



Colorado State University

Assistant / Associate Professor – Aerospace Propulsion

Posting Details

Posting Detail Information

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| Working Title | Assistant / Associate Professor – Aerospace Propulsion |
| Position Location | Fort Collins, CO |
| Posting Number | 202100283F |
| Proposed Annual Salary Range | \$95,000 - \$120,000 |
| Employee Benefits | Colorado State University (CSU) is committed to providing employees with a strong and competitive benefits package that supports you, your health, and your family. Visit CSU's Human Resources website for detailed benefit plan information for permanent full-time and part-time faculty and administrative professional employees in the following University benefit areas: https://hr.colostate.edu/hr-community-and-supervisors/benefits/benefits-eligibility/ and https://hr.colostate.edu/prospective-employees/our-perks/ . |
| Position Type | Faculty |
| Work Hours/Week | 40 |
| Description of Work Unit | As one of the nation's top public research universities, Colorado State University is a land-grant institution, with enrollment of more than 34,000 students. CSU offers 76 undergraduate degree programs, 114 graduate degree programs, 21 professional master's degree programs, and a Professional Veterinary Medicine program. CSU's world-class research and scholarship attract more than \$370 million in research funding every year, ranking second nationally in federal research funding for universities without a medical school. Fort Collins is an attractive community of approximately 170,000 located along the Colorado Front Range at the base of the Rocky Mountains, 65 miles north of Denver. The city is routinely recognized as one of the most desirable places to live in the United States. It consistently ranks high on quality of life measures by numerous publications; see https://www.fcgov.com/visitor/awards for the complete list. The Front Range has developed into a high-tech hub with companies such as Woodward, Hewlett-Packard Enterprise, IBM, Intel, Keysight Technologies, Broadcom, AMD, Xilinx, Ball Aerospace, Lockheed Martin, Raytheon, and Northrop Grumman located in or near Fort Collins. The city offers a pleasant climate with excellent schools and abundant cultural and recreational opportunities nearby. For more information on Fort Collins, check out the City's website: www.visitftcollins.com . |

The Department of Mechanical Engineering (ME) at Colorado State University (CSU) offers a curriculum that integrates exceptional classroom learning and in-depth engineering practice for an unparalleled educational experience. Made up of 46 faculty members, 13 staff members, 1,000 undergraduate students, and 150 graduate students, ME is one of the largest departments on CSU's campus. State-of-the-art labs provide unmatched, hands-on experience to help undergraduate students conceptualize industry environments, and \$7.5M in annual research funding provide groundbreaking opportunities focusing on health, materials, and energy, for graduate students to enhance their educational concentrations. Award-winning faculty offer industry and academic perspective and equip each graduate with the tools needed to obtain leading positions in advanced technology fields. The Mechanical Engineering program at CSU includes majors in both Mechanical Engineering and Biomedical Engineering-Mechanical Engineering; both curricula combine classroom learning with engineering practice. Further information about the Department can be found at www.engr.colostate.edu/me/.

In response to demand from the Colorado Aerospace Industry, the Colorado State University Mechanical Engineering Department offers an Undergraduate Concentration in Aerospace Engineering, a Graduate Certificate with an Aerospace Engineering Specialization, and Master of Engineering and Master of Science degrees in Mechanical Engineering with an Aerospace Engineering specialization. Current faculty have active externally funded aerospace research programs and teach related courses in fluid dynamics, propulsion, aerospace structures, and aerospace materials and manufacturing.

The CSU Mechanical Engineering Department has a long history of aerospace research programs, beginning in 1965 with the [Electric Propulsion and Plasma Engineering Laboratory](https://projects-web.engr.colostate.edu/ionstand/index.php), <https://projects-web.engr.colostate.edu/ionstand/index.php>. Since then, Mechanical Engineering researchers have established a robust [aerospace focused research portfolio](https://www.engr.colostate.edu/me/aerospace/) <https://www.engr.colostate.edu/me/aerospace/> with over \$16M in aerospace-related research grants from sponsors including NASA, the U.S. Department of Defense, the U.S. Department of Energy, United States Air Force, National Science Foundation, Woodward, Lockheed Martin, and others. Many of these activities are focused on propulsion/energy conversion and occur at 100,000 sq ft [Powerhouse Energy Campus](https://energy.colostate.edu/powerhouse/) <https://energy.colostate.edu/powerhouse/>, which includes the Engines and Energy Conversion Laboratory and the laboratories of more than 25 PIs across many disciplines. The Powerhouse is a collaborative ecosystem of researchers, faculty, staff, students, and companies receiving local, national, and global recognition for its interdisciplinary approach, and groundbreaking work on large engine research, development of advanced energy conversion technologies, combustion, sustainable fuels, emissions, sensors/air-quality, and energy focused entrepreneurship.

Tenure/Tenure Track? Yes

% Research 50%

% Teaching 40%

% Service 10%

% Administration 0%

To ensure full consideration, applications must be received by 11:59pm (MT) on 11/19/2021

Number of Vacancies

Desired Start Date

Position End Date

Position Summary

The Mechanical Engineering Department invites applications for a tenure-track faculty member at the rank of Assistant or Associate Professor. Successful applicants should demonstrate a potential to establish and grow a strong externally funded, internationally recognized aerospace propulsion research program. Successful applicants should also be able to mentor, and

internationally recognized aerospace propulsion research program. Successful applicants should also be able to mentor, and advise undergraduate and graduate students, develop and teach courses in aerospace propulsion, and perform service at the college and university levels. This faculty position is a full-time, nine month appointment. Reflecting departmental and institutional values, candidates are expected to advance the Department's commitment to diversity and inclusion.

