MD MUNTASIR ALAM

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EDUCATION

Doctor of Philosophy in Mechanical Engineering ***2020 - Present***
University of Illinois at Urbana-Champaign
Current GPA: **4.00**/4.00

Master of Science in Mechanical Engineering ***2019***
Bangladesh University of Engineering and Technology (BUET)
CGPA: 3.83/ 4.00

Bachelor of Science in Mechanical Engineering ***2016***
Bangladesh University of Engineering and Technology (BUET)
CGPA: 3.91/ 4.00 (Class Rank: **2nd** / 201)

RESEARCH EXPERIENCES

Graduate Research Assistant ***June 2020 – Present***
ACRC and MechSE, University of Illinois at Urbana-Champaign

- **ACRC Project #422** (Innovative Ways to Utilize Ejectors in HVAC&R Applications; PI: Prof. Stefan Elbel) ***June 2020 – Present***
  - Developed numerical models for unconventional ejector cycles in HVAC&R applications
  - Designed test experimental setup for experimentation with new ejector cycles
  - Experimental study will be performed with unconventional ejector cycles for innovative utilization of ejectors in HVAC&R applications
- **ACRC Project #408** (Low-cost Ejector Designs and Cycles for Small to Medium Capacity Applications; PI: Prof. Stefan Elbel) ***June 2020 – Present***
  - Investigated different ways to induce surface roughness inside the ejector surface for exploration of the effect of surface roughness on the ejector and system performance
  - Conducted experimental tests with ejectors of different designs to assess the ejector as well as system performance for small-scale applications

TEACHING EXPERIENCES

Graduate Teaching Assistant ***January 2020 – Present***
*Course: **ME 330 (Engineering Materials)**; MechSE, University of Illinois at Urbana-Champaign*
Lecturer ***2016 –2019***
Department of Mechanical Engineering, Bangladesh University of Engineering and Technology

ACADEMIC ACHIEVEMENTS

Dean's List Scholarship for Academic Excellence ***2011 - 2016***
Four consecutive scholarships winner awarded by the Faculty of Mechanical Engineering, BUET
University Merit List for Academic Excellence ***2011 - 2016***
Awarded by the Faculty of Mechanical Engineering, BUET for excellent academic performance

OTHER EXPERIENCES

Undergraduate Junior Year Project ***2014***

Completed junior year Project on "**Automatic Prevention Model for Vehicle Fuel Theft**"

Undergraduate Senior Year Industrial Training ***February 2016***

Completed Industrial Training at **Kohinoor Chemical Company Limited (KCCL),** Tejgaon, Dhaka, Bangladesh.

SOFTWARE SKILLS

ANSYS, LAMMPS, EES, Tecplot, OriginPro, COMSOL, SolidWorks, AutoCAD, MATLAB, C, C++, OVITO, VMD, Proteus ISIS, Microsoft Office

PUBLICATIONS

Conference Proceedings

[1] **Alam, M.**, Kamruzzaman, Ahsan, F., & Hasan, M. N., "Mixed convection heat transfer inside a differentially heated square enclosure in presence of a rotating heat conducting cylinder", *AIP Conference Proceedings*, 2016, Vol. 1754, No. 1, p. 050035, AIP Publishing.

[2] **Alam, M.**, Kamruzzaman, Saha, S., & Hasan, M. N., "Effect of location of a rotating circular cylinder and heat source on mixed convection heat transfer characteristics inside a square enclosure with discrete heater at the bottom wall", *AIP Conference Proceedings*, 2017, Vol. 1851, No. 1, p. 020101, AIP Publishing.

[3] Billah, M. M., Khan, M. I., Rahman, M. M., **Alam, M.**, Saha, S., & Hasan, M. N., "Numerical study of mixed convection heat transfer enhancement in a channel with active flow modulation", *AIP Conference Proceedings*, 2017, Vol. 1851, No. 1, p. 020104, AIP Publishing.

Journals

[1] **Alam, M. M.**, Thakur, M. S. H., Islam, M., Hasan, M. N., Mitsutake, Y., & Monde, M. (2021). Atomistic and macroscopic characterization of nanoscale thin film liquid-vapor phase change phenomena. *International Journal of Thermal Sciences*, *170*, 107159.

[2] Hasan, M. N., Shavik, S. M., Rabbi, K. F., Mukut, K. M., & **Alam, M. M.** (2018). Thermal transport during thin-film argon evaporation over nanostructured platinum surface: A molecular dynamics study. *Proceedings of the Institution of Mechanical Engineers, Part N: Journal of Nanomaterials, Nanoengineering and Nanosystems*, *232*(2-3), 83-91.