

VEERENDRA NARALASETTI

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EDUCATION

Texas A&M University

Ph.D., Mechanical Engineering

Advisor: Dr. Aravind Krishnamoorthy

Research: AI/ML integrated multiscale modeling and surface characterization

College Station, TX

January 2023 – Present

Louisiana State University

M.S., Mechanical Engineering

Advisor: Dr. Ingmar Schoegl

Thesis: Micro Combustion of Primary Reference Fuels in Narrow Heated Channels

Baton Rouge, LA

December 2018

Jawaharlal Nehru Technological University

B.S., Mechanical Engineering

Advisor: Dr. Krishna Bhaskar

Project: Residual Strength and Stress Intensity Factor Assessment on Center-Cracked Plate

Kakinada, India

April 2016

RESEARCH EXPERIENCE

Texas A&M University

Graduate Research Assistant, Mechanical Engineering

College Station, TX

March 2023 – Present

- Investigating electronic structure and reactivity of photoexcited and far-from-equilibrium surfaces using *ab initio* simulations.
- Simulating phase evolution and tribofilm formation at surface-lubricant interfaces using reactive molecular dynamics.
- Developing machine learning tools to integrate information from multiple length scales.

Louisiana State University

Graduate Research Assistant, Mechanical Engineering

Baton Rouge, LA

August 2016 – August 2018

- Created LabVIEW programs for data acquisition, automation, and flow control.
- Designed and 3D printed prototypes to develop an experimental setup for a fuel reactor.
- Developed Python scripts for image processing, and data analysis and contributed to a publication at conference proceedings.
- Worked with machine vision cameras, 3D printers, flow controllers, thermocouples, DAQ systems, hydrogen flat flame burner, and pyrometry equipment.

TEACHING EXPERIENCE

Louisiana State University

Graduate Teaching Assistant, Mechanical Engineering

Baton Rouge, LA

August 2017 – May 2018

- Acted as a lab instructor for thermal systems course and supervised 15-20 students.
- Assisted the faculty member with creating assignments, grading papers, and student mentoring for thermodynamics course.

PROFESSIONAL EXPERIENCE

Säzän Inc

Seattle, WA

Mechanical Designer

March 2019 – March 2020

- Created Revit and AutoCAD design layouts from Mechanical/Plumbing markups.
- Performed Equipment selection, duct sizing, static pressure loss calculations, load calculations, pipe sizing, riser schematics, and as-built to CAD conversions.
- Performed case studies, code research, and technical report writing.
- Participated in coordination meetings and worked on construction administration.

Raymond Inc

Conyers, GA

Mechanical Designer

May 2020 – October 2021

- Designed HVAC systems and produced construction documents using Revit and AutoCAD.
- Prepared design analysis narratives, technical reports, and HVAC specifications.
- Performed calculations for the design of air distribution systems, hydronic systems, chilled and hot water systems, and variable air volume systems.
- Worked as a part of the project team from schematic design to the construction phase and facilitated MEP-Architectural-Structural coordination.

COMPUTATIONAL EXPERTISE

Materials simulations: VASP, LAMMPS, SPPARKS, QXMD

Programming and Scripting: C++, Python and MATLAB

FEA and CFD software: Fluent and ANSYS Mechanical APDL

Design: SolidWorks, AutoCAD, Revit

PUBLICATIONS

S. Roohani, V. Naralasetti, P. Sharma, V. Sauer, and I. Schoegl. “Investigation of Combustion Characteristics of Primary Reference Fuels in Heated Microchannels.” WSSCI, Oregon, 2018.

AWARDS & CERTIFICATIONS

Quarterly VIP Award 2021 – Raymond Inc.

Engineer In Training (E.I.T) – Texas Board of Professional Engineers (License 65155).