

PHYSICS GRADUATE RECEIVES NATIONAL AWARD FOR RESEARCH AT UF

October 4, 2002

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Gainesville—UF physics graduate Jason Alicea has received a 2002 LeRoy Apker Award from the American Physical Society. Alicea, who graduated in December 2001 with highest honors, received the national award for his outstanding achievements in physics as an undergraduate student at UF.

While at UF, Alicea maintained a 4.0 grade point average and participated in the University Scholars Program and the Research Experiences for Undergraduates Program. He also received a National Science Foundation Graduate Research Fellowship to pursue his PhD in physics at the University of California at Santa Barbara, where he is currently studying.

The Apker Award is given annually to two undergraduate physics students in the U.S. Alicea was one of six finalists who went to Washington, D.C. in September to present his research findings to the awards committee. Each finalist received \$2,000 and a plaque. Alicea was one of two winners this year and will receive an additional \$3,000. The UF physics department will also receive \$5,000 to support undergraduate research.

As an undergraduate, Alicea worked with UF physics professor Selman Hershfield and studied structures called magnetic multilayers, which are stacks of thin metal sheets that alternate between being magnetic and non-magnetic. Each layer is roughly a few nanometers, or a few billionths of a meter, thick. The electrical resistance of these magnetic multilayers can change dramatically when they are subjected to a magnetic field. This phenomenon, known as Giant Magnetoresistance, has technological applications in computer hard drives and memory devices.

“From the start of his research, Jason showed the independence and work ethic you would look for in a graduate student. He made progress every week while still carrying a full undergraduate course load of advanced physics and math courses,” Hershfield said. “There were several times in his research when he could have taken the easier route, but he chose the more accurate and time consuming approach. His final research paper is comprehensive and reflects Jason's willingness to put in the extra work to do the best job possible.”

Alicea presented his research at the annual American Physical Society meeting in March 2002 and will present again at the Annual Conference of Magnetism and Magnetic Materials in November. He is the second UF physics undergraduate to receive the award in the past ten years. Chris Schaffer won the award in 1996, and Christopher Harrison was a runner-up in 1995.