Department of Textile Engineering
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Dr. Md. Ismail Hossain
Assistant Professor
Research Area Artificial Intelligence (Fuzzy Logic, Artificial Neural Network), Taguchi Approach, Composite Textile, Nanotechnology, Functional Textile, Green & Sustainable Textiles, Coloration Technology.

Biography

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Education

PhD in Textile Manufacturing Process
University of Malaya,Kuala Lumpur, Malaysia()Student Type:Full time,
Thesis Title: **Dyeing Process Parameter Optimization and Quality Characteristics Modeling for Viscose Blended Knitted Fabrics**
BSc. in Textile Engineering
University of Dhaka,Bangladesh()Group: Textile Engineering,Student Type:Full time,

Service Records

- **General Manager**
  Department/Section: Knitting & Dyeing
  APS Apparel Ltd.(APS Group) *From 01-01-1970 to 01-01-1970*
  Working Area:Laboratory, Knitting, Dyeing & Finishing
  Responsibility:Production, Quality Control, R & D; WTP, ETP and Overall Management of Knitting & Dyeing.
- **Part-time Faculty Member**
  Department/Section: Textile Engineering
  BGMEA University of Fashion & Technology *From 01-01-1970 to 01-01-1970*
  Working Area:Advanced Printing and Finishing (MSc course)
  Responsibility:Teaching, Paper Setter and Examiner
- **Part-time Faculty Member**
  Department/Section: Textile Engineering
  Bangladesh University of Textile (BUTex) *From 01-01-1970 to 01-01-1970*
  Working Area:Man â€“Made Textile Fibers
  Responsibility:Teaching, Paper setter and Examiner
- **Assistant Professor**
  Department/Section: Textile Engineering
  Daffodil International University *From 04-05-2016 to 31-08-2018*
  Working Area:Wet Processing Engineering
- **Assistant Professor**
  Department/Section: Textile Engineering
  Khulna University of Engineering & Technology (KUET) *From 03-09-2018 to 01-01-1970*
  Working Area:Wet Processing Engineering

Research Interest

Artificial Intelligence (Fuzzy Logic, Artificial Neural Network), Taguchi Approach,

Composite Textile,

Nanotechnology,

Functional Textile, Green & Sustainable Textiles,

Coloration Technology.

Publication

Books

1. Shamsuzzaman,M. , Hossain,I. , Saha,T. , Roy,A. , Das,D. and Podder,M. T. A. &. S. K. (2023) ," Advanced Technology in Textiles", ***Waste Management in Textile Industry*** , ISBN:978-981-99-2142-3,Springer Nature

Journals

20. Hossain,I. , Parvez,M. S. , Mahmud,T. , Rahman,T. and Moniruzzaman,M. (2023) , " Investigation of antimicrobial and physical properties of polyester/cotton blended knitted fabric treated with AgNO3 and aloe vera,," ***Cleaner Engineering and Technology, Web of Science (WoS) and Scopus Indexed, IF=5.30***, Elsevier, vol16, pp.1-10.

19. Nayab-Ul-Hossain,A. N. , Sela,S. K. , Nehal,K. , Hasan,N. , Hossain,I. and Jalil,M. A. (2023) , " Application of green technology to treat fibrous (textile) waste and recycling of used chemicals for reutilization of similar waste,," ***Cleaner Engineering and Technology, Web of Science (WoS) and Scopus Indexed, IF=5.30***, Elsevier, vol13, pp.1-11

18. (2022) , " Manufacturing and compatibilization of binary blends of superheated steam treated jute and poly (lactic acid) biocomposites by melt-blending technique," ***Heliyon, Web of Science (WoS) and Scopus Indexed, IF=4.0***, Elsevier, vol8, no.8, pp.e09923

17. (2022) , " A Prognostic Based Fuzzy Logic Method to Speculate Yarn Quality Ratio in Jute Spinning Industry," ***Textiles, Web of Science (WoS) and Scopus Indexed***, MDPI, vol2, no.3, pp.422-435

