

CORNELL Chronicle

Volume 26 Number 35 May 25, 1995

WALLENBERG SCHOLAR

Senior Jared Genser is one of only 12 students worldwide to be named a Raoul Wallenberg Scholar.

3

AWARDS AND HONORS

It's graduation time again, and many students and faculty have received honors and awards.

8

6 Cornellians elected to Academy of Arts and Sciences

Hunter Rawlings, president-elect of Cornell and a classics scholar, is one of six Cornell faculty members to be elected as a Fellow last month to the American Academy of Arts and Sciences.

Also elected were Malden C. Nesheim, provost of Cornell and professor of nutritional sciences; Jon C. Clardy, professor of chemistry; Terence H. Irwin, professor of philosophy; Robert C. Richardson, professor of physics; and Jeffrey W. Roberts, professor of biochemistry, molecular and cell biology.

Election to the academy is in recognition of distinguished contributions to science, scholarship, public affairs and the arts. The Cornell faculty were among 162 new Fellows and 21 Foreign Honorary Members elected in April at the academy's Cam-



Clardy



Nesheim



Rawlings



Richardson

bridge, Mass., headquarters.

The Academy of Arts and Sciences was founded in 1780 by John Adams "to cultivate every art and science which may tend to advance the interest, honor, dignity and happiness of a free, independent and virtuous people."

Here is information about the new Fellows from Cornell:

Hunter Rawlings

Formerly president of the University of Iowa since 1988, Hunter Rawlings begins his Cornell presidency July 1. Rawlings,

who was born in Norfolk, Va., received his Ph.D. from Princeton University in 1970 and is a 1966 graduate of Haverford College, with honors in classics. He was elected to the Academy's Section on Educational and Scientific Administration.

Before going to the University of Iowa in 1988 as president and professor of classics, Rawlings served for four years as vice president for academic affairs and research and dean of the system graduate school of the University of Colorado, Boulder. He joined UC-Boulder in 1975 as assistant professor of classics. He became department chair in 1978 and was named full professor in 1980. He served as associate vice chancellor for instruction from 1980 to 1984.

Rawlings' scholarly publications include

Continued on page 6

Celebration in Theory



Kevin Morooney, left, Smart Node consultant from Penn State University, explains a graphic of a supercomputer simulation depicting two planets in orbit around a pulsar, the first evidence of planets outside our solar system, on display at the Cornell Theory Center open house May 17. See Page 3 for coverage of the Theory Center's symposium celebrating its 10th anniversary.

Charles Harrington/University Photography

American university 'a treasure'

By Linda Grace-Kobas

William G. Bowen Sunday night opened the faculty symposium honoring Frank H.T. Rhodes by giving an emphatic response to the event's defining question:

"The American university today is in no way endangered and is indeed a national treasure."

Saying that, he then launched a defense of one of the most politically contentious issues facing higher education: affirmative action in student admissions.

The former president of Princeton selected research universities' role as "engines of mobility" and "pathways upward" as the focus of his address to several hundred faculty attendees and guests at a banquet in the Staller ballroom.

"Many people are prepared to accept hard lives for themselves if they genuinely believe their children have the chance for better lives," he said. "Promoting the ideal of opportunity for all races is both right and essential for the future of our country."

"Student aid deserves a very high priority," Bowen said, adding, "The political currents of the day endanger hard-won gains."

Continued on page 6

Taiwan president to give Olin lecture at reunion

President Clinton Monday authorized the visit of President Lee Teng-hui of the Republic of China on Taiwan to travel to the United States for Cornell's alumni reunion weekend June 8 through 11.

"It is a happy day in Ithaca," Cornell President Frank H.T. Rhodes told a contingent of Taiwanese press gathered for the announcement at the Staller Hotel.

Lee, who received his Ph.D. in agricultural economics from Cornell in 1968, had been invited to present the Spencer T. and Ann W. Olin Lecture at reunion. But he had



Lee

not been expected to be permitted to make the visit. The trip will mark a significant shift by Washington, which has stonewalled since last year on Lee's request to visit his alma mater.

Rhodes, who has visited Lee in Taiwan three times in the past three years, told the press that details of the trip and Lee's schedule at Cornell have not been worked out. He assured them, however, that a round of golf at Cornell's Robert Trent Jones golf course, where Lee learned the game, most likely would be on the agenda.

"I am delighted at the news that President Clinton has authorized President Lee Teng-hui of the Republic of China on Taiwan to travel to the United States to present the Spencer T. and Ann W. Olin Lecture at

Cornell University's alumni reunion," Rhodes said in a prepared statement.

"Cornell has long had personal and institutional ties with President Lee, who received his Ph.D. in agricultural economics here in 1968. His doctoral dissertation was cited by the American Association of Agricultural Economics as the best doctoral dissertation of that year, and his research provided the rationale for investment in agriculture during the early years of Taiwan's economic expansion.

"President Lee has achieved international distinction as both a scholar and a political leader. His leadership as president of the Republic of China on Taiwan has significantly advanced democratization and

Continued on page 2

Commencement

Following is an abbreviated calendar of commencement events:

Saturday, May 27:

• *President's Breakfast Reception:* Arts Quad from 7:30 to 9:30 a.m.

• *Senior Convocation:* Barton Hall at noon.

• *Ph.D. Recognition Ceremony:* Barton Hall at 5 p.m.

Sunday, May 28:

• *Baccalaureate Service:* Bailey Hall at 8:30 a.m.

• *Commencement:* Schoellkopf Field from 11 a.m. to noon.

• *Johnson School's Diploma Ceremony:* Bailey Hall at 1 p.m.

BRIEFS

West Avenue construction: West Avenue will be closed from University Avenue to Campus Road for construction and resurfacing starting the first week of June and continuing through the third week of August. The site will be secured with orange fencing, and at least two pedestrian crossings will be accessible. The road will be closed to all but emergency vehicles except for the following dates: June 24, Summer College move-in; July 3, Especially for Youth program move-in; July 8, Especially for Youth move-out; Aug. 10, Summer College move-out. West Avenue is scheduled to reopen before fall opening on Aug. 25.

One-way routing: Garden Avenue Extension from Savage Hall northbound to Newman Lab will become one way to all vehicular traffic beginning June 5. This change is being implemented for both motorist and pedestrian safety.

Steam shutdown: The annual campus-wide steam shutdown is scheduled for 5 a.m. Tuesday, May 30, through 5 p.m. June 1. Most buildings will not have full steam until midnight or later after start-up. The shutdown is essential to permit maintenance on the steam distribution system and repairs at the Central Heating Plant. For questions call 255-5322.

Summer permits: Summer parking permits (valid May 30 through Aug. 25) are available at the Transportation Office. All permit sales are subject to availability. Call 255-PARK for more information.

MEMORIAL

A memorial service for Nick Wilson, the late husband of Ruth Raimon-Wilson, will be held June 1 at 5:30 p.m. in the Founder's Room, Anabel Taylor Hall. Refreshments will be served following the service. Wilson died April 14.

Chronicle schedule

The *Cornell Chronicle* will not publish June 1. The deadline for submitting calendar notices for the June 8 issue, covering June 8 through 15, is Monday, May 29.

CORNELL Chronicle

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Cornell University is committed to assisting those persons with disabilities who have special needs. A brochure describing services for persons with disabilities may be obtained by writing to the Office of Equal Opportunity, Cornell University, 234 Day Hall, Ithaca, N.Y. 14853-2801. Other questions or requests for special assistance may also be directed to that office.



Frank DiMeo/University Photography

Henrik N. Dullea, left, and President Frank H.T. Rhodes speak to a Taiwanese news reporter Monday after a press conference at the Statler Hotel. Rhodes expressed his delight that President Clinton had just authorized the visit of President Lee Teng-hui of the Republic of China on Taiwan to the United States for Cornell's alumni reunion weekend June 8 through 11.

President Lee *continued from page 1*

has been an inspiration for people in developing nations throughout the world," Rhodes added. "[His] return to Cornell will offer an extraordinary educational opportunity for all members of the campus community. We eagerly await his visit and look forward to his insightful comments."

Until now, U.S. officials have said such

a visit would be incompatible with Washington's unofficial relations with Taipei since it severed diplomatic ties with Taiwan and recognized China in 1978. They have said Lee could change planes in the United States, but little more.

Both houses of Congress recently voted almost unanimously to approve a resolu-

tion urging that Lee be allowed to make a private visit.

China, which has viewed Taiwan as a renegade province since the end of the Chinese civil war in 1949, staunchly opposes any official contacts with Taipei. Taiwan has formal diplomatic relations with only 29 countries.

Three local agencies get Robert S. Smith awards

Three local agencies have received 1995 Robert S. Smith Awards for community progress and innovation.

Established at Cornell by the Tompkins County Trust Co. last year, the awards are named for the trust company's former board of directors chairman, who is the W.I. Myers Professor Emeritus of Agricultural Finance at Cornell. They are intended to generate program partnerships between the university and citizens of Tompkins County.

The one-year awards, selected from 18 applications and announced by William Lacy, director of Cornell Cooperative Extension, have been presented to:

- The Women's Community Center for the development of a unique community-based Women's Economic Development Resource Center.
- The Varna Volunteer Fire Co. for a fire district mapping project.

• Tompkins County 4-H to enrich the after-school Academic Excellence Program by adding a job skills/career awareness component.

Last year, the first recipients of the Robert S. Smith Award were the Learning Web, the Sciencenter and the Tompkins County Planning Department. As part of the program process, recipients must complete a final project report. The first trio of final reports illustrates the success of the programs:

Mary Ann Lapinski, director of the Learning Web, reports that last year's Smith Award provided a paid internship for Anita Prasad, a junior student in rural sociology at Cornell, who worked with the Web's community service coordinator, Curtis Ogden, to plan and implement volunteer community service projects for 25 middle-school youths in Groton, Trumansburg, Enfield and Newfield. The experience was so positive

for Prasad, Lapinski noted, that she is now volunteering in the program.

At the Sciencenter, the Smith Award provided funds for Cornell student Meredith Peck to research volunteer training methods at U.S. museums and write a volunteer training guide that the center has integrated into its standard program of preservice training. Her work "strengthened our ability to recruit and manage volunteers," said Charles H. Trautmann, Sciencenter executive director.

A workshop on technology transfer sponsored by the Tompkins County Board of Representatives was held Nov. 19 at Cornell, organized by Rachel Weber, a doctoral student in the Department of City and Regional Planning at Cornell. The conference, which featured a range of speakers from business, government and academia, explored issues revolving around technology transfer and economic development in the county.

CU trustees to meet May 26-27

The Cornell Board of Trustees will meet in Ithaca on May 26 and 27.

The full board will convene on Saturday, May 27, in the trustee meeting room in the Johnson Museum of Art at 10 a.m.

During a brief open session, the board will hear reports from the president, the university faculty and Student Assembly. The 1995-96 financial plan and statutory college budget, as well as the annual report on "Progress Toward Diversity" and a report on the Cornell Campaign also will be presented.

The Executive Committee will meet in the Taylor Salon in the Statler Hotel on Friday, May 26. The luncheon meeting will begin at 12:15 p.m.

During the open session of the meeting, the committee will hear a report from the president and review the 1995-96 financial plan for the statutory colleges and revisions to Cornell's patent policy.

The committee also is expected to approve the nominations of Don M. Randel as provost, James J. Mingle as university counsel and secretary of the corporation, and

Franklin M. Loew as dean of the College of Veterinary Medicine.

Three committees also will meet Friday:

• The Buildings and Properties Committee will meet at 9 a.m. in the Yale-Princeton Room of the Statler Hotel. There will be a brief open session at the beginning of the meeting.

• The Committee on Land Grant and Statutory College Affairs will hold an open meeting at 2 p.m. in Room G-01 of the Biotechnology Building. The committee will hear updates on the the state budget, state and federal relations and statutory tuitions.

• The Committee on Academic Affairs and Campus Life will meet at 8 p.m. in the Taylor Salon of the Statler Hotel. During an open session, the committee will hear the report of the Strategic Planning Task Force on Graduate and Professional Education and a presentation on "The Faculty of the Future."

A limited number of tickets for the Executive Committee and board meetings are available at the Cornell Information and Referral Center in Day Hall.

Russian children's choir will perform

Through the international language of music, 44 children from St. Petersburg, Russia, will join the Ithaca community starting tonight for 10 days of peace and cultural understanding. The visit of the Vassilyostrovsky Children's Chorus, sponsored by the Ithaca Community Chorus and Chamber Singers, will feature several events on the Cornell campus and in the city of Ithaca. Their visit is the result of the Ithaca Community Chorus' January 1994 concert tour of Russia.

Friday will be spent at Cornell, beginning with lunch at Robert Purcell Community Center and ending with a tour of campus.

The chorus will sing at the Ithaca Farmer's Market Saturday. That evening, they will present a joint concert with the Community School of Music and Arts' Ithaca Children's Choir. This 8 p.m. performance, in St. Paul's Methodist Church in Ithaca, kicks off a week of concerts across upstate New York.

For information about concerts, tickets or opportunities to meet the young Russian singers, call 257-5664 or 257-6765.

Hundreds help Theory Center celebrate anniversary

By Larry Bernard

Hundreds of people from Cornell and the Ithaca community toured the Cornell Theory Center last week, peering in CAVEs, having their faces morphed and making medical diagnoses over the information superhighway.

The Theory Center held an open house for the community on May 17, followed by a scientific symposium May 18, to celebrate its 10th anniversary. In May 1985, the National Science Foundation established four national supercomputing centers to advance the country's efforts in science and engineering.

