad Mumtaz Haris Ali Khan Aamer Shahzad	
Engineering Failure Analysis , Volume:167, Part A, ID:108909,	
Impact Factor: 4.4 Quartile: 1 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
Syed Baleegh Hussain Aamer Shahzad Muhammad Nafees Mumtaz Qadri Taimur Ali Shams Imran Shah Shuaib Salamat	

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

2024

Application

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 Irtiza 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

2022

Application

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

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 <i>Muhammad Rehan M Farooq Bin Akram Aamer Shahzad Taimur Ali Shams Qasim Ali</i> <i>The Aeronautical Journal</i> , Pages 1-41 Impact Factor: 0.818 Quartile: 4 Citations: 20 DOI: https://doi.org/10.1017/aer.2022.29	2022
Numerical estimation of longitudinal damping derivatives of a flying wing micro aerial vehicle <i>Taimur Ali Shams Syed Irtiza Ali Shah Aamer Shahzad Kashif Mehmood</i> <i>Proceedings of the Institution of Mechanical Engineers, Part G: Journal of Aerospace Engineering</i> , Pages 1-20 Impact Factor: 1.056 Quartile: 4 DOI: https://doi.org/10.1177/09544100221082856	2022
Numerical analysis of bladeless ceiling fan: An effective alternative to conventional ceiling fan <i>Kashif Mehmood Aamer Shahzad Jehanzeb Masud M Farooq Bin Akram Muhammad Nafees Mumtaz Qadri Taimur Ali Shams</i> <i>Journal of Wind Engineering and Industrial Aerodynamics</i> , Volume 221, Article Number 104905 Impact Factor: 4.8 Quartile: 1 Citations: 6 DOI: 10.1016/j.jweia.2022.104905	2022
Aerodynamic analysis of hummingbird-like hovering flight <i>Naeem Haider Aamer Shahzad Muhammad Nafees Mumtaz Qadri Taimur Ali Shams</i> <i>Bioinspiration and Biomimetics</i> , 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 <i>Shakeel Ahmad Jiyun Zhao Aamer Shahzad Muhammad Nafees Mumtaz Qadri Hui Tang</i> <i>Computers and Fluids</i> , Volume 218, Article Number 104844 Impact Factor: 3.077 Quartile: 2 Citations: 5 DOI: https://doi.org/10.1016/j.compfluid.2021.104844	2021
On the meshfree particle methods for fluid-structure interaction problems <i>Farrukh Mazhar Ali Javed Jing Tang Xing Aamer Shahzad Mohtashim Mansoor Adnan Maqsood Syed Irtiza Ali Shah Kamran Asim</i> <i>Engineering Analysis with Boundary Elements</i> , Volume 124, Pages 14-40 Impact Factor: 3.250 Quartile: 1 Citations: 38 DOI: 10.1016/j.enganabound.2020.11.005	2021
Experimental Investigation of Propeller Induced Flow on Flying Wing Micro Aerial Vehicle for Improved 6DOF Modeling <i>Taimur Ali Shams Syed Irtiza Ali Shah Aamer Shahzad Ali Javed Kashif Mehmood</i> <i>IEEE Access</i> , Volume 8, Pages 179626-179647 Impact Factor: 3.367 Quartile: 2 Citations: 10 DOI: https://doi.org/10.1109/ACCESS.2020.3026005	2020
Investigating the effects of leading edge tubercles on the aerodynamic performance of insect-like flapping wing <i>Muhammad Bilal Anwar Muhammad Nafees Mumtaz Qadri Aamer Shahzad</i> <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , Pages 1-12 Impact Factor: 1.762 Quartile: 3 Citations: 9 DOI: https://doi.org/10.1177%2F0954406220946355	2020
Recent progress in flapping wings for micro aerial vehicle applications <i>Naeem Haider Aamer Shahzad Syed Irtiza Ali Shah Muhammad Nafees Mumtaz Qadri</i> <i>Proceedings of the Institution of Mechanical Engineers, Part C: Journal of Mechanical Engineering Science</i> , Pages 1-20 Impact Factor: 1.762 Quartile: 3 Citations: 42 DOI: https://doi.org/10.1177%2F0954406220917426	2020
Upwind skewed radial basis functions (USRBF) for solution of highly convective problems over meshfree nodes <i>Ali Javed Ali Asadullah Baig Kamal Djidjeli Aamer Shahzad Asad Hameed</i> <i>Engineering with Computers</i> , Pages 1–17 Impact Factor: 3.938 Quartile: 1 Citations: 7 DOI: 10.1007/s00366-019-00873-3	2019

