Hello everyone!

- My name is Manolis and I study Astronomy at Cornell University.
- I am from Greece, and that’s why I have a funny accent! 😊

I will talk to you about what is like to be a professional scientist or work in research...
Science is cool!
Astronomy is even cooler!!
But science is also hard...

\[
\ddot{\mathbf{r}}_i = \sum_{j \neq i} \frac{\mu_j (\mathbf{r}_j - \mathbf{r}_i)}{r_{ij}^3} \left[ 1 - \frac{2(\beta + \gamma)}{c^2} \sum_{l \neq i} \frac{\mu_l (\mathbf{r}_l - \mathbf{r}_i)}{r_{ij}^3} \right] \\
+ \gamma \left( \frac{s_i}{c} \right)^2 + (1 + \gamma) \left( \frac{s_i}{c} \right) - \frac{2(1 + \gamma)}{c^2} \\
- \frac{3}{2c^2} \left[ \frac{(\mathbf{r}_i \cdot \mathbf{r}_j)}{r_{ij}} \right]^2 + \frac{1}{2c^2} (\dot{\mathbf{r}}_i \cdot (\mathbf{r}_j - \mathbf{r}_i)) \\
+ \frac{1}{c^2} \sum_{j \neq i} \frac{\mu_j}{r_{ij}^3} \left\{ [\mathbf{r}_i \cdot (2 + 2\gamma) \ddot{\mathbf{r}}_i - (1 + 2\gamma) \dot{\mathbf{r}}_j] \right\} (\dot{\mathbf{r}}_i - \dot{\mathbf{r}}_j) \\
+ \frac{3 + 4\gamma}{2c^2} \sum_{j \neq i} \frac{\mu_j \ddot{r}_j}{r_{ij}}
\]
...and not very social
So, How do I know if I want to become a scientist?
How do I know if I want to become a scientist?

- I love watching the night sky (or science programs on tv or images of galaxies on the internet) but I hate math...
  - Science can be your hobby! For example, becoming an amateur astronomer gives you all the joy of astronomy, without any of the pain 😊
- Math and physics are my favorite classes at school and I’m pretty good at them. I always wanted to become a scientist...
  - Go for it!
How do I know if I want to become a scientist?

- I would like to be a scientist but I love being social... Having a job where I interact with people is very important for me!
  - Consider becoming a science teacher or teacher in general!
- I would like to work in a quiet environment, where I can concentrate and think...
  - You’re on the right path
How do I know if I want to become a scientist?

- I want to be rich someday!
  - Consider med school, law school, starting a business or playing football (*the last two will get you rich very rarely, but sometimes it’s worth trying*)

- I want to become famous, kinda like Einstein or Newton...
  - Even the most famous scientists within the scientific community, are *not* famous among people! (who knows David Charbonneau, Rashid Sunyaev, Nima Arkani-Hamed, etc?)
How do I know if I want to become a scientist?

- I want to have a creative job, where I can work on challenging problems!
  - Science offers tons of them!
- I don’t mind not being rich as much as I mind having a stable job and not live in fear of losing it...
  - Being a scientist is not the easiest of lives, but it is not as stressful as working in a corporation, or running your own business...
How do I know if I want to become a scientist?

- I always wanted to become a scientist, but I’m a girl and I don’t know any women scientists...
  - The number of women science students is between 30% - 50% of the total! All studies show that women scientists are as good as men scientists.
- I always wanted to become a scientist, but my parents are not. Is this an issue?
  - Not at all!
How do I become a scientist?

- You need to enjoy math and physics at school, and to be good at them.
- You go to college in some scientific field (engineering, biology, physics etc.)
  - *tip: try to get internships in companies or get some research experience while in undergrad. It will make you realize what you like and what you don’t! It will also provide you with connections…*
- Then you apply for jobs...

OR
How do I become a scientist?

• You apply for gradschool in the science that you like...
  • *Despite its name gradschool is a job! When you are a grad student you don’t pay but rather you get paid...*

• You apply for a post-doc.
  • Post-doc is a job, where you are hired for 2-3 years at a time and do your own research.
  • Since a scientist might work in 2 or more post-docs, you must be prepared to *move*.

• You apply for faculty positions (aka professor positions), and hope you get one!
Thank you! Any questions??