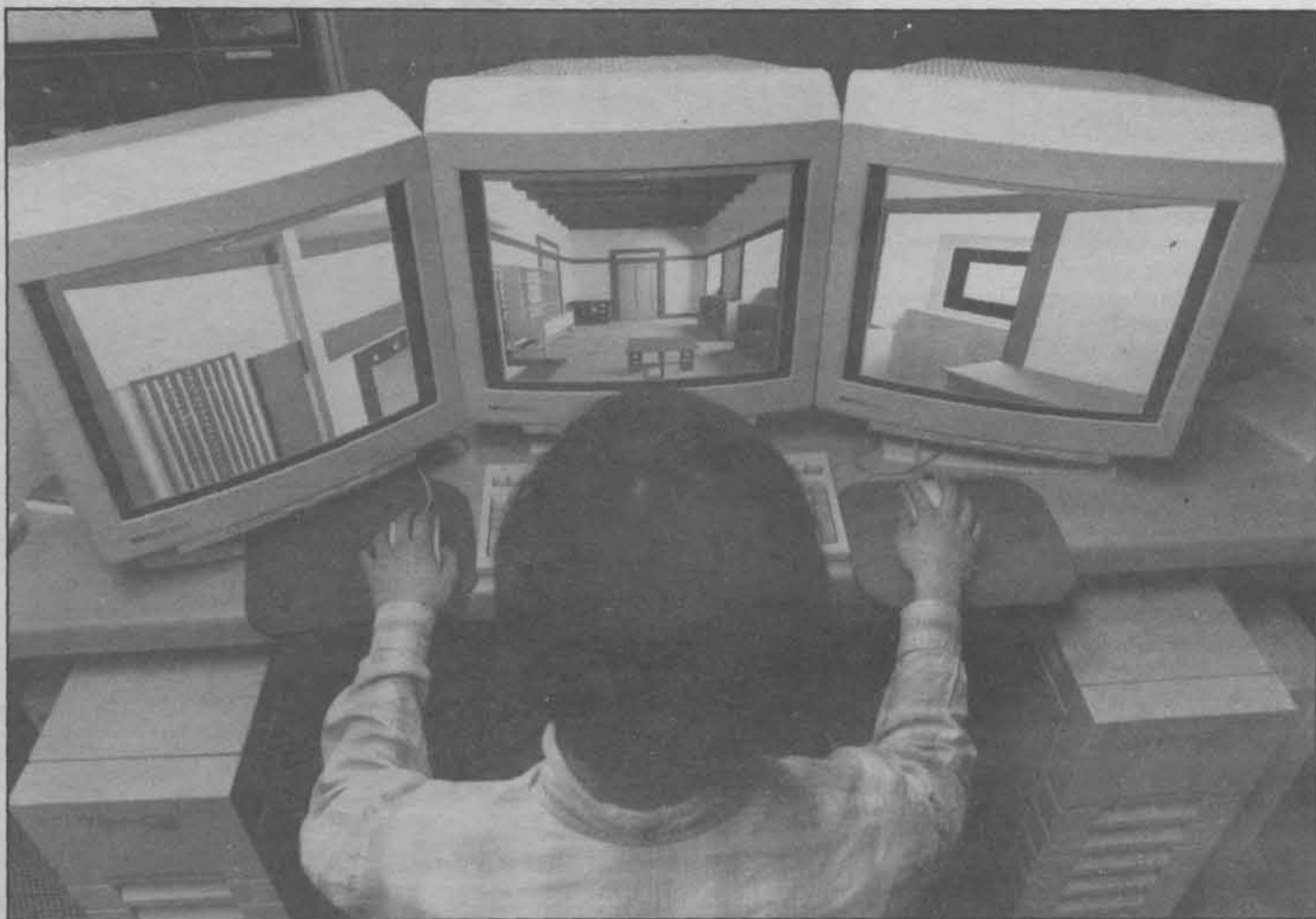
The Theory Center now has, in full production, the world's largest general purpose supercomputer — 512 processors housed in 34 black frame racks that hum along 24 hours a day, seven days a week. A scalable technology with up to 512 separate processors that work in parallel, the IBM SP2 is faster, larger and more powerful than any computer anywhere. It is used for research in a variety of areas, from ground water pollution cleanup to finding planets around other stars.

Theory Center visitors were able to see a virtual reality environment, in which researchers can "fly through" a molecule or cell; witness pathology diagnoses made over the Internet via CUSeeMe software; experience IthacaNet, the local community's presence on the World Wide Web over the Internet; tour the Web; see scientific visualizations made on supercomputers; and see interactive 3D computer graphics, including 3D morphing, in which faces seem to melt from one to the next.

After the open house, scientists, administrators and staff gathered to pay tribute to the accomplishments over the last decade but also to look ahead to the next 10 years.

"High-performance computing is evolving faster than ever before," Malvin H. Kalos, director of the Theory Center, told a group gathered for a reception to commemorate the first decade. "We embark on the next 10 years with a sense of adventure."

Norman R. Scott, Cornell vice president for research and advanced studies, said the Theory Center is an excellent example of fulfilling Cornell's mission in teaching, research and outreach, as well as the importance of partnerships with government, industry and the university.



Charles Harrington/University Photography

Research Assistant Sebastian Fernandez operates a three-screen walk-through to show how an architect might use a graphic simulation in the Program of Computer Graphics at the Cornell Theory Center open house May 17.

"The Cornell Theory Center is an excellent example that supercomputing has proven it is more than a tool, it is changing the nature of science and engineering," Scott said.

Anne C. Petersen, deputy director of the National Science Foundation, while lauding the supercomputing center, issued a cautionary note. "There really is a great sense of pride around the NSF in the NSF program and in the Theory Center's program," she said. But despite a decade of "immense achievement," the NSF is "re-viewing its role in supporting the (super-computer) centers. If the budget cuts now being considered do come to pass, the review process will become even more intense than it already is."

Irving Wladawsky-Berger, IBM general

manager for the Power Parallel Division, said the Theory Center helped make parallel processing a new business for IBM. The company now has 450 SP2s in operation around the world, although none as fast or powerful as the machine at Cornell.

"They helped us get into supercomputing to begin with 10 years ago; they helped us start our POWERparallel business three years ago; and they continue to encourage us to 'push the envelope' in multiple directions, both with technologies and advanced applications," Wladawsky-Berger said.

Also speaking at the reception was John Hopcroft, dean of the engineering college, and John Toole, director of the National Coordinating Office for HPCC (High Performance Communications and Computing).

"A lot of us forget there was a time when we scientists did not have access to supercomputers," Hopcroft said. "Now, the Theory Center has provided universal access for all scientists." Supercomputing has, he said, placed "simulation science next to experimental and theoretical science."

At the scientific symposium on May 18, researchers from a variety of fields showed the versatility of supercomputers. Among them: Harold A. Scheraga, Cornell professor of chemistry, described how he uses the supercomputer to study protein folding; Charles Peskin of New York University described how to build a virtual heart; and Margaret Geller of the Harvard Center for Astrophysics showed graphic voyages through the universe.

Genser '95 named a Raoul Wallenberg Scholar

By Darryl Geddes

Senior Jared Genser, who was honored at the White House last year for his public service work, has capped an impressive undergraduate career with two prestigious honors.

Genser, 22, a human service studies major in the College of Human Ecology, was selected as one of only 12 students worldwide to be a Raoul Wallenberg Scholar and was named the winner of Cornell's John F. Kennedy Memorial Award.

As a Wallenberg Scholar, Genser will travel to Israel in August for a year of graduate study at the Hebrew University, where he will examine the function and role of leadership in democratic societies. The scholarship, named for the Christian Swedish diplomat and humanitarian who devoted himself to rescuing Jews from the Nazis, covers full tuition and related costs. Genser was selected for the scholarship, in part, because of his superior academic and leadership abilities.

"I've always been involved in public service work and saw the scholarship as a unique opportunity to study politics and human rights in the context of another

culture," said Genser, who has deferred his acceptance at Harvard's John F. Kennedy School of Government until fall 1996.

As an undergraduate, Genser founded and directed the Cornell chapter of Best Buddies of America, a program that pairs Cornell students with developmentally disabled adults from the local community. In March 1994 he was named by then-New York Gov. Mario Cuomo as policy adviser to the New York State National Service Commission. He served as a training program coordinator for the U.S. Justice Department's national service program, JustServe, and as an intern and consultant for Youth Service America, for which he was cited by First Lady Hillary Rodham Clinton at a White House ceremony in April 1994. But even before college Genser's character was reflected in his actions, as he cared for the terminally ill and helped feed the homeless.

Genser believes that an individual's introduction and commitment to service should be a function of America's public schools. "By involving students in community service in the early grades, students will learn that such work is a responsibility of good citizenship. They will not ask themselves should I be involved, but rather how should I be involved," said Genser, who took a year's leave to work with Kathleen Kennedy Townsend, now Maryland's lieutenant

governor, to promote that state's service-learning graduation requirement.

In his application for the Wallenberg Scholarship, Genser suggested the groups' capstone project be to help create a community service curriculum for a school in Israel. In the past scholars coordinated a human rights seminar at Moscow State University that featured presentations by Soviet dissidents and civil libertarians and established a library for immigrants in Jerusalem.

Genser's selection as the recipient of the John F. Kennedy Memorial Award, which was established by the Cornell Class of 1964, is further testament to his leadership skills and his commitment to helping others. The award honors the Cornell senior who shows outstanding promise for a career in public service.

Genser believes that community involvement in public service activities is a way to bring together diverse populations for the common good. "It is very rewarding when people can build upon their diversity as a strength and address community needs," he said.

The Maryland native believes Cornell should do more to promote service among students. "Cornell needs to dedicate a building — a place where service organizations can discuss projects and community values — to give public service greater visibility and greater importance on campus."

2 receive Kodak scholarships

Two Cornell students have been awarded Eastman Kodak/National Hispanic Scholarships. Ernesto Borrego and Jason Rivera are two of only 12 Hispanic-American students in the United States to receive the financial awards. The scholarships, which are renewable, cover tuition for one year.

Borrego, a freshman from El Paso, Texas, is majoring in electrical engineering. He attended Cornell's pre-freshman summer program last year.

In high school, Borrego, 19, excelled in math and science and was named outstanding student in math and science in the Southwest at a competition held at the University of El Paso.

While graduation is still several years away, Borrego's future plans include pursuing a doctorate degree.

Rivera, a sophomore from Cliffside Park, N.J., is majoring in chemical engineering. The 19-year-old hopes to pursue a career in biomedical engineering after graduation. Rivera is a member of Cornell's varsity track team, where he competes in the pole vault. In high school Rivera was president of the National Honor Society.



Genser



Borrego



Rivera

IBM equipment grants spur social science research

By Larry Bernard

A law professor tracks federal court cases. An agricultural economist creates models in dairy management. Physicists create new tools for undergraduate teaching. And social science faculty across campus have immediate access to the latest census figures.

What makes all this possible? For the past two years, Cornell departments and centers have been given about \$2.5 million worth of IBM Corp. computers in a program that Big Blue calls Special University Research Grants. Essentially, it puts the power of a (former) supercomputer on the desktops of faculty around the country, and Cornell is receiving grants for an unprecedented third consecutive year.

"Particularly in the social sciences, this shared grant has had tremendous impact among faculty typically not readily able to access this computer resource," said Norman R. Scott, Cornell vice president for research and advanced studies. "This gift has had a very significant impact, giving faculty unique opportunities."

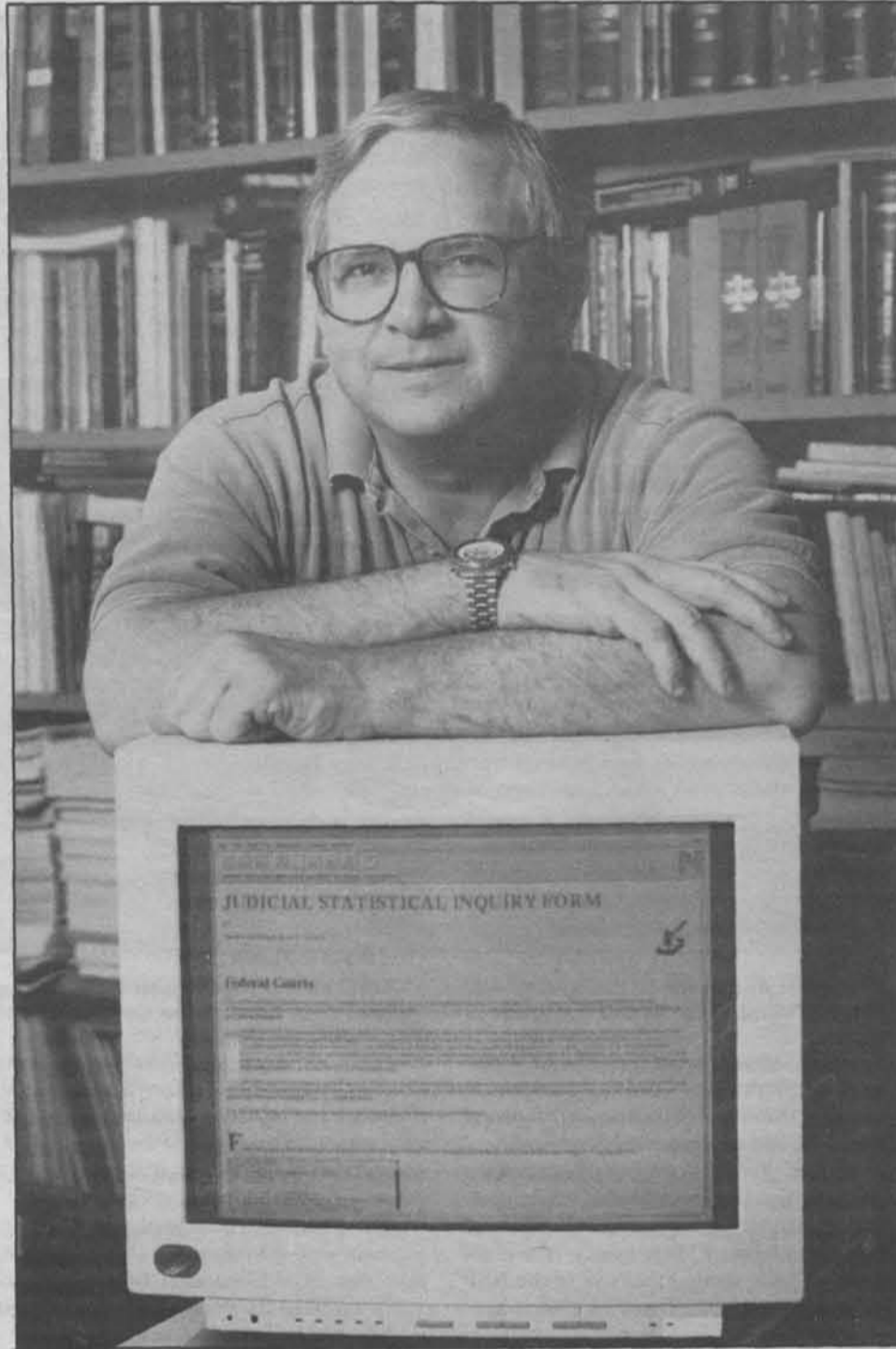
At the Cornell Institute for Social and Economic Research (CISER), 22 faculty members in four colleges use 23 RS/6000s of different models. The availability of such hardware has made it possible for CISER to make a program available to extract data from the Data Archive without, for example, downloading the entire 1990 census.

