Tenure-Track Assistant Professor - Ultra-High Temperature Alloys - Materials Science and Engineering
University of Tennessee, Knoxville

Job Title	Tenure-Track Assistant Professor - Ultra-High Temperature Alloys - Materials Science and Engineering
Department	Materials Science and Engineering https://mse.utk.edu/
Institution	University of Tennessee, Knoxville Knoxville, Tennessee
Date Posted	Oct. 6, 2025
Application Deadline	Dec. 15, 2025
Position Start Date	Aug. 1, 2026
Job Categories	Assistant Professor
Academic Field(s)	Material/Metallurgy
Job Website	http://apply.interfolio.com/174950
Apply Online Here	http://apply.interfolio.com/174950
Apply By Email	

Job Description

Position Description

The UT Space Institute (UTSI) and the Department of Materials Science and Engineering (MSE) in the Tickle College of Engineering (TCE) at the University of Tennessee, Knoxville (UTK), invite applications for a tenure-track assistant professor in the area of ultra-high temperature alloys (UHTAs).

The UT Space Institute (https://www.utsi.edu) is a hub of aerospace and defense research, closely connected with NASA and DoD programs in the region. The MSE Department at UTK is a vibrant and

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rapidly growing academic unit with internationally recognized strengths in ceramics, metals and alloys, polymers, composites, and electronic materials. Our faculty bring world-class expertise in computational modeling, AI/ML for materials informatics, advanced and automated manufacturing and characterization, in-situ and ex-situ probes of nano- and microstructures, and physical and mechanical testing of materials. Together, UTSI and UTK provide an unparalleled environment for impactful research and education. Visit the department website for more information: https://mse.utk.edu/

Research Areas of Interest

We seek candidates with research expertise in ultra-high temperature alloys for high-Mach flight and space system applications. The successful candidate is expected to advance fundamental understanding of how alloy design, processing, and characterization control microstructure, chemistry, and performance of UHTAs under extreme environments, with potential applications in aerospace and defense. Areas of particular interest include, but are not limited to:

· Alloy design and discovery of UHTAs (e.g., refractory alloys, creep- and oxidation-resistant systems).

· Processing science, including advanced manufacturing, powder metallurgy, and directional solidification of UHTAs.

· Thermomechanical and environmental degradation mechanisms (creep, fatigue, oxidation, corrosion).

· In-situ and operando methods for characterizing UHTAs at high temperatures and under extreme conditions.

The successful candidate will be expected to establish a vigorous, externally funded research program in ultra-high temperature alloys, collaborate with UTSI and MSE faculty and with partners at NASA Marshall Space Flight Center, Redstone Arsenal, the Arnold Engineering Development Complex (AEDC), and the aerospace and defense industry, and contribute to the broader materials and aerospace communities through high-quality scholarship and professional service.

Teaching Areas of Interest

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The successful candidate will contribute to the educational mission of both UTSI and the MSE Department at UTK. Teaching areas may include, but are not limited to:

- Materials for Extreme Environments
- Mechanical Behavior of Materials
- Alloy Design and Processing
- Advanced Manufacturing of Metals and Alloys
- Materials Characterization Techniques

Candidates are expected to play an active role in curriculum development, including creating innovative graduate-level courses that directly reflect their research expertise and advance the department’s strategic focus on materials for extreme environments.

About the Tickle College of Engineering

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The Tickle College of Engineering (TCE) is in the midst of an unprecedented period of growth and success, including adding over 30 new faculty to the college as part of ambitious hiring campaigns led by Chancellor Donde Plowman and Dean Matthew Mench. The college has set records in research expenditures, enrollment, incoming student GPA, intellectual property development, and U.S. News & World Report rank in the past three years. New facilities include the state-of-the-art Zeanah Engineering Complex, the University of Tennessee Manufacturing and Design Enterprise (TN-MADE) facility, and the Innovation South building now under construction that will house UTK's Fibers and Composites Manufacturing Facility (FCMF). Faculty in the college leverage the exceptional national laboratory ecosystem surrounding UT, including world class neutron scattering, materials synthesis/characterization, and high-performance computing user facilities at Oak Ridge National Laboratory. An initiative to develop The National Security Prototype Center for complex manufacturing challenges in partnership with the Y-12 National Security Complex was recently announced.

