

**Position Title**

NASA's Pathways Recent Graduate Opportunities  
(Research, Control Systems)

**NASA Announcement Number**

GR13P0031

**OPM Control Number / Status**

336728500 / Posted

<http://www.usajobs.gov/GetJob/ViewDetails/336728500>

**Open Dates**

01/29/2013 - 02/20/2013

**Position Information**

Full-Time / Recent Graduates

**Who May Be Considered**

Current students from education institutions interested in paid opportunities with Federal agencies or recent Graduates from qualifying institutions within two years of degree or certification (Veterans precluded by their military service obligation, will have up to six years to apply) or Presidential Management Fellowships for individuals who have received a qualifying advanced degree within the preceding two years.

See *pmf.gov* (<http://www.pmf.gov>).

**Organization**

RHC0 / CONTROLS & DYNAMICS BRANCH

**Vacancy Type**

Case File

**Salary Range**

\$59,681 - \$71,533

**Pay Plan - Series / Grade (Low, High, Potential)**

GS - 0801 / 11, 12, 13

**Duty Location**

391680035 - Cleveland, OH (1)

**Citizenship Required**

True

## **Job Summary**

The NASA Pathways Recent Graduate Program (RGP) is a formal development program that provides the opportunity for employment in the Federal Government and career advancement. The successful candidate will be placed in a one year formal development program (may be extended up to two years) under the guidance of a mentor and be provided with at least 40 hours of job-related training. Upon completion of the program, Recent Graduates may be converted to a permanent position (or, in some limited circumstances a term appointment lasting 1-4 years). To be eligible for conversion, Recent Graduates must have:

Successfully completed at least 1-year of continuous service in addition to all requirements of the Program; demonstrated successful job performance; and met the qualifications for the position to which the Recent Graduate will be converted.

The Controls and Dynamics Branch at NASA Glenn Research Center is committed to working cooperatively with its space and aeronautics customers to research, develop and demonstrate technologies for advanced control concepts and dynamic modeling that enhance performance, safety, environmental compatibility, reliability and durability of aerospace propulsion systems.

The controls technology areas include fault diagnostics, health management, active combustion control, active stall control, turbomachinery system stability management, intelligent engine control, inlet control, integrated flight/propulsion control, nonlinear and robust multivariable control synthesis techniques, and life extending control. The dynamic modeling work includes modeling of advanced turbomachinery concepts and components, and cross-disciplinary research between controls and computational fluid dynamics (CFD).

## **Comments**

Relocation expenses are not authorized.

Your qualifications will determine your starting salary and grade level. This position will be filled at Step 1 of the GS-11 or GS-12 levels with promotion potential to GS-13. Your application must indicate the lowest grade you will accept.

Applicants must be prepared to provide college transcripts upon request.

To receive consideration, you must submit a resume and answer NASA-specific questions. The NASA questions appear after you submit your resume and are transferred to a NASA web site. If you successfully apply, USAJOBS will show your application status as 'resume received - complete.' If your status is 'Application Started,' you have not successfully applied. Do not rely on a USAJOBS email to confirm successful application only an email from NASA confirms a successful application.

\*\*\*\*To receive consideration, your resume **MUST** contain your complete degree information (i.e., type of degree received, year degree received, G.P.A, and major area of study). You **MUST** include the descriptive title, and number of semester/quarter hours. You are also strongly encouraged to detail any relevant coursework and/projects. If this information is not provided, your education may not be appropriately evaluated and you may lose consideration for this position. Please note that degrees in engineering technology are not considered to be qualifying for this position. If you are selected for this position, you will have to provide an official copy of your transcripts prior to entering on duty. \*\*\*\*

## **Marketing Summary**

NASA, the world's leader in space and aeronautics is always seeking outstanding scientists, engineers, and other talented professionals to carry forward the great discovery process that its mission demands. Creativity - Ambition - Teamwork - A sense of Daring - and a Probing Mind - That's what it takes to join NASA, one of the best places to work in the Federal Government.

## **Key Requirements**

1. Must have received qualifying degree within 2 years of appointment date
2. Applicants must meet all qualification requirements by appointment date
3. Position is Excepted Service-Excluded from the Career Transition Program.
4. Position subject to pre-employment background investigation
5. Applicants must possess at least a Bachelor's Degree or equivalent

## **Total number of openings**

1

## **Major Duties**

The individual selected for this position will serve as Research Control Systems Engineer in the Controls and Dynamics Branch at the NASA Glenn Research Center. The work involves research, design, development, test, and evaluation of all types of open- and closed-loop control systems, and health management systems for use in aerospace systems. Duties include the development and/or implementation of new theories for control and/or health management of aerospace systems; theoretical studies and experimentation of aerospace systems and subsystems to determine their dynamic characteristics and the various control and/or health management parameters. Develops and implements controls system logic on engine system simulations for both real-time and non real-time evaluation. Supports experimental implementation and verification of advanced control concepts on propulsion system components. Duties may also include monitoring contractors engaged in this work.

