Supercomputer depicts collision of black holes

By Larry Bernard

A team of theorists has created a computer model that predicts what happens when black holes collide—a step toward solving Einstein's equations of general relativity and also a step toward new, collaborative ways of doing research.

The model, done on the world's fastest supercomputers at Cornell and the University of Illinois at Urbana-Champaign, depicts the geometry of black holes when two of them collide head-on and merge into a single black hole.

"We want to find out exactly how this merger takes place as these giant black holes come together. What happens is that they create a more massive black hole," said Saul Teukolsky, Cornell professor of physics and astronomy who participated in the research.

The work is presented in the journal Science (Nov. 10, 1995) by Teukolsky; former Cornell astrophysicist Stuart Shapiro; Richard Matzner of the University of Texas at Austin; Edward Seidel and Larry Smarr from the University of Pittsburgh; and Jeffrey Winicour from Washington University.

The research is funded by the National Science Foundation as one of the federal government's "Grand Challenges" in high-performance computing and communications—an effort to show that broad collaborations among computer scientists and researchers in other fields, in this case astrophysics, can yield spectacular results in solving some of science's and the nation's most vexing questions. This work was done Continued on page 6
Some notes on the image:

1. **Josephine Allen** is an associate professor of human service studies at Cornell University. She specializes in social policy and social welfare services. She is also the director of the Department of Civil Engineering and serves as co-director of the Alexander Hamilton Medal, Columbia University. She received the Hamilton Medal this month.

2. Two Cornell faculty members have been recognized as Distinguished Alumni of the Department of Environmental Sciences and Engineering (ESE) at the University of North Carolina at Chapel Hill. Walter R. Lynn, '54 MSE, and Cornell professor of civil engineering, recognized his contributions to earthquake engineering, the annual award was presented by ASC. President Stafford E. Thompson at the society's Oct. 25 annual convention and exposition. ASC represents more than 120,000 civil engineers worldwide and is America's oldest national engineering society.

3. **BRIEFS**

   - **Water Notice:** By requirement of the New York State Health Department Sanitary Code, Section 5-133, The Cornell University Department of Utilities shall accept public comment on the Water Supply Emergency Plan Update for at least 14 days following the date of first publication, Thursday, Nov. 30, 1995. The plan is available for review and comment at the Water Filtration Plant, 101 Caldwell Road, Ithaca, NY 14853, during the hours of 8 a.m. to 4:30 p.m., Monday through Friday. Contact Ann Christoferson at 255-3381 for further details.

   - **Salvation Army needs bell-ringers:** The Salvation Army has kicked off its annual Christmas Kettle Campaign, and all donations are needed now, according to the Salvation Army. The campaign is being conducted at various locations around the county. But in order for the campaign to be successful, the Salvation Army needs more volunteer bell-ringers. Last year, the lack of volunteer bell-ringers cost the organization an estimated $30,000 in uncollected donations, said local commander Captain Chuck Tompkins. If you have the time and would like to be of service to those helping the less fortunate, please call the Salvation Army at 273-2400.

   - **CU issues warning on Thanksgiving e-mail hoax:** Cornell officials announced Nov. 27 that an electronic mail message over the Thanksgiving holiday, purporting to come from the campus judicial administrator, was a hoax and is being investigated. H. David Lambert, vice president for information technologies, warned that impersonation of any member of the campus community, electronically or otherwise, will be investigated aggressively by university officials and, by outside authorities as appropriate. Here is his statement:

     "On Thanksgiving Day, Nov. 23, an electronic mail message was sent to a large number of the Cornell community with electronic mail addresses. This message, purporting to be a 'confidential memorandum' from Barbara L. Krause, Cornell's judicial administrator, discussing the recent actions involving the circulation of offensive material authored by four Cornell undergraduates, was a hoax. The message was not authored by Ms. Krause and should not be interpreted by anyone who receives it as reflecting her views, the views of the Office of Judicial Administrator, or of Cornell University on the previous incident.

     "Careful examination of the alleged e-mail address of Ms. Krause would have indicated that it did not come from the Cornell system (cornell.edu) but rather from another server, 'phantom.com.'

     "Staff of Cornell Information Technologies became aware of the apparent hoax and, after ascertaining the external source of the message, took steps to limit its distribution. Thus, not every address on campus actually received the message.

