

Sayalee P. Sabne

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OBJECTIVE:

To obtain a challenging internship/full time job opportunity which encourages technical growth, allows to exploit and enhance design and reliability engineering skills and provides a good learning experience

EDUCATION:

- Master of Science in Mechanical and Aerospace Engineering (Thesis) **Dec 2015**
The University of Texas at Arlington CGPA 3.3(Current)
- Bachelor of Engineering in Mechanical Engineering **2008-2012**
University of Pune, India CGPA 3.4(distinction)

KEY SKILLS:

Domain: Structural Design, Failure analysis, Reliability Engineering, Computer Aided design and Simulation, Structural Dynamics, Design Optimization, Finite Element Analysis.

Software: ANSYS workbench, Solidworks, ANSYS Icepak, ANSYS APDL, Auto-CAD 3D, Mastercam, MATLAB 2013, Lab view.

Programming Languages: Auto-Lisp, C.

EXPERIENCE:

1. **Design Engineer Trainee, Coretec Engineers, India.** **May 2013-Dec 2013**
 - The job was focused on modelling and simulation of electric generators, lifts and conveyors, etc. using computer software.
 - The individual components were designed to optimize dimensions for better reliability under structural loads.
 - Auto-CAD 3D, Solidworks and ANSYS Workbench were the mainly used.
2. **Graduate Research Assistant, the University of Texas at Arlington.** **Jan 2015-Current**
 - Involved in Semiconductor Research Corporation (GRC Task 2512.001) project that includes birth-to-death modelling methodology of optimization for board level reliability of various electronic packages
 - Also working on characterization of materials of various components present in PCB assemblies

PROJECTS:

1. **Drop Test, Failure analysis and Reliability Investigations of PCB assemblies:** **Current**
 - The research work is mainly focused on the improvement of the solder joint and board level reliability of the PCB assemblies subjected to drop test. The PCB assemblies involve QFN, BGA and WCSP packages mounted on multilayered PCB.
 - The stress results obtained by varying test parameters such as height and orientation of drop, structural parameters such as thickness of layers of the multilayered PCB and other operational parameters are being compared using ANSYS workbench. Optimization of various parameters based on impact life is under process
 - Another objective of the project is to conduct experimental drop test and establish a correlation between the laboratory experiment, actual accidental drop impact suffered by small electronic devices and the computational simulation of the test.
2. **SRC and Texas Instruments Project:** **Current**
 - Calculation of Coefficient of Thermal Expansion (CTE) and Young's Modulus are calculated experimentally. The properties so obtained are used in simulation in order to reduce thermal and structural stresses induced in PCB assemblies.
 - DMA and TMA are used for material characterization.
3. **Design and Fabrication of Mechanical Can Crusher (B.E. final year):** **2012**

A mechanically operated soda can-crusher was built using beam engine mechanism and four bar linkage. The structural design for safe operation and fabrication were the areas where I contributed to the project. Solidworks was used for modelling.
4. **Semi-automation of the spot welding machine (B. E. final year):** **2012**

An idea was proposed for semi-automation of a spot welding machine in a fabrication firm to reduce overall process time. The idea was executed on Solidworks.

5. Design Optimization Project:

MS Fall 2014

“Range optimization of a projectile” was a project included in the coursework of Design Optimization. The starting point and initial velocity of a projectile were specified and the range of the projectile was maximized using MATLAB.

PRESENTATIONS:

1. Poster presentation on “Impact of Layer Thickness of QFN Mounted PCB During Drop Testing”, Sayalee Sabne, Anik Mahmood, Trina Barua, A R Nazmus Sakib, Alok Lohia, Dereje Agonafer, SMTAI, 2015.
2. Presentation on “Vortex Induced Vibrations for Aqua Clean Energy” in the third year of undergraduate studies in the year 2011.
3. Presentation on “The ergonomic and aesthetic aspects for the products of daily use” in the final year of undergraduate studies in the year 2012.

EXTRACURRICULARS:

- Have been a part of Environment and tree plantation programs including multiple campaigns conducted for environmental awareness in the years 2011 and 2012.
- Cultural Coordinator of Music and a singer in Indian Cultural Council of the University of Texas at Arlington, currently.
- Have been a part of robotics competitions as a participant and event organizer in the years 2011 and 2012.

QUALITIES:

- Passionate, optimistic person
- Excellent communication and interpersonal skills
- Quick learner and a team player