



Adhir Chandra Paul Assistant Professor Research Area Interested Research Area: Biodegradable Polymer Composite, Products, Solid Waste Management, Wastewater Treatment

Biography Integrated Manufacturing Systems Laboratory [Which contain Shoemaster Power, Creative, Leather Goods Software including 2D & 3D Digitizer Board and Plotter] Footwear Manufacturing Workshop [Which contain Toe Lasting Machine, Heat Setting WelcomedatchioekModeingnMachiositandCauroenitly, I am serving as an Assistant Professor at the Department of Leather Engineering, Khulna University of Engineering & Technology (KUET), Rinallyayobargi aces welcen ayto iereen politierent sections of not profile i Thanks ig let foo yis it in the 砂饼帕Pacement of this Department. Nowadays, Leather & Leather Products including Footwear will be the subsequent cash cow for Bangladesh after the RMG sector and itâ€<sup>™</sup>s had a significant impact on the economy of Bangladesh.

I have been graduated from the Institute of Leather Engineering and Technology (ILET) [Erstwhile Bangladesh College of Leather Technology, Dhaka], University of Dhaka. During my final year Biomaterial, Materials for Footwear & Leather student in an undergraduate program, I have been successfully completed an industrial training program for three months in PICARD Bangladesh Limited, Savar, Dhaka. After graduation, I have started service as a Design Executive at Apex Footwear Limited, Gazipur, Dhaka. I was involved with this renowned footwear manufacturing organization for almost two and half years in the product development (R&D) department.

> About research, I am interested in biodegradable polymer composite for Leather products including Footwear, Collagen and Keratin based Biomaterials, Comfort studies of Footwear and Leather Garments, Solid waste management of Leather and allied materials, Wastewater treatment, Thermal Pyrolysis, and Power harvesting Footwear.

Now, I am the teacher-in-charge of two well-equipped laboratories:

# Education

## M. Sc. in Leather Engineering

Khulna University of Engineering & Technology, Bangladesh (2023)

**B.Sc. in Leather Products Technology** 

Institute of Leather Engineering and Technology (ILET), University of Dhaka [Erstwhile Bangladesh College of Leather Technology, University of Dhaka], Bangladesh (2003-2006) Achievement: First Class 1st Position in the Department Passing year 2006 [4th year Final Exam held in 2008 & Result published in Sep., 2009]

Higher Secondary School Certificate

Allauddin Siddique College, Bangladesh (2000-2001)

Secondary School Certificate

Shahid Jamal High School, Bangladesh (1995-1999) Achievement: Obtain 1st Position in my School

## Service Records

### • Senior Design Executive

Department/Section: Product Development (R & D)

Apex Footwear Limited From 01-01-1970 to 01-01-1970

Working Area:New Product Development

Responsibility:Design & Development of different Footwear styles including Oxford, Derby, Loafer, Mocassino, and so on. Besides that, Providing Technical Support to the Production Team during Production. Coordination among Merchandising, Planning, Marketing, Commercialization, and Production. To Explore Innovative Footwear which comprises contemporary Fashion Trends and Satisfy the consumer demands.

- **Assistant Professor** Department/Section: Leather Engineering Khulna University of Engineering & Technology (KUET) From 01-01-1970 to 01-01-1970 Responsibility: Teaching, Research and Student Supervise Lecturer
- Department/Section: Leather Engineering Khulna University of Engineering & Technology (KUET) From 01-01-1970 to 01-01-1970 Responsibility: Teaching, Research and Student Supervise

## **Research Interest**

Interested Research Area: Biodegradable Polymer Composite, Biomaterial, Materials for Footwear & Leather Products, Solid Waste Management, Wastewater Treatment

- Collagen and Keratin Based Biomaterials for Biomedical Application
- Biodegradable Polymer Composite for Footwear Materials
- Solid waste management of Leather and allied materials
- Comfort studies of Footwear and Leather Garments
- Simulation & Modeling: Last, Customized Footwear
- Power harvesting Footwear
- Wastewater Treatment
- Thermal Pyrolysis