     "Yesterday, Nov. 26, a group calling itself 'Online Freedom Fighters Anarchist Liberation' (OFFAL) posted a message on various electronic bulletin boards claiming responsibility for the hoax. The authors threaten to take similar action against other universities which in their judgment commits unpopular viewpoints.

     "Cornell takes the impersonation of any member of the Cornell community most seriously, and a thorough investigation has been instituted both on campus and with external authorities. No information about that investigation is available at this time.

     "As we have recommended previously concerning offensive electronic mail, large recipients of this most recent message to trash it and not send it to others, thereby perpetuating the hoax and further accomplishing the objectives of its perpetrators.

     "In addition, I would ask your cooperation in not sending any communications on the message directly to Ms. Krause—not only because she was not the author of the original message but also because her office needs to be able to respond to its ongoing, legitimate workload. If, however, you do wish to share specific information concerning this hoax with the university administration, we have established a special mailbox for that purpose: forged_jump(email@cornell.edu).

     "Thank you very much for your cooperation."
New policy governs cyberspace conduct and responsibility

By William Steele

Cornell has developed the "Responsible Use of Electronic Communications Policy" to address a growing reality on campus: Students, faculty and staff increasingly are using electronic communications for course work and to remain in contact with friends and colleagues—and that has resulted in an increased use of Cornell's computers, servers and networks.

The policy is the result of two years of effort by a campus committee representing the offices of Information Technologies, Human Relations, the Judicial Administrator and the University Counsel.

Following the initial release in May 1994, the university developed procedures to help guide individuals responsible for administering university computer resources. Development of the policy framework and procedures was followed by extensive campus review. The policy, including the procedures, was recently released to the campus.

The term "electronic communications" in the policy's title encompasses e-mail, the World Wide Web, postings on Usenet and other electronic bulletin boards, electronic video technologies and future electronic communications tools.

The policy strongly embraces the Cornell principle of freedom with responsibility. Specifically, the policy states that "Cornell University expects all members of its community to use electronic communications in a responsible manner. The University may restrict the use of those systems and network systems for electronic communications in response to complaints presenting evidence of violations of other university policies or codes, or state or federal laws."

"The beauty of this policy," explained Marjorie W. Hodges, policy adviser to the Office of Information Technologies on the drafting committee, "is that it works within our existing disciplinary framework. For example, if allegations concern potential violations of the Campus Code of Conduct, we forward that complaint to the judicial administrator for determination."

That was, she pointed out, exactly what happened in the recent "75 Reasons" e-mail case (see story, page 2).

"When that incident occurred," Hodges said, "Cornell was fortunate to have already issued a policy in this area and fortunate that procedures were in place to respond."

Hodges noted that the policy could also be applied in the case of the forged memo recently circulated on campus (See story, page 2). The policy makes clear, forging electronic communications is a violation of the Campus Code of Conduct.

An appendix to the policy includes specific examples of prohibited activities, including the use of electronic communications to:

• Harass, threaten or otherwise cause harm to specific individual(s), whether by direct or indirect reference.
• Impede, interfere with, impair or otherwise cause harm to the activities of others (for example, by "jamming" an electronic mailbox with repeated messages).
• Download or post to university computers, or transport across university networks, material that is illegal, proprietary, in violation of university contractual agreements, or otherwise is damaging to the institution. (This would include, for example, the use of copyrighted material without permission.)

The appendix also outlines procedures to be followed when such violations occur.

In addition to formal distribution, the policy will be presented in a series of focus group discussions across the campus. The policy document is posted on the World Wide Web at <http://www.univco.cornell.edu/ru.html>.

Rawlings reaffirms commitment to Extension

By Blaine P. Friedlander Jr.

Cornell President Hunter Rawlings reaffirmed the university's commitment to Cornell Cooperative Extension as extension employees convened Nov. 14 via a statewide teleconference. While state and federal revenue sources may be drying up, Rawlings and other administrators are actively seeking new areas for Cooperative Extension development.

"We are always looking for growth opportunities, and we don't want to downsize unthinkingly," said Rawlings, who made a guest appearance on the statewide Cooperative Extension television program Second Tuesday. "For example, distance learning offers opportunities to deliver Cornell extension information to many sites," he said.

Rawlings also lauded the service for its attention to New York state and explained that he believes that teaching, research and extension are "inextricably intertwined" at Cornell.

Second Tuesday, produced by Cornell Media Services and hosted by Nancy Fey, is distributed via satellite to county extension offices statewide.

