



## Dr. Md. Shariful Islam

Professor

**Research Area** Impact Resistance of Polymeric Materials Investigation on Mechanical Properties of Natural Fiber Composites Textile Composites as Cryogenic Fuel Tank Investigation of Free Edge Effect in Composites Interlaminar Strengthening of Composites Through Additive Manufacturing

## Education

### Ph.D. Mechanical Engineering

University of Texas at El Paso, United States (2016)

### M.Sc. Mechanical Engineering

University of Texas at El Paso, United States (2013)

### B.Sc. Mechanical Engineering

Khulna University of Engineering & Technology, Bangladesh (2008)

## Biography

Dr. Md. Shariful Islam is currently working as a professor in the Department of Mechanical Engineering at Khulna University of Engineering & Technology. Dr. Islam has earned his Ph.D. and M.Sc. in Mechanical Engineering from The University of Texas at El Paso, USA and B.Sc. in Mechanical Engineering from Khulna University of Engineering & Technology, Bangladesh. Dr. Islam's research interest includes Natural Fiber Composites, Fiber Metal Laminates and Multi-scale Material Modeling.

## Service Records

- **Professor**  
**Department/Section:** Mechanical Engineering  
**Khulna University of Engineering & Technology (KUET) From 01-01-1970 to 01-01-1970**
- **Associate Professor**  
**Department/Section:** Mechanical Engineering  
**Khulna University of Engineering & Technology (KUET) From 01-01-1970 to 01-01-1970**
- **Assistant Professor**  
**Department/Section:** Mechanical Engineering  
**Khulna University of Engineering & Technology (KUET) From 01-01-1970 to 01-01-1970**
- **Lecturer**  
**Department/Section:** Mechanical Engineering  
**Khulna University of Engineering & Technology (KUET) From 01-01-1970 to 01-01-1970**

## Research Interest

Impact Resistance of Polymeric Materials

Investigation on Mechanical Properties of Natural Fiber Composites

Textile Composites as Cryogenic Fuel Tank

Investigation of Free Edge Effect in Composites

Interlaminar Strengthening of Composites Through Additive Manufacturing

## Publication

### Books

### Journals

13. M. S. Islam and L. R. Xu, "Nonlinear Impact Force Reduction of Layered Polymers with the Damage-Trap Interface," **applied sciences**, MDPI, vol. 12, no.14, 2022. .
12. L. R. Xu, M. S. Islam, R. Martinez, M. Flores, K. Zhao, A. Karakoç and Taciroglu, "Simplified indentation mechanics to connect nanoindentation and low-energy impact of structural composites and polymers," **Journal of Reinforced Plastics and Composites**, SAGE Publications, 2022. .
11. K. Jubair, M. S. Islam and D. Chakraborty, "Investigation of Mechanical Properties of Banana-Glass Fiber Reinforced Hybrid Composites," **Journal of Engineering Advancements**, SciEn, vol. 02, no.04, pp.175-179, 2021. .
10. D. Chakrabarti, M. S. Islam and K. J. a. M. R. H. Sarker, "Effect of Chemical Treatment on the Mechanical Properties of Luffa Fiber Reinforced Epoxy Composite," **Journal of Engineering Advancements**, SciEn, vol. 01, no.02, pp.37-42, 2020. .
9. M. Asif, K. A. Rahman and M. O. F. a. M. S. Islam, "Comparative Study on Mechanical Properties of Bamboo Strip and Bamboo Strip-glass Fiber Reinforced Hybrid Composites," **Journal of Engineering Advancements**, SciEn, vol. 01, no.01, pp.06-10, 2020. .
8. M. Islam and S. A. a. A. Almamun, "Comparative Study on Mechanical Properties of Banana and Rattan Fiber Reinforced Epoxy

Composites," **American Journal of Engineering Research (AJER)** , vol. 8, no.2, pp.01-06, 2019. .

7. , "Numerical Analysis of Impact Resistance of Polypropylene," **International Journal of Mechatronics and Manufacturing Technology** , vol. 4, no.1, pp.01-11, 2019. .

6. , "Numerical Analysis of Thermo-hydraulic Performance of Ground Heat Exchanger," **Mechanical Engineering Research Journal** , CUET, vol. 11, pp.38-43, 2018. .