As a result, statistical research and economic modeling now is available at workstations that can be linked to a network server.

The extract program has been in use since June 1994. "Without the RISC/6000 workstation, none of this would have been possible," said Mariann Carpenter, computing manager for CISER. "Data handling capability is much improved. The sheer size of some of the files has made it impossible to contemplate the task before now. Not only does this help researchers at Cornell, but it allows anyone with Internet capabilities to be able to interact with CISER. Social science researchers across the country will finally have easy access to data they need."

John M. Abowd, professor of industrial and labor relations, is pleased that the social science community has better research capabilities as a result of the IBM donations. However, "I do not believe that most of the social scientists understand the advantages well enough to use it effectively," Abowd said, adding that the numbers are increasing. "For those who do, the productivity of using central data/statistical servers, local workstations and desktop Windows/DOS machines in a reasonably integrated environment has greatly improved our computing system."

Theodore Eisenberg, professor of law, found a new and much preferable way to do law research. "The new IBM equipment has enabled me to keep all the results of all



Charles Harrington/University Photography

Law Professor Theodore Eisenberg at his IBM RS/6000 computer recently in his office in Myron Taylor Hall.

federal court cases for 12 years in one place and to analyze them much more quickly and efficiently than the old system," Eisenberg said, adding that he could do things now that were not possible before.

For example, with the RS/6000 workstation, Eisenberg has linked U.S. Census data to the federal courts database to study whether race and income help explain case outcomes.

"The old mainframe would have choked on this combination," he said. On a more personal note, he added that the UNIX technology allows him to do most of his computing in the office during regular hours. Previ-

ously, he did it from home for after-hours reduced charges.

Another use for Eisenberg is proving quite valuable: He has established a server on the World Wide Web on his desktop RS/6000 of trial outcomes of federal court cases. The server runs a statistical program for any researcher with the ability to access the Internet, so it's not just canned material.

"Anyone in the world with a Web browser can do it," he said. "You can run a statistical program on the spot. It's really an unusual use of the Web. Millions of people won't use it, but for federal court researchers, it's quite a useful tool."

IBM officials laud the program as giving computing resources to many that previously was available to only a few.

"The purpose is to create or enhance IBM's presence at major research universities by entering long-term relationships that may involve placement of equipment to support research of mutual interest," said Chris McMahon, IBM higher education representative to Cornell.

But the benefits are not limited to the social sciences. Jim Sethna, associate professor of physics, used an earlier IBM grant in Cornell's Laboratory of Atomic and Solid State Physics (LASSP) to develop software that researchers around the country can use for numerical analysis and for graphical simulations of physics problems.

Called LASSPTools, the program was developed on IBM's RS/6000 machines and runs on UNIX workstations. The program is used for such areas as quasi crystals, earthquakes and minimal surfaces, to name a few. And a new IBM donation is helping physicists design new undergraduate teaching courses. With a teaching lab established with a major gift by an anonymous donor, the physicists have redesigned an upper-level course in solid state physics taught entirely on computer, using simulations, with no lectures.

"The entire research computing in LASSP is finding its base on the IBM donation," Sethna said. "These machines were just wonderful. IBM had a grand vision and gave us a large number of them at a time when there weren't many of them available to consumers, and that made this research possible."

IBM also has awarded a grant for environmental research to Christine Shoemaker, professor of civil and environmental engineering, to study ground water contamination and optimum cleanup strategies. The five-year, \$550,000 award was made "to sponsor environmental research at universities and research organizations throughout the world" using IBM technology, according to the company. Grants in IBM's Environmental Research Program are made through a national competition based on a peer review process.

Shoemaker's grant includes nine RS/6000 workstations, three PCs and four printers. She also now has connections to the IBM SP2 supercomputer at the Cornell Theory Center—the most powerful parallel processor made. "That made it very easy for us because the SP2 is based on IBM RS/6000 technology and software," Shoemaker said.

Said Scott: "This continues to represent the outstanding partnership between Cornell and IBM. In addition to the longstanding interaction with the Theory Center, it provides interaction with faculty in a broad fashion across the entire campus. It's a terrific example of the broad partnership that exists," Scott said.

Cornell expert improves computer graphics through engineering

By Larry Bernard

Shedding just the right amount of light on an object is a key component of making realistic computer graphics.

Thanks to a Cornell mechanical engineer, computer graphics artists are closer to the goal of making images that are "indistinguishable from reality."

"In a real room, color doesn't just sit in one spot," said Kenneth E. Torrance, Cornell professor of mechanical and aerospace engineering. "It bleeds and moves around. Light is scattered and in different ways. Everything has shadows. Computer graphics need to reflect that."

Torrance, whose research expertise is in heat transfer and fluid mechanics, has applied basic engineering theory to computer graphics to make them seem as real as a photograph. His theories now are widely used in commercial forms, in everything from entertainment to aircraft and automotive design, architecture and spacecraft.

Torrance and co-workers first proposed

in the early 1980s what now is the underlying mechanism of much of computer graphics over the last 15 years: radiosity, and physically based reflectance models, based on global and local models for the interaction of light and surfaces.

Last year, the Association of Computing Machinery gave Torrance the SIGGRAPH Computer Graphics Achievement Award, recognizing his contributions in the field. In its citation, the association said:

"Radiosity represented a new and important basic paradigm for rendering . . . Torrance's seminal work inspired other computer graphics researchers at several institutions to explore this new approach. Indeed, we might well say that Torrance is the father of radiosity in computer graphics."

Donald P. Greenberg, Cornell professor of computer graphics and director of the National Science Foundation-funded Program of Computer Graphics, said Torrance's work has been vital to the field.

"Ken really pioneered the analytical descriptions of light-reflection models, that

is, describing how light scatters when it hits the surface of material and reflects back," Greenberg said.

"Cornell has had the most significant role in the entire computer graphics community in developing this process, and Ken has been instrumental every step of the way. Our primary goal when we started this was photo-realistic imaging, modeling how light behaves. Now, graphic interfaces have become the heart and soul of the whole computer industry and will move from 2D to 3D."

Torrance, who teaches undergraduate courses in heat transfer and graduate courses in computational methods, said he took a theory commonly used in thermal engineering—for combustion engine design or heat-exchange in a room, for example—and applied it to visual images. "When you look at heat radiation transfer in, say, a furnace, you have about 100 surfaces to model. But with a lighting problem, you have 50,000 or more surfaces. You need extremely high resolution," he said.

His work has been funded by the National Science Foundation, Hewlett-Packard, the Cornell Theory Center, the federal Advanced Research Projects Agency, the Cornell Program of Computer Graphics, IBM Corp., Digital Equipment Corp., Eastman Kodak Co. and others.

Torrance and colleagues in the Program of Computer Graphics were first to create realistic images of objects that correctly incorporated the behavior of metallic, non-metallic and partially transparent substances. He has now developed a lab for studying the radiometric properties of surfaces and light sources for comparing simulated images with actual images.

Early computer graphics simply were, well, simple. They did not reflect the way light really behaves in a room and how it is scattered to form various hues and contrasts. Applying radiosity takes all that into account, he said.

The test, Torrance said: "If you see an image and say, 'That looks real.' Then you've succeeded."

CORNELL PROFILES

New student trustee wants to be where the action is

By Denise Taylor

It didn't take sophomore Kety Esquivel long to figure out it's the board of trustees that makes many of the decisions at Cornell that affect students the most. And once that became clear, she took charge in her usual straightforward, fast-action manner.

After elections held March 7 and 8, Esquivel '97 was elected as a student member of the board of trustees. She will be replacing Julie Crotty, whose two-year term ends in June, and joining Karin Klapper '96.

An industrial and labor relations (ILR) major, Esquivel has served on both the Student Assembly (SA) and University Assembly (UA) during the past year.

She joined the SA, she said, because it "looked like a mechanism set up so that the students could voice their concerns." The SA's authority is restricted to the areas of dining, residence life and student activities, however, and it was this "limited jurisdiction" that motivated the Rochester native to run for the board of trustees seat.

"When I looked into the board of trustees, I saw that these are the people who are making the decisions," she said. They were making decisions about issues that concerned her, but over which she had no impact through the SA, she added.

Esquivel said one such concern is the issue of academics. She ran on a platform that emphasized restructuring, and wants to examine dual degrees, double majors, overlapping between colleges and the relationship between professors and students.

A particular "vision" she has for academics is an extension of the research symposium offered every year. Citing her fieldwork in Guatemala last winter and her ability to fund, through different university programs, a presentation of her research, Esquivel feels "the resources are there. It's just a question of knowing how to tap them."

She noted that students at Cornell "are at the forefront of a lot of research," and pooling available resources in one fund could allow more students on the graduate and undergraduate level to participate in such symposiums.

Esquivel also wants to see continued student involvement, especially in "the issues that affect them particularly concretely, such as financial aid." Attempting to mobilize students in an effort to save state and federal funding to higher



Charles Harrington/University Photography
Kety Esquivel '97, newly elected student trustee, stands in front of Willard Straight Hall recently.

education, she helped organize trips to Albany to speak with representatives, letter writing campaigns and phone-a-thons.

Student activism in the fight against budget cuts has been particularly impressive, Esquivel said. The cuts would affect "not just the students themselves but our institution. The [effects] will trickle through to all students in the end," she said.

The trustee-elect said she also would

like to see student leaders at Cornell "found an actual lobbying organization for financial aid." She would like to be involved with the effort but doesn't believe she should spearhead such an activity as a trustee.

Esquivel said that such an organization would show students taking "more of an assertive and active role. It is important for the [governmental] representatives to

see the students interested and active."

These visions are not part of an agenda, she said. Since she hasn't "worked in [the] framework" of the board of trustees, she'll probably spend her first semester trying to determine "how people [on the board] think certain things through and deal with certain issues." She said her position probably will be a less vocal one at the beginning of her term, but not a passive one. Esquivel wants first "to learn how to work with the board and then show them that this is an idea I have and how can we go about implementing it? But first I think I need their trust and respect."

As Esquivel acquires the respect of the trustees, her life won't necessarily be all work and no play. The trustee-elect has plenty of interests to keep her entertained. A resident of Risley Hall, a dormitory for people interested in the creative and performing arts, Esquivel loves dancing, singing and acting, as well as attending performances as a spectator. And she "loves traveling and exploring different languages and cultures."

Also on Esquivel's list of loves is her university. "Cornell has everything," the music enthusiast noted, from free concerts in areas as diverse as folk and classical music to access to the Johnson Museum of Art.

She said she enjoys the nearby cafes, where people can play chess or just chat. And while she likes to talk to people about "factual issues that we can tangibly affect," Esquivel also enjoys cafe conversations which are sometimes about "more abstract and philosophical things."

No less pleased with the structure of Cornell, Esquivel said ILR is perfect for her because she came from a small, private preparatory school and she wanted to continue her education in a small college, but as a people-person she also wanted access to lots of people. Cornell worked well, she said, in providing her with "something small within something big."

She points, too, to the academic opportunities at Cornell. She said one of the motivating factors in her decision to come here "was the fact that it was seven schools," which allows a "broad-based perspective."

Esquivel said she came to college knowing that she "would go to grad school with some kind of focus on immigration issues," and the many fields she can work in at Cornell will help her determine from what angle she will approach the issue.

Gymnosperm Slope cleared to open up view of conifer collection

By Mary Hirschfeld

Gymnosperms? They are plants that lack flowers and produce their seeds in cones, which means that the majority of gymnosperms are conifers, those needle-bearing evergreens like pines, spruces and firs that liven up Ithaca's gray winter landscape. The word *gymnosperm* translates literally to naked seed — one that has no protective covering. The seeds sit "naked" upon the bracts that form the conifers' cones.

Gymnosperm Slope is easily accessible, the slope upon which Rice Hall, Fernow Hall and Kienzle Overlook sit. It forms a distinctive bowl that partially encloses the Plantations botanical garden, and it physically separates Plantations from the campus above. An open-air lunch at the Plantations Peony Garden in late May or early June provides an excellent view of Gymnosperm Slope as you revel in the blooms of the

commentary

herbaceous and tree peonies.

