San Jose State University Research Foundation

<table>
<thead>
<tr>
<th>Position:</th>
<th>Research Associate</th>
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<tbody>
<tr>
<td>DEPARTMENT:</td>
<td>Research will be done under the auspices of the Psychology department at San Jose State University</td>
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<tr>
<td>IMMEDIATE SUPERVISOR:</td>
<td>Project Director</td>
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<td>POSTING DATE:</td>
<td>7/25/2019</td>
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<td>CLOSING DATE:</td>
<td>Open Until Filled</td>
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<tr>
<td>SALARY:</td>
<td>Negotiable based on experience DOQ/E Full Time Exceptional Benefits for Employees and Eligible Dependents: A range of PPO and HMO selections, dental insurance, vision insurance, employer retirement account contribution of 7%, and subsidized post-retirement medical benefits for qualified employees.</td>
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<td>EXEMPT STATUS:</td>
<td>Exempt (Salary)</td>
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GENERAL NATURE OF POSITION:

Do you want to help support NASA’s long distance, long duration missions? We are the Human Computer Interaction (HCI) Group, a team of researchers, designers, and developers working with NASA under to advance the state-of-the-art of technologies for astronauts and flight controllers that support spaceflight mission operations. The research is centered around understanding how best to enable crew autonomy, i.e., astronauts working more independently from flight controllers. Our human systems engineering research is centered around understanding how best to enable crew autonomy. This entails both developing technology aids and evaluating usability and human performance with those aids in controlled, lab environments, analog field sites, and real operational settings. Among the software tools we focus on are scheduling software to manage the complex problem of resource-constrained planning for astronauts, spacecrafts, and robots, integrated sensor network feeding augmented reality systems that guide astronauts to complete intricate procedures, and multimedia communication platforms that are robust to transmission delays and intermittently accessible. San José State University is involved in collaborative research with civil service scientists in the Human Systems Integration Division at NASA Ames Research Center in Mountain View, CA. We seek a full-time employee to conduct research and development of these software tools. Post-doctorate candidates are highly encouraged to apply.

Our work environment is very open, collaborative and welcoming; we are a diverse and tight-knit team that enjoys off-site team building events and activities. We believe that fostering a comfortable workplace for everyone is important! Our team values a healthy approach to our work, from providing adjustable desks to maintaining a balanced work-life schedule. You will contribute to our wide diversity of skills and incorporate new ideas into our environment. You will work with people across NASA, hear about upcoming missions and how we help support them.
ESSENTIAL DUTIES & RESPONSIBILITIES:

a) Work and contribute in all aspects of human systems engineering research. This includes: conducting literature reviews of space human factors and relevant studies, searching publication databases and summarizing research findings; preparing experimental protocols; developing experiment designs; conducting human-in-the-loop experiment/s, completing data post-processing and analysis as well as statistical analysis; and publishing experimental results, using statistical and graphical methods.

b) Work and contribute in the design and development of novel prototype software/hardware platforms for human-in-the-loop experiments studying new concepts of spaceflight operations and state-of-the-art inclusion of new technologies into spaceflight operations.

c) Conduct field research such as contextual inquiry, interviews, in situ observation, need validation, usability testing, and task analysis. Must communicate findings through models and presentations to team and stakeholders, as well as translate user research findings into software designs.

d) Contribute to team at large by writing research and technical proposals, engaging in lab activities, including ordering and organizing supplies and maintaining equipment, and collaborating with other team members.

e) Other duties and tasks as assigned.

INTERPERSONAL CONTACTS:
Reports to the Project Director. Interacts with NASA Ames civil service and Research Foundation research staff, on a daily basis.

QUALIFICATIONS:

1) Education and Experience:
   • Minimum MS/MA in Human Factors engineering, Computer Science, Human Computer Interaction, Aerospace Engineering, Psychology, and/or related field is required. Doctoral degree is preferred.
   • At least 2 years of experience conducting human factors research is required for MS/MA candidates only.
   • At least 1 year of experience working and developing software/hardware prototypes.

2) Knowledge, Skills, Abilities required:
   • Ability to work independently and as a team member on several tasks within a project and across projects.
   • Familiarity with topics related to human performance, task performance, measuring task efficiency and effectiveness, workload, situation awareness, and trust in the context of human-computer/human-automation interaction is required. Knowledge of space human factors is desirable.
   • Familiarity with analysis tools, such as post-processing Python coding, using SPSS, and/or R is required.
   • Familiarity with hardware and/or software development is required in at least two of these domains: simulators, virtual reality, augmented reality (Microsoft HoloLens/Unity/C#, iPad/ARKit 2), Internet of Things (IoT) sensors, microcontrollers (Arduino/Raspberry Pi/ESP8266), wearable sensors/platforms, and networking/data-logging with IoT devices.
   • Demonstrable ability to communicate effectively, participating in conferences, talks, and written publications is required. Proposal development skills highly desired.
   • Knowledge with designing procedures, task execution, and/or scheduling tasks is preferred.
3) **Complexity of Duties:**
- Exercise independent judgement in the managements and completion of a diverse set of concurrent tasks, including leading specific research efforts is required.

