Cal Poly’s ‘Leaning Trike’ Design Places Second at Human Powered Vehicle Challenge

SAN LUIS OBISPO – Cal Poly leaned in at the recent Human Powered Vehicle Challenge West, taking second place for an innovative leaning-trike design. The team finished fourth overall at the regional competition, held April 12-14 at San Jose State University.

“The design certainly set us apart. Very few vehicles are built as leaning trikes,” said Matt Baker, mechanical engineering senior and club president. “It was gratifying to see the design generate so much curiosity among other teams and to see their interest in how we managed to design and build the vehicle.

“We chose the leaning tricycle design in response to changing competition rules. In recent years, the contest has been shifting more to a utility-based vehicle and less to a speed bike. Our design is not only novel; it offers very real advantages – adding the stability of three wheels while maintaining the feel and quickness of a bike.”

What didn’t quite mesh for the team’s entry this year was its drivetrain: “There was more drag in the system than we would have liked,” Baker said.

In addition to Baker, team members included mechanical engineering graduate student Josh Smith; seniors Bryan Cook, Will Hilgenberg, Judy Lantaca, Jenny Sevilla and Samantha Weiner; juniors Matthew Allen, Peter Aumann, Trent Hellman, Marley Miller, Alex Nolan, Alex Powers, Lauren Romero and Zachary Yasuda; sophomore Cody Anderson; aerospace engineering senior Will Hilgenberg; and computer science graduate student Kimberly Paterson. Kim Shollenberger and Andrew Kean were faculty advisors, and George Leone was technical advisor.

The Rose-Hulman Institute of Technology was top ranked overall, followed by Colorado State University, Missouri University of Science and Technology, and Cal Poly.

Founded as the American Society of Mechanical Engineers, ASME promotes the art, science and practice of multidisciplinary engineering and allied sciences around the globe. ASME’s international Human Powered Vehicle Challenge provides an opportunity for graduate and undergraduate students to demonstrate the application of engineering design principles in the development of sustainable and practical transportation alternatives. For more information, go to www.asme.org.

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