Colorado State University Programs & People

Randy Bartels Receives "Presidential Early Career Award"

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Randy Bartels, assistant professor of electrical engineering at Colorado State University, has been awarded a Presidential Early Career Award - the U.S. government's highest honor for outstanding up-and-coming scientists and engineers.

Bartels, 31, was one of 56 scientists from around the country who received the award in a ceremony at the White House that included President George W. Bush. Bartels was the only recipient from a Colorado university and one of two scientists nominated by the U.S. Department of Defense, courtesy of the Office of Naval Research.

President Bush and a selection of the recipients of the 2005 Presidential Early Career Awards for Scientists and Engineers. Randy Bartels is in the third row, fourth from the right.

The DOD also committed $500,000 over five years to Bartels' research as the result of his Presidential Early Career Award. It's his second major DOD honor: In 2005, the Office of Naval Research presented Bartels with the Young Investigator Award - including a $350,000 prize - for his advances in physics and engineering. He was one of 28 investigators selected from a pool of 212 applicants.

"Professor Bartels exemplifies the kind of intellectual enterprise occurring at Colorado State that is critical to the economic prosperity of Colorado, the nation and the world," said Larry Edward Penley, president of Colorado State. "His multi-disciplinary approach - into physics, chemistry, optics and engineering - will help find solutions to the great challenges facing society."

"We are proud of Randy and the faculty in the College of Engineering who continue to make discoveries that are affecting people's lives," said Sandra Woods, dean of the College of Engineering.

Diversity in research and discovery

Bartels' work has generated many discoveries in diverse fields. He heads Colorado State's Laboratory for Ultrafast and Nonlinear Optics, where his research concentrates on the generation and control of short laser pulses and their use for the control of quantum dynamics - to precisely control the positions of atoms in molecules, for example.

His research group is using this newly perfected control over matter for the Office of Naval Research to develop new technology to make optical clocks 10,000 times more precise than standard atomic clocks.

The additional funding provided by the Department of Defense will help Bartels improve that technology.

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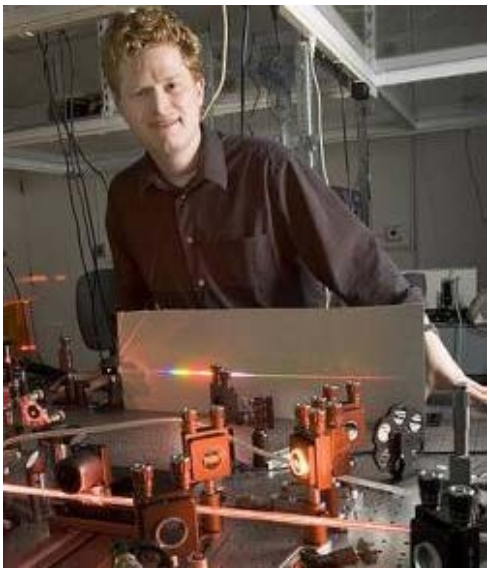

Bartels works with a laser experiment in his Laboratory for Ultrafast and Nonlinear Optic at the Engineering Research Center.

"This is a great honor and gives us the resources we need to continue our cutting-edge research at Colorado State," Bartels said of his award.

Bartels' team is also working to develop new molecular-specific imaging techniques that could be harnessed to study molecular function in cells in fundamentally new ways and to drive chemical reactions with specially shaped light pulses that enable the synthesis of chemical compounds not possible with other techniques.

A string of honors and awards

Bartels has been honored with numerous awards in his young career from many disciplines - engineering, physics, chemistry, computer science and optics.

Highlights of his awards:

- He was named a Sloan Research Fellow in physics, one of the oldest and most prestigious research honors in the nation.
- He was one of 18 young physicists from across the world invited to speak at a special symposium held in honor of one of the inventors of the laser, Charles H. Townes, who received a Nobel Prize in physics in 1964. Bartels was also one of a handful of scientists from around the country invited by the National Academies of Science to discuss the future of important areas in U.S. science.
- Honoring his research in chemistry, Bartels received a 2005 Beckman Young Investigator award from the Arnold and Mabel Beckman Foundation.
- For advancing evolutionary computation, he received the 2005 Gold Medal Human-Competitive Award.
- In 2004, Bartels received the Optical Society of America Adolph Lomb Medal at the age of 29, which is one of the OSA's highest honors and is given to an individual who has made substantial contributions to optics before the age of 35.
- He received the NSF CAREER Award in 2004, recognizing his early potential for scientific leadership.
- This spring, Colorado State announced Bartels as one of two recipients of the prestigious Monfort Professor Award - one of the university's top honors.

Bartels received his doctorate in electrical engineering from the University of Michigan in 2002 and joined Colorado State in 2003.