16. Hossain,I. , Moniruzzaman,M. , Maniruzzaman,M. and Jalil,M. A. (2021) , " Investigation of the Effect of Different Process Variables on Color and Physical Properties of Viscose and Cotton Knitted Fabrics," ***Heliyon, Web of Science (WoS) and Scopus Indexed, IF=4.0***, Elsevier, vol7, no.8, pp.1-8

15. Hossain,I. , Uddin,M. H. , Jalil,M. A. and Uddin,Z. (2021.) , " Modelling the Effect of Resin-Finishing Process Variables on the Dimensional Stability and Bursting Strength of Viscose Plain Knitted Fabric Using a Fuzzy Expert System," ***Tekstilec, WoS and Scopus Indexed, IF= 1.091***, Urednistvo Tekstilec, vol64, no.2, pp.119-135

14. Mamun,A. A. , Hossain,I. , Mozumder,S. and Hossain,M. K. (2021) , " DETERMINATION OF STANDARD MEASUREMENTS OF T-SHIRT FOR YOUNG ADULTS OF BANGLADESHI ORIGIN," ***DAFFODIL INTERNATIONAL UNIVERSITY JOURNAL OF SCIENCE AND TECHNOLOGY***, vol16, no.1, pp.24-30

13. Moniruzzaman,M. , Jalil,M. A. , Hossain,M. N. , Hossain,I. and Maniruzzaman,M. (2020) , " Characterization of Chemical-Treated and Gamma Irradiated Pineapple Leaf Fabric/Epoxy Composites: Surface Structure and Physico-Mechanical Properties," ***Tekstil ve Muhendis; Scopus Indexed***, Journal of Chamber of Textile Engineers., vol27, no.119, pp.144-153

12. Smrit,S. A. , Belal,S. A. , Haque,M. M. , Hossain,I. , Farzana,N. and Haque.,A. N. M. A. (2019.) , " Prognosis of Dimensional Stability and Mass per Unit Area of Single Jersey Cotton Knitted Fabric with Fuzzy Inference System.," ***Tekstilec, WoS and Scopus Index, IF=1.091.***, Urednistvo Tekstilec., vol62, no.3, pp.166-181

11. Hossain,I. , Choudhury,I. A. , Mamat,A. B. and Hossain.,A. (2017) , " Predicting the colour properties of viscose knitted fabrics using soft computing approaches," ***The Journal of the Textile Institute, WoS and Scopus Index, IF=1.901***, Taylor & Francis, vol108, no.10, pp.1689-1699, DOI:https://doi.org/10.1080/00405000.2017.1279004

10. Hossain,I. , Mamun,A. A. , Haque,M. and Uddin,Z. (2017) , " Comparison of Fuzzy Intelligent Model and Taguchi Mathematical Model for the Prediction of Bursting Strength of Viscose Plain Knitted Fabrics.," ***American Journal of Engineering Research***, vol6, no.1, pp.184 -193

9. Hossain,I. , Choudhury,I. A. , Mamat,A. B. , Shahid,A. and Khan.,a. A. N. (2016.) , " Predicting the Mechanical Properties of Viscose/Lycra Knitted Fabrics Using Fuzzy Technique.," ***Advances in Fuzzy Systems. WoS and Scopus Index, IF = 1.3***, Wiley, Hindawi Publishing Corporation, vol2016, pp.1-9, DOI:10.1155/2016/3632895

8. Hossain,I. ,Hossain,A. and Choudhury,I. A. (2016) , " Dyeing Process Parameters Optimization and Color Strength Prediction for Viscose/Lycra Blended Knitted Fabrics using Taguchi Method," ***The Journal of the Textile Institute, WoS and Scopus Index, IF=1.901***, Taylor & Francis, vol107, no.2, pp.154-164, DOI:https://doi.org/10.1080/00405000.2015.1018669