Those of you who have recently visited Plantations may have wondered about the extensive brush clearing on Gymnosperm Slope. You may have noticed that junipers, spruces, firs and pines are now visible on the slope, although they bear the signs of years of competition from grapevines and honeysuckle. The Plantations staff cleared this slope to rediscover those conifers that had long ago been covered by competing underbrush and to restore the slope to its original purpose, that of displaying a comprehensive collection of conifers.

Gymnosperm Slope is one element of a

comprehensive master plan for Plantations that dates back to 1912, when the Cornell Department of Forestry planted red and white pines and hemlocks on Comstock Knoll. These trees now provide shade for the rhododendron collection on the Knoll. The master plan had two goals. All the conifers would be grouped together to facilitate their observation and study, and the concentration of evergreens would make the area an oasis of green during the long Ithaca winters.

Most of this plan came to fruition during the 1930s and '40s. Gymnosperm Slope was planted with a diverse array of junipers, spruces and firs; yews were planted to line Plantations Road and driveway, false cypress groves sheltered the main building and pines were planted on the dry west-facing slope along Judd Falls Road. From Kienzle Overlook, on Tower Road near the traffic booth, you can clearly see the pattern of green formed by these different types of conifers.

Now that the taxing work of brush clearing has neared completion, Plantations' horticultural staff can begin to restore Gymnosperm Slope to its original state. Existing older specimens will be rejuvenated. Some specimens have been shaded to such an extent by brush that they bear little resemblance to their former selves. Plantations staff will take cuttings or scionwood to make grafts of these plants to replace the originals. New conifers will be added to diversify the collection and enhance its teaching value, and small Asian maples and other unusual flowering trees will be planted in the shelter of the conifers.

This will not happen overnight. However, the long-term nature of this project ensures that each year a new section of the slope will be planted with unusual evergreens and small flowering trees.

Hirschfeld is horticultural curator for the Cornell Plantations.

The American University – A National Treasure

Treasure *continued from page 1*

Only at our peril will we allow higher education to be resegregated along economic and racial lines."

Bowen said it is a mistake to frame the difficult issues involved in creating opportunities for black Americans solely in the context of individual rights and fairness. Decisions on admission to selective institutions are based on a host of factors, some of them objective and others not.

'If we are to learn from our efforts, and our mistakes, we must be willing to examine the consequences of our policies.'

— William G. Bowen

"In my view, no individual has any right of entitlement to a place in the class," he stated, adding that institutions also should consider composition of the student body and the benefits students derive from learning to interact with a wide variety of people.

Bowen, author of several books, is now president of the Andrew W. Mellon Foundation. He is participating in a study sponsored by the foundation which is examining issues surrounding admissions criteria for different groups of students, and he gave the Rhodes symposium audience a preview of some of the study's findings about SAT scores as an admissions criterion.

While high SAT scores are a predictor of academic success for white students, there is no correlation between SAT scores and graduation rates or GPA for black students, Bowen said, describing results found in examining



Frank DiMeo/University Photography

William G. Bowen, president of the Andrew W. Mellon Foundation and former president of Princeton University, Sunday night opened the symposium honoring Cornell President Frank H.T. Rhodes at a banquet in the Statler Hotel ballroom.

data at a small subset of selective institutions.

If admission depended on SAT scores alone, almost three-fourths of black students who matriculated at those institutions in 1989 would not have been admitted, leaving blacks as only two percent as opposed to eight percent of the class.

"The benefits of having blacks represented in that class would not have occurred," Bowen noted. He also pointed out

that a retrospective examination of the data showed that the black students who would have been rejected solely on the basis of SAT scores did about as well academically as those who would have been admitted.

Efforts to increase diversity on campus may depend on the kind of learning environments that are created, Bowen added, arguing that black students face various kinds of stigmatization. He recommended that uni-

versities "be realistic of where we are as a society, take a long view, and exercise patience and persistence."

There is also a need for honesty in evaluating policies and practices seriously. "If we are to learn from our efforts, and our mistakes, we must be willing to examine the consequences of our policies," Bowen said. "We must balance conflicting values and be willing to make compromises."

American Academy of Arts and Sciences *continued from page 1*

a book, *The Structure of Thucydides' History* (Princeton University Press, 1981). He also is the author of scholarly monographs and articles, and has served as editor of *The Classical Journal*. At Princeton, Rawlings was a Woodrow Wilson Fellow and National Defense Education Act Fellow.

Rawlings is a member of the board of directors of the American Council on Education. He has served on the executive committee of the Association of American Universities and as a member of the National Committee for the Selection of Mellon Fellows in the Humanities and the National Army Advisory Panel on ROTC Affairs.

He chaired the Governor's Commission on Foreign Language Studies and International Education for the state of Iowa from 1988 to 1991 and was a member of Iowa's Economic Development Board.

Rawlings also chairs the Council of Ten, presidents and chancellors of the Big Ten Conference, and has been a member of the Presidents' Commission of the NCAA since 1993.

He received the University of Colorado Teaching Excellence Award in 1979. He is a member of the Archaeological Institute of America and the American Philological Association.

Malden C. Nesheim

Malden Nesheim is provost of Cornell. He was elected to the Academy's Section on Educational and Scientific Administration. A professor of nutritional sciences, he served from 1974 to 1987 as chairman of the Division of Nutritional Sciences in the Colleges of Human Ecology and Agriculture and Life Sciences.

His laboratory and field research have focused on the effect of parasites in human nutrition and health, and his national and international service on nutrition education. Nesheim is one of the scientists responsible for the National Institute of Medicine's

"Recommended Dietary Allowances" and the federal government's "Dietary Guidelines for Americans."

A member of the Cornell faculty since 1959, when he was appointed assistant professor of animal nutrition, Nesheim earned a B.S. (1953) and an M.S. (1954) at the University of Illinois and a Ph.D. (1959) in nutrition, biochemistry and physiology at Cornell. Nesheim, 63, completes his term as university provost in June.

Jon C. Clardy

Jon Clardy, the Horace White Professor of Chemistry, came to Cornell from Iowa State University in 1978. He was elected to the Academy's Section on Chemistry. He was chairman of the Cornell chemistry department from 1988-1993. Clardy received a Ph.D. from Harvard University in 1969 and a B.S. from Yale University in 1964. He was selected an Alfred P. Sloan Foundation Fellow and a Camille and Henry Dreyfus Teacher-Scholar.

Clardy received a Guggenheim Foundation Fellowship in 1984 and was selected a Fellow of the American Association for the Advancement of Science in 1986. He won the Akron Section Award from the American Chemical Society in 1987 and the Clark Distinguished Teaching Award at Cornell in 1990. In April this year, Clardy won the American Chemical Society's Ernest Guenther Award for work on natural products.

Also, Clardy has been selected five times by undergraduate Merrill Presidential Scholars as the professor who most influenced them at Cornell. Clardy teaches undergraduate courses in chemistry and a graduate course in X-ray diffraction.

Clardy's research deals with a variety of topics united by the common theme of three-dimensional structures of biologically important molecules. He works in the areas of antitumor antibiotics, marine natural products, unusual fungal metabolites and, most

recently, the structures of natural products with their protein receptors. He has published more than 500 papers.

Terence Henry Irwin

Terence Irwin, professor of philosophy, came to Cornell from Harvard University in 1975. He was elected to the Academy's Section on Philosophy and Theology. Irwin was appointed chairman of the Department of Philosophy in 1994. He received a Ph.D. from Princeton University in 1973 and a B.A. from Oxford University in 1969. He studied at Harvard University from 1971 to 1972 as a Loeb Fellow in Classical Philosophy.

A native of Northern Ireland, Irwin received National Endowment for the Humanities (NEH) Fellowships in 1979 and 1990, and served as director of an NEH Summer Seminar for College Teachers in 1980. He is a member of the executive committee of the American Philosophical Association (Eastern Division) and of the board of editorial consultants for *Encyclopaedia of Ethics* and the *Cambridge Dictionary of Philosophy*.

Irwin has published mainly on Greek philosophy. He is the author of *Plato's Ethics* (Oxford University Press, 1995) and *Aristotle's First Principles* (Oxford University Press, 1988).

Jeffrey W. Roberts

A biochemist, Jeffrey Roberts is the Robert J. Appel Professor of Cellular and Molecular Biology at Cornell. He was elected to the Academy's Section on Biochemistry, Molecular Biology and Molecular Genetics. He served as chairman of the Section of Biochemistry, Molecular and Cell Biology in the College of Agriculture and Life Sciences from 1988 to 1993. Roberts' research focuses on gene expression, transcription mechanisms and control of DNA repair. He teaches biosynthesis of macromolecules and is the co-author, with James Watson, of

Molecular Biology of the Gene, 4th edition.

Roberts earned a B.A. (1964) in physics and liberal arts at the University of Texas and a Ph.D. (1970) in biophysics at Harvard University. Before joining the Cornell faculty as an assistant professor of biochemistry in 1974, he was a National Science Foundation Postdoctoral Fellow at the Laboratory of Molecular Biology, Cambridge, England; a Junior Fellow in the Harvard Society of Fellows; and a Research Fellow in Biochemistry, also at Harvard.

Robert C. Richardson

Robert Richardson is professor of physics and director of Cornell's Laboratory of Atomic and Solid State Physics (LASSP). He was elected to the Academy's Section on Physics. He has been at Cornell since 1966, when he started as a research associate. In 1987 he was named the F.R. Newman Professor of Physics and became director of LASSP in 1990.

Richardson earned undergraduate (1958) and graduate (1960) degrees from Virginia Polytechnic Institute and a doctorate (1966) from Duke University, all in physics.

A member of the National Academy of Sciences since 1986, he chaired its physics section from 1989 to 1992. His research interest is in experimental low-temperature physics, especially the properties of liquids and solids at sub-millikelvin temperatures.

Richardson won the Eight Simon Memorial Prize from the British Physical Society and the Buckley Prize from the American Physical Society. He is a Guggenheim Fellow, a Fellow of the American Physical Society and the American Association for the Advancement of Science, and he is a Foreign Member of the Finnish Academy of Science and Letters.

Richardson has co-authored a textbook on experimental low-temperature physics and has produced a 20-tape series of lectures in introductory physics for undergraduates.

Symposium honors President Frank H.T. Rhodes

Rhodes believes universities have served nation well

By Darryl Geddes

Cornell President Frank H.T. Rhodes, responding to the question posed by the title of a symposium held this week in his honor — "The American University: National Treasure or Endangered Species?" — said universities are indeed national treasures and, despite public criticism and financial hardship, they are far from endangered.

"We are the place of education for many future leaders," he told a largely faculty audience in the Statler Auditorium Monday. "We are the site of preparation for virtually all [the nation's] students and future professionals. We are the site of treatment for most of the complex diseases, illnesses and concerns, and in a subtle way we are the shapers of national debate. Warts and all, we have served the nation well."

Rhodes, who retires June 30 after serving as Cornell's president since 1977, predicted the American university will continue to thrive but acknowledged that its longevity may be threatened by forces from within.

"I don't believe we are endangered, but I do suggest we may be weakened," he said. "We are weakened every time our practices betray our rhetoric. We are weakened every time a student experience belies the high rhetoric of the catalog. We are weakened every time our personal individual faculty interests override the need for collegiality in the interest of the wide community."

"We are weakened every time departmental exclusivity overrides collegiate concerns," Rhodes continued. "We are weakened every time the organization and practice provide disincentives for collegiality. We are weakened when administrative leadership allows us to put personal interest ahead of student concerns."

Marye Anne Fox, vice president for research at the



Frank DiMeo/University Photography

President Frank H.T. Rhodes listens intently Monday during an afternoon session of the symposium at the Statler Auditorium held in his honor.

University of Texas at Austin, said graduate education, especially in the sciences, has become so specialized that many advanced degree holders are inadequately trained to face the changing job market in America. "Many are not finding work in their chosen fields, and of those who do, many feel they are underemployed," Fox said.

Fox, who was educated as a chemist, offered her remarks during a session titled "Graduate Students: Too Many and Too Narrow." She said doctoral students need better communication skills and a greater knowledge of management

issues, computers and economics.

Fox suggested a revised course of doctoral study should be more flexible to guarantee students greater creativity in pursuing the degrees. "A graduate education should not be designed as if one size fits all."

Earlier, Princeton University President Harold T. Shapiro, who worked with Rhodes at the University of Michigan, said that despite the many contemporary challenges facing undergraduate education in America, the quality of the undergraduate experience has never been better.

Vest says research universities are overstressed and underfunded

By Larry Bernard

A series of "potentially dangerous" federal policy errors are "looming on the horizon" for higher education, MIT President Charles M. Vest told a Cornell audience on Monday.

"Research universities are overstressed and underfunded," Vest said at a morning talk to the Rhodes symposium on the American university. The panel was titled, "Research Universities: Overextended, Underfocused; Overstressed, Underfunded?" and was held in the Alice Statler Auditorium. Sponsored by the Cornell faculty, the symposium honored President Frank H.T. Rhodes.

Citing the Vannevar Bush report of 50 years ago that laid the blueprint for government-university partnership in research, Vest said that the partnership "has been frayed since the mid-1980s. The nation has steadily added new requirements, and now we have a system that effectively keeps many young people out of science."

Further, policy-making has moved from the executive branch to the congressional branch, further straining the relationship of universities and the federal government. It has led, he said, to three policy errors: the "inaccurate" characterization of research as basic, applied or strategic; the failure to recognize research as an investment, rather than a cost; and the separation of education and research.

