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## Mechanical Engineering Student Awarded NSF Graduate Research Fellowship

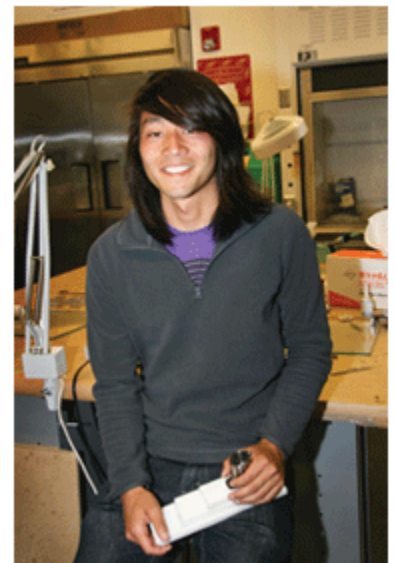
SAN LUIS OBISPO -- Kevin Yamauchi, a master's candidate in the biomechanics program in Cal Poly's College of Engineering, has been awarded a National Science Foundation Graduate Research Fellowship worth \$90,000 over three years.

The competitive fellowship this year was awarded nationally to 2,000 students -- three of them Cal Poly alumni. Yamauchi selected Cal Poly for his post-graduate work; chemistry grads Crystal Valdez and Joseph Carlson are pursuing advanced degrees at UCLA and UC Irvine, respectively. The NSF program supports graduate students who have demonstrated potential for significant achievements in science and engineering research.

Yamauchi's research will focus on the properties of articular cartilage as it relates to treatment of osteoarthritis. The knowledge gained will aid in devising new tools, strategies and therapies to improve tissue repair and regeneration. "My interest is in how mechanical engineering concepts apply to complex systems in the body," he said. "Osteoarthritis is a prevalent disease affecting almost 30 million Americans, with no treatment thus far. It's an area of study that poses significant and unsolved challenges."

Yamauchi, who earned a bachelor's degree in mechanical engineering, credits Cal Poly with uniquely preparing him for this new frontier. "I am used to being exposed to new challenges on an ongoing basis. Every project ushers in new people, new equipment and the different vocabularies of an interdisciplinary team," Yamauchi said. "Especially valuable is how the college exposes students to the research world, even as undergraduates. For the past two summers, I had access to research facilities at UC San Diego as part of Cal Poly's collaborative relationship with that research university. As a result, I already know what it is to carry out, document and communicate research in a professional lab setting."

Another "incredible influence" on his research interests was service learning. Last year he was part of a five-member interdisciplinary team to develop a low-cost prosthetic foot for people served by a Honduran clinic. The multidisciplinary effort involved students studying mechanical engineering, materials engineering and biomedical engineering. "What drew me to the project was the strong level of personal connection," Yamauchi said.



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