# Publication

## Books

### Journals

7. Paul,A. C., Uddin\*,M. E., Layek,R. K. and Saha,T. (23 June 2023, Impact Factor:3.348, ), "Investigation on mechanical, gas barrier, and biodegradation properties of graphene oxide reinforced bovine trimmings derived collagen biocomposite," *Polymers for Advanced Technologies*, Wiley

6. Dewangan,S. , Saksham,S. , Paul,A. C. and Burja,a. J. (2023) , " A Comparative Analysis among Quenched, Tempered, and Stepped Cooled TIG Welded SS-304 Plates Based on Tensile Strength, Hardness, and Microstructural Appearance," **, Journal of Advances in Materials Science and Engineering**, Hindawi, pp.5523162

5. HOSSAIN,M. A. ,Abdullah-Al-MAMUN,M. A. and PAUL,A. C. (2022) , " Energy Harvesting from Close Type Footwear: A Smart Design Approach," *Textile & Leather Review*, vol05, no.ISSN 2623-6281, pp.253-267

4. Mamun,M. A. A., Hasan,R., Ahmed,M. R., Paul,A. and Raha,R. (2019), "Antifungal Efficacy of Neem Leaves (Azadichta Indica) and Mahagony Fruit Bark (Swietenia Mahagony) Extracts on Leather Shoes," **Bangladesh Journal of Scientific and Industrial Research** (**BJSIR**), Bangladesh Academy of Sciences, vol54, no.03, pp.257-262

3. Abdulla-Al-Mamun,M. A. , Paul,A. C. , Raha,R. K. and Binty,T. W. (2019) , " Cost-effective Different Ladies Jewelry from Leather Products Wastages," *International Journal of Engineering Research & Technology*, IJERT, vol08, no.02, pp.154-158

2. Hashem1\*,M. ,Paul,A. and Hasan,S. H. a. A. (2017), "Renewable energy from the waste soles through thermal pyrolysis â€" A novel approach," **Bangladesh Journal of Scientific and Industrial Research (BJSIR)**, Bangladesh Academy of Sciences, volVol. 52, no.2, pp.141-146

1. Paul,A. C. , Abdullah-Al-Mamun,M. A. , Ray,S. K. and Islam,M. A. (2015.) , " Cost-effective Design Development of Medicated Footwear for Diabetic Patients," *International Journal of Engineering Research & Technology*, IJERT, vol04, no.08, pp.637-641

## Conference

20. Paul,A. C. and Opu,D. M. E. U. a. S. H. (29-30 December 2022), "Collagen Protein Extraction from Fresh Hide Trimmings: Waste to Wealth Approach," 8th International Integrative Research Conference on Governance in Society, Business and Environment, INSEARCH 2022

19. Paul,A. C. and Biswas,M. S. R. a. S. (03-05 November 2022), "Acid dye Remediation through Pyrolytic Fresh Charcoal of Waste Footwear Sole," *5th International Conference on Academic Research in Science, Technology and Engineering (ICARSTE)* 

17. Paul,A. C. ,Ali,M. M. and jail,A. (18-19 December 2021), "Chromium Removal from Tannery Waste Water Using Shorea Robusta Leaf Adsorbent," 7th International Integrative Research Conference on Governance in Society, Business and Environment, INSEARCH 2021

16. Paul,A. C. and Saha,A. A. a. P. (03-05 November 2021), "Exploration of Footwear Sole from Styrene Butadiene and Natural Rubber with Chrome Shaving as Filler," XXXVI IULTCS Congress 2021 (Congress of the international Union of Leather Technologists and Chemists Societies)

15. HOSSAIN,M. A. ,Abdullah-Al-MAMUN,M. A. and PAUL,A. C. (21st October 2021) , "Innovation and Smart Footwear Design for Energy Harvesting: A Sustainable Approach," *International Conference on New technologies, new materials and new forms of footwear sales* 

14. Paul,A. C. , Anjum,N. J. , Alam,S. R. and Paul,N. (19-21 December, 2020) , "Compatibility of Different Fusible Interlinings with Goat Nappa Leather," *6th International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE)* , ICMIEE-ID-037

