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Downloaded On: Nov. 23, 2024 10:21pm Posted Oct. 15, 2024, set to expire Feb. 8, 2025

Job Title Assistant Professor, Mechanical Engineering -

Mechanics of Materials

Department Engineering

Institution Colorado School of Mines

Golden, Colorado

Date Posted Oct. 15, 2024

Application Deadline Open until filled

Position Start Date Available immediately

Job Categories Assistant Professor

Academic Field(s) Mining/Minerals

Mechanical Engineering Material/Metallurgy

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Job Description

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Engineering a world of possibilities

MECHANICAL ENGINEERING - Assistant Professor in Solid Mechanics, Materials and Manufacturing

The Department of Mechanical Engineering (ME) at Colorado School of Mines invites applications for a tenure-track assistant professor position in the area of computational or experimental mechanics, with a focus on the fatigue and fracture and their impact on the performance of electrochemical energy storage and conversion materials. We seek candidates with expertise in multiscale and multiphysics computational modeling or experiments, chemo-elastoplastic mechanics, scale-bridging techniques,



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and/or the application of machine learning to enhance and guide physics-based computations and experiments.

The ideal candidate will contribute to the department's teaching mission by offering courses such as Mechanics of Materials, Advanced Mechanics, Continuum Mechanics, Nonlinear Materials Behavior, and potentially others.

RESPONSIBILITIES

- Establish a robust, externally funded research program in the areas of fatigue and fracture and theirimpact onelectrochemical energy storage and conversion materials.
- Develop and teach undergraduate and graduate courses within the Solid Mechanics, Materials, and Manufacturing curriculum.
- Advise and mentor graduate and undergraduate students.
- Collaborate with interdisciplinary teams on research projects across the department and university.
- Contribute to service roles within the department, university, and broader academic community.

MINIMUM QUALIFICATIONS

- PhD in Mechanical Engineeringor Materials Scienceby thestart date of employment.
- Demonstrated potential for excellence in research in the areas of fatigue and fracture of electrochemical andenergystorage materials.
- Passion for teachingand curriculum developmentwith a commitment to learning and implementing best practices in STEM pedagogy at the undergraduate and graduate levels.
- Commitment to implement best practices in diversity, inclusion, and accessibility to create environments where all can succeed.
- Strong interpersonal and communication skills.

PREFERRED QUALIFICATIONS

- Researchexpertiseinone or moreof the following areas:multiscale andmultiphysicscomputational
 modeling or experiments, chemo-elastoplastic mechanics, scale-bridging techniques, and/or the
 application of machine learning to enhance and guide physics-based computations and
 experiments.
- Experience in advising and mentoring undergraduate and graduate students.
- Priorexperiencewithsecuring external funding for research programs.
- Experience in interdisciplinary research collaboration.

ABOUT THE DEPARTMENT OF MECHANICAL ENGINEERING



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The Department of Mechanical Engineering is focused on education and both basic and applied research that addresses problems of national interest in the areas of thermal-fluid systems, systems/operations engineering, advanced manufacturing, biomechanics, robotics and automation, and solid mechanics and materials. Our undergraduate enrollment in Mechanical Engineering is 2,086, with approximately 22% women and 17.7% underrepresented students. We pride ourselves on a strong project-based spine of undergraduate courses that apply theoretical knowledge and engineering skills in classroom activities and team projects. The ME Department currently has 29 tenured/tenure-track faculty, 16 teaching faculty, 4 professors of practice, and 6 research faculty. We maintain a high-quality, well-funded (R1 status) research program (~\$12M in annual research awards) with strong participation from students at both the graduate and undergraduate levels. Approximately 161 graduate students (24.8% women, 12.4% underrepresented) study within a broad research portfolio. Major specialty programs for undergraduate and graduate students include robotics, automotive engineering, biomechanics, aerospace engineering, energy systems and systems engineering/operations research. More information can be found at mechanical mines.edu.

ABOUT MINES AND GOLDEN, CO

When the world looks for answers, the world looks to Mines.

Colorado School of Mines is a top-ranked public university solving the grand challenges facing our society, particularly those related to the Earth, energy and the environment. Founded in 1874 with specialties in mining and metallurgy, Mines' scope and mission have continually expanded to meet the needs of industry and society. Today, we are the No. 38 public university in the nation, recognized for our innovation and undergraduate teaching in science, technology engineering and math (U.S. News and World Report, 2023).

Mines graduates are change makers, boundary breakers and problem solvers. Since our earliest days, a Mines education has been and continues to be a transformational opportunity, with one of the strongest returns on investment out there for talented STEM students of all backgrounds.

