Research Engineer

US-MD-Columbia

Overview

The UL Firefighter Safety Research Institute (FSRI) advances fire research knowledge and develops cutting edge, practical fire service education aimed at helping firefighters stay safe while more effectively protecting people and property.

https://ulfirefightersafety.org/

Contribute to a Safer, More Secure, and More Sustainable World. At UL, we know why we come to work. Thousands of us around the world wake up every day with one common purpose – to make the world a safer, more secure, and more sustainable place to live. We clear the way for our customers to introduce the latest products, technological advances, and systems in an increasingly complex world so they can provide peace of mind to the market. Our integrity is woven throughout our company and shapes the way we approach and deliver our solutions. We are proud that the work we do every day has a meaningful contribution to society. We continue to build upon our legacy of trusted expertise and partnership to keep our communities safe and secure as we march forward into the future. This helps us to sleep better at night, and we are confident that the millions of people we touch rest easier too.

Responsibilities

Under general direction, the Research Engineer performs engineering work in the UL Firefighter Safety Research Institute of Underwriters Laboratories, Inc. including literature studies, experimental design, data acquisition, data analysis, and report writing necessary to execute comprehensive experimental studies. Projects typically require substantial knowledge of state-of-the-art engineering principals and theories, and the use of professional concepts and procedures to solve a wide range of research based problems. A Research Engineer will also need to leverage existing knowledge and experience to help resolve problems in current programs and/or improve existing approaches.

- Identifies fundamental knowledge needed to enhance UL’s thought leadership and support the strategy of the Firefighter Safety Research Institute.
- Applies intensive and diverse knowledge of engineering technology and systems engineering concepts to the specific research tasks. Exercises 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.
- Analyzes experimental data and test results to determine trends and develop solutions.
- Stays ahead of changing technologies, in the field by reading journals and scientific publications, and attending academic conferences.
- Plan, design, and complete experiments as needed and document the results.
- Performs other duties as directed.

Qualifications

- Master’s degree in mechanical, civil, fire protection or other related engineering discipline or 5+ years of experience as an engineer with expertise in thermal fluid sciences.
- Demonstrated general knowledge of engineering disciplines with a background in experimentation and/or computational work.
- Demonstrated ability to maintain engineering based academic and applied knowledge and skills.
- Ability to collaborate with peers through the use of version control infrastructure and work directly with fellow Research Engineers and other team members to complete a project from start to finish.
- Excellent written and oral communication skills required.
- Previous fire, combustion or related laboratory and/or field research experience is desired.
- Fire service experience is preferred.
- Working knowledge of a modern engineering software stack is desired (e.g., LaTeX, Python, R, Github).
- Working knowledge of domain specific tools such as Autodesk Building Design Suite, FDS, and National Instruments LabView is also desired.
- Physical demands include, but are not limited to: standing, reaching, stooping/bending, walking, climbing ladders.
- Must be able to wear a respirator.
- Ability to lift heavy material >60lbs. assisted and unassisted and/or frequently work in difficult positions.
- Ability to travel (up to 20%).