13. paul,A. C. ,Shuvo,M. R. A. and Tushar,M. M. R. (10-14 August, 2020), "Treatment of Tannery Wastewater through Calcium Carbonate from Mollusca (Snail Shell)," *5th NA International Conference on Industrial Engineering and Operations Management*, Abstracting, IEOM-ID-159, pp. 717

12. paul,A. C. ,Rakin,S. I. and Munna,A. R. A. (19-22 December, 2020), "Effect of Leather Trimming and Neem Fiber on the Mechanical and Thermal Property of Cement Based Materials," **6th International Conference on Chemical Engineering (ICChE)**, Poster Presentation, ICChE-2020-ID-133

11. paul,A. C. ,Sadik,M. N. and Rony,M. S. R. (19-22 December, 2020), "Variations of Foot Measurement of Primary School Going Students through Binary Logistic Regression Analysis-A Case Study in Khulna Region," *6th International Conference on Chemical Engineering (ICChE)*, Poster Presentation, ICChE-2020-ID-132

10. paul,A. C. ,Shuvo,M. R. A. and Tushar,M. M. R. (19-22 December, 2020), "Bio Catalytic Treatment of Tannery Wastewater through Calcium Carbonate from Mollusca (Snail Shell)," **6th International Conference on Chemical Engineering (ICChE)**, Poster Presentation, ICChE-2020-ID-130

9. Paul,A. C. ,Waliullah,M. and Galib,M. A. A. (17-19 December, 2019), "Utilization of Natural Dye Extracted from Spent Tea Leaves (Camellia Sinensis) for the Dyeing of Leather," *4th International Conference on Mechanical, Industrial and Materials Engineering (ICMIME)*, ICMIME-ID-RT-6

8. Paul,A. C., Hasan,M. A., Ali,M. M., Jalil,M. A. and Tushar,M. M. R. (11-13 December, 2019), "Footstep Power Generation and Performance Analysis through Different Types of Footwear Styles," *5th International Conference on Mechanical Engineering and Renewable Energy* (ICMERE), ICMERE-PI-88

7. Paul,A. C. ,Khan,J. and kamal,R. (11-13 December, 2019), "Absorptive remediation of chromium contaminated tannery effluents by utilization of Mahagoni Tree (swietenia mahagoni) Bark," *5th International Conference on Mechanical Engineering and Renewable Energy (ICMERE)*, ICMERE-PI-87

6. Paul,A. C. ,Noor-E-Imam,N. and Hossain,S. (23-24 December, 2018), "Application of lean and six sigma tool to waste reduction and productivity improvement in footwear industry," *5th International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE)*, ICMIEE-ID-260

5. Paul,A. C. ,Islam,M. A. and Hossain,M. S. (23-24 December, 2018), "Studies on Sewing Complication through Pareto Chart and Cause-Effect Diagram Analysis of a Footwear Industry," **5th International Conference on Mechanical, Industrial and Energy Engineering (ICMIEE)**, ICMIEE-ID-261

4. Saif,M. N. ,Hossain,M. A. and Paul,A. C. (28-30th December; 2017), "Improvement of Productivity through Manipulating the Fabrication Layout in Sewing Department of a Footwear Industry," *International Conference on Mechanical Industrial and Material Engineering* (ICMIME), ICMIME-ID-IE-225 3. Paul,A. C. ,Ahasanuzzaman,S. and Alam,A. (23-25th December; 2017), "A study on the correlation between human left and right foot based on foot length and foot width and foot joint girth of Bangladeshi male," *International Conference on Mechanical Industrial and Material Engineering (ICMIME)*, ICMIME-ID-RT-226, pp.01-06

2. Hashem, M. A. , Paul, A. C. and Hossain, S. (2015), "Utilization of waste sole as a source of energy through thermal pyrolysis," **11th** International Conference on Mechanical Engineering

1. Ray,S. K. , Paul,A. C. , Islam,M. A. and Dutta,M. (26 - 29th November; 2015) , "The development and Quality enhancement of medicated Footwear for consciousness about diabetic foot troubles for the diabetic patients," *International Conference on Mechanical Engineering and Renewable Energy*, ICMERE-PI-172