4) **Physical Requirements**
- Requires attendance at conferences, requiring domestic and/or international travel (approximately 3-4 times per year).
- Requires travel to different NASA centers and analog field sites, which may be remote (approximately 3-4 times per year).
- Ability to travel domestically and internationally.
- Frequent and ongoing use of a computer terminal to conduct a variety of the more advanced clerical functions and communications.
- Periodic regular lifting, walking, and carrying of files, documents and other related materials.
- Strength, dexterity, and coordination and/or ability to use a computer keyboard and tablets (e.g., iPads), and read a video display terminal on a regular basis.
- Located at the NASA Ames Research Center. Therefore, this employee must meet security qualifications for entrance to the Center.
- Candidate will be a U.S. citizen or Permanent Resident.

5) **BENEFITS:**
   - **The comprehensive benefit package includes:**
     a) Nine Health Insurance Plans to choose from
     b) Free dental and vision for employee and family
     c) Paid Federal & State Holidays
     d) Retirement Plan: 403 (b) employee contribution plan component and a 403 (b) employer contribution component
     e) Vacation and separate sick plans
     f) Employee Discounts
     g) Paid Training and Conferences
     h) Increases based on merit (performance)

**SUPERVISORY RESPONSIBILITIES:**

None, although may be called upon for advice and direction by others.

This position description intends to describe the general nature and level of work being performed by people assigned to this job. It is not intended to include all duties and responsibilities. The order in which duties and responsibilities are listed is not significant.

**APPLICATION PROCEDURE**

To apply for this position, an applicant must submit a formal application for employment, as well as a resume and a cover letter. The applicant may do this via e-mail or by regular mail. The formal employment application is located at [http://www.sjsu.edu/researchfoundation/open/Employment%20Application%20Form_new.pdf](http://www.sjsu.edu/researchfoundation/open/Employment%20Application%20Form_new.pdf)

It may also be obtained from the Research Foundation through its website at [http://www.sjsu.edu/researchfoundation/open/index.html](http://www.sjsu.edu/researchfoundation/open/index.html).
An applicant may also apply in person by visiting the Research Foundation, located at 210 North 4th Street, 4th Floor, San Jose, CA (corner of St. James and North 4th Streets). Please address your formal application, your resume and your letter of interest directly to:

San Jose State University Research Foundation  
Attn: HR/Job Code Research Associate (HCI)  
210 North 4th Street  
San Jose, CA  95112  
E-mail: foundation-jobs@sjsu.edu

**Reasonable Accommodation:**
The San Jose State Research Foundation is committed to providing access, equal opportunity and reasonable accommodation for individuals with physical or mental disabilities in the employment, recruitment, examination, hiring and interviewing processes. If you are a job seeker with a physical or mental disability and require a reasonable accommodation to search, apply, or interview for a job opening or otherwise need a reasonable accommodation during the application and hiring process, please contact us at foundation-jobs@sjsu.edu. In the email message, please indicate your full name, phone number and the type of assistance required. You must not reveal the underlying medical reason for your needed reasonable accommodation or otherwise disclose confidential medical information. You may also call (408) 924-1400 from 8:00am to 5:00pm (PST), Monday through Friday, excluding holidays, to get assistance.

The Research Foundation provides excellent benefits package to benefited employees. Please visit [http://www.sjsu.edu/researchfoundation/humanresources/healthbenefits/index.html](http://www.sjsu.edu/researchfoundation/humanresources/healthbenefits/index.html) to get more details.

Research Foundation employment is separate and distinct from San Jose State University or State of California employment. Research Foundation employees are not employees of either SJSU or of the state of California.

The San Jose State University Research Foundation (SJSURF) is a non-profit auxiliary of San Jose State University. SJSURF is totally self supported. The majority of the organization’s funding comes from the federal government, and other public and private entities. With annual revenues totaling over $65 million, programs managed through SJSURF cover a rich diversity of applied research, public services, and educational related activities.

**SAN JOSE STATE UNIVERSITY RESEARCH FOUNDATION** is an Equal Opportunity Employer and does not discriminate on the basis of race, color, creed, gender, religion, marital status, registered domestic partner status, age, national origin, ancestry, physical or mental disability, medical condition, sex, genetic information, sexual orientation, military and veteran status or any other consideration made unlawful by federal, state, or local laws. It also prohibits unlawful discrimination based on the perception that anyone has any of those characteristics, or is associated with a person who has or is perceived as having any of those characteristics.

A background check (including a criminal records check) must be completed satisfactorily before any candidate can be offered a position with the SJSURF. Failure to satisfactorily complete the background check may affect the application status of applicants or continued employment of current SJSURF employees who apply for the position.