

# Brian Chap

February 2019 • UCLA FastTrack Program



## Where are you from?

I am a member of the spaceship Planet Earth, which I entered into after docking at Orange County, California.



## Which school are you attending?

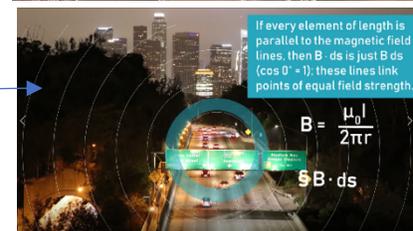
The UCLA School of Engineering, home to thinkers, doers, and a multitude of carnivorous squirrels

## What are some of interests of yours?

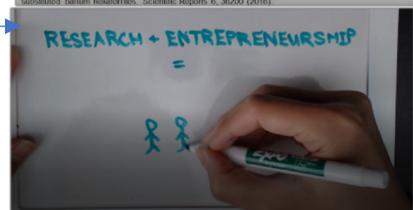
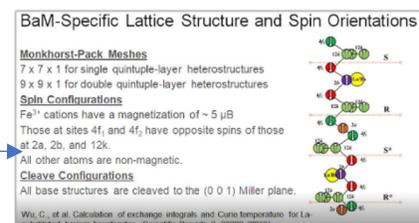
Photography, coding, karate, architecture, mixed media, trampolines, mentoring students, traveling to places unknown

## When did you know you wanted to be an electrical engineer?

Every 2 years, my outlook on who I intend to be has changed. When I was 14, I embraced the realms of number theory and calculus, believing that I would find myself amidst the orderly lines and curves that defined the world. With high school, though, came a new understanding of how fundamental interactions drive the technology we take for granted. Yet, something was still missing. That something emerged in two different experiences, the first being a paid research opportunity at UCLA's Device Research Lab. Reading through the endless findings of distinguished professors and then constructing a paper that I presented to a panel at UCI, this could be considered a turning point in my theoretical undertakings prior to this year. The second was more subtle still, and necessitated that I look back at what I had learned for the past 18 years of my life. Rather than acquire, I found myself wanting to directly apply the knowledge that I had carefully cultivated. This is why I chose Electrical Engineering as my intended major.



First-principles study of the proximity effect between a topological insulator and an antiferromagnet



## Who has influenced you the most in your choice of academic field?

Although my family has been crucial in encouraging me to persist through adverse times, the “most influential” honor would be best awarded to a friend who I met two years ago. While others found relief in social media, he found relief in the higher purpose of constructing sentient technology. Together, we, among other things, explained quantum encryption to philosophy students for two days and developed applications that were hallmarks of my high school experience. His strength of convictions, blended with the unique visions that we each had, were pivotal in enabling me to better appreciate the power of electrical engineering.

## Why did you choose the UCLA Electrical Engineering program (i.e. big campus)?



UCLA, as a campus, is a fusion of different perspectives. It is a place where every person has a story to tell, and a place where ideas, in conjunction with resources, have the opportunity to flourish. Stepping into Engineering VI two years ago, I discovered a school away from school; my questions were always answered, and the first-floor lab supplanted my high school as the preferred study space for me. In contrast to the limitations of high school, I find myself now constrained only by time, and every day presents a new chance to realize my dreams from years ago.

## What are you interested in as a career?

There are three fields that I am particularly interested in at this point:

- (1) Mapping technologies that involve spatial recognition (i.e. drones) or crowdsourced exchange of people and goods
- (2) Shared communication and search engines in the field of information technology (more creative approaches)
- (3) Consumer-oriented sensors

When I was younger, I originally sought to become a professor. Yet, I have increasingly found myself attracted to the start-up scene at the interface of computer science and electrical engineering. With skills ranging from app development to environmental sensing, my intentions are to apply the knowledge I gained over time.

