



## Student Opportunities at JPL

Dr. David H. Atkinson, David.H.Atkinson@jpl.Caltech.edu  
Jet Propulsion Laboratory, California Institute of Technology  
9 November 2018



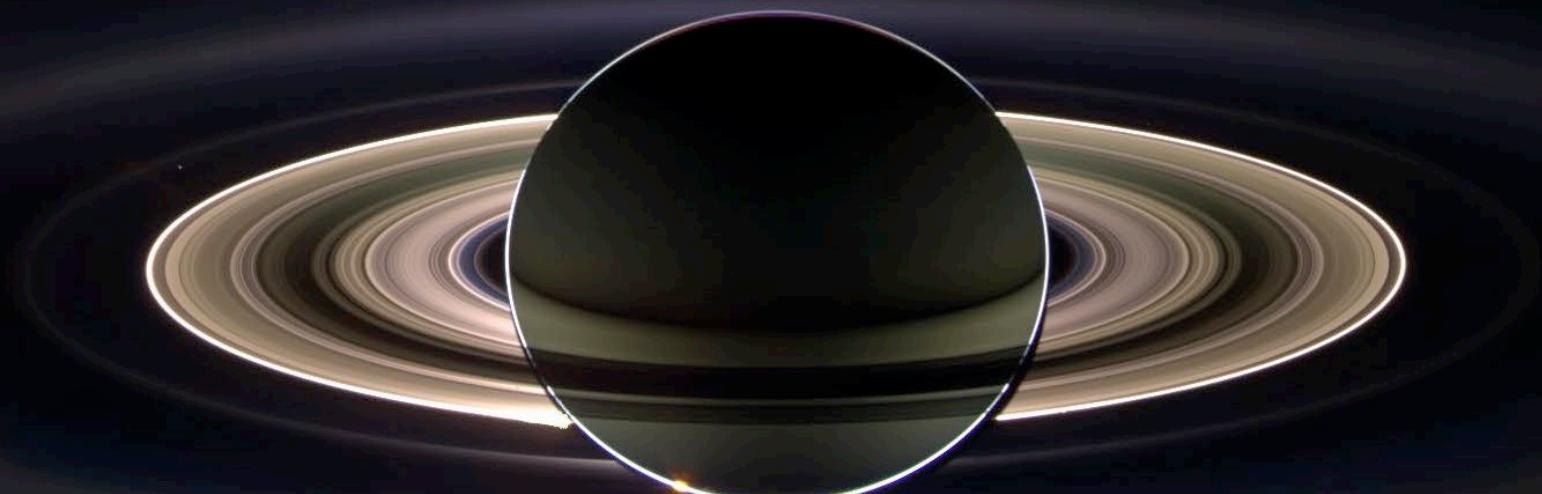
**Jet Propulsion Laboratory**  
California Institute of Technology



Photo Credits: NASA



Photo Credits: NASA





*“The Earth is the cradle of the mind,  
but one cannot live in the cradle forever.”*

- K. E. Tsiolkovsky

# How to get involved!

# Student Internships

“Dare Mighty Things”

<https://www.jpl.nasa.gov/opportunities/>

<https://www.jpl.nasa.gov/edu/intern/>



# Student Internships

An internship at NASA's Jet Propulsion Laboratory is a chance to do the impossible.

Our internships put you right in the action with the scientists and engineers who've helped make JPL the leading center for robotic exploration of the solar system.

Our programs are as varied as the places we explore, with opportunities for undergrads, graduate students, postdocs and faculty.

Interns partner with world-renowned scientists and engineers on some of the most important research and space missions exploring Earth, Mars, the outer solar system and worlds beyond.

# Studying How Life Got Started on Earth

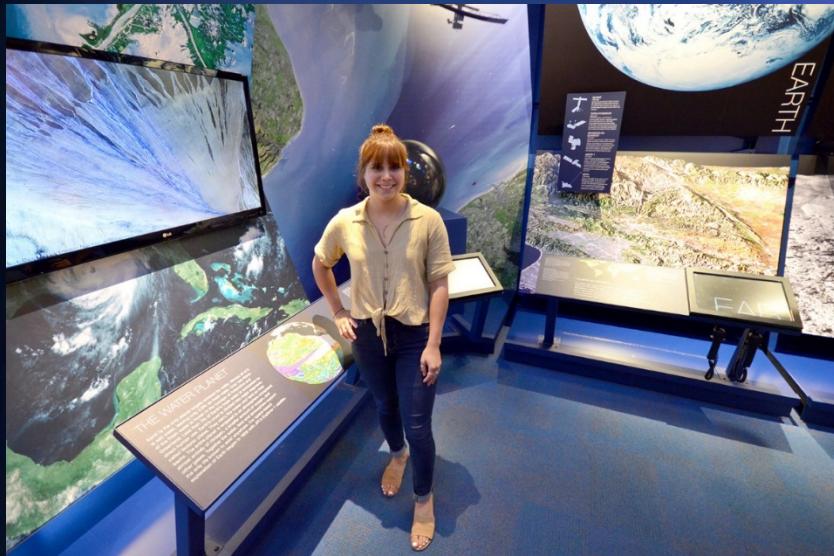
As a high-school student, Erika Flores helped test the arm of the Phoenix Mars Lander.

