FSRI Research Engineer

Location: US-MD-Columbia

Job ID

2022-29319

# of Openings

1

Job Category

Engineering

At UL, we know why we come to work.

We have an exciting opportunity for a research engineer to join our growing Fire Safety Research Institute (FSRI) with Underwriters Laboratories.

As a research engineer you will collaborate with other researchers to apply a wide variety of scientific knowledge-based disciplines of fire protection and mechanical engineering with the goal of improving fire safety. You will plan, conduct, analyze, and document experiments to add to the body of scientific knowledge on topics related to hazard based safety engineering. Projects require extensive knowledge of state-of-the-art engineering and instrumentation principals and theories and uses professional concepts and procedures to solve a wide range of research-based problems.

Specifically, this position is focused on addressing concerns related to advancements in experimental measurement and analysis of fire ignition, growth, spread, and
suppression. Current research focus areas include: heat transfer and flame spread at the wildland-urban interface, and wildland firefighting effectiveness and safety. Strong writing skills are a plus.

Underwriters Laboratories’ Fire Safety Research Institute (FSRI) advances fire safety knowledge to address the world’s unresolved fire safety risks and emerging dangers. As part of Underwriters Laboratories Inc., the non-profit organization within the UL enterprise, we are committed to sharing our fire safety insights with everyone to advance UL’s public safety mission of providing safe living and working environments for people everywhere. Through advanced fire science, rigorous research, extensive outreach and education in collaboration with our international network of partners, we impart stakeholders with the information, tools and resources that enable them to make better, more fire-safe decisions that ultimately save lives and property. To learn more, visit FSRI.org.

At Underwriters Laboratories, we wake up every day with a common purpose: to make the world a safer, more secure and sustainable place. Science is in our DNA; we are endlessly curious and passionate about seeking and speaking the truth. We take delight in knowing that our work makes a meaningful contribution to society, and we are proud that our culture is centered on integrity, collaboration, inclusion and excellence. Underwriters Laboratories stands at the forefront of technological advancement, and we are continually challenged to find new ways to foster innovation and positive change. Satisfying? Yes. Exciting? Absolutely!

What you’ll learn & achieve:

As a Research Engineer, you will play a key role in the fire safety research conducted by Underwriters Laboratories as you:

- Conduct literature reviews to analyze fire incident data and laboratory test results in order to determine causes of problems and develop solutions. Evaluate technical specifications and factors related to process or design objectives.
- Initiate, plan, design and execute scientific research, experiments and related activities to ensure timely completion of projects. Evaluate and document your results in formal reports and in peer-reviewed journal articles.
- Apply intensive and diverse knowledge of engineering concepts to specific research tasks. Exercise a high degree of judgment in formulating, evaluating, and correlating broad engineering research concepts and guiding the analysis of unique problems and developing new and improved techniques and methods.
- Conduct research using physical and computational test methods ranging from micro-scale through full-scale.
- Perform measurements with a variety of instruments and apparatus. This includes understanding the principles of operation to ensure appropriate application, functionality of the device, and the calibration status. Keep work area neat, clean, and safe.
- Ensure that all data is backed-up, and is entered into the laboratory information management system (LIMS) or data repository and archived in a timely and accurate manner.
- Stay ahead of changing technologies in the field by reading journals, scientific publications, and attending academic conferences.
- Demonstrates potential for technical proficiency, scientific creativity, collaboration with others, and independent thought.
- Read and follow the Underwriters Laboratories Code of Conduct, and follow all laboratory safety, physical and digital security practices.
- Performs other duties as directed.
UL has COVID-19 protocols and policies in place to ensure the safety of our employees, customers and clients. Effective November 1, 2021, the company mandates that employees are vaccinated against COVID-19 as a condition of employment (except where prohibited by law), subject to reasonable accommodation as required by law.

What makes you a great fit:
The ideal candidate will bring several qualities to the team, including:

- Positive and collaborative work ethic
- Ability to operate at a strategic and operational level, including attention to detail and the ability to perform assigned duties
- Positive and collaborative Interpersonal skills to work effectively with researchers across the organization.
- High degree of curiosity to learn and support the fire safety research mission.
- Problem solving skills with the ability to identify root causes, develop practical solutions, and work in collaboration with other researchers to address technical challenges.
- Excellent written and oral communication and clear presentation skills
- Responsiveness, flexibility, and a sense of urgency, with focus on both results and improvements for the short and long term.

