



Mohd Reyaz Ur Rahim, Ph.D.
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PROFILE

Dr. Mohd Reyaz Ur Rahim has been serving as an Assistant Professor in the Department of Mechanical Engineering since 2013. His research expertise includes thin-walled, corrugated, origami structural analysis and additive manufacturing, with a particular focus on improving the mechanical performance and durability of advanced structures. Dr. Rahim has significant experience in computational and experimental methods to investigate structural performance, material behavior, and the optimization of manufacturing processes. His academic journey includes a Ph.D. in Solid Mechanics from Integral University, Lucknow, M.Tech. in Solid Mechanics from Motilal Nehru National Institute of Technology, Allahabad, and B.Tech. in Aeronautics from The Aeronautical Society of India, New Delhi. An experienced faculty with over a decade of experience, Dr. Rahim is adept at structural analysis, product design and process optimizations. He is proficient in utilizing advanced CAD and CAE software such as Ansys Workbench, Abaqus, SolidWorks, CATIA, Fusion 360 and Auto CAD. Dr. Rahim has published 30 articles published in peer reviewed journals and conferences.

RESEARCH INTEREST:

- Thin-walled structures
- Corrugated structural analysis
- Additive manufacturing
- Non Linear Analysis
- Material behavior
- Finite element analysis (FEA)

SUMMARY OF RESEARCH ACCOMPLISHMENT:

● Number of publications in SCI indexed journals :	03
● Number of publications in Scopus indexed journals :	07
● Number of publications in Non-Sci/Scopus but Peer Reviewed :	30
● Number of publications in International Conferences :	05
● Book Chapters :	05
● Presentation in international conferences :	05
● Citations :	63

- H index : 05
- i10 index : 01

PROFESSIONAL MEMBERSHIP:

- Associate Member of the Aeronautical Society of India, New Delhi

COURSE TAUGHT:

- Basic Mechanical Engineering
- Materials Science
- Applied Elasticity
- Engineering Graphics
- Machine Drawing
- Mechanics of composite materials
- Strength of material

ADMINISTRATIVE/DEPARTMENTAL RESPONSIBILITY

- Member of Criteria II
- Member of Departmental NEP2020 Committee
- Member of Departmental CEPC Committee
- Lab In Charge of Materials Science & testing lab
- Former Time Table Coordinator
- Course Coordinator B.Tech ME 1st Year

STUDENTS SUPERVISION

- PhD: 03 (Ongoing)
- M.Tech: 08
- B.Tech: 08 groups

PUBLISHED/GRANT PATENTS

- A SYSTEMATIC APPROACH TO ANALYZING THE ADVANCEMENTS OF HEAT EXTRACTION METHODOLOGIES FOR ENHANCING (Published)

PUBLISHED/ACCEPTED SCI/SCOPUS RESEARCH PAPERS

- Rahim, M. R. U., & Bharti, P. K. (2020). Energy absorption characteristics of thin-walled sinusoidal corrugated tube using RSM-CCD. *Production Engineering Archives*, 26(4), 144-153.
- Hasan, M. F., Bharti, P. K., & Rahim, M. R. U. (2021). An investigation of wire offset and surface morphology of Die Steel D-3 on Wire EDM by using RSM-CCD. *Production Engineering Archives*, 27(2), 112-118.
- Saad, M., Akhtar, S., Rathore, A. K., Begume, Q., & Reyaz-ur-Rahim, M. (2018, August). Control of semi-active suspension system using PID controller. In *IOP conference series: materials science and engineering* (Vol. 404, No. 1, p. 012039). IOP Publishing.
- Umer, A., Khan, B. H., Khan, S., Alam, A., & Reyaz-Ur-Rahim, M. (2018, August). Energy absorption, deformation and crushing behavior of bi-metallic tubes with different cross-sectional shapes under axial loading. In *IOP Conference Series: Materials Science and Engineering* (Vol. 404, No. 1, p. 012043). IOP Publishing.
- Rahim, M. R. U., Bharti, P. K., Azmi, A. A., & Umer, A. (2018). Axial crushing comparison of sinusoidal thin-walled corrugated tubes. *Materials Today: Proceedings*, 5(9), 19431-19440.
- Umer, A., Azmi, A. A., & Rahim, M. R. U. (2018). Numerical study on buckling behavior of thin-walled corrugated tubes under quasi-static axial and oblique loading. *Materials Today: Proceedings*, 5(9), 19109-19115.
- Rahim, M. R. U., Akhtar, S., & Bharti, P. K. (2017). Comparative analysis of buckling load of circular and corrugated tubes by utilizing key performance indicators. *International Journal of Applied Mechanics and Engineering*, 22(3), 789-797.

