HARI KRISHNAN

+1 (310) -882 -1337 | harikrishnan@ucla.edu | hkkrishnan.com | www.linkedin.com/in/harikrishnan17

EDUCATION University of California Los Angeles (UCLA)

Master of Science – Mechanical Engineering
National Institute of Technology Karnataka (NITK)

Bachelor of Technology – Mechanical Engineering

Los Angeles | March 2017

GPA - 3.825/4 Surathkal | 2015

GPA - 4/4

CAD/DESIGN – CREO, SOLIDWORKS, SPACECLAIM, Surfacing. ANALYS

PROGRAMMING – MATLAB, LabVIEW, Python.

ANALYSIS – ANSYS WB, COMSOL, Moldflow.

OTHERS – DTC Windshill Direct Modelling 3D Printing

OTHERS – PTC Windchill, Direct Modelling, 3D Printing.

AREAS OF INTEREST – Design and Analysis, Prototyping, Robotics, Automation.

COURSEWORK — Compliant Mechanism Design, Rapid Prototyping, Robotics, Linear Dynamic Systems

FEM, Mechanical Design – High Temperature, Analysis of Structures.

RELEVANT EXPERIENCE

SKILLS

iROBOT, California

June 2016 - Dec 2016

Mechanical Intern | Design and Prototyping

- Design and rapid prototyping (FDM) of components for a new mobile robot in development using CREO and SOLIDWORKS.
- Optimized robot shell design to improve mobility and developed fixtures, significantly reducing prototype build times and improving build quality.
- Developed multiple test metrics for standardizing robot performance and assembled over 20 robot prototypes.
- Implemented skeleton based modelling techniques and managed product data using PTC Windchill.

RoMeLa - Robotics and Mechanisms Laboratory, UCLA Graduate Student Researcher | Design and Analysis

Oct 2015 - present

- Heading the development of a modular wall climbing Hexapod Robot with emphasis on design for manufacturability (DFM).
- Redesigned (surfacing) and built the outer head of the UCLA LUSKIN concierge robot (LARA), reducing the weight by half and improving strength against drops.
- Optimized and redesigned robotic components based on FEA for improved strength using ANSYS and SOLIDWORKS.

TATA Centre for Technology and Design - IIT Bombay, India Research Intern | Medical Product Design and Prototyping

Summer 2015

- Designed and implemented the prototype of an affordable, portable and robust Digital Microscopic Device for scanning cancerous cells at the source point.
- Developed system controls using Arduino, Linux CNC and worked with Open CV (python) to manipulate and stitch together captured images.

Tampere University of Technology, Tampere, Finland Research Intern | Product Design and Prototyping

Summer 2014

- Designed and fabricated the TUT Microfactory prototype (miniaturized production system),incorporating HEPA filters, fans for air flow, achieving overall control and significantly reducing cost using an Arduino Microcontroller.
- Designed and fabricated enclosures, heat sinks and other major components using CATIA and implemented PID control to maintain the temperature, humidity and airflow within the work chamber.

Department of Atomic Energy (BARC), Mumbai, India

Summer 2013

- Research Intern | Manipulator Analysis and Robotic System Design
- Developed MATLAB simulations to quantify the error involved in motion transmission from the master to the slave side
- Analyzed manipulator kinematics and suggested design improvements to reduce position error.
- Developed designs of cleaning bots and mechanisms used for expired radioactive glove boxes at the Robtoics department.

PROJECTS

Multiphysics Analysis of Automobile Disc Brakes

March – June 2016

High Temperature Mechanical Design (University of California Los Angeles)

- Modelled and simulated the mechanical and thermal effects on an automobile disc brake during braking using COMSOL.
- Optimized vane profiles for maximum cooling using Solidworks design study and co-simulation using COMSOL.

Flexure Based Micro Mirror Design

Jan - March 2016

Compliant Mechanism (University of California Los Angeles)

- Designed a Flexure based Micro Mirror System driven at resonant frequencies for precision applications using Solidworks.
- Performed FEA and frequency optimization using ANSYS and optimized designs for MEMS fabrication capabilities.

LEADERSHIP EXPERIENCE Founding Member and Secretary - Graduate Indian Student Association (UCLA)
Teaching Assistant - Basic Mechanical Engineering Laboratory (UCLA)

March 2016 - present March - June 2016

Coordinates. The Committee details attended while when well

2014 - 2016

Coordinator – The Ooperai Foundation (social outreach philanthropy)