

**Education**

**Ph.D.** August 2016- August 2021 (Expected)  
Department of Mechanical Engineering  
The University of Alabama, Tuscaloosa, Al

**B.Sc.** in Aeronautical Engineering, 2014  
Bangladesh University of Professionals  
“Design, Analysis and Optimization of a Small Unmanned Aircraft”

**Research Experience**

Graduate Research Assistant, August, 2016- present  
Computational Mechanics Group  
M.E., The University of Alabama  
Advisor: Dr. Alexey Volkov

**Research Interest**

Atomistic Simulation  
Carbon nanotubes  
Multiscale and multiphysics simulations  
Computational fluid dynamics

**Work Experience**

Part time lecturer, Feb, 2014- Aug, 2015  
Avionics Department  
SAIC Institute of Management & Technology, Dhaka, Bangladesh

**Technical Skills**

Programming language: FORTRAN, C  
CAD Tools: AutoCAD, SolidWorks  
Simulation tools: MATLAB

**Publications**

1. **Banna M. A. Horaira**, Rayhan M. Afsar, Ali Z. M. Shahjahan, & Salam M. Abdus, “Design, Analysis & Optimization of A Small Unmanned Aircraft,” *IEEE Aerospace Conference-2015, Montana, USA, paper ID-2589 (9.0212)*.
2. **Banna M. A. Horaira**, Rayhan M. Afsar, & Salam M. Abdus, “Next Generation Hybrid Power Plant: A Solution to Continuous Flight,” *American Institute of Aeronautics & Astronautics (AIAA) region VII (Asia Pacific) student conference 2013*.
3. Rayhan M. Afsar, **Banna M. A. Horaira**, Rumi M. J. Uddin, Salam M. Abdus, “CEASIOM: An Open Source Multi Module Conceptual Aircraft Design Tool,” *International Journal of Engineering Research and Technology, Vol. 2 (07), 2013, ISSN 2278 - 0181*.

**Hobbies & interests**

History  
Remote travelling  
Soccer, Cricket, Badminton