



Dr. Mohd Anas

**Associate Professor (II), Department of Mechanical Engineering, Faculty of Engineering,
Integral University, Lucknow**

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Hyperlinks of ([Google Scholar Citation](#), | [Orcid Id](#), [Scopus](#), | [Web Of Science](#), | [Research gate](#), | [linked in](#))

PROFILE

Dr. Mohd. Anas is currently serving as Associate Professor (II) in the Department of Mechanical Engineering, a position he has held since October 2013. He has served as Assistant Professor from July 2009 to October, 2013. He has joined this university on July 13, 2007 on the post of lecturer (Grade-1). His research expertise lies in Static and dynamic analysis of composite beams, Finite Element Analysis, Machine Design and Unconventional Machining. Dr. Anas has authored over 45 articles published in peer reviewed journals and conferences. He holds a Ph.D. in Applied Mechanics from Integral University, Lucknow, India, M. Tech. in Machine Design (Engineering) from Aligarh Muslim University, Aligarh, India and B.Tech. in Mechanical Engineering from Uttar Pradesh Technical University (Now AKTU), Lucknow, UP, India.

RESEARCH INTEREST:

- **Static and dynamic analysis of beams**
- **Composites (MMCs / FRC)**
- **Unconventional machining / manufacturing and analysis**
- **Friction stir welding / processing**

SUMMARY OF RESEARCH ACCOMPLISHMENT:

- **Number of publications in SCI/ Scopus indexed journals** :13
- **Number of publications in Non-Sci/Scopus but Peer Reviewed** :21
- **Number of publications in International Conferences** :17
- **Book Chapters** :05
- **Presentation in international conferences** :18
- **The referee for various scientific journals** :01
- **Citations** :150
- **H index** :08
- **I10 index** :06

COURSE TAUGHT:

- **Machine Design**
- **Computer Aided Design**
- **Advanced Machine Design**
- **Strength of Material**
- **Heat and Mass Transfer**
- **Unconventional Manufacturing Processes**
- **Automobile Engineering**
- **Mechanical System Design**

ADMINISTRATIVE/DEPARTMENTAL RESPONSIBILITY

- Departmental Placement Coordinator
- Proctorial Board Departmental Coordinator
- Member of NAAC Criteria 5
- Departmental Disciplinary committee member
- M. Tech Dissertation Coordinator
- Head Examiner

STUDENTS SUPERVISION

- PhD : 03 (awarded), 04 (Ongoing)
- M. Tech : 11
- B. Tech : 24 (groups)

PUBLISHED/ACCEPTED SCI/SCOPUS RESEARCH PAPERS

- Effect of Varying Volume Fraction of Reinforcement on the Microstructure, Hardness and Tribological Behaviour of Aluminium Metal Matrix Composites Developed Through FSP Technique, Journal of the Institution of Engineers (India): Series D (2023): pages 1-11, <https://doi.org/10.1007/s40033-023-00476-9>
- Effect on Mechanical properties of Aluminium Alloy Composition on Adding Ash as Reinforcement Material. International journal of Metals Materials and Minerals, vol. 25, No.2, pp, 1-7, 2015. DOI : [10.14456/jmmm.2015.9](https://doi.org/10.14456/jmmm.2015.9)
- Flexible Architecture: Optimization of Technology and Creativity, International journal of Engineering and Technology (IJET), volume 9, 2017, page 510-520, ISSN 2319-8613. DOI: [10.21817/ijet/2017/v9i3/170903S078](https://doi.org/10.21817/ijet/2017/v9i3/170903S078)
- Experimental study on heat transfer of an engine radiator with TiO₂/EG- water nano-coolant,

SN Applied Sciences, A Springer Nature Journal, Volume 3, article number 434, 2021, <https://doi.org/10.1007/s42452-021-04441-7>