Please carefully review the General Qualifications and Educational Qualifications sections as they cover important details regarding minimum requirements if you plan on qualifying on both experience and education.

## General Qualifications

NASA Pathways candidates will meet the qualification requirements consistent with NASA and the OPM qualification standards applicable to the position being filled. Where appropriate, candidates will be required to meet NASA's Aeronautics, Scientific, and Technical (AST) qualification standards for the position(s) for which they are applying.

To meet eligibility requirements for this position under the NASA Pathways Recent Graduate Program (RGP), applicants must have completed, a qualifying Bachelors, Masters or Doctorate degree, within the previous 2 years, from a qualifying educational institution. A veteran, who, due to military service obligations was unable to apply within 2 years of receiving their degree, has as much as 6 years after degree completion to apply. In addition to meeting these basic eligibility requirements to apply for the NASA Pathways RGP, individuals must:

- \* Meet the qualification standards of the position.
- \* Be a United States citizen.
- \* Meet any Agency-specific requirements identified in the job announcement (e.g., security).

To qualify for the GS-11: In addition to the basic education requirements, applicants must have at least one of the following:

a. Completion of all requirements for a master's or equivalent graduate degree in an appropriate field.

OR

b. One year of professional experience in an appropriate field that is at least equivalent in difficulty and responsibility to GS-9-level work in the Federal service.

Specialized experience at the GS-9 level is defined as having assisted in the development and/or implementation of new theories for control and/or health management of aerospace propulsion systems; performed theoretical studies and experimentation of aerospace propulsion systems and subsystems to determine their dynamic characteristics, develop computer simulations, and understand relationship of performance with various control and health parameters. The candidate should have knowledge of control theory and control system design or prognostic and diagnostic techniques for aerospace systems. Other required knowledge includes numerical analysis, advanced mathematics, principles of physics, and computer programming. Additionally, knowledge and skill performing control system design work and analysis using Matlab/Simulink tools is required at all levels.

To qualify for the GS-12: In addition to the basic education requirements, applicants must have:

a. Completion of all requirements for doctoral degree (Ph.D. or equivalent) in an appropriate field.

OR

b. One year of professional experience in an appropriate field at least equivalent in difficulty and responsibility to that of the GS-11 in the Federal service.

Specialized experience at the GS-11 level is defined as having performed aerospace engineering studies of considerable scope and complexity with elements or components from related disciplines, such as control systems engineering mathematics, operations research, and computers. The candidate should also have experience in planning and conducting conventional design work on projects with difficult or unusual components and have knowledge of propulsion system dynamics and dynamic modeling.

For all grades, qualifying experience may be either paid or volunteer experience.

### **Educational Qualifications**

Required college majors for applicants qualifying on the basis of undergraduate or graduate education only: Aeronautical Engineering, Aeronautics, Aerospace Engineering, Astronautical Engineering, Astronautics, Astronomy, Astrophysics, Chemical Engineering, Electrical Engineering (except power), Electronics Engineering, Applied Mechanics, Mechanical Engineering, Engineering Mechanics, Nuclear Engineering, Nuclear Engineering Physics, Oceanography, Optical Engineering. Other majors will qualify if the major includes or is supplemented as follows: Biomedical Engineering, Chemistry, Computer Science, Computer Engineering, Mathematics (Pure or Applied), Physics, Applied Physics, Engineering Physics (or other related field), if includes or is supplemented by two courses in solid state physics, materials, optics, statics and dynamics, electricity and electronics, electron optics, kinetic theory of gases, electromagnetic propagation or radiation, semiconductors, vibration, high vacuum theory, information theory or heat transfer.

**FOR THIS POSITION, A DEGREE IN AEROSPACE ENGINEERING, ELECTRICAL ENGINEERING, OR MECHANICAL ENGINEERING IS PREFERRED WITH AN EMPHASIS IN CONTROL SYSTEMS.**

**U.S. EDUCATION:** Institutions located within the United States that have attained accreditation are listed on the U.S. Department of Education's website. To verify your institution's accreditation, please assess this website <http://ope.ed.gov/accreditation/Search.aspx>. A complete listing of all institutions, including those located outside of U.S. territories, may be found in Accredited Institutions of Post-Secondary Education, a handbook published annually by the American Council on Education (ACE).

**FOREIGN EDUCATION:** If you are using education completed in foreign colleges or universities to meet the qualification requirements, you must show that the education credentials have been evaluated by a private organization that specializes in interpretation of foreign education programs and such education has been deemed equivalent to that gained in an accredited U.S. education program; or full credit has been given for the courses at a U.S. accredited college or university. For further information, visit: <http://www.ed.gov/about/offices/list/ous/international/usnei/us/edlite-visitus-forrecog.html>

### **Requirements**

U.S. citizenship is required.

## **How You Will Be Evaluated**

Candidates will be assessed either based solely on basic eligibility requirements or may include a qualitative rating of candidates. NASA Pathways candidates will meet the qualification requirements consistent with the OPM qualification standards applicable to the position being filled. Where appropriate, candidates will be required to meet NASA's Aeronautics, Scientific, and Technical (AST) qualification standards for the position(s) for which they are applying. Veterans' preference applies to all selections made under the Pathways authority in accordance with Part 302 of 5 CFR. Candidates who meet the minimum qualification requirements need not be further evaluated; however, if no further evaluation is done, qualified veterans have absolute preference. If candidates are further evaluated using NASA's category rating process, qualified veterans have absolute preference within the appropriate category.

