

+1 (310) -882 -1337 | hari.krishnan17@outlook.com | hkkrishnan.com | www.linkedin.com/in/harikrishnan17

EDUCATION	<div>University of California Los Angeles<div>Master of Science – Mechanical Engineering</div><div>National Institute of Technology Karnataka</div><div>Bachelor of Technology – Mechanical Engineering</div></div>	<div>Los Angeles Expected Dec 2016</div> <div>GPA - 3.72/4</div> <div>Surathkal 2015</div> <div>GPA - 4/4</div>
SKILLS	<div>CAD/DESIGN – SOLIDWORKS, CATIA, AutoCAD, DFM.</div> <div>PROGRAMMING – MATLAB, LabVIEW, Python.</div>	<div>ANALYSIS – ANSYS WB, COMSOL.</div> <div>OTHERS – Webots, 3D Printing, Laser Cutter, Photoshop.</div> <div>AREAS OF INTEREST – Design and Analysis, Prototyping, Robotics, Automation, Control Systems.</div> <div>RELEVANT COURSEWORK – Compliant Mechanism Design, Rapid Prototyping, Robotics, Linear Dynamic Systems Finite Element Modelling, Mechanical Design – High Temperature.</div>
RELEVANT EXPERIENCE	<div>RoMeLa - Robotics and Mechanisms Laboratory, UCLA</div> <div>Graduate Student Researcher Design and Analysis</div> <div><ul style="list-style-type: none">Heading the development of a new Hexapod Robot with emphasis on Design for Manufacturability (DFM).Redesigning and optimising components based on FEA for improved strength using ANSYS and Solidworks.Developing locomotion control of the hexapod bot using LabVIEW.</div> <div>TATA Centre for Technology and Design - IIT Bombay , India</div> <div>Research Intern Medical Product Design and Prototyping</div> <div><ul style="list-style-type: none">Designed and implemented the prototype of an affordable, portable and robust Digital Microscopic Device for scanning cancerous cells at source point.Fabricated XY CNC Router, enclosures and lens arrangements mainly using 3D Printing.Developed system controls using Arduino, Linux CNC and worked with Open CV (python) to manipulate and stitch together the captured images.</div> <div>Tampere University of Technology, Tampere, Finland</div> <div>Research Intern Product Design and Prototyping</div> <div><ul style="list-style-type: none">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.</div> <div>Department of Atomic Energy (BARC), Mumbai, India</div> <div>Research Intern Manipulator Analysis and Robotic System Design</div> <div><ul style="list-style-type: none">Analysed Manipulator Kinematics and developed MATLAB simulations to quantify the error involved in motion transmission from the master to the slave side in Articulated Master Slave Manipulators.Design Analysis of Master Slave manipulators and suggested design improvements to reduce position error.Worked in the Department of Remote Handling and Robotics developing designs of cleaning bots and mechanisms which can be used for expired radioactive Glove Boxes. Currently in developmental phase.</div>	<div>Oct 2015 – present</div> <div>Summer 2015</div> <div>Summer 2014</div> <div>Summer 2013</div>
PROJECTS	<div>Flexure Based Micro Mirror Design</div> <div>Compliant Mechanism (University of California Los Angeles)</div> <div><ul style="list-style-type: none">Designed a Flexure based Micro Mirror System - driven at resonant frequencies for precision applications using Solidworks.Performed FEA and frequency optimisation using ANSYS and optimised designs for MEMS fabrication capabilities.</div> <div>Analysis of Semi-Active Suspension / Analytical modelling of Magnetorheological Fluids</div> <div>Undergraduate Thesis (National Institute of Technology Karnataka)</div> <div><ul style="list-style-type: none">Modelling and analysis of Semi-Active Suspension systems using ADAMS-MATLAB Co-simulation Environment.Implemented PID, Skyhook and Ground Hook control for the system and analysed responses of the suspension model for each strategy.Generated parametric Bouc Wen and Modified Bouc Wen models of the MR Fluid, solving for a Multi Objective Optimisation Problem. Implemented parametric models using MATLAB Simulink Environment.</div> <div>Gesture Based Locomotive Robot</div> <div>Mechatronics (National Institute of Technology Karnataka)</div> <div><ul style="list-style-type: none">Built a gesture based locomotive Bot which responds to hand movements, controlled by an Arduino interfaced with LabVIEW environment. Implemented control systems, signal filters and obstacle avoidance strategy.</div>	<div>Jan – March 2016</div> <div>July 2014 – May 2015</div> <div>May – July 2013</div>
LEADERSHIP EXPERIENCE & HONORS	<div>TA – Basic Mechanical Engineering Laboratory (MAE 157)</div> <div>Coordinator – The Ooperai Foundation</div> <div>SPDC Scholarship by the Government of India</div>	<div>March 2016 - present</div> <div>2014 - 2016</div> <div>2012 - 2015</div>