At the same time, Mines faculty members are pushing their fields in new directions, whether that's manufacturing, space resources, quantum engineering, carbon capture or more. Mines was recently classified as a R1 "Very High Activity" research institution by Carnegie, a notable feat for any university but particularly one of our size. That size - roughly 7,000 undergraduate and graduate students - also translates to a close-knit campus community, where employees have opportunities to get involved in multiple ways, continued professional learning is valued and everyone can make an impact.



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Community Alliance groups bring together employees for professional development, networking, cultural awareness and community involvement, and all Mines employees also have access to the wealth of activities happening every day on campus - nationally-renowned speakers, special events and Mines traditions like Engineering Days, just to name a few.

And don't get us started on our hometown. We are located in the heart of Golden, Colorado --with its charming historic downtown and nearby hiking trails - and in close proximity to all that Denver and the Rocky Mountains have to offer. That includes the sunny, high-altitude climate and outstanding outdoor recreation opportunities that make the Denver area an ideal place to live, work and play.

Are you looking for an inspiring, mission-driven workplace where you can contribute to solving the world's problems and educating the next generation of change makers? Are you an individual who values a diverse and inclusive community, where our different perspectives, experiences and cultures enrich the educational and work experience?

Look to Mines.

More information can be found at www.mines.edu.

HOW AND WHEN TO APPLY:Review of applications will begin on November 15th, 2024 and applications will continue to be accepted until the position is filled. Priority will be given to those submitted by January 1st, 2025. The desired start date is August 2025. Applicants will be asked to complete an online application (personal information, demographic information, and veteran status). References will not be contacted until later in the selection process and you will be informed before contact is made. Applicants will notice on the application form, there is only one location to upload all required materials. Further, once submitted, the applicant will not be able to edit their application. Applicants may submit their application as one combined document or as separate documents.

The application must include:

- a curriculum vitae
- a statement of research (up to 3 pages)
- a statement of teaching (up to 3 pages)
- a statement of contributions to diversity and inclusion(up to 3 pages)
- a cover letter expressing interest in the position with names and contact information for at least 3 references.



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Teaching Statement: Mines is committed to high quality, hands-on and project-based learning. Candidates should cover their in-person and hands-on teaching pedagogy experiences. Contributions to DE &I: Candidates should submit a one-page statement on Contributions to Diversity, Equity, Access and Inclusion. Mines is committed to diversity, equity, access, inclusion, and diversity - for more information visit https://www.mines.edu/diversity/.The diversity and inclusion statement should describe your past experience and proposed activities to advance diversity, equity, access, inclusion, and diversity at Mines.

Mines welcomes everyone to our team; in your application, please feel free to note which pronouns you use (For example - she/her/hers, he/him/his, they/them/theirs, etc.). If you would like to request an accommodation at any point in the application or interview process, please contact hr@mines.edu.

Please contact search committee chair, Prof. Mohsen Asle Zaeem, <u>zaeem@mines.edu</u> with questions.

EQUAL OPPORTUNITY:

Mines' commitment to nondiscrimination, affirmative action, equal opportunity and equal access is reflected in the administration of its policies, procedures, programs and activities and in its efforts to achieve a diverse student body and workforce.

Through its policies, procedures and resources, Mines complies with federal law, Colorado state law, administrative regulations, executive orders and other legal requirements to prevent discrimination (including harassment or retaliation) within the Mines campus community and to address potential allegations of inequity or concerns for safety.

Background check is required for this position. Contact Kathleen Feighny in HR at kfeighny@mines.eduwith any application questions.

Accommodations - It is the intent of Mines to comply with the applicable requirements of the Americans with Disabilities Act and the Americans with Disabilities Act Amendments Act of 2008, and their implementation rules and regulations, in support of equal opportunities for qualified applicants with disabilities to promote diversity and inclusion at Mines. To meet this goal, Mines will make reasonable accommodations during the employment selection process and within our working environment.

If you are a qualified individual with a disability or a disabled veteran, you may request a



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reasonable accommodation if you are unable or limited in your ability to access job openings or apply for a job on our site as a result of your disability. You can request a reasonable accommodation by contacting our Human Resources team athr@mines.edu or 303.273.3250 for assistance.

To apply, visit: https://mines.wd1.myworkdayjobs.com/en-US/Mines_Careers/details/Assistant-Professor--Mechanical-Engineering---Mechanics-of-Materials_JR105451

Contact Information

Please reference Academickeys in your cover letter when applying for or inquiring about this job announcement.

Contact

Engineering
Colorado School of Mines

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