PAPER PUBLISHED IN INTERNATIONAL CONFERENCES

- Saad, M., Akhtar, S., Rathore, A. K., Begume, Q., & Reyaz-ur-Rahim, M. (2018, August). Control of semi-active suspension system using PID controller. In *IOP conference series: materials science and engineering* (Vol. 404, No. 1, p. 012039). IOP Publishing.
- Umer, A., Khan, B. H., Khan, S., Alam, A., & Reyaz-Ur-Rahim, M. (2018, August). Energy absorption, deformation and crushing behavior of bi-metallic tubes with different cross-sectional shapes under axial loading. In *IOP Conference Series: Materials Science and Engineering* (Vol. 404, No. 1, p. 012043). IOP Publishing.
- Rahim, M. R. U., Bharti, P. K., Azmi, A. A., & Umer, A. (2018). Axial crushing comparison of sinusoidal thin-walled corrugated tubes. *Materials Today: Proceedings*, 5(9), 19431-19440.
- Umer, A., Azmi, A. A., & Rahim, M. R. U. (2018). Numerical study on buckling behavior of thin-walled corrugated tubes under quasi-static axial and oblique loading. *Materials Today: Proceedings*, 5(9), 19109-19115.

PUBLISHED NON-SCI-SCOPUS BUT PEER REVIEWED RESEARCH PAPERS

- Qavi, A., & Rahim, M. R. U. (2022). A review on effect of process parameters on FDM-based 3D printed PLA materials. *Int. Res. J. Mod. Eng. Technol. Sci*, 4(6), 3088-3100.
- Rahim, M. R. U., & Akhtar, S. (2023). A Review on Application and Mechanical Properties of Hollow Tubular Section. *Acta Marisiensis. Seria Technologica*, 20(2), 18-25.
- Rahim, M. R. U., & Bharti, P. K. (2020). Buckling Analysis of Innovative Corrugated Column by using Response Surface Methodology. *Acta Marisiensis. Seria Technologica*, 17(2), 8-17.
- Reyaz-Ur-Rahim, Mohd, P. K. Bharti, and Afaq Umer. "Axial Crushing Behaviors of Thin-Walled Corrugated and Circular Tubes-A Comparative Study." *Technological Engineering* 14.1 (2017): 5-10.
- Umer, Afaq, Adil Ata Azmi, and M. Reyaz Ur Rahim, "Strength and stiffness optimization of diamond frame using corrugated tubes", *Technological Engineering* 15.1 (2018): 11-15.
- Rahim, Mohd Reyaz Ur, Shagil Akhtar, and Prem Kumar Bharti. "Finite Element Analysis for the Buckling Load of Corrugated Tubes." *International Journal of Advanced Engineering, Management and Science* 2.7 (2016).
- Umer, Afaq, and Mohd Reyaz Ur Rahim. "Effect of Combined Cross-sectional Geometries on the Buckling Behavior of Thin-walled Tubes." *International Journal of Advance Engineering Science & Technology*, 1 (2018): 43-46.
- Umer, Afaq, Bakhtawar Hasan Khan, Belal Ahamad, Hassan Ahmad, and Mohd Reyaz Ur Rahim. "Behavior of thin-walled tubes with combined cross-sectional geometries under oblique loading." *International Journal of Advanced Engineering, Management and Science* 4, no. 3.
- Ahamad, Belal, Anand Singh, Masihullah, Afaq Umer, and Mohd Reyaz Ur Rahim. "Buckling behavior of straight slot tubes under oblique loading—A comparative study." *International Journal of Advanced Engineering, Management and Science* 4, no. 5.
- Umer, Afaq, Bakhtawar Hasan Khan, Belal Ahamad, Hassan Ahmad, and Mohd Reyaz Ur Rahim. "Behavior of thin-walled tubes with combined cross-sectional geometries under oblique loading." *International Journal of Advanced Engineering, Management and Science* 4, no. 3.
- Umer, Afaq, Adil Ata Azmi, and M. Reyaz Ur Rahim. "Parametric Study of 2D Truss With Thin-Walled Corrugated Tubes". *World Journal of Technology, Engineering and Research* 4 (1), 110-114