"Many House Republican leaders say applied research has a lower priority. 'Basic' is the watchword. They believe universities have no role in applied research." Such thinking "will erode computer science, mathematical science and engineering," Vest said, adding that university research "cannot be turned on and off at will. We need continuity, a long-term perspective" to produce the research that the nation needs.

Vest said that university research always provides good return on the dollar. Citing an MIT study, Vest said that return could be anywhere from 25 percent to 3,000 percent. "How would you like that return on your endowments?"

He added that the integration of research and education "is in great danger. The government is paying less and less. It's a myopic vision of research procurement. The interweaving of education and research is critical in higher education."

Vest also said that universities need to change as well, not just the federal government. They need to "operate more efficiently, with higher quality, and reduce the cost of education; improve the learning environment and use information technology creatively."

"We have to ask, is the learning environment all it could be? The human touch has eroded. The pace of activity is relentless. Students crave more personal interaction. Quiet contemplation and deep discussions are not possible on



Vest

Gray

Lane

'I'm actually optimistic. We will have a healthy scientific enterprise in the future, but in the short term it's going to be rocky. It doesn't mean we should not expect a new golden age in the future.'

— Neal Lane

many of our campuses."

Vest continued that information technology is "too powerful" a tool to be ignored, not as a panacea, but to contribute to the "global university. We must not just be ready for it, but shape it."

An engineer by training, Vest recommended that graduate education be restructured to have increased emphasis on practice, not research, and on multidisciplinary research. "More interaction with the real world is needed," he said. "We must become more adaptive, truly interdisciplinary in our research. Service to society is the new intellectual frontier."

Vest concluded that research universities "must rebuild the public trust" and "reinvigorate our commitment to excellence," and universities must "rekindle the excitement about science. We must talk about the payback to industries, and in the quality of life. We should talk about what we don't know as well as what we do know. We value everyone else in this country above thinkers. None of this will change until we speak . . . to students and the public. We must be teachers speaking to the practical needs of society."

A panel of educators and administrators discussed Vest's comments. Responding were Hanna H. Gray, the Harry Pratt Judson Distinguished Service Professor of History and President Emeritus of the University of Chicago; Neal Lane, director of the National Science Foundation and former provost of Rice University; Harold T. Shapiro, president of Princeton University, and Marye Anne Fox, vice president for research at the University of Texas, Austin.

Shapiro questioned whether the Bush report would be necessary now. "The world has changed in almost bewildering ways since 1943. It would be astonishing for an optimal science policy to be the same. Is that type of science policy still supportable? Is the United States shouldering more than its share of R and D [research and development]?"

Shapiro continued: "My own view is that America is suffering a sense of loss. We will require a new science policy but with a new focus on efficiency."

He compared the research situation to health care. "Health is good; research is good. The more, the better. But the concern is not whether we spend too much on health, but whether we're getting value for our money. The same is true for science. Are we spending it in a way that's valuable?"

Lane also delivered a talk during the morning session on "Prospects in Science and Technology." He said the winds in Washington are at hurricane force, and the federal investments in science and technology are at stake.

"This is only the beginning of a long, hot summer," he said. "The trend [for science funding] will be down. In some cases, we're looking at wholesale elimination of programs."

The NSF has been spared so far, he said, but the larger issue remains: "We must have a prescription for addressing the federal downturn. We have to better connect science in ways that benefit people. That means we have to overcome traditional barriers and focus more sharply on research and teaching students."

Gray, former president of the University of Chicago, addressed "Prospects for the Humanities" in a symposium talk. "The humanities is suffering a terminal case of low self-esteem . . . The humanities always seem to be in crisis," she said, adding that it rides waves of controversy. "At present, it looks like this is the really big one, the surfer's wave." Factions of humanistic scholars are embattled with one another over shifts of intellectual direction, Gray said.

Urie Bronfenbrenner, the Jacob Gould Schurman Professor Emeritus of Human Development and Family Studies and of Psychology at Cornell, described the prospects for social sciences in the context of the land grant university. He explained research by a dozen Cornell faculty members that show conditions are poor in this country. "For 19 years, conditions improved for everybody," he said. But from 1973 to '92, a better life was not for everyone: the rich were getting richer, the poor, poorer."

The United States was at the bottom when compared with other countries on economic, educational and social measures.

"There is a body of evidence," Bronfenbrenner said, "that the greatest threats to our nation lie within our social sphere. That imperils the quality of our lives, perhaps for generations to come."

Students and faculty honored for their achievements

This list of faculty and student awards is only a sampling of the honors presented this year. Congratulations to all!

College of Agriculture and Life Sciences

The Senior Service Award, sponsored by the ALS Alumni Association, went to **Evangeline Loh**.

Mark Brush received the Paul Schreurs Memorial Award to recognize excellence in undergraduate research, sponsored by the college's honor society, Ho-Nun-De-Kah.

The new Academic Excellence award recognizes the top scholars in each of the 17 majors in the college. They were awarded as follows: agricultural and biological engineering – **Ying Chau** and **Susannah Daly**; animal science – **Stacie Minnier**; agricultural, resource and managerial economics – **Jonathan Taber**; biological sciences – **Leah Berkery**; biometry and statistics – **Stephen Darrow**; communication – **Jonathan Perry**; education – **Beverly Tarnoff**; entomology – **Erich Tilgner**; environmental systems technology – **Robin Cooley**; food science – **Douglas Goldstein**; general studies – **Richard Dilworth**; landscape architecture – **Teresa**

recognizing leadership, service and future promise.

Jeannie Meejin Yoon received the Clifton Beckwith Brown Memorial Medal, awarded to the senior attaining the highest cumulative average in architectural design.

The William Downing Prize, recognizing outstanding achievement in architectural design, went to **Senan Choe** and **Caleb Mulvena**.

Blanca Patricia Rodriguez received the Eschweiler Prize, given to a graduating architecture student who has enrolled in an architecture graduate program at Cornell.

Caleb Mulvena won the New York Society of Architects Matthew W. Del Gaudio Award for leading the class in design, planning and construction.

Winners of the Edwin A. Seipp Memorial Prize were **Roger Hom**, **Joseph Karadin**, **Edward Kooyomjian** and **Christopher Ho**.

The Edward Palmer York Memorial Prize went to **Jonathan Parker**, **Andrea Gaffney** and **Anaelechi Owunwanne**.

The Charles Goodwin Sands Memorial Medals went to **Kelwin Kwan**, silver medal for architecture; **Naomi Fox**,

employee" went to **Michael Merritt Jr.**

Adam Baacke received the Hahn-Rotterdam Prize for "exceptional contributions to the development of innovative, high-quality student activities programming and for adhering to the highest human values while maintaining academic excellence."

The Class of 1963 Award for "the student organization or program house that is most successful in using formal and/or informal learning to promote understanding, respect and amicable relations among students of different races and cultures" went to the **Multicultural Living Learning Unit**.

College of Engineering

The Tau Beta Pi and Cornell Society of Engineers 1994-95 Excellence in Teaching Award, presented to a faculty member for outstanding performance in the teaching of engineering curricula and elected by the engineering student body, went to **Brian Smith**, assistant professor in computer science.

English Department

The George Harmon Coxe Award in American Literature and Creative Writing went to **Freda Kirkham** for "Cutthroat Absolution," a collection of poems, and for their short stories, to **Justin Collins** for "State Lines," **Erica Eisenstein** for "Atlanta Beach," and **Miranda Strichartz** for "Seeing Coyote."

This year's Dorothy Sugarman Poetry Prize, offered to an undergraduate for the best poem or poems of no fewer than 100 lines and worth \$150, went to **Barbara Yien**. **Connie Hsu** and **Jessica Tashker** received honorable mentions.

First prize winners of the Corson-Bishop Poetry Prize were **Angela Bommarito** and **Ellen Samuels**; second prize winners were **Daniel Donaghy** and **Brielle Rosa**.

German Studies Department

The Simmons Award in German, which goes to the student who has done the best work in German, went to **Claire Colton**. Colton also received a second prize in the Goethe Prize Competition for her essay "The Question of Gender in *Die Zauberflote*: Inversion of Stereotypes of Pamina and Papageno."

Graduate School

Deping Xu received a Hsien and Daisy Yen Wu Scholarship Award, worth \$500.

School of Hotel Administration

The Clyde Robinson Awards went to the following students: the Freshman Award to **Celia Balli**; the Academic Excellence Award to **Alessandra Murata**; the Service Award to **Laura Korneway**; the Leadership Award to **Jennifer Tsai**; and the Dean's Award to **Monica Edwards**.

The Dean's Awards went to the following students: Freshman Award of \$250 to **Christina Foersler**; Sophomore Award of \$250 to **Lisa Cinnamon**; Junior Award of \$500 to **Michael Coolidge**; and the Senior Award of \$500 to **Astrid Gerard**.

The following are Class Marshals and Banner Bearers: **Wayne Hartley**, first marshal; **Tricia Loberg**, second marshal; **Vernetta Kinchen**, first banner bearer; **Vieven Chen**, second banner bearer; **Jennifer Tsai**, third banner bearer; and alternates **Todd Edebohls** and **Tracie Gates**.

College of Human Ecology

The recipient of the Distinguished Teaching Award, nominated by juniors and seniors in the College of Human Ecology, was **Elaine Wethington**, professor of human development and family studies.

Institute for European Studies

Frederic Conger Wood Fellowships, awarded to undergraduate students, went to **Daniel Jutt** and **Tanya Mamedalin**, both in the College of Arts and Sciences.

Michele Sicca Summer Research Grants, awarded to graduate students, went to the following from the College of Agriculture and Life Sciences: **Jana Hranaiova**; from the College of Arts and Sciences: **Rawi Abdelal**, **Jennifer Austin**, **Arthur Daemrich**, **Szabolcs Kemeny**, **Martin Krusin-Elbaum**, **Nuria Lopez-Ortega**, **Benjamin Middleton** and **Lawrence Shapiro**; from the College of Architecture, Art and Planning: **Ritu Bhatt**, **Lawrence Shapiro** and **Janet White**.

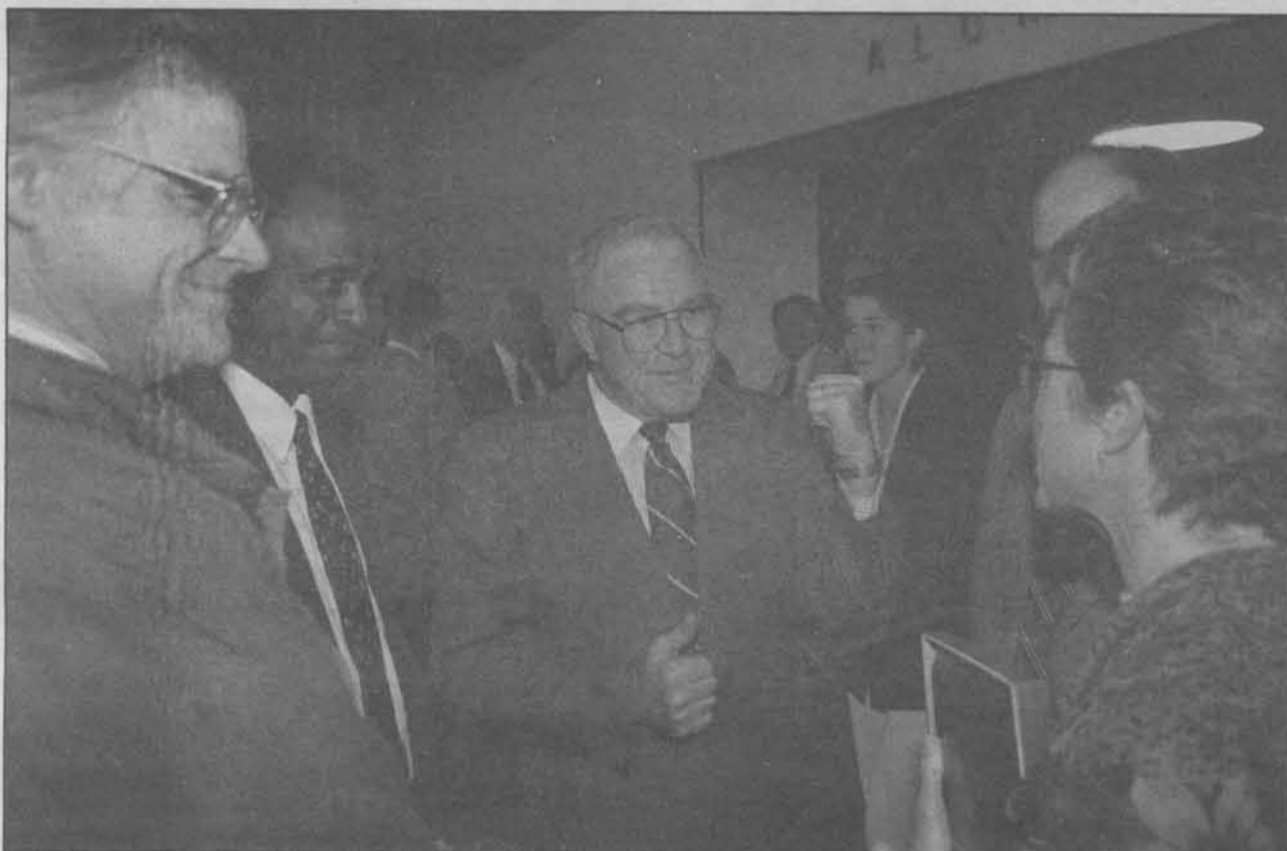
Dana Marie Luciano from the College of Arts and Sciences was awarded the Manon Michels Einaudi Travel Grant, which goes to a graduate student.

Luigi Einaudi Graduate Fellowships went to **Richard Clayton** and **Eileen Crosby**, both in the College of Arts and Sciences.

