

## Cornell Mourns the Loss of Professor Ephraim Garcia

by Leslie Cheng, Newsletter Co-Editor

On the night of September 10, 2014, Cornell Mechanical and Aerospace Engineering Professor Ephraim Garcia, PhD, passed away at a hospital in Syracuse, NY at the age of 51.

Born on June 14, 1963 in New York City, Ephraim grew up there with his Cuban immigrant parents and three brothers before moving to Long Island at the age of eight. He attended SUNY Buffalo where he received his PhD and met his lovely wife, Anna Marie. Despite majoring specifically in Aerospace Engineering, he specialized in electro-mechanical engineering.

Afterwards he and his wife went to Vanderbilt where he taught as an Assistant Professor for mechanical engineering classes while operating the Dynamic Structures and Materials corporation. In 1993, Professor Garcia was named a

National Science Foundation Presidential Faculty Fellow by President Clinton. He later became a program manager in the Defenses Sciences Office of the Defense Advanced Research Projects Agency (DARPA) in Maryland before joining Cornell faculty in 2002.

After his family moved to Cortland, Professor Garcia became an inspirational teacher, advisor, and friend to many Cornell faculty and students. At Cornell, he was very involved academically, research-wise, and socially with the MAE students. Being quite successful in his research, he has two patents for "A Piezoelectric Motor" and his "Extremely Low-loss Rectification Methodology for Energy Harvesting" project. He had published over 190 conference papers, 90 journal articles, and eight books.

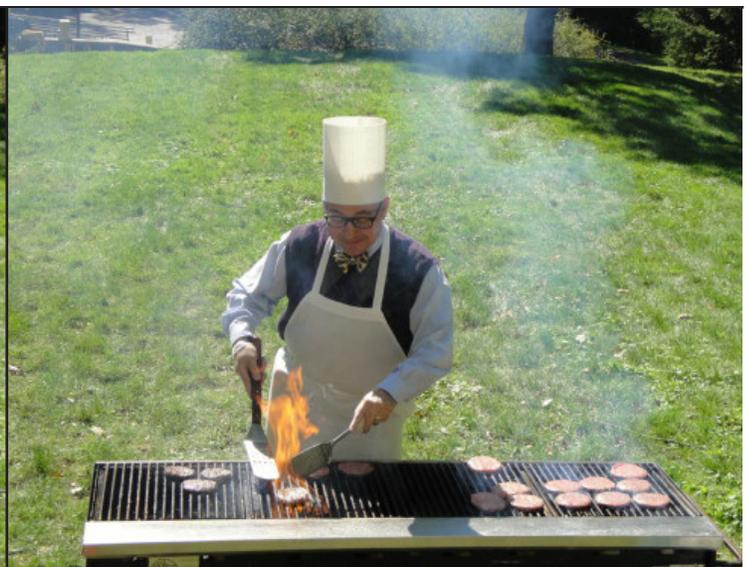


At Cornell he taught many MAE courses such as 3050 Intro to Aerodynamics, 3780 Mechatronics, 4280 Design Seminar, 5070 Dynamics of Flight Vehicles, and 5950 Smart Materials and Structures. More significantly, however, Professor Garcia directed Laboratory for Intelligent Machine Systems (LIMS) with several

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*Professor Garcia was at the center of the 2012 ASME BBQ...*



*...especially with his unmatched BBQ skills.*

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PhD students whose research encompasses a wide variety of micro and macro scale systems involving biological and aerospace applications. He also advised many project teams, including Cornell Rocketry, Cornell Mars Rover, and Design Build Fly.

As a very proactive member of the engineering community, he received numerous awards and honors from ASME, AIAA, and other major organizations for his research projects and teaching skills. With his vast knowledge and friendly personality that has touched many in the Cornell community, Professor Garcia will be sorrowfully missed by everyone.



*Students wait anxiously as Professor Garcia prepare the BBQ*

## Quotes From Garcia's Obituary

He was also a Son, a Husband, and a Brother, a Thinker, and a Leader of Men. His authority came from the blunt force of his intelligence and his wisdom.

But how can I make you know what he was like? You can never know. My words could never match his presence. He was vitality itself, the flame that burned brightest. He loved history and the future most of all. He would always say that he would rather have been born in another era, anytime but the present. He wanted to conquer frontiers, but instead the world gave him a map with every corner filled in already. And so all his life he dreamed of the stars, of our place among them, and he did his part trying to bring us closer to them. Next to works by Hawking stand books on the evolution of Man. Engineering was his profession, but his mission was the destiny of our species.

