



Khaled M. Mukut

Mechanical Engineer

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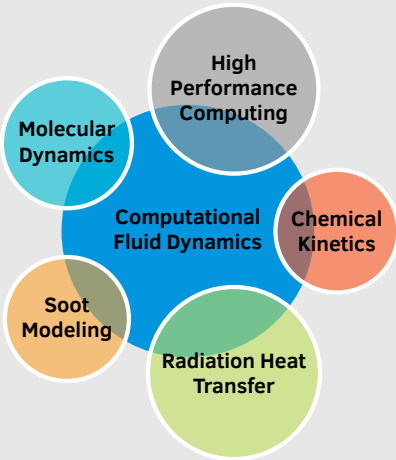
Education

Ph.D candidate
Specialization:Energy Systems
Marquette university
2019 - Present | Milwaukee, WI, U.S.A.

MS in Mechanical Engineering
Specialization:Energy Systems
Marquette university
2017 - 2019 | Milwaukee, WI, U.S.A.

Technical Skills

Overview



Software and Programming

- C • C++ • MATLAB
- OpenFOAM • ANSYS:FLUENT
- Fortran • Python • LAMMPS
- gnuplot • Bash • Linux
- COMSOL • \LaTeX • Converge CFD
- Autocad • Solidworks
- Paraview • Tecplot
- Machine Learning •Data Science

About Me

I am a dedicated, honest, hardworking and proactive Mechanical Engineer with a strong background in computational fluid dynamics, high performance computing , and environmental modelling. I am a very fast learner and enjoy learning new things. I am currently looking for a summer intern opportunity to utilise my technical skills in a challenging working environment and become a valuable asset to the organisation that I work for.

For a more detailed overview of my profile click [HERE](#) or **SCAN**



Honors and Awards

- Awarded Richard W. Jobling Distinguished Research Fellowship (Marquette University)
- Awarded Outstanding RA award for the Department of Mechanical Engineering (Marquette University)
- Best poster award in annual graduate poster exhibition (Marquette University)
- Awarded Dean’s List Scholarship (BUET)

Experience

- Mar 2016 - Aug 2017 **Graduate Assistant** BUET
 - Mentored two separate group totalling seven undergraduate seniors in their undergraduate thesis work. One group worked on linear heating in nano-confinement using **molecular dynamics** and the other group worked on numerically modelling a thermally stratified co-axial jet using **ANSYS: FLUENT**.
- Mar 2016 - Aug 2016 **Operation Engineer (Export)** PRAN-RFL
 - Worked on the "Automatic Conveyor Control System in Production Line" project actively (Hardware and Software).
 - Active member of the operation and maintenance team for injection and blow molding machines.
- Feb 2016 - Mar 2016 **Maintenance Engineer (Intern)** KPCL
 - Hands on experience of working with large diesel and HFO based power plant.

Research

- Aug 2017 - Present **Graduate Research Assistant** Marquette University
Research Topic: Fundamental investigation and modelling of soot formation in combustion systems.
 - **Tools:** OpenFOAM, C++, HPC cluster, slurm,Fortran, Python, LAMMPS etc.
- Mar 2016 - Aug 2016 **Graduate Assistant** BUET
 - Non-reactive molecular dynamics investigation of explosive boiling, bubble formation and nucleation in nano-confinements.
 - Numerical standardization of thermally stratified co-axial jet flow parameters
 - **Tools:** LAMMPS, ANSYS: FLUENT, Tecplot, MATLAB etc.
- Jan 2015 - Dec 2015 **Undergraduate Research** BUET
 - Drag minimization and optimization of lift-to-drag ratio in airfoils using passive and active control.
 - **Tools:** ANSYS: FLUENT, MATLAB, Tecplot etc.

Publications

- K.M. Mukut, S.P. Roy & E. Goudeli. Molecular arrangement and fringe identification and analysis from molecular dynamics (MAFIA-MD): A tool for analyzing the molecular structures formed during reactive molecular dynamics simulation of hydrocarbons. Computer Physics Communication, 276, DOI:10.1016/j.cpc.2022.108325
- A. Sharma, K.M. Mukut, S.P. Roy & E. Goudeli (2021). The coalescence of incipient soot clusters. Carbon, 180, 215-225, DOI:10.1016/j.carbon.2021.04.065
- K.M. Mukut, S.P. Roy (2020) Effect of O2 concentration in ambient mixture and multiphase radiation on pollutant formation in ECN spray-A, Combustion Theory and Modelling, 24:3, 549-572, DOI: 10.1080/13647830.2020.1721561

• For full list of publications click [HERE](#) or **SCAN**