As a Chemical Engineering undergraduate at Cal Poly, Erika worked with JPL scientists studying how life began on Earth, helping produce amino acids, central to life processes, under conditions found on early Earth.



Now a graduate student in environmental science, Erika helps the Mars 2020 rover team keep the spacecraft clean of microbes that could hitch a ride to the Red Planet.

# Rolling on the Science of an Atmospheric River



As a JPL intern from the University of California in Merced where she studies Earth Sciences, Vicky Espinoza published her first science paper on the effects of climate change on global atmospheric rivers which bring an onslaught of snow and rain to affected areas and have serious implications for people who live there.

# The Art of Planning to Return the First Samples From Mars

Omar Rehman, a transportation design major, helps bridge the gap between form and function in his JPL internship.



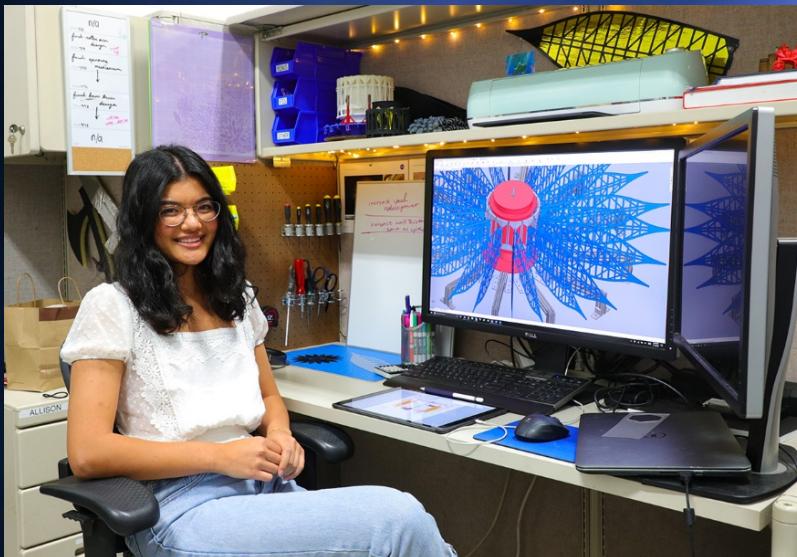
The Mars 2020 rover will carefully select rock and surface material samples to store in sealed tubes for potential return to Earth as part of a future mission concept.

A team at JPL is taking an in-depth look at how to accomplish the Earth sample return.

Using his transportation design background, Omar uses visual arts to help the team come up with ideas for the sample-return vessel.

# Imaging Planets Beyond Our Solar System

Starshade is a giant, precisely shaped structure that can unfurl from a small package and fly in perfect sequence with a space telescope. The goal of Starshade is to suppress the light from distant stars so scientists can observe the surrounding planets. More than 40 interns have worked on Starshade over the past seven years.



Starshade intern Christopher Esquer-Rosas uses origami skills to help a full-scale model of the giant sunflower-shaped structure unfurl.