Library

Of the more than 600 student workers in the Cornell Library system, five student employees received Fuerst Outstanding Library Student Worker Awards worth \$500: **Helen Luc** from the Physical Sciences Library; **Marsha DeMay** from the Engineering Library; **Shyh-Liang Sim** with

Continued on page 9



Charles Harrington/University Photography

At the College of Agriculture and Life Sciences Dean's Award Convocation April 25, Dean David L. Call, center, chats with, from left, professors Michael Walter and Larry Walker, and Barbara Bedford, assistant professor of natural resources, who received the Young Faculty Teaching Excellence Award.

Anechiarico; natural resources – **Scott Delconte**; nutrition, food and agriculture – **Chadik Hewlett**; plant sciences – **Eva Gussack**; rural sociology – **Melissa Lewin**; soil, crop and atmospheric sciences – **Eric DeLong**.

Also new this year were the Outstanding Student Employee Award, which went to **Jed Colquhoun** and **Susan Downer**, and the Perseverance Award, which was awarded to **Therese Grubb** and **Rebecca Sluiter**.

The Professor of Merit award, voted on by the senior class, was awarded to **Ronald E. Pitt**, professor of agricultural and biological engineering.

The Distinguished Adviser Award, also selected by the senior class, went to **Thomas W. Scott**, professor of soil, crop and atmospheric sciences.

The Young Faculty Teaching Excellence Award, given by the college for a faculty member with less than 10 years of teaching at Cornell who demonstrates excellence in undergraduate teaching, went to **Barbara L. Bedford**, assistant professor of natural resources. Another teaching award given by the college, the Innovative Teacher Award for developing new approaches to instruction in undergraduate teaching, went to **Aaron N. Moen**, professor of natural resources.

The Chancellor's Award for Excellence in Teaching awarded by the State University of New York, went to **Gary W. Fick**, professor of soil, crop and atmospheric sciences, and **Karl J. Niklas**, professor of plant biology.

The Chancellor's Award for Excellence in Professional Service, also awarded by SUNY, went to **David O. Watkins Jr.**, director of media services for the college.

The Edgerton Career Teaching Award, for a faculty member who has provided outstanding teaching and advising throughout a long career in the college, was presented to **Richard J. McNeil**, professor of natural resources.

College of Architecture, Art and Planning

The Martin Dominguez Award for Distinguished Teaching went to **Mark Jarzombek**, professor of architecture.

The AIA Student Medal and Certificate, for best undergraduate academic grade average, went to **Jeannie Meejin Yoon** (medal) and **Kristin Ann Gonsar** (certificate).

Victor Vizgaitis was awarded the Alpha Rho Chi Medal,

bronze medal for art; **Senan Choe**, **William Smith** and **Frank Valdes** won bronze medals for architecture.

George How Summer Travel Award went to **Mark Goh**. **Alexandra Stonescu** won the Faculty Medal of Art.

Mia Pearlman and **Todd Bourret** won the Edith and Walter King Stone Memorial Prize, given to juniors exhibiting promise and accomplishment in the field of art.

Abigail Sheer won the Michael Rapuano Memorial Award in landscape architecture.

The E. Gorton Davis Traveling Fellowship was awarded to **Katherine Hickey**.

The Mackesey Prize for academic achievement and contribution to the intellectual advancement of fellow students went to **Elizabeth Uphoff**.

Timothy McHarg won the City and Regional Planning Student Award for demonstrating, academically and through work experience, potential success in the field.

Robert Pick won the John W. Reps Award in the Historic Preservation Planning Program.

The Urban and Regional Studies Academic Achievement Award went to **Stephanie Beth Lessans**.

Chemistry Department

The following undergraduate prizes have been awarded:

A.W. Laubengayer Prizes to **Katherine Henzler**, **Ilya Nasrallah**, **David Levinthal** and **Joseph Greco**. The ACS Analytical Prize to **Jima Jenab**. The American Institute of Chemists Medal to **Rachel Winston**. George C. Caldwell Prizes to **Michael Krochmal** and **Lecia VanDam**. The Harold Adlard Lovenberg Prize to **Philip Geissler**. The Leo and Berdie Mandelkern Prize to **Dana Buske**. The Merck Index Awards to **Brian Gruber** and **Charles Blazey**.

Dean of Students Office

Winners of the Edgar A. Whiting Award for "exemplifying the personal characteristics and dedication of Edgar Whiting, director of Willard Straight Hall from 1930 to 1970, on behalf of the programs and services of student activities/development" were **Allison Halpern** and **Andrew Vail**.

The Daniel F. Mahaney Scholarship for "exemplary performance as a volunteer leader and as a student em-

Hotel School student, 30, wins \$15,000 Drown Prize

By Darryl Geddes

"I was absolutely shocked," said Anthony Calabria, when he was told that he had won one of Cornell's richest undergraduate prizes.

Calabria's surprise at being named the winner of the \$15,000 Drown Prize, awarded annually to a top senior in the School of Hotel Administration, is quite genuine. For not even Calabria could have predicted that such an accolade lay at the end of his six-year pursuit of a Cornell degree.

Calabria's application for admission to the Hotel School in 1989 didn't quite measure up. "I was rejected," said the North Syracuse native. "I was really disappointed, because everyone I spoke with said if you want to learn about the restaurant business and the hospitality industry go to Cornell. It's something I very much wanted to do."

Even before graduating from high school, Calabria had been consumed with the restaurant business. He cleaned dirty dishes at a T.J. Big Boy franchise before

later through Cornell's extramural program, which enables employees to take up to four credits each semester without applying for admission to Cornell. For the next two years Calabria took courses and raised his grade point average; he decided to reapply to the Hotel School and was accepted as an undergraduate in spring 1993.

While majoring in food and beverage management, Calabria also worked full time as purchasing supervisor at Robert Purcell Union, as supervisor at Willard Straight Hall and supervisor of some university cash operations, including Martha's, Malott's and other campus eateries.

Calabria's schedule was grueling, as he combined his 40-hour work weeks with 15 credits of course work. Assignments, exams, projects and extracurricular activities often competed with purchasing reports and budget and staff reviews that were part of his job responsibilities. In addition to his studies and job, he served as a teaching assistant and did volunteer work for the community service organization Loaves and Fishes.

"There were times when I almost gave up," he said. "But I knew that would be an easy way out and I wouldn't be fair to myself if I did that."

Calabria sees his graduation from Cornell as a personal triumph. "I wanted to prove to myself that I had the smarts to do the work and compete with the best students in the world," he said.

Calabria said he really hasn't given much thought on how to spend the Drown's \$15,000 cash award; he only hopes it won't be spent quickly. But it could help pay for a marketing plan or study for his dream of opening a brew house, where pub food would be served up with homebrewed beer.

A six-member panel selected Calabria as winner of the Drown prize. Four other Hotel School graduating seniors won \$1,000 each as Drown prize finalists. They are Sarah Bradbury of Louisville, Ky., Lindsay Monge of Rye, N.Y., Vernetta Kinchen of Forestville, Md., and Traci Gates of Owings, Md.

The Drown Prize was established and endowed at Cornell in 1985 in honor of the late Joseph W. Drown, who owned and operated hotels in Hollywood, San Diego, Los Angeles and Las Vegas. The prize is intended "to enhance not only the knowledge of young people but their independence and self-reliance so that they may contribute to the free society to which Mr. Drown credited his own success."



Calabria

'Tony Calabria is really what the Drown Prize is all about. It honors his perseverance, his energy, his industriousness and his warmth. I believe he'll make a significant contribution to the industry.'

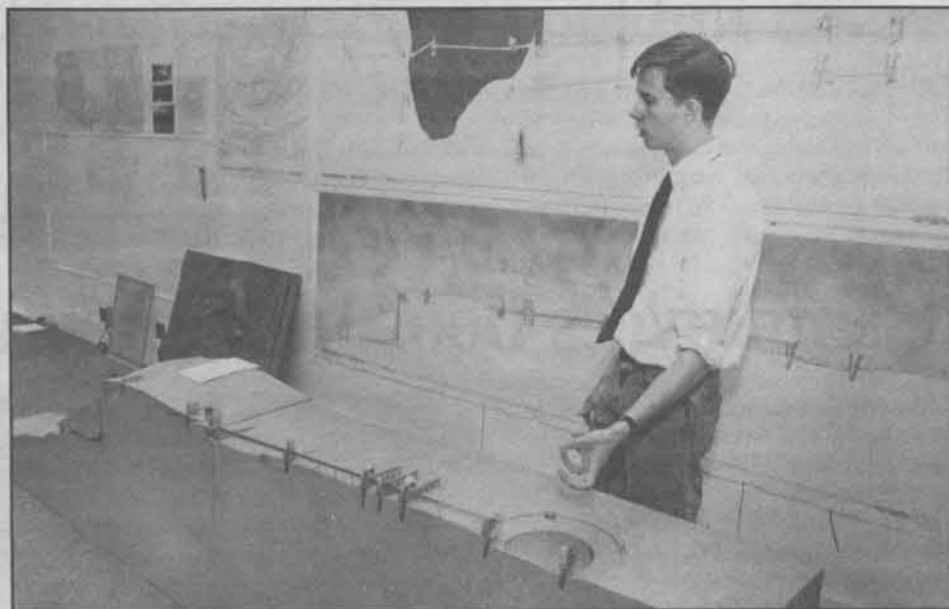
— Elizabeth Huettman
Assistant Professor, Hotel School

being promoted to cook. Anxious to get beyond such tasks, Calabria entered Onondaga Community College and graduated in 1985 with an associate's degree in food service management. The degree made him more employable, and soon he began accepting management positions at restaurants in the Syracuse area. But his desire to learn more about the industry and move beyond middle management led him to apply to Cornell in 1989.

"I thought I had a decent chance of being accepted because of my experience, but I knew my grades were borderline," he said.

A week after getting his rejection letter, Calabria sent off his resume seeking a position in Cornell's dining operations. Someone had told him about the university's Employee Degree Program, where qualified employees can earn their degree — tuition free — while working for Cornell.

Calabria was hired in August 1989 and began taking Hotel School courses a year



Adriana Rovers/University Photography

Architecture student Victor Vizgaitis presented his final project titled "Side-real Space" May 10 in Sibley Hall.

Architecture students defend final projects to faculty jury

By Darryl Geddes

Fifth-year architecture student Victor Vizgaitis chatted nervously with his classmates. Occasionally, he looked at his handwritten notes and at the classroom wall where earlier he hung detailed drawings of his project. Students poked their heads into the classroom to see if the proceedings had begun. Vizgaitis' 1 p.m. defense of his senior thesis project was now 20 minutes late.

Applause in Hartell Gallery signaled the end of one student's thesis defense. Standing under the glare of the gallery lights, the student received hugs and "well-dones" from classmates after a grueling two-hour project review by a faculty jury.

"It's the culmination of the students' undergraduate career," said architecture Professor George Hascup, of the senior thesis review process.

This semester 60 fifth-year architecture students defended their final projects before a faculty committee. Anxiety producing? "It really shouldn't be," Hascup said. "They've been making presentations to their faculty advisers for quite some time now, but this final review is where they put it all together."

With a jury of four professors and a visiting critic seated before him, Vizgaitis matter-of-factly unveiled his project: an astronomy school, which, by its design, emphasizes man's physical insignificance by demonstrating the enormity of the universe.

Plans call for Vizgaitis' astronomy school to be built atop a mesa in Golden, Colo. His detailed maps, scale drawings and three-dimensional model showed how visitors would enter the school through a cave-like opening in the side of the mesa wall and be transported 300 feet, via eleva-

tor, to the mesa top. A 3,000-foot walkway gradually rises above ground, taking visitors to four towers along the way, containing classrooms and lecture halls. The towers, Vizgaitis told the faculty jury, are strategically placed to coordinate with various constellations. At the end of the walkway is the school observatory.

The faculty committee praised the scheme and concept of the project as "rich," "fascinating" and "wonderful." But the panel did have questions. One professor wondered about the astronomy school's daytime uses and suggested that the structure and design could be claustrophobic in daylight. Another panelist quizzed Vizgaitis on why he went to such length in his design and construction to illustrate man's insignificance in relation to the universe, when such a lesson can be learned through technology and other means.

"I think it went pretty well," Vizgaitis said of his 90-minute inquiry. "The questions and concerns they had were the ones I was expecting."

Academic careers aren't necessarily made or broken on the senior thesis review, although a poor performance can take its toll. "It can be incredibly disappointing not to do well on the final project," Hascup said. He added, however, that major missteps usually are avoided since faculty provide some guidance, albeit from a distance, on the final project. Grades are issued by members of the jury and then posted for all faculty to review.

"The review process enables students to see how their work stands up under examination from outsiders and from faculty with different areas of expertise," Hascup said. "To be able to defend one's design with reasoned explanations will serve the students well in the future."

Students and faculty honored for their achievements

Continued from page 8

Mann Library; **Kimberly White** in the Library Technology Department; and **Linnie Wieselquist** from Olin Library.

Math Department

The winner of the Eleanor Norton York Award was **Marcelo Aguiar**. The Kieval Prize went to **Daniel Rabinovitch**.

Natural Resources Department

Renee Land has been awarded a \$1,000 Marlin Perkins Scholarship, a program of Mutual of Omaha's Wildlife Heritage Center, based on academic excellence and demonstrated interest in wildlife preservation, natural resources conservation or environmental studies.

Physics Department

Paul Shocklee was the winner of the Donald R. Yennie Prize. The Paul Hartman Prize winner will be announced after final grades are completed.

