

## NASA Postdoctoral Program

### I. Background

The National Aeronautics and Space Administration (NASA) is chartered in the National Aeronautics and Space Act [51 U.S.C. § 20101 et seq.] with, among other objectives, the expansion of human knowledge of the Earth and of phenomena in the atmosphere and space. Working from this Congressional authorization, U.S. National Space Policy directs NASA to advance fundamental scientific knowledge of our Earth system, Solar System, and the Universe. NASA's historic and enduring purpose aligns to the following four major strategic themes: DISCOVER, EXPLORE, DEVELOP, and ENABLE. These four single-words characterize the Strategic Goals located in the Agency's 2018 Strategic Plan and correspond to NASA's missions of scientific discovery of the Earth, of other worlds, and of the cosmos as a whole. NASA's plan further explains that the agency maintains its purpose to serve the American public and to support National priorities through these six elements:

- Fostering New Discoveries and Expanding Human Knowledge
- Global Engagement and Diplomacy
- Interactions with the Nation's Security and Industrial Base Posture
- Economic Development and Growth
- Addressing National Challenges
- Leadership and Inspiration

The NASA Postdoctoral Program (NPP) is an example of a long-running, public program clearly aligned to the agency's strategic plan and contributing to fostering new discoveries, expanding knowledge, promoting economic development, and fostering global engagement, in particular. The NASA Postdoctoral Research Program (NPRP) and the NASA Postdoctoral Management Program (NPMP) comprise the NPP. The NPRP and NPMP Fellowships provide individuals with the opportunity 1) to conduct NASA-inspired, independent research and/or 2) to experience research management professional development relevant to NASA's Mission and Vision.

U.S. citizens, lawful permanent residents (LPR), and foreign nationals who are eligible for a J-1 visa as a Research Scholar or other qualifying visa, participate in on-going NASA research at Host Organizations such as NASA Centers or facilities, NASA-affiliated institutes, Federally Funded Research and Development Centers (FFRDCs), or other institutions determined by NASA. Researchers providing opportunities at these Host Organizations are considered Host Advisors. The NASA Headquarters' Aeronautics Research Mission Directorate (ARMD), Human Exploration and Operations Mission Directorate (HEOMD), Science Mission Directorate (SMD), and Space Technology Mission Directorate (STMD) and other Offices at HQ can participate in NPP, with the majority of the Fellows supported by the SMD. NASA Centers or other facilities may also choose to provide funding for Fellows.

No NPP Fellow incurs any formal obligation to the Government of the United States, nor are Fellows considered to be federal employees of NASA, i.e., civil servants. When accepting the terms of a NPP appointment, a Fellow agrees that the receipt of stipend payments shall not be construed as an employment relationship with NASA.

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The NPP is a major investment that promotes access to and creation of mutually-beneficial free and open scientific data and ideas. NPP places Fellows with NASA employees, Jet Propulsion Lab (JPL) contractors, and other researchers at the Host Organizations. The contractor issues offers to applicants based on Host Organizations guidance that considers NASA's research priorities, quality of applications, and availability of funding. Historically, appointments are made for one year and are renewable.

The total number of NASA Fellows on tenure at present is around 200 with a potential of upto 270. At present approximately 90 new Fellows are selected each year. The number of Fellows on tenure may expand or contract in the event of a natural or other disaster, national emergency, economic stimulus, etc. NASA, not the contractor, determines the maximum number of tenure years for the Fellows. The contractor implements NASA's decisions.

Historically, the maximum duration for continuous tenure is approximately three years. Under certain circumstances, e.g., to enable Fellows to communicate their NPP research via a national or international conference; to compensate for research time lost to a government shutdown or other circumstances beyond NASA's control and on a case-by-case basis NASA does permit tenures to be longer than three years by a few weeks, months or even a fourth or more year. Under special circumstances, on a case-by-case basis and as funding allows, NASA may permit Fellows to have a break in tenure, i.e., extended leave-without-stipend (LWS). The contractor obtains permission from NASA before granting LWS.

### A. The NASA Postdoctoral Research Program (NPRP):

1. The NPRP provides highly qualified postdoctoral researchers the opportunity to conduct research at a specific Host Organization proposed by the applicant.
2. NPRP Fellows are doctoral-level STEM (Science, Technology (e.g., computer science), Engineering, and Mathematics) professionals in disciplines relevant to NASA's mission who can apply their special knowledge and talents to research areas that are of interest to them and to the Host Organization.
3. Two types of Fellows are supported by the NPRP program: Research Fellows, who are within five or fewer years from the date their degree was conferred; and Senior Research Fellows, who are normally five years or more beyond the doctorate, and who have achieved significant professional accomplishments in their field.
4. Fellowships typically are renewable for a year at a time contingent upon demonstrated progress in the selected research topic and availability of funding. Most Fellowships are two years in duration. About 15% of Fellows renew for a third year. Single year Fellowship tenure is less than 5%.
5. Currently, Research Fellows receive a minimum annual stipend of \$63,000. Research Fellows' stipends can vary based on tenure in the program, locality-based cost-of-living adjustments, expertise, etc. Stipends for Senior Research Fellows are negotiated on a case-by-case basis using experience-based criteria, including the number of years beyond the doctoral degree, career achievement (academic rank and professional title), current income, etc. The current approximate maximum senior stipend is \$138,000.

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6. Eligible Fellows receive a relocation allowance modeled after Federal government relocation guidelines at the current not to exceed amount of \$12,000. The maximum amount of this allowance is subject to change.
7. All Fellows shall receive an allowance of at least \$10,000 to support research dissemination and personal professional development, including but not limited to abstract submission fees, conference registration fees, Host Organization-required training, Fellow-suggested training, publication charges, poster costs, and travel.
8. NASA funds a stipend supplement for individual and family insurance plans. Currently, the contractor provides the option to participate in health insurance that meets J-1 visa requirements to all Fellows and their dependents.

### B. The NASA Postdoctoral Management Program (NPMP):

1. The NPMP provides scientists and engineers an opportunity to gain research management or research management policy development experience.
2. Normally, only NASA Headquarters participates as a host site for NPMP. In extraordinary circumstances as determined by NASA Headquarters, non-HQ hosts are permissible. In such a case, the HQ's Funding Source (e.g. SMD) or Contracting Officer's Representative (COR) will communicate the new host site to the contractor.
3. The approximate maximum total tenure duration of an NPMP Fellow is 3-to-4 years. Historically the first year has been spent at a Host Organization as a NPRP Fellow before applying to and being accepted into the NPMP. However, there is no requirement that every NPMP fellow spend time first as a NPRP. The NPMP tenure at NASA Headquarters varies at the discretion of the NASA host and funders.
4. The NPMP Fellow undertakes a meaningful and significant research management developmental program. An advisor at NASA Headquarters ensures that the Fellowship tenure provides a research management development opportunity relevant to Headquarters that furthers the Fellow's future career direction.
5. Policies and procedures for NPMP, total compensation package, renewals, relocation, travel, and miscellaneous allowances, and contractor burden are the same as for the NPRP.