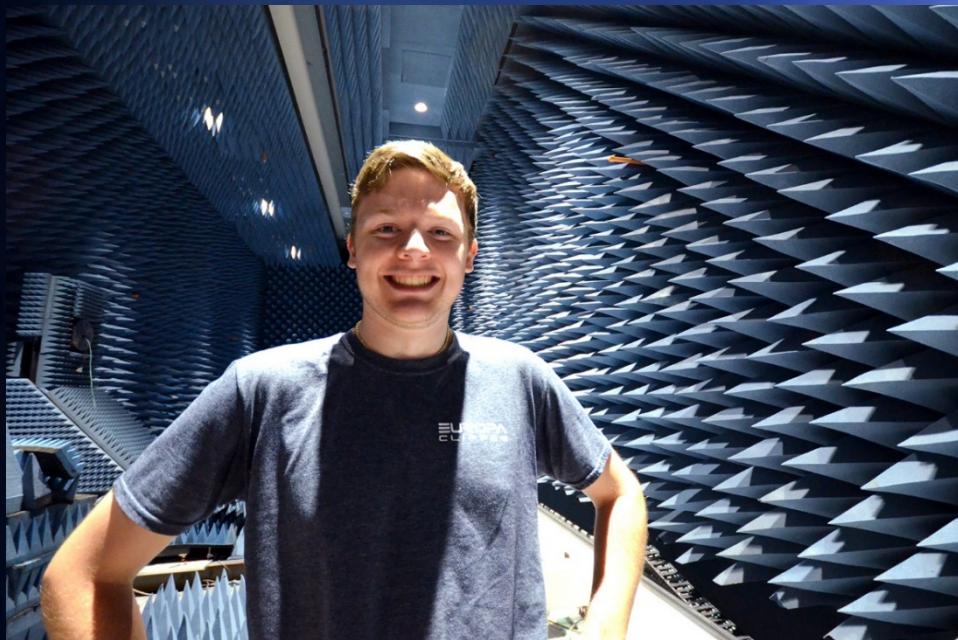
Intern Allison Ayad, a mechanical engineering student at Pasadena City College, is creating a working miniature model of starshade to help optimize the design.

# Searching for Signs of Life Beyond Our Solar System



JPL intern Tre'Shunda James, a physics and chemistry major from Occidental College creates models of extrasolar planets to help better understand potentially habitable worlds.

# Preparing to See the Unseen on Jupiter's Moon Europa



A radar on NASA's Europa Clipper spacecraft will be key to finding out if Jupiter's moon Europa is indeed an ocean world.

JPL intern Zachary Luppen, an astronomy and physics major from the University of Iowa, is creating ways to test the Europa Clipper radar to help peer below the surface of the icy moon.

# Starting From the Ground Up



Seeing what it takes to build a mission from the ground up, JPL intern Joshua Gaston, an aerospace engineering student from Tuskegee University is working with JPL's project formulation team to help send tiny satellites called CubeSats beyond Earth's gravity.

# Finding Life on the Rocks



To prepare her team to analyze the first sample returned from Mars in the future, JPL intern Amanda Allen, Earth science major at UC San Diego, is exploring what the tiniest and rarest fossils can tell us about ancient life on Earth – and beyond.

# From Island Life to Spotting Asteroids for NASA



Lean Teodoro grew up on the remote island of Saipan in the middle of the Pacific Ocean. Lean is now a geophysics student at the University of Hawaii and a 2018 JPL summer intern.

This summer, Lean helped search for asteroids with NASA's NEOWISE the Near-Earth Object asteroid-hunting portion of the Wide-field Infrared Survey Explorer (WISE) mission team.

# Getting New Perspectives on a Potential Ocean World

JPL intern Maya Yanez, undergraduate student at the University of Colorado at Boulder, is trying to find out what the first spacecraft to land on Jupiter's ice-covered moon Europa might encounter.



As part of a team designing a Europa Lander to explore the Jovian moon to search for biosignatures of past or present life, Yanez is combing through images, models, analogs, to characterize a spot that's "less than a quarter of a pixel on the highest-resolution image we have of Europa."

November 9, 2018



# Year-Round Internship Program

The JPL Year-Round Internship Program offers part-time and full-time internship opportunities at JPL during summers and the academic year to undergraduate and graduate students pursuing degrees in STEM fields.

Students are partnered with JPL scientists or engineers and complete designated projects that contribute to NASA and JPL missions and science.

## **Requirements:**

- Undergraduate and graduate students pursuing degrees in STEM disciplines.
- Open to students whose colleges and universities allow them to pursue off-campus, independent study during terms or semesters of the academic year as well as summers
- Minimum 3.0 GPA (3.5 preferred)
- Open to U.S. citizens and legal permanent residents (LPRs)

## **Details:**

- Participants receive a weekly stipend. Stipend amounts vary and are subject to change
- Housing and travel allowances are provided only to program participants residing outside the 50-mile radius of JPL
- Internship periods are flexible
- Full-time and part-time opportunities available

# Summer Internship Program

The JPL Summer Internship Program offers 10-week, full-time, summer internship opportunities at JPL to undergraduate and graduate students pursuing degrees in STEM fields.

Students are partnered with JPL scientists or engineers and complete designated projects that contribute to NASA and JPL missions and science.