Bill Lacy, director of Cornell Cooperative Extension, explained that while facing dwindling financial resources, "we at CCE already have a model for [projects such as] distance learning. Into the 21st century, we at Cooperative Extension are positioning ourselves well to serve the people of New York. We need to think of ourselves as the front door to the university," he said.

For the upcoming legislative session, Lacy said that CCE ought to be prepared for any financial contingency. In fact, he believes that budget issues and the implementation of the strategic plan are extension's primary goals for the upcoming year.

Later in the telecast, Lacy explained that his tenure so far has been full of adventure. He said: "CCE is a vital organization for the state, but we have to make it more well-known." J.C. Shaver, CCE assistant director, reported that recent surveys reflected a need for improved links between the faculty and field representatives, adding that restructuring certain processes within CCE could facilitate those links.

First-hand knowledge

\[\text{Observing World AIDS Day}\

\text{The theme of World AIDS Day 1995, on Dec. 1, is "Shared Rights, Shared Responsibilities." Here are some campus and community events planned around the annual observance:}\

\begin{itemize}
\item **Dec. 1, 5:30 - 6 p.m.:** The eighth annual Candlelight Vigil in Observance of World AIDS Day will be held on the Ithaca Commons.
\item **Dec. 1, 12:15 - 12:35 p.m.:** A brief gathering of Cornell students, faculty and staff in honor of World AIDS Day will be held in front of Willard Straight Hall, sponsored by Into the Streets, SAFER and Cornell AIDS Action.
\item **Dec. 1-15:** The Johnson Museum of Art will exhibit "World AIDS Day," a collection of events over a two-week period. In addition to visiting exhibitions and work from the permanent collection, student and community organizations will provide information to make viewers aware of the complexity of the AIDS crisis. (See calendar, page 12).
\end{itemize}
Safe surfing: Security and password tips for CU e-mailers

By Daisy Z. Dailey

Security on the Internet is a complicated issue—some areas are more secure in terms of information exchange and retrieval than others. The balance is a collection of hypertext-based information on the Internet, for example, is a public place and security is minimal. On the other hand, many people assume that electronic mail is safe from prying eyes. This is not always the case.

An e-mail message goes through a computer called a "mail server," usually located within the Cornell network, or out onto the Internet. Within the Cornell system, this procedure is secure. The mail server is kept in a physically secure location that only the supervisor and other people have access to it. When mail leaves the Cornell network and travels onto the Internet, there may be times when electronic privacy is at risk. However, there are some precautions and tips that will help you protect your e-mail communications.

Protect yourself: passwords, Net IDs and security

Your Net ID establishes you in the Cornell network and allows a variety of privileges. The password protects electronic data, ensuring that only the person issued the Net ID can access and retrieve information for which they are responsible. It is always the case.

Always remember the boundaries of the computer hardware and security software you use to access the Internet. Within the Cornell system, this software, which is available for free online (one popular software is POPG—short for "Pretty Good Privacy") and for purchase. In addition to protecting a message, encryption software can be used to verify that a message was sent by you. POPG encryption of signatures and messages will soon be a feature of Eudora, the popular electronic mail program for Macintosh and Windows used at Cornell.

Be careful with addressing messages—particularly at Cornell, where the use of Network identities (Net IDs) means that people are identified by a series of easily mistyped letters and numbers.

According to the August 1995 online edition of MacWorld, "... with e-mail there is always the chance that your message may be intercepted, forwarded or accidentally sent to the wrong address."

With this in mind, content of a personal nature may not be suitable for e-mail. Be sure to consider the message the e-mail knows it's private; if you don't want the message to be forwarded, explicitly state that in your message.

Remember the bounds of the person who reads your e-mail. Is it possible to automatically downloaded to the hard drive of the computer to which it is read. This means that you probably know the recipient's address. If you do not want to be accessible, it is wise to protect them as you would any other private files — lock them, encrypt them or save them to a secure disk.

The do's and don'ts of choosing a password

When choosing a password, don't use your login name in any form, e.g., a-s, reversed, capitalized, doubled, etc., don't use your first or last name, in any form; don't use your mother's maiden name; don't use other information easily obtained about you. This includes license numbers, the brand of your e-mail software, the name of your street, your address, etc. Choose a password that is six or more characters long with at least one number included in the group. Many people prefer to intersperse numbers and use mnemonic devices, such as the first letters of words from a favorite song, poem or sentence that is easy to recall.