TCE currently has 203 tenure/tenure-track and 79 non-tenure track faculty in its nine academic departments and offers 11 undergraduate, 16 M.S., and 15 Ph.D./DE degree programs. Affiliated with TCE and located in Tullahoma, Tennessee, the UT Space Institute is a hub of aerospace and defense research. The college is also home to eight research centers and three interdisciplinary institutes. With approximately 4,300 undergraduate and 1,500 graduate students, the college sits 29th among public universities in the most recent U.S. News and World Report graduate rankings. Faculty in the college have won 29 early career awards (NSF, DOE, DARPA, AFOSR, and ARO) since 2016. In FY24, the college had annual research expenditures of $113.6M.

About Knoxville

Knoxville, TN is a vibrant city with a beautiful and walkable downtown, active neighborhoods, an effervescent nightlife that includes numerous theaters and museums, a rich live music scene across all genres, and eclectic restaurants. Knoxville is nestled in the foothills of the Great Smoky Mountains, surrounded by lakes and the Tennessee River, providing amazing access outdoor recreation. Knoxville is within easy driving distance of four major metropolitan areas that regularly host larger cultural and entertainment events.

About Tallahoma

Tullahoma, home of UTSI, offers a smaller-community setting near Arnold Air Force Base, with easy access to Nashville, Chattanooga, and Huntsville, creating a unique nexus of aerospace and defense

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activity.

Qualifications

Qualifications

· A Ph.D. in Materials Science and Engineering or a closely related field is required.

· Evidence of recent research and publications on ultra-high temperature alloys (UHTAs).

· Postdoctoral or equivalent research experience is preferred.

· Demonstrated potential for excellence in research and teaching at both the undergraduate and graduate levels.

· Evidence of commitment to excellence in teaching, mentorship, and service.

· A record of high-impact publications and recognition in the materials community is desirable.

Application Instructions

Application Instructions

Applicants should submit the following materials:
• Cover letter addressing qualifications and research/teaching interests (1–2 pages).
• Curriculum vitae, including a complete publication list.
• Statement of research interests and future research plans (1–3 pages).
• Statement of teaching philosophy and interests (1–2 pages).
• Contact information for at least three professional references.

Applications must be submitted through the University of Tennessee’s online application system [insert link]. To receive full consideration, applications should be received before December 15, 2025. Review

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of applications will continue until the position is filled.

For questions and inquiries about this position, please contact the Search Committee Chair, Prof. Katharine Page kpage10@utk.edu.

EEO/AA Policy

Equal Employment Opportunity Statement

All qualified applicants will receive equal consideration for employment and admission without regard to race, color, national origin, religion, sex, pregnancy, marital status, sexual orientation, gender identity, age, physical or mental disability, genetic information, veteran status, and parental status, or any other characteristic protected by federal or state law. In accordance with the requirements of Title VI of the Civil Rights Act of 1964, Title IX of the Education Amendments of 1972, Section 504 of the Rehabilitation Act of 1973, and the Americans with Disabilities Act of 1990, the University of Tennessee affirmatively states that it does not discriminate on the basis of race, sex, or disability in its education programs and activities, and this policy extends to employment by the university.

Requests for accommodation of a disability should be directed to the ADA Coordinator at Equal Opportunity and Accessibility, 1840 Melrose Avenue, Knoxville, TN 37996-3560, by email to eoa@utk.edu, or by phone at 865-974-2498. Inquiries and charges of violation of Title VI (race, color, and national origin), Title IX (sex), Section 504 (disability), the ADA (disability), the Age Discrimination in Employment Act (age), sexual orientation, or veteran status should be directed to the Office of Investigation and Resolution, 216 Business Incubator Building, E J. Chapman Drive, Knoxville, TN 37996-3560, by email to investigations@utk.edu, or by phone at 865-974-0717.

Contact Information

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

Contact Katharine Page

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Materials Science and Engineering
University of Tennessee
1508 Middle Drive; 414 Ferris Hall
Knoxville, TN 37916

Phone Number 8659745336
Contact E-mail kpage10@utk.edu