

# ADULLAH ARAFAT

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## EDUCATION

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**The University of Utah, Salt Lake City, UT 84112, USA**  
(M.S) Master of Mechanical Engineering

*Aug 2022 - Now*

**Khulna University of Engineering and Technology (KUET)**  
**Khulna 9203, Bangladesh**  
(B.S) Bachelor of Materials Science and Engineering

*Feb 2017 - Mar 2022*  
CGPA: 3.62 (Among top 15%)

## RESEARCH EXPERIENCE

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**The University of Utah, Salt Lake City, UT 84112, USA**  
*MS Thesis Research*  
Integrated Multiphysics Laboratory (IMP) Lab

*Aug 2022 - Now*

## WORK EXPERIENCE

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**The University of Utah, Salt Lake City, UT 84112, USA**  
*Graduate Teaching Assistant*  
Mechanics of Materials ME EN 3315

*Aug 2022 - Now*

**Emprotec Limited, Khulna 9100, BD**  
*Design Engineer*

*Nov 2018 - Aug 2022*

Responsibilities: Designing LPG Spherical storage tanks, Cylindrical storage tanks, Ball valves and Actuated valves using SOLIDWORKS Designing P&ID of LPG network, P&ID of Fire fighting network, P&ID of Industrial air network, 3D Pipe Routing of different LPG Plants using AutoCAD Plant 3D and SOLIDWORKS Pipe Routing Designing Land Layouts of different LPG Plants using AutoCAD Designing different sample P&IDs using Microsoft Visio

**FabLab KUET, Khulna 9203, BD**  
*Student Operator*

*Aug 2019 - Mar 2020*

- Operated CNC Milling Machine (Roland MDX-540)
- Operated Laser Cutter (Epilog Laser MINI 18)
- Operated 3D Printer (Ultimaker 3)

## PUBLICATIONS

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### Book Sections:

1. Mubin, Shafat, Jichen Li, and Steven Plimpton. Extending and Modifying LAMMPS Writing Your Own Source Code: A pragmatic guide to extending LAMMPS as per custom simulation requirements. Packt Publishing Ltd, 2021: Page(304-311)

## Peer Reviewed Journals:

1. Hossain Sarkar, Md Mosarof, Md Sherajul Islam, **Abdullah Arafat**, ASM Jannatul Islam, Naim Ferdous, Md Tawabur Rahman, Minhaz Uddin Sohag, Md Al Imran Fahim, Catherine Stampfl, and Jeongwon Park. "Effects of the Substrate Structure on the CVD Growth of Two-Dimensional Hexagonal Boron Nitride." The Journal of Physical Chemistry C 126, no. 14 (2022): 6373-6384.
2. Komol, Md Mostafizur Rahman, Md Karimul Joarder, **Abdullah Arafat**, and Amit Kumer Podder. "Fingerprint and password controlled garage access system with belt pulley and power screw driven mechanism." International Journal of Advanced Mechatronic Systems 8, no. 1 (2020): 36-45.
3. Komol, Md Mostafizur Rahman, Amit Kumer Podder, **Abdullah Arafat**, and Tanzim Nabeed. "Remote sensing global ranged door lock security system via mobile communication." International Journal of Wireless and Microwave Technologies 9, no. 5 (2019): 25-37.

## Conferences:

1. Md. Jarir Hossain, Md. Mahbubur Rahman, Fahim Islam Anik, MD Ikramul Hasib, **Abdullah Arafat**. "Numerical Investigation on Fatigue Life Estimation of Aluminum Structure for Uniaxial Cyclic Loading by Finite Element Modeling." International Conference on Mechanical Engineering and Renewable Energy 2019 (ICMERE2019)

## AWARDS

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1. **Department Dean List Award 2018** — Organized by KUET  
Academic Excellence in the Department
2. **Wash Innovation Challenge 2018** — Organized by UNICEF and BRAC  
Finalist (South Asia Region)
3. **9th International Olympiad On Astronomy and Astrophysics (IOAA)**  
Bangladesh National Team
4. **Ignition 2018 CAD Contest**  
Champion
5. **ASME CUET Extrusion CAD Contes**  
1st Runner up
6. **IPE Fest 2018 CAD Contest**  
2nd Runner Up
7. **Bangladesh Astronomy Olympiad**  
2nd and 1st in Divisional Round (2013, 2015)

## TRAINING AND COURSES

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- **From Atoms to Materials: Predictive Theory and Simulations** — Institution: PurdueX  
Platform: Edx — Status: Completed
- **Materials Data Sciences and Informatics** — Institution: Georgia Institute of Technology  
Platform: Coursera — Duration: 1 month. (August 2019) — Grade: 91.1% — Credential ID: 4NJG5524REYV
- **Python for Data Science and AI** — Company: IBM  
Platform: Coursera — Duration: 1 month. (February 2020) — Grade: 98% — Credential ID: MBAN9P4DZGBD

- **Design for Machining, Design for Additive Manufacturing, Abaqus Heat Transfer, Abaqus Stress Analysis, Abaqus Thermal Stress and Deformation, SOLIDWORKS Efficient Modeling and Design Intent, SOLIDWORKS Mold Tools and Plastic Design**  
Platform: SOLIDprofessor — Duration: 2-3 months

## SOFTWARE SKILLS

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<b>Modeling and Analysis</b>	LAMMPS, Python, C++, Bash Scripting, VMD, Ovito, Vesta Materials Studio, ANSYS, SOLIDWORKS, AutoCAD Plant 3D.
<b>Software &amp; Tools</b>	Key Shot 8, Adobe Illustrator CC19, Adobe Photoshop CC19, Microsoft Word, Microsoft PowerPoint, Microsoft Excel.

## CERTIFICATIONS

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- **Duolingo English Test (DET)**  
Score: 135/160 — Organization: Duolingo  
Credential link: [certs.duolingo.com/7b97a1a4e3e85414886c5c28ae4461b0](https://certs.duolingo.com/7b97a1a4e3e85414886c5c28ae4461b0)
- **Certified SOLIDWORKS Associate (CSWA) Examination**  
Score: 240/240 — Organization: Dassault Systmes — Credential ID: C-49FPLUKRNS
- **Certified SOLIDWORKS Professional (CSWP) Examination**  
Score: 318/318 — Organization: Dassault Systmes — Credential ID: C-A6HWVU5MSB

## EXTRA-CIRRICULAR ACTIVITIES

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**Organization: Youth Opportunities (YO)** — Position: Campus Ambassador — Duration: 2018-2019

**Organization: YSI Bangladesh** — Position: Head of Campus Representatives — Duration: 2018-2019

**Club: CADers** — Position: Head of IT and Resource — Duration: 2018-2020

**Club: Spectrum (Professional Skill Development Club of KUET)** — Position: Chief Technology Officer (CTO) — Duration: 2017-2020

**Club: KUET Career Club** — Position: Head of IT and Resource — Duration: 2018-2022