It is important to understand that even if you choose a password carefully, someone else could obtain it. To do so, they would need to intercept and then decode your e-mail message. If you suspect that someone else is using your Net ID and are concerned about their e-mail, you should contact the CIT HelpDesk.

Respect the computing rights of others

Cornell's "Policy Regarding Abuse of Computers and Network Systems" states: "The use of computers and network systems in no way exempts any member of the University community from the ethical or legal behavior in the Cornell community.... Members of the University community are expected to follow certain principles of behavior in making use of computers and network systems, in particular to respect and observe policies governing the privacy of or other restrictions placed upon data or information stored in or transmitted across computers and network systems, even when that data or information is not securely protected ...."

According to CIT policy, all access privileges (which include all accounts, user IDs, network IDs, telephone codes and any other access codes) are to be used for an individual's exclusive use and are authorized for use by no other person. Violations of the above may constitute a violation of the Cornell Campus Code of Conduct and/or the Code of Academic Integrity.

Despite the need for caution, computing at Cornell is a vital part of academic and administrative life. Take the time to ensure your personal electronic security by following the steps outlined above.

The list of a handful of friends did not create a hostile environment.

Some have suggested that the students should be responsible for creating a hostile environment because they are in circulation with benign intent. Having attended a mandatory training session with Cornell Information Technology (CIT) and Cornell Women in Technology (CIT), they should have been more aware of how easily others could forward "75 Reasons." But the fact that the list is "borrowed" or "taken" by another person in no way exempts any member of the University community from the ethical or legal behavior in the Cornell community. If you suspect that someone else is using your Net ID and are concerned about their e-mail, you should contact the CIT HelpDesk.

The list of "75 Reasons." Some people, angry and offended, have suggested the four students to threats of death, other bodily harm, e-mail "bombings," and even threats to "bring down" Cornell's entire e-mail system. Ironically, allegations of such conduct would suggest a Code violation much more clearly than the allegations in this case. For those who responded to the violence of "75 Reasons" with violence of their own, I urge you to reconsider your actions and to look for more positive ways to convey your message.

Others of you took the time to explain to these young men why their words were so hurtful. Coming as they did in some cases from survivors of sexual assault, your words enabled the students to understand (in ways that a judicial system never could) how much pain and distress the "75 Reasons" caused. As strongly as I urge the violent responses to stop, I hope that people at Cornell and elsewhere can follow the lead of those who have attempted to turn a very negative incident into a positive learning experience.

Barbara L. Krause Judicial Administrator

The list of "75 Reasons"...
Developing skim milk that looks and tastes like 2%, without the fat

By Blaine P. Friedlander Jr.

Cornell researchers at the Northeast Dairy Foods Research Center (NDFRC) may have found ways that could make skim milk taste, look, and smell more like its cousin, 2 percent milk, but without the fat. “The dairy industry needs an acceptable alternative for consumers who may want the fat and do not like the sensory quality of skim milk,” said David M. Barbano, professor of food science. His report, “Identification of the Aroma and Flavor Components Necessary to Produce a Fat-Free Milk with the Taste of 2 Percent Fat Milk,” appeared in the NDFRC’s 1995 Annual Report. Barbano and his colleagues are in search of the compounds in 2 percent milk that are responsible for the aroma and flavor, then they will determine which ingredients or blends mimic 2 percent milk. Whole milk contains 3.25 percent fat. The dairy shelves also stock milk products at 2 percent, 1 percent, and skim, which has very little milk fat (less than .5 percent). The researchers first had to test the senses. They found that people use the color of milk to distinguish between the fat gradations. People notice that 2 percent milk is more white than skim milk. In fact, they say skim milk is perceived as having a green or blue tint. In the lab, viscosity and color could be matched, and panelists could distinguish the milks—distinguishing significant differences in aroma. The study, “The Influence of Fat on Sensory Properties, Viscosity and Color of Lowfat Milk,” appeared in the Journal of Dairy Science (Vol. 78, No. 6, 1995). Harry T. Lawless, associate professor of food science, and Lance G. Phillips, research associate in food science, co-authored the report with Barbano. Since 1972, whole milk sales have been halved from 40 to nearly 20 billion pounds annually, while the sales of low-fat milk have soared from 8.2 to 25.3 billion pounds. Skim milk sales were comparable.

