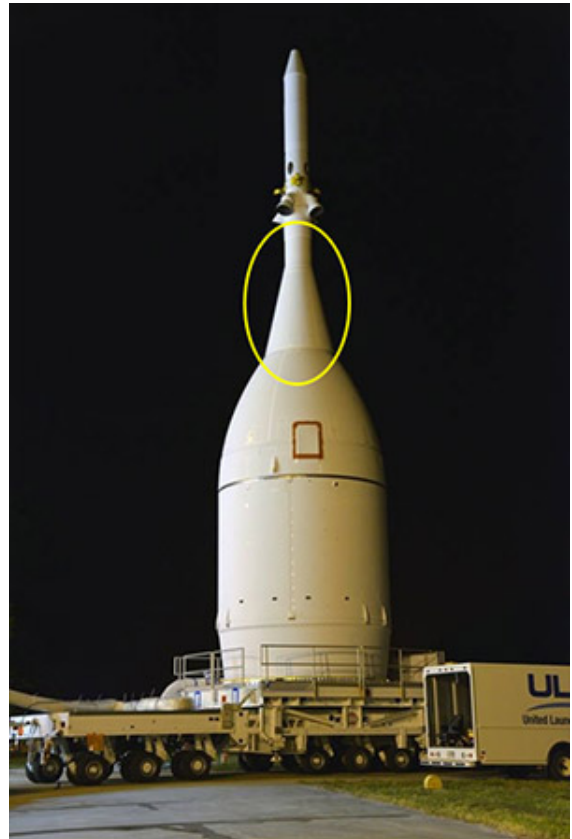


Alumnus Reaches for the Stars

When Robert Kolozs, a UC San Diego alumnus, toured the Kennedy Space Center in Cape Canaveral late last year, he had a sudden revelation: if everything went well, the spacecraft parts his company manufactured would someday share an exhibit with the space shuttle and the Saturn V rocket used during the Apollo missions.

Kolozs is president of San Diego Composites Inc., a company he cofounded in 2004. The company built and tested more than 1,000 parts for NASA's Orion spacecraft, a vehicle designed to carry astronauts to destinations in deep space, including an asteroid and Mars. On Dec. 5, Orion launched atop a Delta IV rocket from Cape Canaveral Air Force Station's Space Launch Complex for a two-orbit, four-hour test flight. San Diego Composites manufactured everything from the vehicle's windows to light composite elements connecting the spacecraft's inner and outer shells. The company also built a key component of the system that would allow Orion's crew to eject in an emergency.



Attending the launch and seeing parts that this company made blast off into space was an amazing experience, Kolozs said. "This is as close as you can get to your childhood dreams of being an astronaut and going into space," he said. "It's awe-inspiring."

This is San Diego Composites' first big project with NASA. Headquartered in San Diego, the company designs, manufactures and tests a wide range of products, including missile systems, space structures, propulsion systems and aircraft structures.

"We are a small business and we are employee owned," said Kolozs. "Our goal is to grow as a business and provide people here ownership from that growth."



Staff at San Diego Composites Inc.

Many of the staff are UC San Diego alumni, including half of the senior staff and more than half of the engineering staff. The company recruits interns at the Jacobs School of Engineering's DECaF career fair—many of whom then land full-time jobs.

“I equate a lot of what we do to a more technical version of Mythbusters,” Kolozs said. “We develop designs for spaceships, airplanes and missiles; then we test them by blowing them up.”

Kolozs got his first introduction to the world of composites as an undergraduate student studying structural engineering at UC San Diego between 1993 and 1998. He took classes from structural and aerospace engineering professor John Kosmatka and wound up working for him at the Powell Structural Research Laboratories. His job was to run vibration tests on a composites bridge being designed to withstand earthquake loads. The data he collected were later used in a Ph.D. student's thesis. “That was a unique opportunity,” Kolozs said. UC San Diego did a great job at exposing structural engineers to a wide range of specialties within the discipline, including civil and aerospace engineering and defense-related work, he added.

He then earned a master's from the University of Texas at Austin and worked for another small composites company in San Diego before starting San Diego Composites. “We wanted to provide something unique to aerospace and defense industries by bringing together our expertise in high-tech engineering and lightweight composites,” he said.

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