

Lindsey Nast

16175 Gollihar Road Peyton, CO 80831
(719) 487-5098; lindsey.nast@colorado.edu

Education

University of Colorado Boulder

Doctorate of Philosophy – Mechanical Engineering (Expected completion date May 2025)

University of Colorado at Colorado Springs

Bachelor of Science – Mechanical Engineering (May 2020)

Minors in Electrical Engineering, Aerospace Engineering, and Mathematics.

Engineering GPA 3.82 and Overall G.P.A. 3.77; Graduated with Honors.

Relevant Coursework

- Mechanical Engineering core coursework in Statics, Dynamics, Thermodynamics, Materials Engineering, Strengths of Materials, Engineering Measurements, Dynamic Systems Modeling, Fluid Mechanics, Machine Design, Control Systems, Heat and Mass Transfer, and a rotating academic research seminar.
- Electrical Engineering coursework in Electronics, Linear Circuits, Discrete Mathematics, and Introductory Signals Processing.
- Aerospace Engineering coursework in Aerodynamics, Propulsion, and Fundamentals of Astrodynamic.
- Graduate-level Multiphase Flows and Spacecraft Attitude Control (Fall 2019).

Skills

- Proficient in Microsoft Office Suite,
- Experienced with SolidWorks, MATLAB, C, C++, COMSOL, and ANSYS Fluent, and
- Experienced at machining, 3D printing, and use of laboratory instrumentation.

Project Experience

2019-2020 AIAA Space Systems Design Competition: Lunar Base Camp

- Electrical Systems Team Lead – tasked with designing power systems, communications systems, and power generation for a long-term lunar base camp.
- Published a poster in Colorado Springs Undergraduate Research Journal Vol 13, No 2 (2020).

Senior Design Project: Skeletal Imaging Improvements

- Tasked with development of a system to evaluate the direction of anisotropy of trabecular bone from clinical CT data.
- Developed a test plan and evaluation criteria to evaluate the feasibility of use of existing market software.
- Presented a project summary at UCCS Senior Design Expo, May 2020.

Undergraduate Research Project: Acoustic Emissions of Intracranial Aneurysms

- Tasked with development and interpretation of complex hemodynamic patterns induced by the geometry of an aneurysm branched from an artery.

- Emphasis was placed on modeling turbulent, cyclic, and unsteady flow components to model bruits as recorded in clinical data.
- Presented a summary of research at Mountain Lion Research Day, December 2020.

Employment Experience

University of Colorado at Colorado Springs - Research Assistant

9/2019 – Present

- Performed numerical modeling and analysis of blood flow in intracranial aneurysms.
- Conducted extensive research into the literature on aneurysm detection, hemodynamics, and existing computational fluid dynamics methodology.

University of Colorado at Colorado Springs - Mech-Etronics I Laboratory Instructor

1/2018 – 5/2019

- Instructed students in the construction and analysis of linear electronic circuits.
- Instruction included acquisition and analysis of experimental data, and instrumentation use.
- Assisted primary instructor in grading lab assignments and administering assessments.

Pikes Peak Library District - Computer Helpdesk Assistant

10/2016 – 8/2017

- Assisted library patrons in use of technology, including computer software, computer hardware, and other library systems.
- Performed troubleshooting of patron and library information technology equipment.

Multiple Colorado School Districts - Volunteer Audio Engineer

5/2015 – Present

- Provided sound reinforcement services for over 50 performances.
- Responsible for deployment, configuration, and operation of state of the art sound reinforcement system with 28 wireless microphones.
- Performed system troubleshooting and rapid problem solving.

References

References are available upon request.