## **Benefits**

NASA offers excellent benefit programs and competitive salaries. To learn more about pay and benefits at NASA, visit the [NASA Jobs website](http://nasajobs.nasa.gov/benefits/benefits.htm).

## **Other Information**

Any applicant tentatively selected for this position may be required to undergo a pre-employment background investigation. As a condition of employment, male applicants born after December 31, 1959, must certify that they have registered with the Selective Service System, or are exempt from having to do so under the Selective Service Law. Your USAJobs account asks you to assign a name to each of your resumes. When you apply to a NASA position, we will show you the text of the resume you have submitted, but we do not maintain the name you have assigned to that resume. If you wish to keep track of that information, we recommend you make note of it at the time you apply.

## How to Apply

This vacancy is being filled through NASA STARS, an automated Staffing and Recruitment System. NASA partners with USAJOBS in providing a seamless application process. Before you begin the application process, please read the vacancy announcement carefully and have all required information available. You may begin the process of submitting your resume by clicking on the "Apply Online" link.

In order to be considered, you must submit a resume completed on the USAJOBS site. When completing your USAJOBS resume, please remember that NASA limits resumes to the equivalent of approximately SIX typed pages, or approximately 22,000 characters including spaces. You will NOT be allowed to complete the application process if your resume is too long or if your resume was uploaded to USAJOBS from a second source. Additionally, NASA does not accept documents attached through USAJOBS' document attachment feature.

Once you submit your resume to NASA, you will be asked to complete a short series of additional questions. You must finish the entire process in order to have a complete application package and receive consideration. Your answers will not be saved unless you finish the entire application.

You may edit a previously-submitted application, if the announcement is still open. For more information, see the *Applicant Guide*. ([https://resume.nasa.gov/applicant\\_guide.htm](https://resume.nasa.gov/applicant_guide.htm) *target=\_blank* *target=\_blank*).

If you are unable to apply electronically for this position, submit your resume and supplemental questions to: National Aeronautics and Space Administration (NASA), Resume Operations Center, Mailstop: HS50, Marshall Space Flight Center, AL 35812. DO NOT submit your resume directly to the Center advertising this vacancy. Mailed resumes must be received by the close of business on the closing date of the announcement. Hard copy resumes requirements are provided at: *Hard Copy Resume Requirements* (<http://NASAjobs.NASA.gov/howtoapply/hardcopyresumes.htm> *target=\_blank* *target=\_blank*).

If you are a first time applicant, we recommend that you review NASA's *Applicant Guide* ([https://resume.nasa.gov/applicant\\_guide.htm](https://resume.nasa.gov/applicant_guide.htm) *target=\_blank* *target=\_blank*) to ensure that you are providing a complete resume. Failure to submit the supplemental data and a resume that contains all of the required information may result in loss of consideration for positions in which you are interested.

All applications must be received no later than midnight Eastern Time on the closing date of the announcement.

## **Required Documents**

NASA's application process has been specifically developed to ensure that we only ask you for the information we absolutely need to evaluate your qualifications and eligibility. In order to apply for this position, you only need to submit your resume and answer the screening questions and supplemental information. No additional documentation is accepted at the time of application. (For example you need not submit narrative KSA statements; they are not required and will not be evaluated.) In this way we allow you to focus on preparing a resume that best describes your background and abilities. For assistance in preparing your resume, consult the *Applicant Guide* ([https://resume.nasa.gov/applicant\\_guide.html](https://resume.nasa.gov/applicant_guide.html) *target=\_blank*). Nothing further is required until requested by the Human Resources Office. At that point, we may ask you to submit documentation to support statements made in your resume. For example, we may ask you to provide academic transcripts or proof of Federal employment status. If you are claiming veterans' preference, we may ask you to submit proof of veterans' preference (DD-214, and, if claiming 10-point preference, SF-15 plus proof required by that form). If you fail to provide the required documents within the stated time period, we may withdraw a job offer and/or remove you from further consideration.

## **Contact**

Theresa Santos / / Theresa.M.Santos@nasa.gov

## **What to Expect Next**

Candidates for NASA positions are evaluated using our automated staffing and recruitment system, NASA STARS, which compares your skills and experience as described in your resume with the requirements of the position. If you are found to be a highly qualified candidate, you will be referred to the selecting official for further consideration. (In some cases, individuals with priority for special consideration must be considered and selected before other candidates.) Whether or not you are contacted for an interview depends upon the location of the position and the judgment of the selecting official.

At NASA, we pride ourselves on efficient and timely recruitment actions, and you can normally expect to learn the outcome of the selection process in a fairly short period of time. In addition, to ensure that you can measure progress for yourself, NASA provides you with regularly updated information on the status of the vacancy announcement.