Romance Studies Department

The following awards for the Corson French Prize were made: First prize, which carries an award of \$500, went to

Carole Allamand for her essay "Yourcenar et Gide: paternite ou parricide?" Second prize, with an award of \$350, went to **Anthony Pollock** for his essay "Au rire eternal condamne": Baudelaire's Satanic Epistemology."

Amy Berlin has received the Juliette McMonnies Courant French Prize, awarded to a senior woman majoring in French who has made the best record for four years, with special reference to facility of expression in French.

The J.G. White Scholarships in Spanish for outstanding work in Hispanic language, literature and culture went to **Mary Carmen Gasco, Isabel Ramos and Judith Saenz-Badillos**.

Jorge Rosario was awarded the J.G. White Prize for Excellence in English.

The J.G. White Prize for Excellence in Spanish went to **Maura Flood, Karen Galinsky, Tiller Russell and Anita Starosta**.

Student Activities Office

The 1995 winners of the Buick Volunteer Spirit Award were **Kim Cherry, Christopher Montgomery, Jessica Bury and Carolan Magnoli**. Recipients were awarded five shares of General Motors Corp. common stock and a plaque.

College of Veterinary Medicine

The College of Veterinary Medicine awarded 34 prizes at a May 23 banquet and ceremony. Among them was the university's longest-standing award, the Horace K. White Prize, formerly known as the President's Prize and named for the brother of Andrew Dickson White, which was presented to **William Benner**.

The White Prize is awarded to the graduating senior with the highest academic record over four years in the professional program.

Women's Studies Program

Eight graduate students received Beatrice Brown Awards, which go to graduate students working on some aspect of women and gender. They were: **Julie Curry**, history; **Liette Gidlow**, history; **Mary Graham**, industrial and labor relations; **Jayati Lal**, sociology; **Helena Pachon**, nutritional sciences; **Gema Perez Sanchez**, romance studies; **Elizabeth Rowe**, human development and family studies; and **Cynthia Wilczak**, anthropology.

Jennifer Barone has received the Judith Ellen Kram Award. She will use the award to research the practice of trafficking of women for prostitution from Nepal to India.

CORNELL RESEARCH

Employees boost manufacturers' toxic reduction plans

By Roger Segelken

Manufacturers planning to invest in toxic emissions reduction already may have the most effective "device" working for them, according to human-resource analysts at the Cornell School of Industrial and Labor Relations.

When it comes to cutting toxic release inventories, companies with formal employee participation programs focused on the environment are three times more successful than those relying on technology or outside sources alone, the Cornell Work and Environment Initiative and the Center for Advanced Human Resource Studies found in a statistical analysis of pollution reports to the U.S. Environmental Protection Agency (EPA).

"We are starting to see that technology

'If all companies performed at the level of those with strong employee engagement, then hundreds of millions of dollars would be saved and millions of tons of toxic waste would not enter the environment.'

— Edward Cohen-Rosenthal

alone — the bigger, better scrubber on the smokestack or some other technological fix — may not be enough to bring about the shift in behavior that society needs to become more toxics-free," said Edward Cohen-Rosenthal, director of the Work and Environment Initiative, a unit of the Cornell Center for the Environment. "Once we get past the 'easy' cuts in toxics inventories, source reduction becomes a social and organizational problem, trying to use technology and people in a better way."

The Cornell analysts looked at more than 11,000 reports, filed with the EPA as required by the federal Pollution Prevention Act of 1990. Since 1987, manufacturers who release to the waste stream or to the environment more than the threshold amounts of any of some 300 toxic chemicals must report that activity to the EPA. The 1990 law added a requirement to report any progress in source reduction of toxic chemicals.

Toxic Release Inventories reported to the EPA are public information, and environmental organizations have taken advantage of that provision to learn more about local sources of pollution. The



From left: Antonio Ruiz-Quintanilla, a CAHRS research associate; John Bunge; and Edward Cohen-Rosenthal stand in front of the Resource Recovery Facility, 201 Palm Road.

Cornell analysis is the first nationwide, quantitative assessment of which company strategies make a difference in the effort to reduce toxics in the waste stream and the environment.

"This is more than just a sample. This analysis was performed on the entire population of manufacturers reporting reductions to the EPA," explained John Bunge, assistant professor of economic and social statistics in the School of Industrial and Labor Relations and a statistician in

the Center for Advanced Human Resource Studies (CAHRS), sponsor of the research. Also participating in the analysis was Antonio Ruiz-Quintanilla, a CAHRS research associate.

A majority of the approximately 80,000 Toxic Release Inventories filed for the two-year period of 1991-92 (the most recent span for which the EPA has compiled data) reported no progress at all in reducing toxics. Reduction is voluntary, Cohen-Rosenthal noted, but under the law,

manufacturers must report efforts — if any — that are made toward reduction.

"If all companies performed at the level of those with strong employee engagement, then hundreds of millions of dollars would be saved and millions of tons of toxic waste would not enter the environment," Cohen-Rosenthal said.

The Toxic Release Inventory asks whether employers are using any of three participatory approaches: internal pollution prevention audits, formal suggestion systems and participative team management. It also checks for external assistance, such as trade association or vendor audits, state or federal government technical assistance, external audits or material and balance audits.

Manufacturers trying any methods reported a 6.9 percent reduction. However, manufacturers using formal employee participation programs were able to report significantly greater success in reducing toxics:

- For manufacturers using just one employee-participation method alone, the improvement was 9 percent.
- Two employee-participation methods together resulted in a 10 percent improvement.
- And three together produced a 16 percent reduction in toxics.

"This more than three-fold improvement — from a 5 percent reduction to 16 percent — is not only statistically but practically significant," Bunge said. "We're talking about many millions of tons of toxic materials that would have been released to the waste stream or to the environment. Other source-reduction methods are working to some extent, but it is clear that formal employee participation programs are making the greatest impact."

Curiously, informal employee suggestions had a negative impact on toxic-reduction efforts, Cohen-Rosenthal noted. "It takes a broad, corporate culture and defined commitment to environmental improvement to have the highest level of results," he said. "If you are going to make a difference, you have to get your people squarely on board."

After presenting their results to EPA officials, the Cornell researchers are publishing the findings in a CAHRS report, "Employee Participation in Pollution Reduction: Preliminary Analysis of the Toxics Release Inventory."

They plan a case-by-case, in-depth study at manufacturing sites to learn why employee participation is so successful in keeping toxics out of the waste stream and how to spread these practices more widely.

Scarlet tanagers need their space, forest habitat census finds

By Roger Segelken

More so than other tanagers, a survey in 43 states and five Canadian provinces shows, the scarlet tanager is sensitive to habitat size and is less likely to breed in small forest fragments.

The Project Tanager survey by 742 volunteer bird watchers is directed by the Cornell Laboratory of Ornithology as a National Science Experiment with funding from the National Science Foundation and National Fish and Wildlife Foundation. In the first full year of the survey, 1994, specially trained volunteers canvassed 2,200 sites, where forest areas ranged from two or three acres to more than 2,000 acres.

"Thanks to volunteer efforts, we are

gaining a clearer understanding of how the breeding biology of the tanager species nesting in North America depends on their forested habitats," reported Kenneth V. Rosenberg, senior scientist in Bird Population Studies at the Cornell ornithology lab. "It is now clear that the size of forest patch influences whether scarlet tanagers will be present, as well as their probability of breeding," Rosenberg said, noting that other tanager species are less sensitive to reduction in habitat size.

Tanagers were chosen for the habitat size study because they were thought to be forest interior specialists that evolved strategies to protect their eggs, their young and themselves against woodland predators. Forest interior specialists may be relatively safe nesting in the sheltered

interiors, while some predators (such as crows and raccoons) are most successful working the edges, where the forest has been cleared for roads and other development. Because forest fragmentation in North America has coincided with population declines of some neotropical migrant bird species, ornithologists want to know the relationship between habitat size and breeding success.

Project Tanager volunteers searched for birds in local habitats, which were identified with the assistance of the U.S. Forest Service, Fish and Wildlife Service, National Park Service and Bureau of Land Management. Besides counting birds in forest patches of various sizes, the volunteers recorded information on breeding behavior — such as courting, nest-build-

ing, tending eggs or feeding young — then returned the data to the Cornell lab on computer-readable forms.

Cornell analysts used a statistical procedure called logistic regression to determine birds' sensitivity to forest fragment size. According to the analysis, the probability of sighting scarlet tanagers in 1,000-acre forests is 83 percent; in 100-acre forests, 68 percent; and in 1-acre forests, only 30 percent.

Project Tanager will continue this year with volunteers visiting the same sites to see if the birds are coming back. This test of year-to-year variability should show, among other things, whether smaller, isolated patches are more likely to lose their tanagers, even if the birds breed successfully in small plots.



Tim McKinney

The Cornell women's crew varsity eight. Jen Evans has the 7-seat, third from the bottom.

Jen Evans stands out in a crowd

By Scott Stapin

In crew, it can be especially difficult for a single athlete to rise to the top and stand out in a crowd. Collegiate rowers rarely get recognized for their individual efforts, because each member of a boat is like a cylinder in a V-8 engine. All eight rowers must fire at precisely the right moment in order to be fast enough to win a race. They often are not looked upon as individuals, as much as they are considered part of one cohesive unit.

However, there is one member of the Cornell women's varsity eight who has broken the anonymity barrier of her sport through hard work on and off the water. Jen Evans, the first and only woman rower in the history of the Cornell crew program ever to compete all four years in the varsity eight, has not only experienced battling for the national title three consecutive times, but she also is a three-time Academic All-Ivy selection, a three-time dean's list student and is well on her way to becoming a veterinarian as a first-year graduate student in the College of Veterinary Medicine. She is kept extremely busy with both her athletic and academic endeavors and doesn't settle for anything less than perfection.

"I just want to succeed," Evans said. "I'm not happy sitting around. I'm very unhappy getting B's and C's and not doing the best I can all the time."

Throughout her Big Red rowing career, Evans has played a key role in the success of several impressive varsity crews. As a freshman just out of Cold Spring Harbor High School, she won a spot in the bow seat of the varsity eight late in the spring of 1992 and eventually went on to win a silver medal at the Collegiate National Championships. In 1993, Cornell's success continued with a third-place finish at nationals, adding a bronze medal to Evans' collection. Last year, the Big Red finished fourth in Cincinnati and

she was the recipient of the Lianne Ritter Memorial Arete Award, which is given annually to the junior who combines the best in scholarship and rowing ability. Finally, this spring (June 9-10), Evans may get the opportunity to lead the Red to an elusive gold medal at nationals, a feat that Cornell last accomplished in 1989. The 1995 squad, which has posted a 5-3 mark during the regular season, is getting faster every day and currently is ranked fourth by the EARWC heading into the Eastern Sprint championships (May 21).

Besides the fact that Evans, a co-captain, is one of the top rowers on the squad, there is something else that makes her stand out (literally) among her boatmates. At 5 feet 7 inches, Evans is much smaller than the average varsity rower, but she possesses some key attributes that allow her to overcome her height deficit.

"There are three main reasons for her success," said 15th-year head coach John Dunn. "First, she is genetically gifted. Second, she pushes herself extremely hard. Third, she is very flexible. At 5-7, she is relatively short and has always been in boats where the average height of a rower has been about 5-11. Using that flexibility, Jen is able to be as long as the taller rowers in terms of the length of the stroke, which is important in this sport."

Even with her crew career winding down, Evans has much to look forward to in the near future. On July 2, she has plans to be married to Jeremy Rawlinson '92, who was a member of the 1992 undefeated Cornell lightweight crew. Evans can also look forward to a rewarding career as a veterinarian after graduation.

Regardless of what else happens to her after her Cornell experience, you get the feeling that Jen Evans will continue to stand out in a crowd.

CALENDAR

from page 12

the ATH Chapel.

Mass schedule for May 27-28: Saturday at 5 p.m. in Anabel Taylor Hall Auditorium; Sunday at 8:30 a.m. in Bailey Hall.

The summer Mass schedule, June 3 through Aug. 20, is: Saturday, 5 p.m., and Sunday, 10 a.m. Daily Masses will be announced weekly.

Christian Science

Testimony and discussion every Thursday at 7 p.m., Founders Room; Anabel Taylor Hall.

Episcopal (Anglican)

Sundays, worship and Eucharist, 9:30 a.m., Anabel Taylor Chapel.

Friends (Quakers)

Sundays, 11 a.m., meeting for worship in the Edwards Room of Anabel Taylor Hall. Discussions most weeks at 9:50 a.m., 314 Anabel Taylor Hall.

Jewish

Morning Minyan at Young Israel, 106 West Ave., call 272-5810.

Shabbat Services: Friday, 6 p.m., Anabel Taylor Hall: Conservative, Founders Room; Reform, Chapel; Orthodox, Young Israel, call 272-5810 for time.

Saturday Services: Orthodox, 9:15 a.m., Edwards Room, ATH; Conservative/Egalitarian, 9:45 a.m., Founders Room, ATH.

Korean Church

Sundays, 1 p.m., chapel, Anabel Taylor Hall.

Latter-day Saints (Mormon)

Discussions on the Book of Mormon: Wednesdays, 7:30 p.m., 314 Anabel Taylor Hall. All are invited to come and discover the religious writings of ancient American cultures.

Sunday services: Cornell Student Branch, 9 a.m., Ithaca ward, 1 p.m. For information, call 272-4520, 257-6835 or 257-1334.

Muslim

Friday Juma' prayer, 1:15 p.m., One World Room, Anabel Taylor Hall. Daily Zuhr, Asr, Maghreb and Isha' prayers at 218 Anabel Taylor Hall.

Protestant Cooperative Ministry

Sundays, 11 a.m., chapel, Anabel Taylor Hall.

