



The Jerome Fisher Program in
Management & Technology

Fisher Program in Management and Technology Alumni Spotlights



"We're fortunate as Americans in that if you work hard enough, then anything is possible. Most people growing up in our society feel that but it really is absolutely true and I think that's one of the most important lessons we should learn. Nothing should be considered insurmountable."
- *Garrett E. Reisman, M&T 1991*

If the American dream is one defined by endless opportunities for hardworkers, then NASA astronaut Garrett Reisman is living it now.

As a Mission Specialist Astronaut, he serves as the flight engineer aboard a space shuttle. Pilot Astronauts, by contrast, are usually former military test pilots; they are primarily responsible for controlling the flight at the front of the typical 4-person cockpit.

"We kind of sit in the back and say, 'Are we there yet?'" Garrett jokes before describing his other responsibilities.

"The Mission Specialists are to look out for the big picture," he says. "We help fly the vehicle, do all the space walks, and operate the robot arm."

Other operational activities help to ensure the safety and success of events and projects carried out by NASA. For example, Garrett will serve as a research assistant for principal investigators on the ground while in orbit. "We coordinate with them and perform the research and end up becoming their eyes and ears," he says.

He notes that both sides of his education have assisted him in his career, which he simplifies to two words: technical management.

"Really what we do is train for space flight either flying in a jet or in a simulator or just studying systems for both the shuttle and the station. When you're not assigned to a mission you're basically supporting other programs," Garrett says. "We go to a lot of high-level meetings, design reviews and, in some cases, run projects. Some of those management courses I took years ago finally came into use."

He cites the tragic disintegration of the space shuttle Columbia - which resulted in the deaths of seven astronauts - as an example of how management is applicable to technology.

Before Garrett landed the ultimate fantasy job, however, he had to earn his credentials. He began studying Mechanical Engineering as part of the technical side of the M&T program, determined that graduate school was an attractive prospect, and has never given up following his passions since.

"When I came into the M&T program, I wasn't too sure what I wanted to be. I saw it as a nice way to hedge my bets. It was a great opportunity to keep a broad horizon," he says.

Garrett eventually submatriculated into Penn's Mechanical Engineering graduate program.

But despite interests that included solar car racing, flying, and diving, it wasn't until his fifth year at Penn that he considered becoming an astronaut.

"If you asked me, I'd either say I wanted to be an engineer or doctor or something," Garrett laughs. "I would watch films of Apollo flights and think, 'Sure, that'd be a lot of fun,' but I never thought about it as a career."

His love for technology - which he credits high school physics teacher, Jerry Vandervoort, for "jump starting" - won out however and he started to peruse the biographies of NASA's astronauts. He concluded that his pilot's license, intention to pursue further education and other aspects of

his career were similar to that of current Mission Specialists at the time.

However, as he continued on his trajectory towards outer space, he encountered one of his first real challenges while completing a Ph.D. in Mechanical Engineering at the California Institute of Technology.

"It was a journey. I remember when I first came to Caltech I was really impressed with the students and their level of aptitude, especially in calculus," Garrett recalls. "Their 'T' side was so phenomenal it was difficult for me to catch up, to perform at that level."

Nonetheless, he overcame these academic hurdles, worked for a few years with TRW as a Spacecraft Guidance, Navigation and Control Engineer, and was offered a job with NASA in 1998.

Attributing his success to a positive outlook and a willingness to keep an open mind, Garrett believes there is no single correct way to live one's life.

"It's like the decision when you go downtown in Philadelphia trying to decide between Geno and Pat's [cheesesteaks]. The truth is they're both pretty good steaks but the important thing is that you enjoy the steak, not which one you choose," he said.

Born in Morristown, New Jersey, Garrett claims Parsippany as his hometown. Married to an oceanography doctoral candidate, he and his spouse have, between them, knowledge spanning the distance from the seas to the stars. With no children to take care of, unless you count Fuzzy the cat, the happy couple lives near the space center in Houston.