



CATCHING UP

# WITH PRESIDENT BAKER

BY LEAH KOLT

BURT RUTAN DESIGNS AND BUILDS AIRCRAFT that break records and make history.

Allison Holmgren is a freshman who hopes to follow in the footsteps of her parents, both Cal Poly industrial engineering graduates.

Mark Montoya is an executive at a construction company in Santa Monica.

In addition to studying at Cal Poly, the trio has something else in common. All three decided to pursue technology careers while in middle school – an early conscious decision that experts say needs to become more widespread if the United States is to maintain its lead in the new global economy.

Montoya (CM '84) says he “fell in love” when he saw “drawings and plans and models” while on a sixth-grade field trip to an architecture firm. Holmgren says her mother, who is a vice president at Sun Microsystems, used to take her to the office, where she met other women engineers and executives. And Rutan (AERO '65) was inspired by Sputnik and the ensuing “space race” and moon shots.

Whether the inspiration comes from a class trip, a parent or an international event, one thing educators and industry leaders agree: Getting students excited about science, math and technology is key to reversing the country's looming shortage of qualified technology workers.

At the forefront of the growing effort to solve this problem is Cal Poly President Warren J. Baker, who has been making it a personal mission for several years to bring business, government and higher education together to increase the number of graduates in science, technology, engineering and mathematics (STEM).

“Unless the United States keeps up with the rest of the world in the numbers of engineers and scientists we produce, we will

lose our global competitive edge,” Baker predicts. “China is said to be already producing 600,000 engineers a year, compared to only some 70,000 in the U.S.”

Baker and Cal Poly alumnus Bill Swanson, chairman and CEO of Raytheon, lead a national Business-Higher Education Forum task force of corporate CEOs and university presidents that provides leadership for strengthening the nation's capacity in STEM disciplines.

During a fall 2005 tour of Chinese universities, Baker witnessed firsthand the investments China is making in STEM education. “Over a period of nearly two weeks, we visited a different university each day. In every case, the institution had experienced dramatic, planned growth in enrollments, especially in STEM disciplines. The faculty and facilities were world class. The education and research results were impressive.”

In the 2006 State of the Union address, President Bush recognized the importance of sustaining America's capacity to innovate in the face of growing competition from China and other nations.

Ahead of the president's call to action, the CSU committed in May 2005 to doubling its production of math and science teachers over five years. Then in March 2006, the CSU Chancellor's Office helped host a summit on recruiting and preparing math and science teachers, which was co-chaired by President Baker.

Numerous sponsors from business and government joined the summit: Apple Computer, The Boeing Company, the California Space Authority, the California Council on Science and Technology, the Center for the Future of Teaching and Learning, Edison International, the Majestic Realty Co., Morgan Stanley, Jet Propulsion Laboratory, and State Farm Insurance.

“With business and higher education working together,” Baker says, “we are sure to make great strides in the near future.” □