An Experimental Investigation of a Passively Flapping Foil in Energy Harvesting Mode <i>Muhammad Nafees Mumtaz Qadri Aamer Shahzad F. Zhao H. Tang</i> <i>Journal of Applied Fluid Mechanics</i> , Volume 12, Issue 5, Pages 1547-1561 Impact Factor: 0.689 Quartile: 4 Citations: 18 DOI: 10.29252/jafm.12.05.29648	2019
Numerical Analysis of High Aspect Ratio Flexible Wings in Flapping Motion <i>Aamer Shahzad Shakeel Ahmed Muhammad Nafees Mumtaz Qadri</i> <i>Journal of Applied Fluid Mechanics</i> , Vol. 12, No. 6, Pages 1979-1988 Impact Factor: 0.689 Quartile: 4 Citations: 7 DOI: 10.29252/jafm.12.06.29792	2019
Effects of hawkmoth-like flexibility on the aerodynamic performance of flapping wings with different shapes and aspect ratios <i>Aamer Shahzad Fang-Bao Tian John Young Joseph Lai</i> <i>Physics of Fluids</i> , Volume 30, Issue 9, Article Number 091902 Impact Factor: 2.627 Quartile: 3 Citations: 61 DOI: 10.1063/1.5044635	2018
Effects of flexibility on the hovering performance of flapping wings with different shapes and aspect ratios <i>Aamer Shahzad Fang-Bao Tian John Young Joseph Lai</i> <i>Journal of Fluids and Structures</i> , Volume 81, Pages 69-96 Impact Factor: 3.070 Quartile: 1 Citations: 62 DOI: 10.1016/j.jfluidstructs.2018.04.019	2018
Investigation of Corrugated Wing in Unsteady Motion <i>A. Shahzad H. R. Hamdani A. Aizaz</i> <i>Journal of Applied Fluid Mechanics</i> , Volume 10, Issue 3, Pages 833-845 Impact Factor: 1.090 Quartile: 3 DOI: 10.18869/acadpub.jafm.73.238.26425	2017
Effects of wing shape, aspect ratio and deviation angle on aerodynamic performance of flapping wings in hover <i>Aamer Shahzad Fang-Bao Tian John Young Joseph Lai</i> <i>Physics of Fluids</i> , Volume 28, Issue 11, Article Number 111901 Impact Factor: 3.521 Quartile: 1 Citations: 75 DOI: 10.1063/1.4964928	2016

Conference Proceedings

Investigation of Temperature Assisted Corrosion Failure of an Aircraft Turbine Blade <i>SARA KHUSHBASH Asad hameed ASAD MUMTAZ BHATTI Haris Ali Khan Aamer Shahzad Farooq bin akram</i> <i>10th International Conference on Engineering Failure Analysis</i> , res.country(88,) Citations: N/A DOI: not given yet	2024
Experimental Investigation of Wing Rock on a Low Aspect Ratio Flying Wing Micro Aerial Vehicle using Pyramidal Balance <i>Taimur Ali Shams Irtiza Ali Shah Ayaz Ahmad Aamer Shahzad Tauqeer Ul Islam Zahid Mehmood</i> <i>AIAA SciTech Forum 2023</i> , res.country(233,)	2023
Sloshing Analysis of a Supersonic Fuel Tank of an Aircraft <i>Farrukh Iqbal Ali Javed Aamer Shahzad</i> <i>International Conference on Applied and Engineering Mathematics (ICAEM)</i> , res.country(177,)	2021
Design and computational study of main body of bird like flapping wing Mav <i>Muhammad Bilal Muhammad Nafees Mumtaz Qadri Aamer Shahzad Nadeem Hussain Shah</i> <i>2021 International Conference on Applied and Engineering Mathematics (ICAEM)</i> , res.country(177,)	2021

Design and Analysis of Flapping Wing Apparatus <i>Muhammad Aneeb Siddiqui Aamer Shahzad Dr M Nafees Mumtaz Qadri Rizwan Yousaf</i> 2021 International Bhurban Conference on Applied Sciences and Technologies (IBCAST), res.country(177,) Citations: N/A DOI: 10.1109/IBCAST51254.2021.9393276	2021
Design, Analysis and Fabrication of RC Operated Flapping Wing Micro Aerial Vehicle Mimicking Natural Flyers <i>Muhammad Muaaz Tariq Rizwan Yousaf Aamer Shahzad</i> 2021 International Bhurban Conference on Applied Sciences and Technologies (IBCAST), res.country(177,) Citations: N/A DOI: 10.1109/IBCAST51254.2021.9393260	2021
Design and Transition of a Quad Rotor Tail-sitter VTOL UAV with Experimental Verification <i>Syed Qasim Sohail Farooq Akram Nadeem Hussain Aamer Shahzad</i> 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 Aerial Vehicle <i>Anas Manzoor Khan Aamer Shahzad Taimur Ali Shams</i> 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	2020
Optimization and Aerodynamic Design of a Soccer Ball Using Numerical Analysis <i>Syed Baleegh Hussain Syed Irtiza Ali Shah Aamer Shahzad</i> International Conference on Engineering and Emerging Technologies (ICEET) , res.country(177,) Citations: N/A DOI: 10.1109/ICEET48479.2020.9048220	2020
Numerical Analysis of Multiphase Blood Flow within Carotid Artery & bifurcation using Mixture Model Theory <i>Nabeel Bhatti Syed Irtiza Ali Shah Aamer Shahzad</i> 15th International Conference on Emerging Technologies (ICET) 2019, res.country(177,) Citations: N/A DOI: 10.1109/ICET48972.2019.8994649	2019
Effects of Leading-Edge Tubercles on the Aerodynamic Performance of Wings <i>Muhammad Bilal Anwar Aamer Shahzad Muhammad Nafees Mumtaz Qadri</i> 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	2019
Static structural and modal analysis of Micro Air Vehicle flapping wing with varying stiffness structures <i>Rizwan Yousaf Ali Javed Aamer Shahzad</i> 2019 16th International Bhurban Conference on Applied Sciences and Technology (IBCAST), res.country(177,) Citations: N/A DOI: 10.1109/IBCAST.2019.8667150	2019
Aerodynamic Hovering Performance of Rigid and Flexible Wing Planform Shapes <i>Aamer Shahzad Fang-Bao Tian John Young Joseph Lai</i> 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 <i>Aamer Shahzad Fang-Bao Tian John Young Joseph Lai</i> Journal of Physics: Conference Series, Volume 822, Number 1, res.country(157,) Citations: N/A DOI: 10.1088/1742-6596/822/1/012007	2016

- Reynolds Number Effects on the Aerodynamic Performance of Wing Planform Shapes in Hover** 2014
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