

SIUE Solar Car Team races to top 10 finish at Formula Sun Grand Prix

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EDWARDSVILLE - The Southern Illinois University Edwardsville School of Engineering's (SOE) Solar Car Team is celebrating its first top 10 finish in the Formula Sun Grand Prix (FSGP) held July 2-8 in Austin, Texas. After passing grueling "scrutineering," or inspections, and completing racing on a 3.426 track, the team achieved its best placement yet at 10th among 18 teams from such institutions as University of California, Berkeley, Georgia Tech and Northwestern.

The team comprised 11 current students with majors spanning engineering, business and nursing, five SOE alumni and two faculty advisors. NOVA, the solar car, is built to operate only on energy stored in batteries that are charged by the attached solar array.

“We are incredibly proud of the team,” said advisor Andy Lozowski, PhD, professor in the Department of Electrical and Computer Engineering (ECE). “They built the vehicle with limited funding that they budgeted and spent carefully. They hand wired everything themselves, and they solicited donated specialized materials and parts from suppliers and recycled components from other teams.”



“There is a sense of camaraderie and purpose that supersedes the team level and includes all teams at the competition,” said Project Director Zack Endsley, of Lewiston. “When you are participating in a solar car challenge, all of the teams genuinely want to see each other succeed and openly share knowledge and resources to make this possible. The open-source nature of this event is what lets our expertise in niche areas such as composites, solar encapsulation, and lithium battery pack design thrive and develop.”

The team received financial and in-kind support from alumni and area employers. SOE alumni, who previously served as team directors, donated a new motor, motor controller

and lithium-ion batteries. Donations from community employers also helped secure new solar cells and composite materials to build the body and solar shell of the car. Spot and frame welding, as well as wireless data acquisition and telemetry, were also completed through industry support.

“The overall value of in-kind help is in the tens of thousands of dollars,” said Logistics Director Triston Cooper, a senior from Lincoln. “Equally important were cash donations from former team members. These are invaluable for overnight critical purchases at crunch time.”

The FSGP exposed participants to a high stakes competition where quick, critical thinking was imperative. SIUE’s team proved its perseverance as it made modifications on site that led to its successful results.



“On the first day of the race, following scrutineering, the team was faced with a solar array that was not outputting the amount of power expected,” Endsley explained. “By day three, we had completely rewired the array. We were outputting nearly four times the amount of power seen on the first day of the event.

“It was the team’s ability to quickly solve this problem on day two that allowed us to come back and be competitive on day three. I was proud of the team’s level of preparedness and ability to overcome adversity and troubleshoot problems during the event.”

“While they don’t earn academic credit, our students learn multiple skills participating in this organization,” added advisor Steve Muren, lecturer and lab manager in the Department of ECE. “They develop skills in team building and cooperation, electrical and mechanical skills, fundraising, community engagement, budget management and marketing. They represent our School and University well.”

Team members included Endsley, Cooper, Edwardsville natives Michael Schalk, James Bannon, Chris Oliva and Jessica Garbe, Syd Stogner, of O’Fallon, Gabriel Calixto, of Bethalto, Jared Bargetzi, of Highland, Emmery Mammen, of Lincoln, and Rachel Roady, of Chicago. Alumni participants were Blake Fry, Brittany Riddle, Matt McQueen, Zach Crawford and Preston Steffey.

The team is already discussing changes and upgrades to NOVA for the 2018 race event. For more information, visit facebook.com/siuesolar or siuesolar.com. Those interested in learning more about the team or becoming a member, should contact siue.solarcarteam@gmail.com.

The [SIUE School of Engineering](#) offers one of the most comprehensive and affordable engineering programs in the St. Louis region with eight undergraduate degrees, five master’s degrees and two cooperative doctoral programs, all housed in a state-of-the-art facility. Students learn from expert faculty, perform cutting-edge research, and participate in intercollegiate design competitions. Companies in the metropolitan St. Louis area provide students challenging internships and co-op opportunities, which often turn into permanent employment. All undergraduate programs are accredited by their respective accreditation agencies.