5. M. Islam, a. P. Prabhakar and , "Interlaminar Strengthening of Multidirectional Laminates using Polymer Additive Manufacturing," **Materials & Design** , Elsevier, vol. 133, pp.332-339, 2017. .

4. A. Castellanos, M. Islam, E. Tarango, Y. Linand a. P. Prabhakar, "Interlaminar reinforcement for enhancing low-velocity impact response of woven composites," **Textile Research Journal** , SAGE, vol. 88, no.15, pp.1710-1720, 2018. .

3. , "Modeling Framework for Free Edge Effects in Laminates under Thermo-Mechanical Loading," **Composites Part B: Engineering** , Elsevier, vol. 116, pp.89-98, 2017. .

2. A. Castellanos, M. Islam, M. Shuvo, Y. Linand a. P. Prabhakar, "Nanowire Reinforcement of Woven Composites for Enhancing Interlaminar Fracture Toughness," **Sandwich Structures and Materials** , SAGE, vol. 20, no.1, pp.70-85, 2018. .

1. M. Islam, E. M. Melendez-Soto, A. Castellanosand a. P. Prabhakar, "Investigation of Woven Composites as Potential Cryogenic Tank Materials," **Cryogenics** , Elsevier, vol. 72, pp.82-89, 2015. .

## Conference

31. R. Ahammad, M. Faruk and A. D. a. M. Islam, "Effect of Adhesive Layer Thickness and Adherent Geometry on the Tensile Properties of Adhesively Bonded T-Joint," **International Conference on Engineering Research, Innovation and Education**, January 2023 .

30. S. Sarker, A. Takey, R. Ahammadand M. I. a. M. Arifuzzaman, "Mechanical Behavior of Sandwich Structure Made of Perlite Foam Core and JFRP Skin," **International Conference on Mechanical, Industrial and Energy Engineering**, December 2022 .

29. A. Islam, A. Debnath and M. I. a. M. Arifuzzaman, "Numerical Analysis of the Rear Wing Mount of a Formula 1 Type Car for Material Selection," **International Conference on Mechanical, Industrial and Energy Engineering**, December 2022 .

28. P. Debnath, A. Debnath, R. Ahammadand M. A. a. M. Islam, "Numerical Simulation of Bi-Adhesive Lap Joints," **International Conference on Mechanical, Industrial and Energy Engineering**, December 2022 .

27. R. Ahammad, A. Debnath, M. Rahmanand M. A. a. M. Islam, "Mechanical Characterization of Date Palm Rachis Fiber Reinforced Epoxy Composite," **International Conference on Mechanical, Industrial and Energy Engineering**, December 2022 .

26. M. Antu and M. H. a. M. Islam, "Effect of Temperature on the Tensile Properties of Adhesively Bonded Single Lap Joint," **International Conference on Mechanical, Industrial and Materials Engineering**, December 2022 .

25. M. Hasan and M. A. a. M. Islam, "Numerical Study of Negative Stiffness Honeycomb Structure for Energy Absorption Applications," **International Conference on Mechanical, Industrial and Materials Engineering**, December 2022 .

24. M. A. I. Khan and Z. F. a. M. S. Islam, "Mechanical Characterization of Drumstick Fiber Reinforced Epoxy Composite," **International Conference on Mechanical, Industrial and Energy Engineering 2020**, December 2020. .

23. , "Investigation of Mechanical Properties of Bagasse Fiber and Human Hair Reinforced Hybrid Composite," **International Conference on Mechanical, Industrial and Energy Engineering 2020**, December 2020. .

22. Z. Rayhan and M. S. I. a. D. W. Hasan, "Investigation of Mechanical Properties of Jute, Cotton and Glass Fiber Reinforced Hybrid Composites," **International Conference on Mechanical, Industrial and Energy Engineering 2020**, December 2020. .

21. M. Aziz and a. M. Islam, "Effect of Lower Surface Modification on Aerodynamic Characteristics of an Airfoil," **International Conference on Mechanical Engineering and Renewable Energy**, December 2017. .