CERES
CORNELL RESEARCH

Undergraduate researcher helps create process to temper ceramics

By Larry Bernard

A major problem in finding a strong material able to withstand high temperatures is that the properties that allow such materials to take the heat make them susceptible to fractures. Ceramic would be particularly good candidate materials because they can have high melting points—above 2,000 degrees Celsius—but they are brittle and break easily, like glass. Now Cornell materials scientists—a professor working with a graduate student, Eran Ustünbag, and an undergraduate student, Jessika Trancik—have come up with a novel way to temper ceramics so they won’t crack easily. Such a process has the potential to be used for a new generation of materials, for such applications as aircraft jet turbines, for example, where components are subjected to high temperatures for long periods under high mechanical loads in hot burning gases. The Cornell team has done to ceramics what already is well-known for glass: they temper, or strengthen, the material, by imposing a compressive stress on its outer surface that does not allow cracks to propagate. “We want a whole new generation of materials for high-temperature structural applications,” said Stephen Sass, Cornell professor of materials science and engineering, who directed the studies.

Nickel alloys now used in turbines, for example, go up to 1,150 degrees Celsius, just below their melting temperature. “Ceramics are a natural,” Sass said. “They frequently melt at temperatures above 2,000 degrees Celsius, and they’re already oxidized so they aren’t much affected by hot gases. But, they are not very forgiving—they chip easily and are very brittle. We can improve that. In the same way you can toughen glass, you can toughen ceramics.”

With glass, two outer pieces sandwich a middle layer with a different composition, which are then all bonded together at high temperatures. When glass cools, the inside layer tries to contract more than the outer layer, and can’t because of the “sandwich,” and that superimposes a stress on the outer regions, limiting its susceptibility to fractures. The Cornell researchers came up with a scheme that does to ceramics what they do to glass. They bonded alumina, a ceramic compound consisting of aluminum and oxygen, to nickel aluminate, another ceramic containing nickel, aluminum and oxygen. They reduced the nickel aluminate by removing oxygen, which decreases its volume and pulls the ceramic in with it. That imposes compressive stresses in the outer surfaces, so cracks can’t flourish. The work, funded by the U.S. Office of Naval Research and the U.S. Air Force Office of Scientific Research, was described on Nov. 2 at the American Ceramics Society meeting in Seattle by Trancik, a Cornell junior in materials science. She did much of the experimental work—including X-ray diffraction studies and X-ray emission spectroscopy—and, from them, the stresses generated in the aluminum oxide.

Cornell has applied for a patent on the process, and Trancik is one of the co-inventors along with Sass and Ustünbag, who now is a postdoctoral researcher at Los Alamos National Laboratory.

“What holds back engines from letting jets fly faster is that they are limited by the relatively low melting temperatures of the current metal components of the engine. But tempered ceramics would be very, very useful if you could go to higher temperatures,” said Trancik, who is now on an engineering co-op semester at Intel Corp. in Portland, Ore. “It would be exciting to me is that an undergraduate student played a central role in its success,” sass said. Said Sass: “It’s a very interesting and potentially useful process. But there are still many challenges that have to be overcome before our proof of the concept of tempering is translated into practical applications.”

“Work makes this research even more exciting to me is that an undergraduate student played a central role in its success.”

Sass said, “I was proud of Jessika, watching her present the results of her research to a group of distinguished scientists in Seattle. She was undergraduate giving a talk at this meeting, and she did an excellent job answering the questions of the experts in the audience.”
Author: Economic influences are key factor in urban woes

By Dennis Shin '96

William Julius Wilson says the problems of the poor in America's inner cities are exacerbated by racial prejudice, but the roots of understanding urban poverty lie in examining unequal and discriminatory economic class structures.

A noted author and professor of sociology and public policy at the University of Chicago, Wilson was named a 1993 MacArthur "genius" fellow, along with five other researchers. Since then he has traveled extensively giving speeches and writing about race and poverty in America.

"I'm from an urban area, so I wanted to hear what he had to say about where I grew up," said Cassia Charles '98.

"Also, I want to go into the medical profession, and I think that one thing I want to focus on is urban America, so I would like to know more about the people I'm going to be working with.

"He has a talent for addressing questions that other people find very difficult, and he seems to be able to use various invested answers," said Elaine Wethington, associate professor of human development and family studies, speaking of Wilson.

