National Aeronautics and Space Administration

Research Opportunities at NASA and Beyond

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Cosmic Origin PAG ERC workshop, Septembet 24, 2026

Who am I?

- 2004: Graduated M.S. in Physics from **University of Milan (Italy)**
- 2006-2010: **PhD in Astronomy&Astrophysics at PennState**
- 2010-2013: Postdoc fellow at UC Berkeley/UC Santa Cruz
- 2013-2016: **NASA Postdoctoral Fellow** at NASA Goddard Space Flight Center
- 2016 - 2019: **Assistant Professor** in Physics and Astronomy at UVI
- 2019-2022: **Physics and Astronomy Instructor at College of Marin**
- **2022-present: NASA Program Scientist in Astrophysics**

In other terms…

- **I am immigrant (J1, F1, J1, 212(B), H1B, GC)**
- **English is NOT my first language**
- **I did a PhD, 2 Postdocs (1 NASA Postdoctoral Program Fellowship)**
- **I was a Faculty at an HBCU (U. of the Virgin Islands)**
- **I was a Faculty at a Community College**
- **I love my students (past, present and "future")**

My Science

- Study the most energetic explosions in the Universe (**Gamma-ray Bursts, GRB**)
- Hunt for the **first stars** ever formed and **Gravitational Waves**
- I utilize the best and largest telescopes on Earth (Keck, Gemini)
- I work with data from dedicated satellite, like Swift (**#1 NASA mission after Hubble**)
- I study the chemical enrichment of the Universe and develop new tools to identify and study new **transient phenomena**

My Current Job

- Focus on programs that respond to the Astro2020 Recommendations on the “State of the Profession”
- Engage with Faculty, student, and researchers across a variety of institutions about NASA funds
- I oversee the Fermi mission
- I am the Deputy Program scientists for TDAMM and UVEX mission

NASA MISSION

NASA serve all Americans and support equality of opportunities for all.

We focus on unleash the true potential of students and researchers regardless of any demographic or geographical location characteristics

One of our goals is to achieve and maintain unquestioned and unchallenged global technological dominance of the US: we must harness the full power of American innovation by empowering entrepreneurs, and reinvigorating our research institutions

There is also a great need to **educate in Science and Technology** a large fraction of the **new generation** (the leaders of our future)

Ref: EOs on “Career and technology Education month”, “Ending illegal discrimination and restoring merit-based opportunity”, “

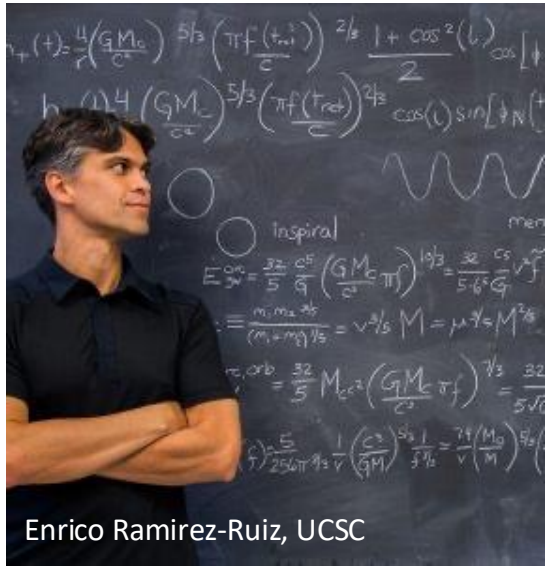
Astronomy and Astrophysics is for EVERYONE

American people have boundless creativity and bold ambition, driven by an indomitable pioneering spirit that propels exploration and discovery

NASA must invest in our people, and lead the world into a new golden age.

Black Americans have been among our country's most consequential leaders[…] and have monumentally advanced the tradition of equality and continue to serve as an inspiration for all Americans

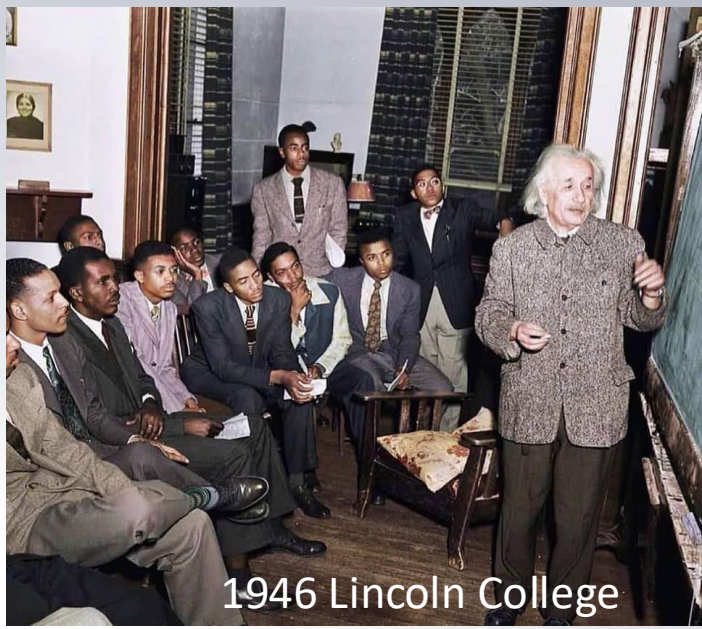
During National Hispanic Heritage Month we honored the tremendous contribution of Hispanic-Americans to our culture, economy and future.



