

FACULTY SPOTLIGHT



5 Questions with *Brendon Anderson*

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Tell me about your research interests and why you are passionate about this topic.

One of the primary objectives of my research is to develop safety guarantees for machine learning systems. I am passionate about this topic for a variety of reasons. From a societal and humanitarian perspective, it is imperative that we understand and overcome the current limitations of these algorithms before we can reliably deploy artificial intelligence in safety-critical systems, such as autonomous vehicles. From an academic perspective, I find it fascinating that this relatively young topic of safe AI naturally calls for new unifications of interdisciplinary principles coming from advanced mathematics, computer science and well-established engineering frameworks such as optimization and control.

What is your favorite part of your job?

The best part of my job is working with students to overcome a particularly challenging concept or problem and witnessing their “aha!” moments when things finally click. I also feel very fortunate to be in an intellectually stimulating environment that values the exploration of cutting-edge research, and to be able to experience my own “aha!” moments when chipping away at unsolved problems.

What is your favorite place in San Luis Obispo County and why?

I really enjoy spending time along Pismo State Beach. Whether it’s to hang out and watch the sunset, to have a bonfire, or to harvest some Pismo clams (do so legally and responsibly!), I always feel relaxed and recharged after spending time at the beach.

How do you like to spend your free time?

You’ll often find me skateboarding at Nipomo Skate Park or SLO Skate Park on the weekends. I’m also passionate about working on and riding vintage bicycles and motorcycles. My latest project is a 1985 Bridgestone MB-1 that I’ve been building up into my “forever bike.”

How does engineering apply to your daily life?

Engineering applies to so many aspects of our daily lives outside of academics and work! My own hobbies and passions are certainly linked to engineering principles. Building and modifying bicycles and motorcycles requires the design and fabrication of custom parts. Even the adjustment of a bike’s ergonomics can be viewed as an optimization problem. Skateboarding is also “engineering in action,” since learning a new trick is all about optimizing foot placement and motion, understanding and predicting the dynamics of the board under certain forces, and so on.



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