- Rahim, Md Reyaz Ur, A. K. Upadhyay, and K. K. Shukla. "Energy Absorption by Circular Tubes Subjected to Oblique Loading". *MIT International Journal of Mechanical Engineering* 4 (ISSN 2230-7680), 3
- Beg, Danish Anis, Bakhtawar Hasan Khan, and Mohd Reyaz Ur Rahim. "Finite element Analysis of Honeycomb filled Metallic Tubes Subjected to Axial Loading." *International Journal of Advanced Engineering Research and Science* 5, no. 4.
- Azmi, Adil Ata, and Mohd Reyaz Ur Rahim. "Load Carrying Capacity of Indian Standard Steel I-Section". *WJTER*, Volume 4 Issue 1.
- Suhail, Mohd, Mahmood Alam, and Reyaz Ur Rahim. "The Effect of Process Parameter on Metal Matrix Composite (Al+ 4% Cu+ 5% Sic) By Stir Casting". *International Journal of Engineering Trends and Applications (IJETA) – Volume 2 Issue 1, Jan-Feb 2015*
- Alam, Mahmood, Reyaz Ur Rahim, and Mohd Suhail. "Empirical Modeling Relating Weld Current, Mass Flow Rate of Hot Air and Welding Speed to Stiffness of Hot Air Welded PVC Plastic." *International Journal of Engineering Trends and Applications (IJETA) – Volume 2 Issue 1, Jan-Feb 2015*.
- Rahim, Mohd Reyaz Ur, Mahmood Alam, Mohd Faizan Hasan, and Mohd Suhail. "Buckling Behavior of Skew Sandwich Plate Using Numerical Simulation". *International Journal of Engineering Trends and Applications (IJETA) – Volume 2 Issue 2, Mar-Apr 2015*
- Anuraj Singh, Mohd Suhail, Mohd Faizan Hasan and Mohd Reyaz-Ur-Rahim, " To Study the Effect of Pouring Temperature on Mechanical Properties of Metal Matrix Composites (Al+4%Cu+5%SiC) in Stir Casting ". *IJISSET*, Vol. 2 Issue 2, February 2015.
- Mohd Shahid Naim, Mohd Faizan Hasan, Reyaz-ur Rahim, "To study the mechanical & thermal aspects of different samples of natural fiber reinforced composites on various parameters ". *International Journal of Scientific Research and Review*, Volume 7, Issue 8.

- Mohd. Faizan Hasan, Mohd. Reyaz Ur Rahim and Arvind Kumar Singh, " Experimental Analysis on Minimum Quantity lubrication on Alloy Steel using Natural Oil-Based Cutting Fluid", MIT International Journal of Mechanical Engineering, Vol. 6, No. 1, January 2016, pp. 13-17.
- Mohd. Reyaz Ur Rahim and Mohd. Faizan Hasan, " Compressive Behavior of Trapezoidal Sandwich Plate Using Numerical Simulation", MIT International Journal of Mechanical Engineering, Vol. 6, No. 1, January 2016, pp. 1-4.

BOOK EDITED/ AUTHORED

- Principles of Engineering Sciences: Fundamentals to Advanced Concepts (in progress)

BOOK CHAPTERS

- Mohd. Reyaz Ur Rahim (2024), Parametric optimization in structural design, Innovative Approaches in Science and Technology Research, Bhumi publications
 - Mohd. Reyaz Ur Rahim (2024), Strain gauges for damage identification in asymmetric sandwich composites: A comparative analysis of materials and methods, Innovative Approaches in Science and Technology Research, Bhumi publications
 - Mohd. Reyaz Ur Rahim (2024), Effective Public Speaking, Crucial Communication, Nitya Publications
 - Mohd. Reyaz Ur Rahim (2023), Recent Advancements in implants by using digital fabrication, Recent Trends in Mechanical Engineering, Amber Publishers
 - Mohd. Reyaz Ur Rahim (2023), A Research Investigation of Lightweight Materials for Automotive, Advances in Material Technology, Amber Publishers
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