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IWU "Three-Peats" at Regional Physics Competition

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FOR IMMEDIATE RELEASE

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BLOOMINGTON, Ill.--For the third year in a row, Illinois Wesleyan University physics students won first place at a March 24-26 regional physics research competition at Purdue University sponsored by the Society of Physics Students.

This was IWU's third time participating in the conference, as well as its third first-place finish in the regional competition, which includes undergraduate research from the University of Illinois, Bradley University, University of Wisconsin-Madison, Purdue University, Principia College, Illinois State University and the Illinois Institute of Technology.

IWU won for research with electrorheological gels (gels that bend when placed in an electrical field). Research on the project was made possible through a 1992 grant from the National Aeronautics and Space Administration (NASA) under the NASA/University Joint Venture in Space Research Program (NASA/JOVE), which encourages about 30 undergraduate campuses like IWU to collaborate on space agency projects. Theoretically, the gels could be used as artificial muscle in patients where natural muscle growth is impossible.

Kimberly Branshaw, a senior chemistry/physics major from New Lenox, Ill., and Dana Deardorff, a senior physics/math major from Elgin, Ill., brought home the first place award for their gel research.

Branshaw's paper *Gels as Muscles: Unusual Diffusion Behavior* was presented at the conference along with *Polyelectrolyte Gels as Artificial Muscles: Understanding Physical Process*, written by Deardorff, who was unable to attend the conference. Each paper is due for publication in the *Journal of Undergraduate Research and Physics* published by the American Institute of Physics.

At the competition Branshaw gave an oral presentation to 150 students and faculty from other schools participating in the research competition. Branshaw said, "I tried to add some humor to the presentation and I gauged my performance by the facial expressions on the people in the crowd. I think they found it interesting because they asked good questions in response at the end."

Branshaw Profiled

Branshaw started out as a chemistry major, but then added physics because they were so closely related. Narendra Jaggi, associate professor and chairperson of physics, invited Branshaw to join the research team because of her chemistry background. Branshaw is responsible for making and altering the properties of the gels, to discern how far they will bend depending on the varying amounts of key chemicals.

She plans to pursue a doctorate in organic chemistry from the University of Illinois after graduation from IWU. Commenting on her experience at IWU, Branshaw said, "I would never have had this opportunity at a large school. Research really takes you out of the books, where there is no index to look up the answers. You can't understand it until you do it."

Deardorff Profiled

Deardorff made a presentation at the 1994 Society of Physics Students regtional competition held at IWU. His paper *Art in Physics: Exotic Macrostructures in Swelling Polyelectrolyte Gels* addressed the artistic value of the gels when they swell.

Deardorff, who came to IWU with an interest in the study of art, explained, "We saw some very interesting developments in the crystallized gel and learned a great deal about its structure. The colors in the gels were so amazing they looked like professionally blown glass."

After graduation Deardorff plans to attend the University of California-Berkeley to pursue a doctorate in biomedical physics.

IWU Physics Program

IWU's chapter of the Society of Physics Students was awarded the "Outstanding Chapter Award" this year for its work during the 1993-94 school year. Keith Swanson, president of SPS at IWU, said, "SPS gives students the chance to discuss physics in a social atmosphere outside the classroom. We also explore career and graduate study opportunities in physics. And it's a great way to get to know your professors."

IWU, founded in 1850, enrolls about 1,800 students in a College of Liberal Arts, College of Fine Arts, and a four-year professional School of Nursing. In recent years, the university's endowment has grown to more than $92 million; a $15 million athletics and recreation center opened in the fall of 1994; and a $24 million science building will open in 1995. The Carnegie Commission for the Advancement of Teaching promoted Illinois Wesleyan to a "Baccalaureate I" institution in 1994, a classification that places it among 164 highly selective National Liberal Arts Colleges in the annual *U.S. New & World Report* rankings. *Barron's Profiles of American Colleges*, another respected college guide, rated IWU "highly competitive (+)" in its latest edition. *101 of the Best Values in America's Colleges and Universities* calls IWU "undoubtedly one of the finest small colleges in the country," adding, "Illinois Wesleyan has surged to national prominence on the basis of its reputation as a school with a rock-solid academic program."

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