Aerospace Propulsion research areas of particular interest include: thermal-fluid science and technologies associated with air-breathing, rocket and space propulsion; novel combustion systems, such as supersonic combustion, plasma-assisted combustion, pulse detonation engines; combustion instabilities; advanced diagnostics; sustainable propulsion, such as electric aviation propulsion systems, sustainable aviation fuels and advanced gas turbine concepts; rocket systems and hypersonic flows; nuclear, electric, and chemical space propulsion systems.

Conditions of Employment

Pre-employment Criminal Background Check (required for new hires)

Required Job Qualifications

- PhD degree in mechanical engineering, aerospace engineering, or a closely related field;
- Demonstrated scholarship in the areas described in the Position Summary;
- Ability to teach Aerospace and Mechanical Engineering courses; and
- Demonstrated personal and professional commitment to improving diversity, equity and inclusion in engineering.

Preferred Job Qualifications

Candidates will be considered at the Assistant or Associate Professor level depending on qualifications.

- Experience beyond doctoral training in an academic, government, or industrial setting;
- A documented record of high-quality research impact commensurate with experience;
- Potential to build a robust, externally-funded research program;
- Experience teaching courses in Aerospace and Mechanical Engineering; and
- Evidence of teaching effectiveness in higher education.

Special Instructions to Applicants

Interested applicants must submit a cover letter which addresses how education and professional experiences align with required and preferred qualifications of the position, a current curriculum vitae or resume, statement of research interests, statement of teaching interests and effectiveness, statement of commitment to diversity and inclusion, and the names, email addresses, and telephone numbers of three (3) professional references. References will not be contacted without prior notification of candidates.

Background Check Policy Statement

Colorado State University strives to provide a safe study, work, and living environment for its faculty, staff, volunteers and students. To support this environment and comply with applicable laws and regulations, CSU conducts background checks. The type of background check conducted varies by position and can include, but is not limited to, criminal history, sex offender registry, motor vehicle history, financial history, and/or education verification. Background checks will also be conducted when required by law or contract and when, in the discretion of the University, it is reasonable and prudent to do so.

EEO Statement

Colorado State University is committed to providing an environment that is free from discrimination and harassment based on race, age, creed, color, religion, national origin or ancestry, sex, gender, disability, veteran status, genetic information, sexual orientation, gender identity/expression, or pregnancy in its employment, programs, services and activities, and admissions, and, in certain circumstances, marriage to a co-worker. The University will not discharge or in any other manner discriminate against employees or applicants because they have inquired about, discussed, or disclosed their own pay or the pay of another employee or applicant. Colorado State University is an equal opportunity and equal access institution and affirmative action employer fully committed to achieving a diverse workforce and complies with all Federal and Colorado State laws, regulations, and executive orders regarding non-discrimination and affirmative action. The [Office of Equal Opportunity](#) is located in 101 Student Services.

The Title IX Coordinator is the Director of the Office of Title IX Programs and Gender Equity, 123 Student Services Building, Fort Collins, CO 80523-0160, (970) 491-1715, titleix@colostate.edu.

The Section 504 and ADA Coordinator is the Director of the Office of Equal Opportunity, 101 Student Services Building, Fort Collins, CO 80523-0160, (970) 491-5836, oeo@colostate.edu.

The Coordinator for any other forms of misconduct prohibited by the University's Policy on Discrimination and Harassment is the Vice President for Equity, Equal Opportunity and Title IX, 101 Student Services Building, Fort Collins, Co. 80523-0160, (970) 491-5836, oeo@colostate.edu.

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Any person may report sex discrimination under Title IX to the [Office of Civil Rights, Department of Education](#).

Diversity Statement

Ability to advance the department's commitment to diversity and inclusion through research, teaching and outreach with relevant programs, goals and activities.

Search Contact

Bret Windom, bret.windom@colostate.edu

Essential Duties

Job Duty Category

Teaching and Advising

Duty/Responsibility

- Prepare and deliver to undergraduate and graduate students up to three courses per year in curriculum closely associated with aerospace propulsion research, and
- Advise and mentor undergraduate and graduate students.

Percentage Of Time

40%

Job Duty Category

Conduct and Publish Research

Duty/Responsibility

- Develop proposals and secure grants from aerospace industrial and federal entities, and
- Design, analyze and publish theoretical or applied research results in peer-reviewed publications to the scientific community.

Percentage Of Time

50%

Job Duty Category

Service to Department, College, University and Discipline

Duty/Responsibility

- Serve on committees at departmental, college, and university levels, and
- Serve the scientific/engineering discipline through activities such as committee membership on academic society committees and reviewing for journals and conferences.

Percentage Of Time

10%

Supplemental Questions

Required fields are indicated with an asterisk (*).

Applicant Documents

Required Documents

1. Cover Letter
2. Resume or CV
3. Statement of Research Interests

- 4. Statement of Teaching Interests
- 5. Statement of Commitment to Diversity and Inclusion

Optional Documents

None

References Requested

References Requested

Minimum Requested 3

Maximum Requested 3