7. Hossain,I. ,Hossain,A. and Choudhury,I. A. (2016) , " Fuzzy Knowledge Based Expert System for Prediction of Color Strength of Cotton Knitted Fabrics," ***Journal of Engineered Fibers and Fabrics. WoS and Scopus Index, IF=2.9,***, Sage Publishing, vol11, no.3, pp.33- 44

6. (2016.) , " Effect of Dyeing Parameters on Color Strength and Fastness Properties of Cotton-Elastane (CE) and Lyocell-Elastane (LE) Knit Fabric.," ***International Journal of Textile Science***, Scientific & Academic Publishing, vol5, no.1, pp.1-7

5. Hossain,I. ,Hossain,A. and Choudhury,I. A. (2015) , " Color Strength Modeling of Viscose/Lycra Blended Fabrics Using a Fuzzy Logic Approach," ***Journal of Engineered Fibers and Fabrics. WoS and Scopus Index, IF=2.9***, Sage Publishing, vol10, no.1, pp.158-168, DOI:https://doi.org/10.1177/155892501501000117

4. Hossain,A. , Choudhury,I. A. , Nahar,N. , Hossain,I. and Mamat,A. B. (2015) , " Experimental and Theoretical Investigation of Powderâ€“Binder Mixing Mechanism for Metal Injection Molding," ***Materials and Manufacturing Processes. WoS and Scopus Index, IF=4.783,***, Taylor & Francis, vol30, no.1, pp.41-46

3. (2015) , " Automated serviceability prediction of NSM strengthened structure using a fuzzy logic expert system," ***Expert Systems with Applications. WoS and Scopus Index, IF=8.5***, Elsevier, vol42, no.1, pp.376-389

2. (2015.) , " Modeling the Spirality of Cotton Knitted Fabric Using Fuzzy Expert System.," ***Turkish Journal of Fuzzy System.***, Turkish Fuzzy Systems Association, vol6, no.2, pp.56-67

1. Shahid,A. ,Hossain,I. and Ali,M. D. H. a. A. (2015.) , " Comparative Study on Color Strength of Cotton-elastane (CE) and Lyocell-elastane (LE) Knit Fabric Using Different Process Variables.," ***Australian Journal of Basic and Applied Sciences.***, AENSI, vol9, no.36, pp.280-285

Conference

4. Jarin,T. , Hassan,K. M. , Hossaon,I. , Rafizul,I. M. , Alamgir,M. and Kraft.,E. (2023) , "POTENTIAL SUBSTITUTION OF PLASTICS BY JUTE PRODUCTS: A REVIEW,," ***Proceedings of the Waste Safe 2023 – 8th International Conference on Integrated Solid Waste and Faecal Sludge Management, 25-26 February 2023, Khulna, Bangladesh*** , ISBN:978-984-35-4034-8

3. Hossain,I. , Hossain,A. , Choudhury,I. A. , Bakar,A. , Uddin,H. and Shahid,A. (20-22 June 2014.) , "Color Fastness Modeling of Viscose Dyed Fabrics Using Fuzzy Expert System.," ***10th International Conference on Mechanical Engineering, (ICME 2013), 2014,*** , Elsevier

2. Hossain,I. ,Choudhury,A. H. I. A. and Uddin.,A. B. a. H. (19-20 February 2014.) , "Prediction of Fabric Properties of Viscose Blended Knitted Fabrics by Fuzzy logic Methodology.," ***International Conference on Mechanical and Civil and Architectural Engineering 2014, (ICMCAE 2014).*** , pp.Pp.100 -10

1. Hossain,I. , Hossain,A. , Choudhury,I. A. and Shahid.,A. B. a. A. (1-3, November 2013.) , "Color Strength Modeling of Knitted Fabrics Using Fuzzy Logic Approach. ," ***International Conference on Mechanical, Industrial and Materials Engineering (ICMIME 2013).*** , pp.870-875.