

Md Malekkul Islam

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SUMMARY OF QUALIFICATIONS

- Comprehensive Knowledge in various Mechanical, Thermal, Design and Manufacturing concepts and Techniques.
- Developed adaptable, dynamic and practical cooling solutions at module level and extend its application to rack level.
- Experience in optimization of liquid and hybrid cooled servers with distributive pumping system using Arduino.
- Research experience in dynamic cold plate design in Multi-Chip Module platform.
- Extensive mechanical design experience includes solid modeling, Creo 3.0 2D & 3D CAD design, SolidWorks and AutoCAD for R&D and manufacturing industry.
- Finite Element Analysis (FEA/FEM) experience to design, optimize failure investigation and design and analyze thermal problems.
- Competent knowledge in structural analysis and reliability of electronic packages in ANSYS.
- Wide-ranging experience and expertise in product development life cycle from creative and cost effective conceptual design, design evaluation, testing, validation as well as release and implementation.
- Proficient in directing engineering projects, mechanical setups from conception through completion.
- Consistency in demonstrating leadership skills, decision-making and resourcefulness in responding to job challenges.

TECHNICAL SKILLS

- Equipment: Air Flow Bench, DAQ, Function Generator, Arduino, TMA, DMA, DIC
- Analysis: ANSYS (APDL, Workbench, ICEPAK, Fluent), COMSOL, 6Sigma, FloTherm
- Design: AutoCAD 2D/3D, SolidWorks, Creo, LabView
- Application Software: LabView, Latex, Acrobat, Minitab 16, SAP
- Programming Languages: Proficient in C/C++, Matlab
- Operating System: Windows, Ubuntu, CentOS

EDUCATION

M.S. in Mechanical Engineering, GPA – 4.00, Expected Graduation in May 2016

The University of Texas at Arlington—Arlington, TX

- Design optimization, fan speed control algorithms, heat sink and dynamic cold plate designs of computer server systems and data centers
- Applied Finite Element (FEA/FEM) procedures to optimize the design and support failure investigation with structural, stress and fatigue analysis
- Some Major Courses: Finite Element Methods, Engineering Analysis, Fundamentals of Composite Materials, Computational Technics of Electronic Packaging, Thermal Convection

B.S. in Mechanical Engineering, 2013

Bangladesh University of Engineering and Technology (BUET), Dhaka, Bangladesh

Projects and Thesis:

- Automatic Temperature Control of Products in Industry
- GSM modem based security system
- Design, Analysis and Maintenance of Cold Storage

PROFESSIONAL HISTORY

Graduate Teaching Assistant (August 2015 – Present)

- Working as a Teaching Assistant for Senior Design Project
- Functioning as Project Mentor for different groups with different project

Graduate Research Assistant in Electronics, MEMS & Nanoelectronics Systems Packaging Center: (August 2014 – Present)

- Working Projects - SRC-TI (Texas Instrument), Facebook and Cisco Servers
- Generation of detailed CFD model using FloTHERM, Icepak, 6Sigma
- Evaluating the cooling performance of direct contact liquid cooled racks using Warm water cooling
- Significant contribution in saving pump power consumption in distributive pumping systems
- Computational work on heat sink optimization, optical microscope visual study and accelerated testing to analyze operational degradation of components
- Thermal fatigue analysis and warpage study of QFN, WCSP boards for industrial applications
- Structural Analysis of different electronic packages like BGA, QFN etc to predict the life cycle
- Material characterization (Young's Modulus, CTE, Bulk Modulus) of PCB boards.
- Determine the physics of failure between PCB boards and packages.
- Multi variable design optimization to minimize the solder joint damage.

British American Tobacco Bangladesh: (September 2013 - February 2014)

- Product development, cost effective design and testing of filler rod
- Directed relocation project of filler rod division
- Performed statistical analysis in Minitab16 using Six Sigma Methodology.
- Prepared technical documentation though SAP

AA Synthetic Fibers Ltd: (March 2012 - April 2012)

- The internship at the AA Synthetic Fibers' power generation department.
- Gained experience operation and maintenance of power generation equipment
- Studied major overhauling of a diesel engine and gas engine
- Performed maintenance and overhauling of different components, subsystems, heat exchanger, Boiler, HVAC, Fuel system, Lubrication system

EXTRA-CURRICULAR ACTIVITIES

- **Organizer:** World Cyber Games 2012, Bangladesh and different Tours, Program in BUET
- **Leader:** Mechanical Engineering Association (MEA), BUET and BUET Computer Club
- **Volunteer:** Blood Donor, BADHON (BUET)
- **Debater:** Participated in English Debating in School & College
- **Entrepreneur:** Played significant role in organizing social and cultural events for Bangladeshi Student Organization at UT Arlington (BSO at UTA)