20. R. Avila and M. I. a. P. Prabhakar, "Thermal Gradient on Hybrid Composite Propellant Tank Materials at Cryogenic Temperatures," **ASME 2016 International Mechanical Engineering Congress and Exposition**, November 2016. .

19. , "Free Edge Effect in Multi-directional Laminate under Thermo-mechanical loading," **ASC 31st Technical Conference**, September 2016. .

18. R. Avila and M. I. a. P. Prabhakar, "Influence of Cryogenic Thermal Gradient on Composite Propellant Tank Materials," **17th US-Japan Conference on Composite Materials**, August 2016. .

17. , "Free Edge effect in Multidirectional Laminates," **The Southwest Emerging Technology Symposium**, April 2016. .

16. M. Tauhiduzzaman, M. Islam and a. P. Prabhakar, "Design Optimization of Sandwich Core and Manufacture Through Additive Manufacturing," **The Southwest Emerging Technology Symposium**, April 2016. .

15. R. Avila and M. I. a. P. Prabhakar, "Design and Testing of Hybrid Composite Materials for Cryogenic Fuel Tanks," **The Southwest Emerging Technology Symposium**, April 2016. .

14. M. Islam, R. Avilla and A. C. a. P. Prabhakar, "Hybrid Textile Composites as Potential Cryogenic Tank Materials," **57th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference**, January 2016. .

13. A. Castellanos, M. Islam, S. Quevado, M. Shuvoand Y. L. a. P. Prabhakar, "Impact Response of Woven Composites with Interlaminar Reinforcement," **57th AIAA/ASCE/AHS/ASC Structures, Structural Dynamics and Materials Conference**, January 2016. .

12. M. Islam and A. C. a. P. Prabhakar, "Effect of Curing Induced Parameters during Manufacturing of Textile Composites," **ASC 30th Technical Conference**, September 2015. .

11. A. Castellanos, M. Islam, S. Quevado, M. Shuvoand Y. L. a. P. Prabhakar, "Nanowire Stiffening of Woven Composites Towards Enhancing Interlaminar Fracture Toughness," **ASC 30th Technical Conference**, September 2015. .

10. M. Islam and E. M. a. P. Prabhakar, "Experimental Investigation of Woven Composites as Potential Cryogenic Tank Materials," **5th Southwest Energy Science and Engineering Symposium**, April 2015. .

9. , "Effect of Compaction during Manufacturing of Textile Composites," **International Conference on Mechanical, Industrial and Energy Engineering**, December 2014. .

8. A. Leanos and M. I. a. P. Prabhakar, "Modeling Progressive Damage and Failure for Polymer Matrix Composites," **International Conference on Mechanical, Industrial and Energy Engineering**, December 2014. .

7. , "Computational Modeling of Curing Induced Damage due to Compaction on Woven Fabric Composite," **ASC 29th Technical Conference/16th US-Japan Conference on Composite Materials**, September 2014. .

6. A. Leanos and M. I. a. P. Prabhakar, "Novel Computational Framework for Thermal Shock Resistance Design of Carbon Composites," **ASC 29th Technical Conference/16th US-Japan Conference on Composite Materials**, September 2014. .

5. M. Islam, P. Prabhakar and H. K. a. S. Stapleton, "Prediction of Damage due to Compaction during Manufacturing of Textile Composites," **16th European Conference on Composite Materials**, June 2014. .

4. M. Islam and a. P. Prabhakar, "Prediction of Damage due to Compaction during Manufacturing of Textile Composites," **4th Southwest Energy Science and Engineering Symposium**, March 2014. .

3. F. Alam, H. Ho, J. Yang, A. Kumar, R. RasjidinS. Ehsanand Islam, "A Study of Baseball Aerodynamic Drag," **International Conference on Mechanical Engineering**, December 2011. .

2. F. Alam, H. Ho, J. Yang, A. Kumar, S. EhsanG. Mainuddinand Date, "Aerodynamics of A Baseball- An Effect of Seams," **International Conference on Mechanical Engineering and Renewable Energy**, December 2011. .

1. , "Heat Transfer Characteristics of Rectangular Blocks in a Channel," ***International Conference on Mechanical, Industrial and Energy Engineering***, December 2010. .