Enrico Ramirez-Ruiz, UCSC

Rebecca Oppenheimer, AMNH

Jaren Ashcraft, UC Santa Barbara

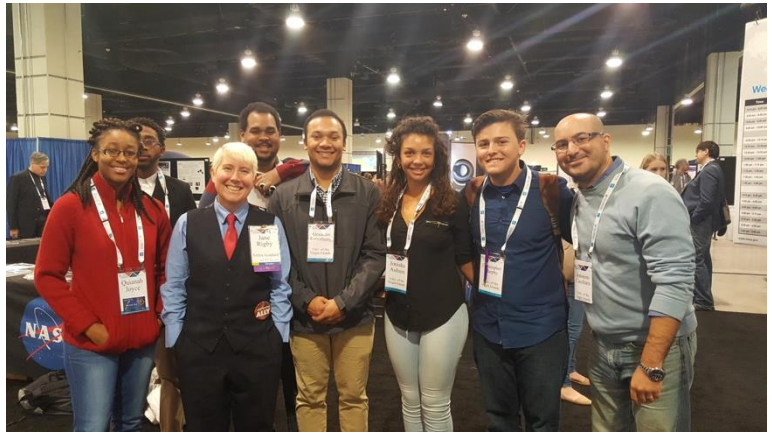


1946 Lincoln College

Ref: EO on President's Council of Advisors on Science and Technology

Let’s talk about NASA Opportunities

What are NASA Internships?



Why should you care?

- Opportunities to learn
- Opportunities to network
- Opportunities to experience possible careers
- Opportunities to travel the World
- Make money!

Research Grants – Student Centered

FINESST: Future Investigator in NASA Earth Science and Space and Technology

- Senior undergrad, **master** and Ph.D. bound students can apply
- **International Students** are eligible
- Grant is $50,000/year for a maximum of three years
- Grant allows students to stay at the institution past-graduation for a year if they finish earlier
- NASA Astrophysics looks for projects in all Astro-areas (theory, observational, technology)
- Project must have a relevance to NASA Astrophysics and use NASA data*
- Deadline usually February

NASA Hubble Fellowship Program (NHFP)

- Post-doctoral Fellowship (PhD graduating students can apply)
- **International Students/PhDs** are eligible
- Fellows receive a $90,000/year stipend + generous research budget
- Fellows are hosted at a US Institution of their choice
- NASA Astrophysics looks for projects in all Astro-areas (theory, observational, technology)
- Deadline usually in October every year

NASA Hubble Fellowship Program in Action

AMP-UP: The Hubble fellows, for the past few years have been “band” together (current and past fellows) and/or with other named fellowships recipients (e.g. 51 PegB) to lower the barrier of accessibility to postdoc positions (both standard post-PhD and Fellowships).
They created the **A**STRONOMY **M**ENTORSHIP **P**ROGRAM FOR **U**PCOMING **P**OSTDOCS (AMP-UP), designed to pair graduate students across the World with fellows in a year-long mentoring effort to prepare them for postdoc/fellowship applications

NHFP On Tour

Since Fall 2025 NASA, HQ has been encouraging NHFP Fellows to be ambassadors of NASA Astrophysics Science, showcasing their research, they careers, and their passions with students and faculty at different type of institutions (R2/R3, HBCU, HSI). They give remote talk or visit these places. Email me if you are interested.

Research Grants – Faculty Centered

In order to level the plain field, when reviewing we implemented the **Dual Anonymous Peer Review Process (DAPR)**.

The goal is to minimize the unconscious bias that reviewers have when seeing proposals from well renowned institutions: proposals must be written in ways such that names and references are anonymous, so that the review **panel first focuses on the science merit** of the proposed projects and not on the individuals who will pursue the project.

SMD-Research Initiation Award (RIA): The program has two principal objectives:

1. Enable investigators with no prior or recent Federal funding to pursue research at institutions that have not commonly proposed or applied to the SMD ecosystem to initiate activities that, over the course of a two-year period, will provide the foundation for a competitive, sustainable, and productive program of research.
2. Enable undergraduate students affiliated with the proposing investigator to perform cutting-edge research in an SMD-relevant field. Funding for undergraduate students is a required element of the proposed project.
3. $300,000 up to 24 months.

F.19 Collaborative Opportunities for Mentorship, Partnership and Academic Success in Science (COMPASS):

The main focus is to create a partnership between **non-R1** institution faculty and NASA Centers personnel (mentors) to initiate a research project that will benefit the faculty and the students. See examples

New NASA Program Element: ROSES-Collaborative Opportunities for Mentorship, Partnership and Academic Success in Science (COMPASS)

Funds research collaborations between NASA Centers or Facilities and academic institutions

Prioritizes academic institutions that have not traditionally been funded by NASA

Prioritizes research that reflects and advances goals of the Science Mission Directorate, NASA, and the Administration

Creates student research and professional development opportunities to help build the United States' STEM workforce

1- and 2-year grants
Budgets capped at $200k/yr
Proposals due: TBD, ROSES-XX

Other opportunities

- **NASA Post-Baccalaureate program (at GSFC):**
  https://cresst2.umd.edu/opportunities/Postbac_program_Opp.html

- **NASA Pathways:**
  - Designed for 16+ year old US Citizen
  - Be enrolled as half/full-time students
  - GPA 2.9 or above
  - https://www.nasa.gov/careers/pathways/

- **NASA Postdoctoral Program Fellowship**
  - 2 years fellowship at a NASA Center (3rd year not guaranteed)
  - Application must be coordinated with a NASA person – advisor
  - Must connect with ongoing NASA mission/research avenues at a Center
  - 3 deadlines a year
  - https://npp.orau.org/

Thank you!

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