"Sometimes the solutions he provides evocative, useful among those who hold different views," she added, "but he's good at meeting their critics."
Plant pathology course gets Rolling Stone's attention

By Peggy Haine

George Hudler, associate professor of plant pathology, who teaches the course "Biological Mushrooms: They Might Be Nice," shows off a fungus to graduate student Jamie Jonker, far left, Agriculture and Life Sciences, and junior Rosanna Luna, Human Ecology, in the Dean's Garden behind Warren Hall.

Hudler is involved in extension work

As a plant pathologist, George Hudler has been involved in extension work as well as teaching and research. His research focuses on diseases of trees and on developing integrated pest management strategies for the Christmas tree industry, which generates approximately $60 million dollars worth of retail sales each year in New York state alone. He also does research on "tar spot," which, as its name might suggest, is a splotty-looking fungus that disfigures maple leaves toward the end of the season. Its damage, more cosmetic than economic, is distressing to homeowners and foresters. Hudler has recently signed a contract with Princeton University Press to write a textbook/trade book about magic mushrooms and miscellaneous molds.

I certainly view the course as a stress-free introduction to a fascinating part of the world most people aren't familiar with.*

- George Hudler

Students also learn about the "hungry fungi." Touted as the largest living organisms on earth, fungi grow on about 30 acres in Michigan and another even larger area in Oregon. DNA analyses of mushrooms sprouting from these masses indicate that each originated from its "mother" fungus several thousand years ago and is connected to it underground. The course explores other cultures' ancient and modern uses of fungi, whose health-giving qualities Western researchers are just now investigating. For instance, Asian medical practitioners prescribe extracts of the culturally tasty shiitake mushroom in the treatment of high blood pressure and some cancers. Others tout kombucha, a symbiotic/synergistic growth of yeasts and bacteria that produces a vinegary "tea" credited as a general tonic. And local entrepreneurs want to start a cottage industry in fermented foods (bleu cheese, beer and wine, home-brewed beer and wine, products in extension work as well as teaching and research. His research focuses on diseases of trees and on developing integrated pest management strategies for the Christmas tree industry, which generates approximately $60 million dollars worth of retail sales each year in New York state alone. He also does research on "tar spot," which, as its name might suggest, is a splotty-looking fungus that disfigures maple leaves toward the end of the season. Its damage, more cosmetic than economic, is distressing to homeowners and foresters. Hudler has recently signed a contract with Princeton University Press to write a textbook/trade book about magic mushrooms and miscellaneous molds.

I certainly view the course as a stress-free introduction to a fascinating part of the world most people aren't familiar with.*

- George Hudler

Students also learn about the "hungry fungi." Touted as the largest living organisms on earth, fungi grow on about 30 acres in Michigan and another even larger area in Oregon. DNA analyses of mushrooms sprouting from these masses indicate that each originated from its "mother" fungus several thousand years ago and is connected to it underground. The course explores other cultures' ancient and modern uses of fungi, whose health-giving qualities Western researchers are just now investigating. For instance, Asian medical practitioners prescribe extracts of the culturally tasty shiitake mushroom in the treatment of high blood pressure and some cancers. Others tout kombucha, a symbiotic/syn ergistic growth of yeasts and bacteria that produces a vinegary "tea" credited as a general tonic. And local entrepreneurs want to start a cottage industry in fermented foods (bleu cheese, beer and wine, home-brewed beer and wine, products

Researchers help fine-tune whale studies

By Roger Segelken

A two-week experiment in the Pacific Ocean revealed the coast of some whales. Hudler proved three things, according to Cornell scientists: • The whales can use visual sightings conducted by the National Marine Fisheries Service (NMFS), acoustic surveys can do a better job of estimating whale populations. • The ocean is awfully noisy if you're a whale.

The experiment, from the U.S. Acoustic Explorer, September's "Whales '95" exercise by scientists from the Cornell Bioacoustics Research Program, was designed to determine whales' whereabouts from the sounds they make. The exercise combined visual sightings and Cold War technologies, originally employed by the Navy for tracking enemy submarines, with new procedures, and a moment detecting the Bioacoustics Research Program for locating, identifying and counting whales.

We demonstrated that it is possible to tell, from the sounds whales make, precisely where they are swimming at any instant.

Christopher W. Clark

The data were sunk on the ocean floor. Back in the Ithaca laboratory, that data will be incorporated with information on visual sightings and with September recordings from Pacific Ocean sections of IOS, the Navy's Integrated Undersea Surveillance Systems. Analysis will take months, but the scientists arc confident in the final results.