- Development of an artificial neural network for the prediction of relative viscosity of ethylene glycol based nanofluids, SN Applied Sciences, A Springer Nature Journal, Volume 2, article number 1473, 2020. <https://doi.org/10.1007/s42452-020-03269-x>
- Effect of Volume Percentage of Reinforcement on the Microstructure and Mechanical Properties of an Al6061-T6/SiC Surface Composite Fabricated Through Friction Stir Processing." Advances in Science and Technology. Research Journal, vol 17, 247-257. <https://doi.org/10.12913/22998624/161690>
- Review and analysis of the effect of variables on aluminium based surface composite fabricated through friction stir processing method, International Journal of Advanced Technology and Engineering Exploration, vol 9,1552-1570, 2022. <http://dx.doi.org/10.19101/IJATEE.2021.875903>
- Efficient Finite Element Model for Dynamic Analysis of Laminated Composite Beam, International journal of Structural Engineering and Mechanics, Vol. 42 No 4(2012) 471-488. DOI: [10.12989/sem.2012.42.4.471](https://doi.org/10.12989/sem.2012.42.4.471)
- An investigative review of squeeze casting: Processing effects & impact on properties, Materials Today Proceedings, Elsevier, volume 26, part 2, pages 1914-1920, 2020. <https://doi.org/10.1016/j.matpr.2020.02.419>
- A consolidated effect of processing and squeeze pressure on Al₂O₃ + SiC reinforced AA6061 cast composite, Materials Today Proceedings, Elsevier Volume 47, Part 19, Pages 6545-7208, 2021. <https://doi.org/10.1016/j.matpr.2021.05.188>
- Sustainability and recent trends in micro- electric discharge machining (μ -EDM): A state-of-the-art review, Materials Today Proceedings, Elsevier Volume 57, Part 5, Pages 1955-2376, 2022. <https://doi.org/10.1016/j.matpr.2021.11.250>
- Integrated Taguchi-GRA-PCA for optimising the heat transfer performance of nanofluid in an automotive cooling system, Grey systems: Theory and Application,14,4, 13-27, 2023. DOI 10.1108/GS-09-2019-0036
- Understanding the optimized effect of multiple reinforcement on impact strength and hardness for aa6061/ al₂o₃ /sic reinforced composite using taguchi technique and grey relation analysis, Composites: Mechanics, Computations, Applications: An International Journal 14(2):13–27, DOI: [10.1615/CompMechComputApplIntJ.2022044779](https://doi.org/10.1615/CompMechComputApplIntJ.2022044779)

PAPER PUBLISHED / PRESENTED IN INTERNATIONAL CONFERENCES

- Finite Element Modeling for Buckling Analysis of Sandwich Beams for various boundary conditions using Zigzag theory and MATLAB, International Conference on Emerging Trends in Mechanical Engineering. CETME 2011. Patiala
- Finite Element Modeling for Buckling Analysis of Symmetric and Asymmetric Beams using MATLAB, National Conference on Recent Advances in Mechanical Engineering, RAME 2011, held at Mathura.
- Effect of Alternating Transverse magnetic field of Bead Geometry and micro structure of underwater welds- RAW 2009, Bangalore
- Response of commercially available electrodes to underwater Wet Welding. Advances in Mechanical Engg. NCAME-2010, Aligarh.
- Buckling Analysis of Laminated Composite Beams using Zigzag theory, MATLAB and ABAQUS, ICEAE 2009, IISc. Bangalore
- Analysis of Aerodynamic Lift of a Bicycle Assisted By Propeller Thrust. NCETMEE 2012, Integral University, Lucknow
- Gujarat model technical and comparative analysis, 3rd international conference on Gujarat Model of Governance, April 25-26, 2015, GTU, Ahmedabad, India
- Analysis of Gujarat Agricultural Development, 3rd international conference on Gujarat Model of Governance, April 25-26, 2015, GTU, Ahmedabad, India.
- CFD Simulation of Human Nasal Breathing cycle, National Conference in Mechanical Engineering – Ideas- Innovations- Initiatives, A.M.U., Aligarh, 16,-17, April 2016.
- Vertical Axis Wind Turbine Modeling and its Analysis Using ANSYS, National conference on Emerging Trends in Non-Conventional Energy Resources (ETNCER), 22 October 2016, Integral University, Lucknow India.

- Our commitment to the Environment, National conference on Emerging Trends in Non-Conventional Energy Resources (ETNCER), 22 October 2016, Integral University, Lucknow India.
- Efficient Solar Panel Design and Fabrication for Solar Vehicle, National conference on Emerging Trends in Non-Conventional Energy Resources (ETNCER), 22 October 2016, Integral University, Lucknow India.
- Sustainable Model for Mechanization Peppermint Oil Extraction Plants for Rural India, IPRoMM 2020, held on December 21 & 22, 2020, Birla Institute of Technology & Science (BITS) Pilani, Hyderabad Campus.
- 2-Dimensional inline system for peppermint oil extraction, IOP Conf. Series: Materials Science and Engineering, (ICRAMEN 2021)1206 (2021).
- Microstructure and mechanical behaviour of reinforced aluminium-based surface composites synthesized by friction stir processing route: a review. Tailored Functional Materials: Select Proceedings of MMETFP 2021.
- Study of Natural Fibre Reinforced Composites, 2018 IOP Conf. Ser.: Mater. Sci. Eng. 404 012048
- Rolling Barriers: Emerging Concept to Reduce Road Accidents: An Indian Perspective, 2018 IOP Conf. Ser.: Mater. Sci. Eng. 404 012045

PUBLISHED NON-SCI-SCOPUS BUT PEER REVIEWED RESEARCH PAPERS

- Buckling of laminated composite Beams, using FEM for Zigzag Theory International journal of Advanced Engineering Sciences and Technology. Vol. 11 No. 2 (2011) 292-296.
- Finite Element Modeling and Simulation for Vibration of Symmetric Composite Beams using Zigzag theory, International journal of advanced Scientific and Technical Research. Vol. 1 No. 2 (2012) 71-78.
- An ABC Analysis for multiple Products Inventory management; Case study of scooters India Limited, International journal of research in Engineering and advanced Technology, Volume 1, issue 5, 2013.