Sri Satya Sai Baba

Sundays, 10:30 a.m., 319 N. Tioga St. For details call 273-4261 or 533-7172.

Zen Buddhist

Tuesdays, 5 p.m.; Thursdays, 6:45 p.m., chapel, Anabel Taylor Hall.

seminars

Boyce Thompson Institute

"Genetic and Molecular Dissection of the Acclimation of Chlamydomonas to Nutrient Stress," John Davies, Carnegie Institution of Washington at Stanford University, May 30, 2 p.m., Boyce Thompson Auditorium.

Genetics & Development

"The Continuing Saga of Twinstar, and Actin-binding Protein Required for Cytokinesis and Centrosome Migration in Drosophila," Kristin Gunsalus, May 31, 12:20 p.m., small seminar room, Biotechnology Building.

Stability, Transition & Turbulence

"Simulations of Homogeneous Turbulent Shear Flow," Alain Pumir, Nice, France, May 26, 12:30 p.m., 708 Theory Center.

symposiums

Industrial In Vitro Toxicology Group

A conference, "In Vitro Markers of Toxicity: Techniques for Evaluating the Cell's Response to Toxic Agents," will be held May 26 from 8:30 a.m. to 4 p.m. in the Statler Hotel. Topics and speakers:

"Digitized Fluorescence Imaging as a Tool in In Vitro Toxicology Studies," Dan Acosta, University of Texas at Austin; "Development and Validation of an Assay of Nongenetic Carcinogens," John Babish, Cornell; "Molecular and Fluorescent Markers of Cytochrome P450," Jas Sidhu, University of Washington at Seattle; "Mitochondrial Trafficking in Neurites of Cultured DRG Cells," Stewart Chute, Bristol-Myers Squibb; "Fluorescent Markers of Mu-

tagen-induced DNA Damage," Bob Van Buskirk, SUNY Binghamton; "Toxicological Implications of Newly Discovered Signal Transduction Mechanisms," Anton Bennett, Beth Israel Hospital, Boston; "Use of the CAT-TOX and Pro-Tox Stress Gene Assays to Evaluate Contact Lens Wetting Solution Ingredients," Bret Jesse, Bausch and Lomb; "Evaluating Mechanisms of Cytotoxicity with the Meridian ACAS 570 Laser Cytometer," David Doolittle, R.J. Reynolds; "Protein Isoprenylation and HMG CoA Reductase-inhibitor Myotoxicity In Vitro," Oliver Flint, Bristol-Myers Squibb; and "Rapid, Kinetic 96-Well Plate Measurements of Fluorescent Probes Using FLIPR," Vince Groppi, The Upjohn Co.

miscellany

Intramural Summer Softball

Competitive coed and recreational leagues are forming now for summer softball season. The season runs from June 12 to July 31. A \$45 entry

fee and roster must be submitted to the Intramural Office in 305 Helen Newman Hall before June 6 at 5 p.m. More information is available from the IM Office, 255-2315 or 255-5133. The managers' meeting will be held June 6 at 5 p.m. in the Helen Newman Hall lounge.

sports

Home games in ALL CAPS
Records as of Monday

Men's Hvywt. Crew (3-3)
May 27, PENNSYLVANIA
June 1-3, IRA at Camden, N.J.

Men's Ltwt. Crew (7-3)
June 3, Nationals at Camden, N.J.

Women's Crew (5-3)
June 1-3, IRA at Camden, N.J.



Hugh Grant stars in *Four Weddings and a Funeral*, playing this week at Cornell Cinema. Check the Films listing for dates and times.

CALENDAR

May 25
through
June 8

All items for the Chronicle Calendar should be submitted (typewritten, double spaced) by campus mail, U.S. mail or in person to Chronicle Calendar, Cornell News Service, Village Green, 840 Hanshaw Road.

Notices should be sent to arrive 10 days prior to publication and should include the name and telephone number of a person who can be called if there are questions.

Notices should also include the subheading of the calendar in which the item should appear.

dance

Cornell International Folkdancers

Open to the Cornell community and the general public. All events are free unless otherwise noted. Beginners are welcome; no partners are needed. For information, call Edilia at 387-6547 or Marguerite at 539-7335.

May 28, 7:30 p.m., basic waltz taught by Marguerite Frongillo; 8:30 p.m., open dancing and requests, Maplewood Community Center.

June 4, 7:30 p.m., Israeli dances taught by Raven and others; 8:30 p.m., open dancing and requests, Maplewood Community Center.

CU Jitterbug Club

For information on these classes, contact Bill Borgida at 254-6483 or 273-0126.

• Basic Lindy Hop, six-week series starts June 6, 8:30 p.m., 209 N. Aurora St.; \$36 advance, \$42 at door.

• Basic Jitterbug, six-week series starts June 6, 7:15 p.m., 209 N. Aurora St.; \$36 advance, \$42 at door.

• Basic West Coast Swing, six-week series starts June 4, 7:30 p.m., 209 N. Aurora St.; \$40 single, \$70 couple.

exhibits

Johnson Art Museum

The Herbert F. Johnson Museum of Art, on the corner of University and Central avenues, is open Tuesday through Sunday from 10 a.m. to 5 p.m. Admission is free. Telephone: 255-6464.

The Johnson Museum is extending its hours for commencement weekend, May 26 and 27, from 10 a.m. to 7 p.m. so graduating students and their families can enjoy the wide range of exhibitions, as well as a prime view of campus and Cayuga Lake.

• "Ithaca: Home of the Ideal Landscape," through June 18.

• "L'empreinte de l'histoire: The Origins of French Printmaking, 1475-1550," through June 11.

• "Late 19th-Century French Color Prints," through June 11.

• "The Isabel and William Berley Collection," through June 11.

• "Charles Meryon and Jean-Francois Millet: Etchings From the Collection of S. William Pelletier," through June 11.

• "Masters of Illusion: Photographs by Bill Brandt and Harry Callahan From the Collection of Mr. and Mrs. Donald Weiss," through June 11.

• "L'esprit illumine: 150 Years of French Photography," through June 11.

• "The Frank and Rosa Rhodes Collection," through June 11.

Cornell Plantations

Council for the Arts grant recipient Erin Caruth's sculpture, "Hopes' Threshold," is on display in the Zucker Shrub Garden, F.R. Newman Arboretum, through June 30.

Hartell Gallery

• B.F.A. exhibitions, through May 25: Mitch Magee, Mark Millea, Dan Gabay and Erin Harding.
• June 3 to 17: exhibition of work by Class of 1970, 25th class reunion.

Kroch Library

• "In the Wake of Romanticism," through June 2.
• "Cornell History Exhibition," June 7 through September.

Tjaden Gallery

• B.F.A. exhibitions, through May 27: Vanessa Kung, Yooni Lee, Christina O'Neal and Mark Piretti.
• June 3 to 17, Architecture, Art and Planning alumni reunion invitational.

films

Films listed are sponsored by Cornell Cinema unless otherwise noted and are open to the public. All films are \$4.50 (\$4 for students), except for Tuesday night Cinema Off-Center (\$2) and Sunday matinees (\$3.50). Films are held in Willard Straight Theatre except where noted.

Thursday, 5/25

"Four Weddings and a Funeral" (1994), directed by Mike Newell, with Hugh Grant and Andie MacDowell, 7:15 p.m.

"The Graduate" (1967), directed by Mike Nichols, with Dustin Hoffman, Anne Bancroft and Katharine Ross, 9:45 p.m.

Friday, 5/26

"The Ref" (1994), directed by Ted Demme, with Judy Davis and Denis Leary, 7:15 p.m.

"Strictly Ballroom" (1992), directed by Baz Luhrman, with Paul Mercurio, Tara Morice and Bill Hunter, 9:15 p.m.

"This Is Spinal Tap" (1984), directed by Rob Reiner, with Michael McKeon, Christopher Guest and Harry Shearer, 11:15 p.m.

Saturday, 5/27

"Four Weddings and a Funeral," 7:15 p.m.
"The Graduate," 9:45 p.m.

Sunday, 5/28

"Taxi Driver" (1976), directed by Martin Scorsese, with Robert DeNiro, Cybill Shepherd and Jodie Foster, 7:30 p.m.

Monday, 5/29

"Where Angels Fear to Tread" (1991), directed by Charles Sturridge, with Helena Bonham Carter and Judy Davis, 7:15 p.m.
"Strictly Ballroom," 9:45 p.m.

Tuesday, 5/30

"Strictly Ballroom," 7:30 p.m.
"This Is Spinal Tap," 9:45 p.m.

Wednesday, 5/31

"On My Own" (1992), directed by Antonio Tibaldi, with Judy Davis, David McIlwraith and Matthew Ferguson, 7:30 p.m.
"Taxi Driver," 9:45 p.m.

Thursday, 6/1

"Queen Margot" (1994), directed by Patrice Chereau, with Isabelle Adjani, Jean-Hughes Anglade and Daniel Auteuil, 7 p.m.

"Shallow Grave" (1995), directed by Danny Boyle, with Ewan McGregor, Kerry Fox and Christopher Eccleston, 10 p.m.

Friday, 6/2

"On My Own," 7:30 p.m.
"Bar Girls" (1994), directed by Marita Giovanni, with Nancy Wolfe and Liza D'Agostino, 9:45 p.m.

Saturday, 6/3

"Queen Margot," 7:15 p.m.
"Shallow Grave," 10:15 p.m.

Sunday, 6/4

"Queen Margot," 7:30 p.m.

Monday, 6/5

The Movies Begin: A Treasury of Early Cinema, 1894-1914, with live piano accompaniment by Philip Carli, 7 p.m.
"Bar Girls," 9:30 p.m.

Tuesday, 6/6

"Shallow Grave," 7:15 p.m.
"Eat Drink Man Woman" (1994), directed by Ang Lee, with Sihunh Lee, Kuei-Mei Yang and Chien-Lien Wu, 9:15 p.m.

Wednesday, 6/7

"Gather at the River: A Bluegrass Celebration"



Emil Ghinger

Eugene Atget's "Mannequins, Children's Clothes" is one of many photos that capture French life and culture in the Johnson Museum of Art's current exhibition "L'esprit illumine: 150 Years of French Photography," on view through June 11. The Johnson Museum is extending its hours for commencement weekend, May 26 and 27, from 10 a.m. to 7 p.m.

(1994), directed by Robert Mugge, with Bill Monroe and Doug McCurry, 7:30 p.m.
"Bar Girls," 9:45 p.m.

Thursday, 6/8

"Eat Drink Man Woman," 7:15 p.m.
"The Lost Weekend" (1945), directed by Billy Wilder, with Ray Milland and Jane Wyman, 9:45 p.m.

graduate bulletin

• **Diploma distribution:** Diplomas will be available for May 1995 degree recipients who completed requirements by mid-March. Many fields and/or colleges will be distributing diplomas at ceremonies after commencement. For students in fields not having ceremonies, diplomas will be at the Graduate School, Sage Hall, at the following times: Sunday, May 28, (following Commencement), noon to 2 p.m.; Tuesday, May 30, 8:15 a.m. to 4:15 p.m.; and Wednesday, May 31, 8:15 a.m. to 4:15 p.m. (bring ID to receive diploma). Contact the Graduate School or your field to determine if your field is having a ceremony. Diplomas will be mailed to other recipients.

• **Ph.D. recognition event:** The ceremony to honor Ph.D. recipients will be held in Barton Hall at 5 p.m. Saturday, May 27. Family, friends and faculty advisers are invited; reception will follow. Candidates who participate must wear a cap and gown and must register in Barton Hall between 3:45 and 4:15 p.m. before the ceremony.

• **Faculty:** Graduate faculty meeting will be held on Friday, May 26, at 4 p.m. in the Sage Graduate Center. The meeting is solely for the purpose of voting on May degrees.

• **Summer graduate registration:** Summer graduate registration begins Monday, May 22, at the Graduate School information desk, Sage Graduate Center. Student ID is required, and students receive a summer 1995 ID sticker. Students must register if they are 1) receiving financial aid during the summer (such as summer loans, assistantships, travel grants or tuition awards); 2) wish to use campus facilities during the summer; or 3) are off campus but need to be registered for summer study. Summer 1995 ID stickers are necessary for those receiving summer fellowship checks from the Graduate School. Registration must be done in person at the Graduate School. Graduate students who have been registered for a regular semester during the preceding academic year do not pay tuition for non-credit summer registration. Students approved for summer residence credit must pay the appropriate pro-rated Graduate School tuition rate. Tuition must be paid for summer courses taken through the School of Continuing Education and Summer Sessions.

• **August degree deadline:** Friday, Aug. 25, is the deadline for completing all requirements for an August degree, including submitting the thesis/dissertation to the Graduate School.

music

Senior Weekend Concerts:

• May 27, 3 p.m., Arts Quad: Cornell University Wind Ensemble.

• May 27, 8:15 p.m., Bailey Hall: Cornell University Glee Club and Chorus. Admission fee. Call 255-4760 for information.

Bound for Glory

Through June 18, Bound for Glory will feature albums from the studio. Give Phil a call at 273-2121. Bound for Glory is broadcast from 8 to 11 p.m. on WVBR 93.5 FM.

religion

Sage Chapel

Marian Wright Edelman, from the Children's Defense Fund, will give the Baccalaureate Service May 28 at 8:30 a.m. in Bailey Hall.

African-American

Sundays, 5:30 p.m., Robert Purcell Union.

Baha'i Faith

Fridays, 7 p.m., firesides with speakers, open discussion and refreshments. Meet at the Balch Archway; held in Unit 4 lounge at Balch Hall. Sunday morning prayers and breakfast, 7 a.m.

Catholic

Mass for Ascension will be May 25 at 12:20 in

Continued on page 11