



# Aerospace Engineer/ Planetary Scientist/Project Manager



**Dr. Kelly Snook**  
Aerospace Engineer/  
Planetary Scientist/  
Project Manager

NASA Ames Research Center

I make computer models of Mars and then compare them to the actual data that we get from the planet. I also do field work, which means I travel to different parts of the world to carry out my research. I recently traveled to the Canadian Arctic in order to test different ways to explore Mars, since they share some similarities. I tried on new space suit designs, and rode around on all-terrain vehicles to simulate being on Mars. Because I am a project manager, I also have to do a lot of organizing and paperwork!

## Areas of expertise:

- Mars atmosphere
- Manned Mars exploration

## How I first became interested in this profession:

I really wanted to go into music, but I thought success might depend more on how lucky I was than on how hard I worked. One day, I wrote all the professions I could think of on pieces of paper, and I drew engineering out of a hat. Aerospace engineering sounded interesting. I decided to stick with it, and that became my job.

## What helped prepare me for this job:

Working at NASA while doing my Ph.D. work gave me an idea of what working here would be like; I also met many of the people I'd be working with in the future. Hands-on and project-oriented courses have also been very useful in preparing me to build and design.

## My role models or inspirations:

One of my role models was my Ph.D. advisor, who guided me through the process of starting to work here. Another major inspiration is Albert Einstein, who had a balanced approach to science and spirituality. I am also very inspired by my religion, the Baha'i Faith: its teachings of harmony between science and religion have motivated me to do well in my work, and through my work, to make the world a better place.

## My education and training:

- B.S., Aerospace Engineering, University of Southern California
- M.S. and Ph.D., Aeronautics and Astronautics, Stanford University

## My career path:

- One year co-op at the Aerospace Corporation while an undergraduate
- Two years as an aerospace engineer at NASA Ames
- Five years as a consultant at NASA Ames
- Eight years as a research/teaching assistant at Stanford University

## What I like about my job:

I like to think about how my work fits into the greater picture of human endeavor and progress. I also enjoy having a job that is exciting and inspiring, and that allows me the freedom to do what interests me and the flexibility to do it how and when I want to.

## What I don't like about my job:

I don't like spending hours filling out forms, or doing other things that take me away from the task I'm here to do. Looking for the money to support my research can also be time-consuming and frustrating.

## My advice to anyone interested in this occupation:

Be persistent. Get a good foundation in math, physics, biology, and geology. Don't lose sight of the things that inspire you, so you'll always be motivated to do your job well. Make sure to take public speaking and technical writing courses, in order to get other people interested in your work and ideas.

## Additional Resources:

- American Institute of Biological Sciences  
<http://www.aibs.org>
- American Physiological Society  
<http://www.faseb.org/aps>
- American Society for Biochemistry and Molecular Biology  
<http://www.biophysics.org/biophys/society/biohome.htm>
- American Society for Microbiology  
<http://www.asmsusa.org>
- Astrobiology Summer Academy  
<http://academy.arc.nasa.gov/>
- Biotechnology Industry Organization  
<http://www.bio.org/welcome.html>
- Earth to Orbit: Engineering Design Challenges  
<http://eto.nasa.gov/>
- Education Pays Calculator  
<http://www.educationpays.org/calc.asp>
- Graduate Student Researchers Program  
<http://spacelink.nasa.gov/Instructional.Materials/NASA.Educational.Products/Graduate.Student.Researchers.Program.Brochure/.index.html>
- MATHCOUNTS Competition  
<http://mathcounts.org/>
- Minority University Research and Education Programs  
<http://mured.nasaprs.com/>
- NASA Cooperative Education Program for college students  
<http://spacelink.nasa.gov/Educational.Services/NASA.Education.Programs/Student.Support/NASA.Cooperative.Education.Program/.index.html>
- NASA Jobs  
<http://nasajobs.nasa.gov/>
- NASA Office of Life and Microgravity Sciences and Applications  
<http://www.hq.nasa.gov/office/olmsa/>
- NASA SHARP Internship Program for high-schoolers  
<http://www.mtsibase.com/sharp/>
- NASA Student Employment  
[http://nasajobs.nasa.gov/stud\\_opps/employment/index.htm](http://nasajobs.nasa.gov/stud_opps/employment/index.htm)
- NASA Student Involvement Program student contests  
<http://www.nsip.net/index.cfm>
- Order NASA career videos such as "Engineers: Turning Ideas into Reality," "Careers: Aerospace Engineer" or "Reaching for the Stars" from NASA CORE.  
<http://core.nasa.gov>
- Revolutionary Vehicle Concepts and Systems student competition  
<http://avst.larc.nasa.gov/competitions.html>
- Student's Guide to Astrobiology  
<http://www.astrobiology.com/student.html>
- Tech-Interns.com  
<http://www.tech-interns.com/>

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Thank you.

