Research Associate
Position Available at CU DENVER NIST PREP Program

NIST Organization (Div/Group): Div. 671/Advanced Communications Research Group

NIST Grade Equivalent: ZP-III
Based on candidate’s education and experience, the candidate is equivalent to a NIST grade level as indicated above.

Level of Appointment: Postbac
This researcher must start an appointment within 5 years of a bachelor’s degree.

Salary Range Determination: $75k-$115k
Based on candidate’s education and experience, the candidate is equivalent to a NIST grade level as indicated above.

Length of Term:
Start Date: 2023-08-24
End Date: 2024-07-04

Summary of Position: This position is part of the National Institute of Standards (NIST) Professional Research Experience (PREP) program. NIST recognizes that its research staff may wish to collaborate with researchers at academic institutions on specific projects of mutual interest, thus requires that such institutions must be the recipient of a PREP award. The PREP program requires staff from a wide range of backgrounds to work on scientific research in many areas. Employees in this position will perform technical work that underpins the scientific research of the collaboration.

As an engineer/developer, the selected applicant will be part of a team of engineers and researchers conducting research and development (R&D) activities focused on accelerating the development of indoor mapping, tracking, and navigation capabilities for first responders.

The work will entail:

Key responsibilities will include but are not limited to:

- Create relationships with local public safety representatives, develop cooperative research projects related to indoor mapping with mobile lidar scanning systems, execute and report on such projects
- Collect data using a mobile lidar scanning system, process the acquired data
- Collaborate with team members in the development of Augmented Reality software for the display of mapping and tracking data
- Utilize an OptiTrack motion capture system to test infrastructure free indoor localization systems; develop software in support of this system
Utilize a total station theodolite to conduct measurements related to ground truth measurements and georeferencing.
Work with the PSCR Lab Operations team to coordinate and document the deployment of hardware and software capabilities required to support the team's R&D activities.
Other hardware/software tasks as required.
Work independently and as part of a diverse team of researchers and support team members to meet the mission goals of the Public Safety Communications Research Division at NIST.

Qualifications

- A Bachelor’s degree in Computer Science, Engineering, or a related field.
- 1 year of relevant experience.
- Advance knowledge and skill in applying theories, principles, and methods of a technical professional field (in science, engineering, information technology, or mathematics) and of a specialty within that field.
- Ability to define problems, perform background research, develop, and execute a project plan, organize, and evaluate results, and prepare reports of findings.
- Ability to consider precedents and use judgment to research, select, interpret, modify, adapt, and apply available guidelines to specific problems or issues.
- Ability to present ideas and results in a clear, compelling, and persuasive manner.

For possible consideration and to process this position, qualified candidates should send resumes to Professor Hamid Fardì at hamid.fardi@ucdenver.edu.

https://engineering.ucdenver.edu/research/prep-research-program