

NIGHAT AFROZ CHOWDHURY



1127 East James E Rogers Way, Room 263, Tucson 85721, AZ, USA



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EDUCATION

Ph.D. IN SYSTEMS AND INDUSTRIAL ENGINEERING | UNIVERSITY OF ARIZONA

August 2019-Present

CGPA: 4.00/ 4.00 (present)

B.SC. IN INDUSTRIAL AND PRODUCTION ENGINEERING | BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)

May 2012-February 2017

CGPA: 3.83 / 4.00 (Class position 4th)

RESEARCH INTEREST

- Ecology & environment
- Techno-economic assessment
- Process modeling and simulation
- Data analytics & machine learning
- Optimization
- Supply chain management

RESEARCH AND TEACHING EXPERIENCE

GRADUATE RESEARCH ASSISTANT | DEPARTMENT OF SYSTEMS AND INDUSTRIAL ENGINEERING | UNIVERSITY OF ARIZONA

August 2019-Present | Tucson, Arizona

- Faculty advisor: Dr. Hongyue Jin
- Projects:
 - Microbial Curing of Cement for Energy Application
 - Ligand Facilitated Bioaccumulation: Biomining of Rare Earth and Other Critical Metals from Electronic Wastes
 - Sustainable Recycling of Rare Earth Elements from NdFeB Magnet Swarf

RESEARCH ASSISTANT | DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING | BANGLADESH UNIVERSITY OF ENGINEERING AND TECHNOLOGY (BUET)

June 2017-November 2018 | Dhaka, Bangladesh

- Faculty advisor: Dr. Syed Mithun Ali
- Projects:
 - Analysis of Supply Chain Risks and Critical Success Factors to Ready-Made Garments Industry of Bangladesh

LECTURER | DEPARTMENT OF INDUSTRIAL AND PRODUCTION ENGINEERING | MILITARY INSTITUTE OF SCIENCE AND TECHNOLOGY (MIST)

July 2017-June 2018 | Dhaka, Bangladesh

- Courses: Measuring, Instrumentation, and Control; Managerial Accounting; Mechanical Drawing Session; Manufacturing Process Session; Computer-Aided Design & SOLIDWORKS

UNDERGRADUATE INTERN | RAHIMAFROOZ RENEWABLE ENERGY LTD.

February 2016-March 2016 | Dhaka, Bangladesh

- Contribution: Layout modification and design, inventory and warehouse management, acoustic room design, standard time calculation, bottleneck identification, productivity determination.

PUBLICATIONS

Journal publications

- **Chowdhury, N. A.**, Ali, S. M., Mahtab, Z., Rahman, T., Kabir, G., & Paul, S. K. (2019). A structural model for investigating the driving and dependence power of supply chain risks in the readymade garment industry. *Journal of Retailing and Consumer Services*, 51, 102-113.
- **Chowdhury, N. A.**, Ali, S. M., Paul, S. K., Mahtab, Z., & Kabir, G. (2020). A hierarchical model for critical success factors in apparel supply chain. *Business Process Management Journal*.
- **Chowdhury, N. A.**, Deng, S., Jin, H., Prodius, D., Nlebedim, I. C. & Sutherland, J. W. (2021). Sustainable recycling of rare earth elements from NdFeB magnet swarf: techno-economic and environmental perspectives (in preparation).

Book chapter publications

- **Chowdhury, N. A.**, Jin, H., Nlebedim, I. C., Ginosar, D. M. & Handwerker, C. (2021). Circular economy of hard disk drives and rare earth elements (in preparation).

PRESENTATIONS

- **N. A. Chowdhury**, "Sustainable Recycling of Rare Earth Elements from Nd-Fe-B Magnet Swarf: Techno-Economic and Environmental Perspectives", 2021 CMI Winter Meeting at Mines, Colorado School of Mines, Golden, CO.
- **N. A. Chowdhury**, "Sustainable Recycling of Rare Earth Elements from Nd-Fe-B Magnet Swarf: Techno-Economic and Environmental Perspectives", ACLCA 2021 virtual conference (September 21-24).
- **N. A. Chowdhury**, "Sustainable Recycling of Rare Earth Elements from Nd-Fe-B Magnet Swarf: Techno-Economic and Environmental Perspectives", GRADSLAM 2020, Systems & Industrial Engineering, University of Arizona, Tucson, AZ.

AWARDS

- Third place, GRADSLAM 2020, Systems & Industrial Engineering, University of Arizona.

SKILLS

APPLICATION

Microsoft Office
Adobe Illustrator

PROGRAMMING

C
MATLAB
R, Python

SIMULATION

Minitab
SuperPro Designer
ARENA

DESIGN

SolidWorks
CATIA
AutoCAD

EXTRA CURRICULAR ACTIVITIES

- Student volunteer, ACLCA conference 2019, El Conquistador, Tucson, Arizona, USA
- Champion (regional level), Math Olympiad-2010, Bangladesh
- Cultural faculty advisor, Department of Industrial & Production Engineering, MIST, Bangladesh
- Event Management Secretary, Department of Industrial & Production Engineering, BUET, Bangladesh
- Performer, Cultural festival, Department of Industrial & Production Engineering, BUET, Bangladesh