POSITION PROFILE

TITLE: Senior Research Scientist

DEPARTMENT/LOCATION: FM Global, Research Division, Norwood, Massachusetts

Responsibilities
The purpose of this position is to develop new scientific knowledge, engineering technologies, and engineering solutions to problems in fire protection, which can be used and applied by FM Global for the prevention or control of industrial property loss. The primary responsibilities of the position are to plan, conduct, and communicate results of research projects in support of the critical business needs of FM Global.

The position is expected to function as part of a dynamic team of scientists to develop and validate physics-based, practical models of water based fire suppression as related to industrial and commercial fire scenarios. Key areas of research include the Computational Fluid Dynamics (CFD) modeling of fire and its induced flows, water mist, sprinkler sprays, transport of droplets, interaction of water droplet/vapor with gas and solid phase combustion, convective and radiative heat transfer, soot formation and oxidation, and other related combustion and suppression phenomena. The position is also expected to work closely with other team members to design and conduct experiments in the area of water-based fire suppression and analyze results.

The position is responsible for performing technically outstanding work as well as all aspects of project management including project proposals, budget, and reporting. In addition, the position is responsible for communicating and transferring research results for practical use within FM Global and, as appropriate, to outside organizations including the scientific/engineering communities and standards organizations. The position also acts as a consultant to FM Global business units as well as to insured clients.

Qualifications
The position requires a PhD in Mechanical Engineering, Chemical Engineering, or related fields with a strong fundamental background in multiple areas including combustion, fluid mechanics, heat transfer, multiphase flow, applied mathematics, and computational fluid dynamics (CFD). Advanced experience in high-performance computing (HPC) and an understanding of experimental methods in thermal fluids, combustion and/or fire are also welcome. Excellent written and verbal communication skills, as well as demonstrated history of strong team performance are required. A demonstrated ability of solving complex problems, developing new methods and algorithms, or providing innovative solutions to challenging problems is highly desirable. Title and salary are commensurate with qualifications and experience.

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