

# San Jose State University Research Foundation

## **Position: Research Associate (Aviation Development)**

<b>DEPARTMENT:</b>	<b>Research will be done under the auspices of the Psychology department at San Jose State University</b>
<b>IMMEDIATE SUPERVISOR:</b>	<b>Project Director</b>
<b>POSTING DATE:</b>	<b>October 15, 2018</b>
<b>CLOSING DATE:</b>	<b>Open Until Filled</b>
<b>SALARY:</b>	<b>\$85,000-115,000 /DOQ/E</b>
<b>EXEMPT STATUS:</b>	<b>Exempt (Salary), Fulltime Benefited</b>

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### **GENERAL NATURE OF POSITION:**

The Psychology Department at San Jose State University is involved in collaborative research efforts with civil service scientists from the Aviation Development Directorate at the NASA Ames Research Center in Mountain View, CA.

The US Army Aviation Development Directorate is looking for an exceptional Research Associate with a focus in aircraft design methodology. The U.S. Army Aviation and Missile Research, Development, and Engineering Center (AMRDEC) leads efforts in the science and technology research and development related to future Army aviation systems. The Concept Design & Assessment Technical Area (CD&A) located at NASA Ames Research Center, Moffett Field, CA is specifically tasked with developing and applying improved methodologies related to the system analysis and design of future Army aviation vehicles. CD&A accomplishes this mission through the application of aircraft conceptual design methodologies to inform the user and acquisition communities with future aircraft conceptual designs.

CD&A also develops methodologies related to optimization and analysis of air vehicle systems to improve conceptual design methodology. An Aerospace Engineer with software development experience is needed to further important research in the areas of aircraft conceptual design, multidisciplinary analysis and optimization of aircraft and system modeling. The ideal candidate has a combination of superb technical, research, and analytical capabilities. The candidate must have a demonstrated ability to get things done quickly and effectively. This person must be comfortable working and collaborating with multiple members of a research team.

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### **ESSENTIAL DUTIES & RESPONSIBILITIES:**

- a) Support CD&A engineers in application of rotorcraft design and analysis software including: NASA Design and Analysis of Rotorcraft (NDARC), comprehensive analysis (e.g. CAMRAD II, RCAS, CHARM), computational fluid dynamics (CFD) and finite element analysis (FEA).

- b) Participate in development of graphical user interface and integration environment for CD&A aircraft design tools. Perform software requirements development, use case creation, beta testing, user training and support.
- c) Demonstrate application of CD&A suite of aircraft design tools to new and novel aircraft configurations and mission requirements. Identify areas requiring further research and development and assist in planning and execution of research activities.
- d) Communicate results of research through briefings, reports, white papers, conference papers, and journal publications.
- e) Participate in programmatic and technical reviews and discussions.
- f) Other duties and tasks as assigned.

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## **INTERPERSONAL CONTACTS:**

Reports to the Project Director. Interacts with US Army civil service and Foundation research staff on a daily basis.

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## **QUALIFICATIONS**

### **1) Education and Experience**

- a) MS in Aerospace Engineering is required.
- b) At least two years of experience in developing and researching Aviation systems OR aircraft design methodology is required. 3 years of experience in aircraft design methodology would be preferred.
- c) Experience developing engineering software, familiarity with at least one of the following software languages: Fortran, Python, Java, or C++ (1 year, required)
- d) Experience with parallel computing applications (preferred).
- e) Experience with aircraft conceptual design, particularly rotorcraft design 1 or more years (preferred).
- f) Experience performing aeromechanical analysis of rotorcraft using comprehensive software and/or CFD. One or more years preferred.
- g) Experience conducting independent research 2 or more years (preferred).
- h) Demonstrated ability to conduct independent research (required).

### **2) Knowledge, Skills and Abilities required**

- a) Strong verbal and written communication skills.
- b) Ability to work both collaboratively as a member of a team and independently as required.

### **3) Physical requirements**

- a) Must be willing to travel domestically and internationally.
- b) Located at the NASA Ames Research Center. Therefore, the employee must meet security qualifications for entrance to the Center, including an Agency background check.
- c) Employee must be a U.S. citizen or Permanent Resident.

### **4) Complexity of Duties**

Exercise independent judgment in the management and completion of a diverse set of tasks.

### **5) BENEFITS**

#### **The comprehensive benefit package includes:**

- a) Ten health insurance plans to choose from
- b) Free dental and vision for employee and eligible dependents
- 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
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**SUPERVISORY RESPONSIBILITIES:**

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

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**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%201-10-18%20pdf.pdf>**

**It may also be obtained from the Research Foundation through its web site at**

**<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, 4<sup>th</sup> 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 **NASA RA AV**  
210 North 4th Street  
San Jose, CA 95112  
E-mail: [foundation-jobs@sjsu.edu](mailto:foundation-jobs@sjsu.edu)

The Research Foundation provides excellent benefits package to benefited employees. Please visit <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.