Suhas Kodali

(248) 697-1687 6/01/2018 Kodalis1@msu.edu

U.S. Citizen

Education

- **Michigan State University,** *East Lansing, MI* **Expected Graduation Date:** August 2019
  - B.S., Mechanical Engineering (Concentration in Aerospace) **GPA:** 3.59

Experience

- **Spring/Summer Co-op, MIT Lincoln Laboratory,** *Lexington, MA* **January 2019 - Present**
  - Spearheaded project to design and fabricate high-strain composite, deployable propellers
  - Improved the efficiency of such propellers from ~40% to ~95% of target
  - Developed MATLAB code to optimize the structural shape of propellers for ideal bending properties
  - Oversaw aerodynamic analysis on external payload over entire flight profile
  - Characterized aerodynamic forces on said payload using FUN3D CFD on supercomputing cluster
  - Identified frequencies of vortex shedding and other aerodynamic forces using spectral density plots

- **Chief Engineer & Co-Founder*, MSU Rocketry*,** *East Lansing, MI* **May 2017 – August 2018**
  - Placed 12th out of 100 teams from around the world as a rookie team, and 10th in category of 47 teams
  - Oversaw entire design project, recruited 20 interested members, and delegated subsystem teams to divide work
  - Developed MATLAB design tool and ANSYS Fluent simulation for aerodynamic design of future hybrid rocket motor
  - Manufactured critical components on lathe and mill, manufactured nose cone with a fiberglass layup
  - Pursued college and university boards to successfully fund $8,500 project
  - Launched rocket to 9,708 feet with a goal of 10,000 feet in first ever successful competition flight

- **Engineering Intern, *Facility for Rare Isotope Beams*,** *East Lansing, MI* **May 2017 - June 2018**
  - Designed 20-ton capacity fixtures and other components used in remote handling
  - Engineered and held design reviews for components to be used in construction of facility
  - Ran static structural FEA in ANSYS Mechanical and SolidWorks Simulation, and verified with hand calculations
  - Analyzed binding and contact forces between components using SolidWorks Motion Analysis

- **Research Assistant, *Michigan State University* ,** *East Lansing, MI* **May 2018 – November 2018**
  - Modeled blast wave propagation through blast chamber using LS DYNA
  - Used adaptive refinement to more accurately capture the pressure profile in blast wave

- **Mechanical Team Member*, MSU Design, Build, Fly Team*,** *East Lansing, MI* **2015 - 2017**
  - Designed empennage, nose cone, launch tube, and landing gear for remote control aircraft
  - Performed aerodynamic analyses and calculated design constraints using MATLAB and FEA

- **Research Assistant*, National Superconducting Cyclotron Laboratory*,** *East Lansing, MI* **2016 - 2017**
  - Designed critical structural components to be used in nuclear experiments

Skills/Relevant Coursework

- FUN3D CFD
- NX
- ANSYS Fluent
- CATIA V5
- Autodesk Inventor
- Java
- Python
- SolidWorks Simulation
- LS DYNA
- ANSYS Mechanical
- Turbomachinery
- Composites
- 3D Printer Maintenance
- AutoCAD
- SolidWorks

Leadership and Recognition

- College of Engineering Dean's Honors List **2015 - 2018**
- Ford Blue Oval STEM Scholarship recipient **2015 - 2018**
- Chief Engineer, Co-Founder – MSU Rocketry **May 2017 - August 2018**
- Rocketry Chair – Spartan Aerosystems **May 2017 - 2018**