## **Requirements:**

- Undergraduate & graduate students pursuing degrees in STEM disciplines
- Minimum 3.0 GPA
- Open to U.S. citizens and legal permanent residents (LPRs).
- Students must be available full time (40 hours per week) for at least 10-weeks in the summer.

## **Details:**

- Summer internships begin in May and June, on the first business day of each week.
- Participants receive a weekly stipend. Stipend amounts vary and are subject to change.
- Housing and travel allowances are not provided, however, program participants have the option of living in the Caltech dormitories for the summer.

# Recent Graduates

<https://www.jpl.nasa.gov/opportunities/>

<https://www.jpl.nasa.gov/opportunities/students/>

The screenshot shows a list of job postings from the JPL website. The header includes the NASA and JPL logos, the text "Jet Propulsion Laboratory California Institute of Technology", and a "MENU" button. Below the header is a search bar and a table of job postings.

**Click Column Header to Sort**

Requisition ID	Posting Title	Related Academic Majors	Requisition Post Information* : Posted Date
2017-8269	<a href="#">Systems Engineer I</a>	..	4/19/2017
2017-8179	<a href="#">Technical Information Compliance Analyst I</a>	..	3/28/2017
2017-8160	<a href="#">Engineering Undergraduate Student III</a>	Electrical Engineering, Physics, Systems Engineering	3/27/2017
2017-8115	<a href="#">Data Scientist I - Artificial Intelligence Group</a>	Computer Science	3/17/2017
2017-8089	<a href="#">Research Scientist II, Ice Sheet System Model (ISSM)</a>	Earth Sciences	3/22/2017
2017-8059	<a href="#">NASA JPL Software Engineer I</a>	Computer Science, Software Engineering	3/13/2017
2017-8058	<a href="#">NASA JPL Software Engineer II</a>	Computer Science, Information Systems, Software Engineering	3/13/2017
2017-8033	<a href="#">Flight Software Engineer I</a>	Computer Science, Electrical Engineering	3/7/2017
2017-7983	<a href="#">Research Scientist II, Geophysics and Planetary Geosciences Group</a>	..	2/28/2017
2017-7963	<a href="#">Planetary Protection Engineer I</a>	..	2/27/2017
2017-7945	<a href="#">Resource Analyst I</a>	Accounting, Business Administration	3/2/2017
2017-7920	<a href="#">Engineering Applications Software Engineer II</a>	Computer Science, Mathematics, Systems Engineering	4/18/2017
2017-7918	<a href="#">NASA JPL Software Year-Round Internship</a>	Computer Science, Mathematics, Systems Engineering	4/18/2017
2017-7896	<a href="#">Parts Engineer I</a>	Electrical Engineering	2/6/2017
2017-7820	<a href="#">Scientist II, WFIRST Coronagraph Scientist/Instrumentalist</a>	..	1/19/2017
2017-7786	<a href="#">Subcontract Manager 1, Commercial Subcontracts &amp; Strategic Sourcing Section</a>	Accounting, Business Administration, Finance, Supply Chain	1/25/2017
2016-7680	<a href="#">Optical Engineer - New Grad</a>	Computer Science, Electrical Engineering, Optical Engineering, Systems Engineering	2/22/2017
2016-7523	<a href="#">Software Engineer II - Data Services Group (397G)</a>	Computer Science, Software Engineering	4/7/2017
2016-7454	<a href="#">Thermal Engineer I</a>	Mechanical Engineering	10/11/2016
2016-7014	<a href="#">Flight Software Engineer II - Artificial Intelligence</a>	..	10/12/2016

Page 1 of 2

**Use the options below to search for opportunities:**

Keywords:

Category: (All)

Address bar: de05ee767802e6...jpeg, e8e7af03426685e...jpeg, a3ef86b5f388124...jpeg, aa04b2734dd19b...jpeg, 83aa7a58dc9c6...jpeg, eabc9376ce787e...jpeg, 511e9ff5a4ad4ac...jpeg, Show all

System tray: 1:48 PM, 4/22/2017

# Postdoctoral Opportunities

<https://npp.usra.edu/opportunities>

<https://www.jpl.nasa.gov/opportunities/>



# For questions on opportunities, please contact

West Virginia Space Grant / NASA EPSCoR:

<http://www.wvspacegrant.org/>

Phone: (304) 293-4099

Dr. David H. Atkinson: [David.H.Atkinson@jpl.Caltech.edu](mailto:David.H.Atkinson@jpl.Caltech.edu)

Ms. Linda Rodgers, JPL University Affairs Officer: [Linda.L.Rodgers@jpl.Caltech.edu](mailto:Linda.L.Rodgers@jpl.Caltech.edu)

# Questions?