He always put me on my toes, forced me to the top of my intelligence. Those who didn't understand what lay within often couldn't handle him. His rough edges could rub hard, but if you listened, they made you sharper. Strong words carried delicate truths. But he was funny, and unapologetic. The way he spoke, he could say anything and did say anything – to provoke, to get a reaction from he who does not get it. But underneath, however he might talk, he had a way of quietly occupying the right side of history. His heart burned with the most genuine compassion for his family, for his friends, and for his fellow human beings. Sometimes that fire could singe you, but you were a fool to think it didn't keep you warm. And you knew without a doubt that you were loved.

He always made me feel that everything would be alright. I still

cannot accept that he is gone. I will forever carry a hole in my heart. It was the cruelest of ironies that his stroke should have taken out the piece of his brain that gives us speech. I thought I'd never hear his voice again. Worse, we were afraid it might not be him in there anymore. But in his last three weeks, he strained and strained to put the neurons back in place, moving paralyzed limbs, physically forcing the words out over an uncooperative tongue: "I. Love. You." That bed, the tubes, the masks, monitors, and restraints, they did all they could to hide the man we loved. But when you looked him in the eye, and he looked back at you, it was him. You knew.

~ Isaac Garcia  
Son of Ephraim Garcia

# Memories From Alumni

*Two former ASME eboard members and members of LIMS lab speak about Professor Garcia's impact on their lives and the MAE community*

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Henry Ekwaro-Osire '14



Professor Garcia was part of my earliest impressions of Cornell. I first met him at a faculty dinner while visiting Cornell as a prospective student, and was surprised at how approachable a professor could be. Hearing him talk about his projects with the enthusiasm we all know strengthened my resolve to study engineering.

During my junior and senior years, I worked in his famed LIMS lab. Doing research under his guidance was one of the most valuable experiences I had at Cornell; he allowed my team and I a great amount of autonomy and responsibility, which challenged us to think critically and come up with ideas of our own. Whenever we were stumped, though, he was always there to guide us and inspire us to continue. We took on the same high expectations of ourselves that he had of us, which was the motivation we needed to successfully carry out our work.

Professor Garcia genuinely cared about his students (“minions”), and was as great a mentor to me, as he was a professor. Despite his unbelievably busy schedule, he always was willing to take the time to discuss any subject, both academic and personal, with me and provide invaluable advice.

As he has with many other students, Professor Garcia has made a lasting impact on my life, and I will always be thankful for having had the privilege of meeting this great man.

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Oliver Kliewe '14



I first met Professor Garcia in the spring of my sophomore year, searching for a research job for the fast-approaching summer. He seemed like any other engineering professor at the time, save his prime office location on the second floor of Upson Hall overlooking students toiling away over problems sets in Duffield. Our conversation then was markedly unremarkable, but little did I know he would play a greater role in my education in the near future.

As many years of Cornell MechEs had done in the past, our class - the class of 2014 - took Mechatronics with Professor Garcia. Sadly, it was the last year he would teach the class. The front of a begrudging, too-busy-for-us engineering professor preceded him most lectures, but ask him a question after class and you could tell he really cared. He had a passion for engineering and education in the truest sense. When teaching us about op-amps he told us to forget about why

or how they do what they do - that was left to the physicists and ECE's. He deemed them “wee beasties” that mysteriously provided amplification of an electrical signal following a certain set of rules. Use those rules, design a circuit, and make it work.

Luckily for me, I didn't just interact with Prof. Garcia as a student. I joined his Laboratory for Intelligent Machine Systems, or LIMS, in spring of my junior year. The first thing he said to my group at the outset of the semester was “Write a paper. You're presenting in April.” Apprehensive as I was, I appreciated the go-get-'em attitude and the subsequent help he provided to get my group out to an AIAA student conference at the University of Maryland later that spring.

For all of the interactions I did have, I wish I had talked to him more. He had a wealth of experience, knowledge, and intuition that is now lost save for as much as it lives on in the undergrads and PhD's that passed through his lab over the years. Cornell MechEs have lost the professor that would hold a party for his students at his own house at the end of the semester, buy pizza and wings for his lab every month or so, and occasionally sign off his emails as “Big E.” I owe that conference to him, the vast majority of my research experience to him, my circuit knowledge to him, heck I even owe my first job out of college to him. His impact on students like me and the department as a whole will not soon be forgot.



**Memorial Service & Celebration of the Life of Professor Ephrahim Garcia**

**WHEN:** Friday, November 7th  
**WHERE:** Anabel Taylor Chapel  
**TIME:** 3:00-5:00pm



**MECHANICUS**

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