

# SANJEEB ROY

M.Sc. And B.Sc. in Industrial and Production Engineering (IPE)

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## RESEARCH INTEREST

- Operations Research | Data Science | Systems Engineering | Environmental Sustainability

## EDUCATION

### ■ **Master of Science in Industrial and Production Engineering** (June 2019 – Jun 2023)

Dept. of Industrial and Production Engineering (IPE), BUET, Bangladesh

**CGPA 3.67/4.00**

**Thesis:** Modelling Hierarchical Structure for Circular Supply Chain in RMG Industry

#### Theory Courses

- Advanced Manufacturing Process
- Composite Materials
- Plastic Process Engineering
- Materials Management
- Logistics Management
- Growth and Management of Technology

### ■ **Bachelor of Science in Industrial and Production Engineering** (Feb 2015 – Apr 2019)

Dept. of Industrial and Production Engineering (IPE), BUET, Bangladesh

**CGPA 3.61/4.00**

**Thesis:** A Fuzzy Cognitive Map and Data Envelopment Analysis- Based Framework for Evaluating Strategies for Environmental Sustainability in the Supply Chain

#### Major Theory Courses

- Operations Research
- Manufacturing Process I and II
- CAD/CAM
- Probability and Statistics
- Computer Integrated Manufacturing
- Product Design I and II
- Machine Tools
- Numerical Analysis
- Ergonomics and Safety Management
- Operations Management
- Quality Management
- Supply Chain Management
- Material Handling and Maintenance Management
- Project and Environment Management

## WORK EXPERIENCE

### ■ **Department of Mechatronic and Industrial Engineering (MIE), CUET, Bangladesh**

#### ▪ **Assistant Professor** (November 2023 - present)

- Instructing 5 theory courses and 2 sessional courses and Supervising 4 thesis student
  - Operations Research
  - Computer Integrated Manufacturing
  - CAD/CAM
  - Production Process
  - Environment and Safety
  - Computer Integrated Manufacturing Sessional
  - Fabrication Laboratory
- Executive leader in Program Self-Assessment Committee for OBE Curriculum Formation
- Faculty Advisor in IEOM CUET Student Chapter
- Moderator Robo Mechatronics Association of CUET Campus

▪ **Lecturer** (January 2020 - October 2023)

- Instructing 7 theory courses and 1 sessional courses and Supervising 4 thesis student
  - Operations Research
  - Computer Integrated Manufacturing
  - CAD/CAM
  - Material Handling
  - Environment and Safety
  - Operations Research
  - Financial Management for Engineers
  - Computer Integrated Manufacturing Sessional
- Faculty Advisor in IEOM CUET Student Chapter
- Moderator in HULT Prize Competition, Robo Mechatronics Association of CUET Campus

■ **Graduate Research Assistant | Dept. of IPE, BUET, Bangladesh** (Jun 2022 – Jun 2023)

**Project Title:** Framework for Implementing Circular Supply Chain in the RMG Industry: Implications for Sustainable Development Goals | **Project ID:** 2021-001-04

- Going through concept centric literature review
- Semi-structured interviews organization
- Questionnaire survey preparation and data collection
- Data analysis and results preparation using FTISM qualitative tool and PLS-SEM statistical tool

■ **Lecturer | Dept. of IPE, BAUST, Bangladesh** (Jul 2019 – Jan 2020)

- Instructed 4 theory courses and 2 sessional course
  - Measurement, Instrumentation & Control (MIC)
  - Robotics
  - Introduction to IPE
  - Industrial Management
  - MIC Sessional
  - Machine Shop Practice
- Team leader to form Criterion 7 in forming the BAETE suggested OBE curriculum for Dept of IPE, BAUST
- Faculty Advisor in BAUST Sports Club

## PUBLICATIONS

- Integrated fuzzy total interpretive structural modelling and partial least squares structural equation modelling to understand resource efficient circular supply chain (Master's thesis work which is in its 2<sup>nd</sup> revision in Annals of Operations Research)
- Chowdhury, R., Billah, M. M., **Roy, S.**, Banik, S. C., & Barua, A. (2024). Analyzing the effect of the density of medium on efficiency of hydrocyclone separator in sorting of PVC and PET using CFD. **Results in Materials**, 21, 100497. <https://doi.org/10.1016/j.rinma.2023.100497>
- Ali, S. M., Belal, H. M., **Roy, S.**, Rahman, M. T., & Raihan, A. S. (2022). Examining the role of soft dimensions on the implementation of ISO 14000 environmental management systems: a graph-theoretic approach. **Annals of Operations Research**, 1-26. <https://doi.org/10.1007/s10479-022-04898-8>
- Raihan, A. S., Ali, S. M., **Roy, S.**, Das, M., Kabir, G., & Paul, S. K. (2022). Integrated model for soft drink industry supply chain risk assessment: implications for sustainability in emerging economies. **International journal of fuzzy systems**, 24, 1148–1169. <https://doi.org/10.1007/s40815-020-01039-w>
- **Roy, S.**, Das, M., Ali, S. M., Raihan, A. S., Paul, S. K., & Kabir, G. (2020). Evaluating strategies for environmental sustainability in a supply chain of an emerging economy. **Journal of Cleaner Production**, 262, 121389. <https://doi.org/10.1016/j.jclepro.2020.121389>

## HONORS and AWARDS

- **DRE Project Award for the year 2023-2024 (2<sup>nd</sup> Phase), CUET, Bangladesh** (Jan 2024)
  - **Project Code:** CUET/DRE/2023-2024/MIE/003 | **Role:** Project Leader
  - **Project Title:** Evaluating Carbon Footprint of a University Campus Using Hybrid LCA

## CERTIFICATIONS

- Design4Circle Training Course | Design4Circle Sep 2022
- Circular Economy - Sustainable Materials Management | Coursera Sep 2022
- Supply Chain Finance and Blockchain Technology Specialization | Coursera May 2022
- Introduction to Supply Chain Finance & Blockchain Technology | Coursera Apr 2022
- Supply Chain Finance Market and Fintech Ecosystem | Coursera May 2022
- Key Success Factors in Supply Chain Finance | Coursera May 2022
- **Future Development in Supply Chain Finance and Blockchain Technology** | Coursera May 2022
- Finance for Non-Finance Professionals | Coursera Mar 2022
- Digital Manufacturing & Design | Coursera Jul 2020

## SKILLS

- Python | C++ | MATLAB | CPLEX | Octave | SPSS | SolidWorks | CATIA
- SimaPro | GABI | TIA Portal | Factory I/O | SmartPLS
- Dedicated | Collaborative | Communicative | Undismayed towards Complex Problems

## STANDARDIZED TEST

- **International English Language Testing System (IELTS)** (31 August, 2024)
  - Overall 8.0 (Listening 8.5 | Reading 8.5 | Writing 6.5 | Speaking 7.5)

## REFERENCE

### ■ **Dr. Syed Mithun Ali**

Head and Professor, Department of Industrial and Production Engineering (IPE), BUET, Bangladesh  
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### ■ **Dr. Abdullahil Azeem**

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