



## Undergraduate Research Forum

### Undergraduates Extend Their Research to the World

The undergraduate research experience is often stereotyped as an activity conducted within the confines of libraries and labs and the associated paraphernalia of bulky books and test tubes. However, the eighteenth annual Undergraduate Research Forum, hosted by the Cornell Undergraduate Research Board (CURB), portrayed participation in university research as exciting as life itself. Keynote speaker Robert C. Richardson, 1996 Nobel Prize Winner in Physics and Cornell's Vice Provost for Research, highlighted Cornell's major research endeavors both on and off campus; and students from a variety of disciplines showcased unique and thought-provoking projects during a poster session. CURB's Spring Forum proved that research transcends the boundaries of the university and has a home in the real world.

Richardson spoke to an audience of Cornell students and faculty about the university's diverse research initiatives and commended CURB on its commitment to promoting undergraduate research. As a professor who taught introductory physics, Richardson opened up a world of research to a host of undergraduates; he continues to encourage students to pursue independent academic projects.

Speaking about ongoing research in the sciences, Richardson gave special attention to Cornell's Arecibo Observatory, located in Puerto Rico. Arecibo boasts the world's largest radio telescope and Puerto Rico's most popular science museum. Using the telescope's radar capabilities, undergraduate and graduate scholars study the properties of cosmic bodies and record radio waves emitted by distant galaxies. Richardson turned his attention back to Cornell's campus with his detailing of the Wilson Synchrotron Laboratory. The laboratory's particle accelerator, the Cornell Electron Storage Ring, has been advancing the field of high-energy physics for more than 20 years. After highlighting Cornell's work in nanoscience and advanced materials, Richardson mapped out the path of the university's research endeavors for the coming years. He discussed Cornell's life sciences research initiative and the university's pledge to raise funds for research in biology, genetics, and related fields. All of these research endeavors offer opportunities for undergraduate participation.

Students and faculty members mingled with undergraduate researchers at the poster session, which gave a select group of students the opportunity to share their findings (often collected over a number of semesters) with the Cornell community. The undergraduate researchers represented all academic areas. For example, a poster about DNA structures stood next to a display of Japanese tea gardens.

Seniors in Landscape Architecture presented independent studies about urban environments and culture-specific con-

structions. Spencer M. Levine '03 proposed a restructuring of cities to accommodate the needs of pedestrians rather than vehicles in his project, "Restoring the Urban Fabric of Sprawled Cities." Anita E. Roth '03 explored the benefits of reforming principles of urban design to fit the needs of children. With "Water as a Transitory Element: The Japanese Tea Garden," Misako Murata '03 analyzed the role of water in Japanese tea gardens and suggested how tea garden aesthetics can be incorporated into modern design. Projects of the Landscape Architecture students deviate from the traditional nature of undergraduate research. Roth summed up the factors on which she and her fellow undergraduate researchers focus: "Our research is more about structural history and understanding architecture's context and site...[research in Landscape Architecture] is based less on the written word than on understanding principles of design."

Students studying Nutritional Sciences explored issues of concern to many women today. Anne Marie Murphy '03 set out to determine what motivates the food choices of adolescent females. By interviewing a number of middle school girls, Murphy discovered that parents exercise the greatest influence over the food choices of adolescent females. Her poster displayed a model that maps the factors that determine food choices and their respective influences. Lindsay Moskowitz '03 examined the influences on the perceptions of body image and self-esteem among female dancers. Through interviews with older adolescent dancers, Moskowitz became familiar with body image problems in the dance community. She suggested reforming the teaching methods and organization of dance studios to combat feelings of inferiority among dancers and to foster self-esteem.

The poster session brought together students and faculty from all of Cornell's academic arenas. In its discussion of the university's research endeavors and showcasing of independent undergraduate projects, the CURB Spring Forum revealed how the Cornell academic experience extends into, and often benefits, the outside world.

*Sheila Yasmin Marikar '05*

#### **For more information:**

Cornell Undergraduate Research Board  
<http://www.rso.cornell.edu/curb>

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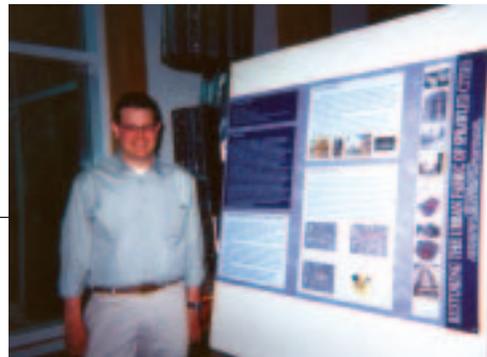
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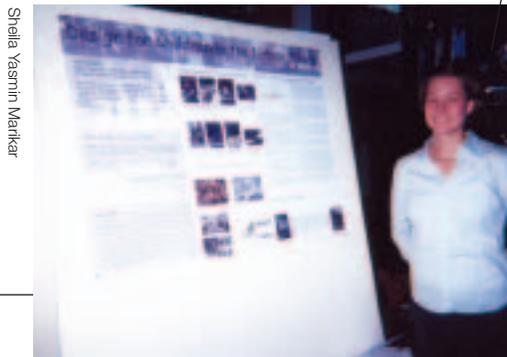
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Misako Murata '03, Landscape Architecture, analyzed the role of water in Japanese tea gardens.

Spencer Levine '03, Landscape Architecture, proposed a restructuring of cities to accommodate the needs of pedestrians rather than vehicles.



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