Professional experience and education requirements for the role include:

- MS Degree in Fire Protection or Mechanical Engineering plus six years of related work experience.
- Demonstrated general knowledge of scientific/engineering disciplines.
- Demonstrated knowledge of bench-scale and full-scale fire research practices and instrumentation.
- Demonstrated knowledge of numerical heat transfer modeling in the context of fire exposure.
- Demonstrated knowledge of programing languages for data acquisition, analysis and report development.
- Demonstrated ability to maintain academic and applied knowledge and skills.
- High Proficiency with MS Office, Excel, and PowerPoint
- Proficiency with LaTeX, Git, and Python is a plus.

This position requires travel on the order of 60 days per year.

What you’ll experience working at UL:

- **Mission**: For Underwriters Laboratories, corporate and social responsibility isn’t new. Making the world a safer, more secure and sustainable place has been our business model for the last 128 years and is deeply ingrained in everything we do.
- **People**: Ask any Underwriters Laboratories employee what they love most about working here, and you’ll almost always hear, “the people.” Going beyond what is possible is the standard at Underwriters Laboratories. We’re able to deliver the best because we employ the best.
- **Interesting work**: Every day is different for us here as we eagerly anticipate the next innovation that our customers create. We’re inspired to take on the challenge that will transform how people live, work and play. And as a global company, in
many roles, you will get international experience working with colleagues around the world.

- **Grow & achieve:** We learn, work and grow together with targeted development, reward and recognition programs as well as our very own UL University that offers extensive training programs for employees at all stages, including a technical training track for applicable roles.

- **Total Rewards:** All employees at Underwriters Laboratories are eligible for bonus compensation. Underwriters Laboratories offers a generous 401k matching structure of up to 5% of eligible pay. Additionally, we invest an additional 4% into your retirement saving fund after your first year of continuous employment. We provide Healthcare Reimbursement Accounts and Health Savings Accounts that Underwriters Laboratories contributes to twice per year! Depending on your role, you can work with your manager on flexible working arrangements. We also provide employees with paid time off including vacation, holiday, sick and volunteer time off.

**Learn More:**

Underwriters Laboratories Inc. is a nonprofit organization dedicated to advancing safety science research through the discovery and application of scientific knowledge. We conduct rigorous independent research and analyze safety data, convene experts worldwide to address risks, share knowledge through safety education and public outreach initiatives, and develop standards to guide safe commercialization of evolving technologies. We foster communities of safety, from grassroots initiatives for neighborhoods to summits of world leaders. Our organization employs collaborative and scientific approaches with partners and stakeholders to drive innovation and progress toward improving safety, security, and sustainability, ultimately enhancing societal well-being.

Our wholly owned subsidiary, UL Inc., advances our shared public safety mission. We fund our work through grants, the licensing of standards documents and the business activities of UL Inc., which conducts testing, verification and certification, and provides training and advisory services, along with data-driven reporting and decision-making tools for customers around the world.

To learn more, visit [UL.org](http://UL.org).

**Connect With Us!**

Not ready to apply, or can't find a relevant opportunity? Connect with us to keep informed about the latest UL career opportunities, tailored to your interests.

If you wish to request reasonable accommodation at any time, please email our Talent Acquisition team at Talent.Acquisition@ul.com.

UL is an Equal Opportunity Employer: Female/Minority/disability/Protected Veteran/Sexual Orientation/Gender Identity

All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, protected veteran status, or disability status. If you'd like more information about your EEO rights as an applicant under the law, please review the [EEO is the Law](http://EEO is the Law) and [EEO is the Law Supplement](http://EEO is the Law Supplement).

Please review the following additional documents:

[UL EEO Policy](http:// UL EEO Policy)
Pay Transparency Statement

E-Verify Poster (English)

Right to Work Poster (English)

UL is committed to hiring and retaining a qualified diverse workforce. We are proud to be an Equal Opportunity/Affirmative Action Employer, making decisions without regard to race, color, religion, creed, sex, sexual orientation, gender identity, marital status, national origin, age, veteran status, disability, or any other protected class. U.S. Citizenship is required for most positions.

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