- Dynamic response comparison of symmetric beams using 3noded and 2 noded beam element, international journal of Engineering and Technical research, vol 2, issue 4, April, 2014.
- Six Sigma; as applied in Quality improvement for injection moulding Process, International review of Engineering research, volume 4, Issue 4, pp317-324, Feb 2014.
- Comparison of Hardness and Strength of Fly Ash and Bagasse Ash Al-MMCS International for science and advanced research in Technology., volume 1, Issue 7, July 2015, ISSN 2395-1052.
- Technique to differentiate between surface nano structuring and hardening, International journal of Engineering Development and research, volume 3, Issue 3, ISSN 231-9939.
- Improvement of JIT of An Industry by using model analysis, International Journal of Scientific process and Application, volume 1, Issue 1, May 2015, pp 11-16.
- Vibration Analysis of sandwich beams using 3noded beam element, International Journal of structural Mechanics and Finite Elements, volume 1, issue 1, August 2015.
- Analysis of Savonius turbine for air striking at different angles, international journal of Mechanics and Design, volume 1, issue 1, August 2015.
- JIT for productivity improvement in Indian Automobile Industries; Case study International for science and advanced research in Technology., volume 1, Issue 7, July 2015, ISSN 2395-1052.
- A review on structural benefits of nozzle in propulsion systems, International Journal of Machine Design and Manufacturing, volume 1, issue 2, Dec. 2015, ISSN -5043.
- Fly Ash and Bagasse Ash Al-MMCS Izod test analysis. International for scientific research and development, volume 3, Issue 6, August 2015.
- Effect of process parameters on Mechanical Properties of hot air welded PVC plastics. International Journal of Exploring Emerging Trends in Engineering, vol 3, issue 2, pp, 107-111, April 2016.

- Total Productive Maintenance: A unique combination of production and maintenance, International review of Engineering research, volume 4, issue 1, Spt.2016, ISSN 2347-2189.
- Vertical Axis Wind Turbine Modeling and its Analysis, Journal of Alternate Energy Sources and Technologies, volume 8 issue 1, 2017, page 26-32, ISSN 2230-7982.
- Investigation of Material Removal Rate, Surface Roughness and Surface Morphology in Wire-Electro Discharge Machining of Die Steel D3, International Research Journal of Engineering and Technology (IRJET) Volume: 09, Issue: 07 2022, ISSN: 2395-0056.
- Improving the Strength of Acrylonitrile Butadiene Styrene Filament Used in the 3D Printer: A Review, International Research Journal of Engineering and Technology (IRJET), Volume: 09 Issue: 06 2022, ISSN: 2395-0056.
- Efficient Solar panel Design and Fabrication for Solar vehicle, Journal of Instrumentation, Technology and Innovations, volume 7, issue 1, 2017, page 20-24, ISSN 2249-4731.
- The Influence of Operational Settings on the Tensile Strength of an FDM-Printed Abs Component, International Journal for Research in Applied Science & Engineering Technology (IJRASET), Volume 10 Issue VI June 2022, ISSN: 2321-9653.
- Improving the Performance of Laser CNC Machine at Different Grade of Aluminium Sheet: A Review, International Research Journal of Engineering and Technology (IRJET), Volume: 09 Issue: 2022, ISSN: 2395-0056

BOOK CHAPTERS

- Microstructure and Mechanical Behaviour of Reinforced Aluminium-Based Surface Composites Synthesized by Friction Stir Processing Route: A Review, Tailored Functional Materials, Springer Proceedings in Materials 15, https://doi.org/10.1007/978-981-19-2572-6_30
- Microstructure and Interfacial Characterization Near Grain Boundary of Al₂O₃/SiC Reinforced AA 6061 Semi-solid Squeeze Cast Composite, Advancement in Materials, Manufacturing and energy Engineering, Vol. I, Lecture Notes in Mechanical Engineering, DOI: https://doi.org/10.1007/978-981-16-5371-1_28

- Sustainable model for mechanization of peppermint Oil extraction for rural india Advances in Industrial Machines and Mechanisms, Springer Nature, Lecture Notes in Mechanical Engineering, 2021, pp 73–81. DOI: https://doi.org/10.1007/978-981-16-0550-5_152
 - Mechanization of Peppermint Oil Extraction Plant of Rural India Machines, Mechanism and Robotics, Lecture Notes in Mechanical Engineering, DOI: https://doi.org/10.1007/978-981-16-0550-5_152
 - Study of Human Factors Responsible for Change in Design, Ergonomics for Improved Productivity, Springer Nature, 2021, pp 317–323, DOI: [10.1007/978-981-16-2229-8_37](https://doi.org/10.1007/978-981-16-2229-8_37)
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