

Four CU students win NASA fellowships

Paula Aven Gladych

LONGMONT - Four students from the University of Colorado at Boulder were awarded NASA Earth System Science Graduate Student Fellowships this month. The prestigious award went to 55 of 219 nationwide applicants. The fellowships - awarded to Alex Huffman, Bryan Brandel, Katherine Dayem and Cynthia Shaw - are initially for one-year terms and may be renewed annually for up to three years total, based on their academic performance and evaluations by their faculty advisors. Each CU-Boulder student will receive a \$24,000 per year stipend to pay university and student expenses, rent, tuition, fees and other educational expenses.

Ming-Ying Wei, manager of the program for NASA, said that the University of Colorado and Colorado State University typically do very well in NASA's grant programs. "We do not specifically look to location. Primarily, we look to merit and how relevant the work is to NASA," she said. NASA formed the fellowship program in 1990 after it launched its earth-observing system satellites. The agency decided it needed other disciplines involved in space research besides the traditional ones, she said. They started approaching interdisciplinary scientists in areas such as geology, climatology and oceanography.

Huffman is using a tool called a mass spectrometer to analyze the earth's natural emissions to "figure out what the aerosols are and what the particles are and where they're going, to get an understanding of how these particles then go on to react and participate in the earth's chemistry on a global scale and on a number of different levels," he said in an interview from his field research site in North Carolina. Huffman is trying to understand the biogenetic emissions from the forests. Gases are emitted from the trees, and scientists in the past have measured how many particles are emitted and how many come down, but nobody has tried to figure out what those emissions actually are, he said. This technology can be used in the natural environment and the urban environment to measure the amount of particulates in the air and to discover what those particulates are. Huffman is working on his Ph.D in analytical chemistry at the University of Colorado at Boulder.

Brandel, another student at CU-Boulder, won the fellowship for his research into carbon sequestration in the Southwestern United States. Dayem is studying topographical forcings on climate and climatic forcings on topography using the solid earth to predict climate change. Shaw is looking into the derivation of ozone photochemical loss by combining satellite data and a 3-dimensional chemical transport model.

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