"We demonstrated that it is possible to tell, from the sounds whales make, precisely where they are swimming at any instant. That should enable the Navy to schedule exercises without disturbing whales, and it gives the NMFS a new tool for monitoring marine mammals that make sounds," said Christopher W. Clark, director of the Cornell Bioacoustics Research Program.

The biologists already had some idea what a noisy place the Pacific is because the Bioacoustics Research Program is responsible for representing marine mammals' interests in the controversial ATAC (Acoustic Thermometry of Ocean Climate) project. However, linking so many listening devices together in one area -- where military, commercial shipping and fisheries traffic is heavy -- really gave them an earful.

"It's like standing in the middle of a busy airport," Clark said. "You're checking it out."

Perhaps, in a sea of discordant racket, the whale's willingness to visit the research ship at close range. One rare sight was of blue whales back whales, shoulder-to- houlder, in a kind of synchronized swimming manner.

The fin backs seemed curious about our boat," Clark said. "They were checking it out."

"The fin backs seemed curious about our boat."

Perhaps, in a sea of discordant racket, the whale's willingness to visit the research ship at close range. One rare sight was of blue whales back whales, shoulder-to- houlder, in a kind of synchronized swimming manner.

The fin backs seemed curious about our boat," Clark said. "They were checking it out."

Perhaps, in a sea of discordant racket, the whale's willingness to visit the research ship at close range. One rare sight was of blue whales back whales, shoulder-to- houlder, in a kind of synchronized swimming manner.

The fin backs seemed curious about our boat," Clark said. "They were checking it out."

Perhaps, in a sea of discordant racket, the whale's willingness to visit the research ship at close range. One rare sight was of blue whales back whales, shoulder-to- houlder, in a kind of synchronized swimming manner.

The fin backs seemed curious about our boat," Clark said. "They were checking it out."

Perhaps, in a sea of discordant racket, the whale's willingness to visit the research ship at close range. One rare sight was of blue whales back whales, shoulder-to- houlder, in a kind of synchronized swimming manner.

The fin backs seemed curious about our boat," Clark said. "They were checking it out."

Perhaps, in a sea of discordant racket, the whale's willingness to visit the research ship at close range. One rare sight was of blue whales back whales, shoulder-to- houlder, in a kind of synchronized swimming manner.
Amedeo Hotels is partner at research center

Amedeo Hotels, owners and operators of the New York Palace, a midtown Manhattan luxury hotel, has formed a partnership with the Cornell Center for Hospitality Research to support research projects that will combine the theoretical aspects of academic research with practical demands of a thriving hotel operation.

"We are confident that our partnership with the Cornell Center for Hospitality Research will result in important contributions to the hospitality industry, particularly in the luxury segment of which we are part," said Richard J. Cotter, managing director of the New York Palace. "In a sense, our hotel will become a laboratory where exciting ideas and innovations with long-term benefits will be explored with Cornell. We look forward to a dynamic joint venture."

Leo Renaghan, director of the Center for Hospitality Research, welcomed the support of Amedeo Hotels. "This collaboration is essential in strengthening both the industry and academia," he said.

Central to the partnership is the Amedeo Research Grant designed to foster original research that will lead directly to long-term improved profitability of international luxury hotels. Research topics will focus on the needs of executives, owners and managers and will, in turn, be translated into operating principles in the areas of operations, management, marketing, human resources, accounting and finance.

The $100,000 Amedeo Research Grant will be administered by the Center for Hospitality Research. The grant competition is open to researchers with an interest in theoretical and empirical research with direct application to the luxury segment of the hotel industry.

Experienced academic and industry judges will award grants of up to $20,000 based on a project's potential contributions to luxury hotel management, research methodology and innovation of ideas or design.

Academic judges are: Cathy Einz, associate professor, management, Pennsylvania State University; Neil M. Landsburg, the Kenneth Blanchard Professor of Human Resources Management, and chairman, the School of Hotel Administration; Professor of Wine, Education and Management, all of the School of Hotel Administration; and Richard W. Malott, Professor of Management and professor of marketing and quantitative management, the Johnson Graduate School of Management.

Industry judges are: Bjorn Hanson, Cornell's Center for Hospitality Research; and Banff Vintners, Cini-Little International, EcoLabs, MedalIion Hotels, Pepperdine International and Holiday Inn Worldwide.

Annual agribusiness conference is set for Dec. 12

By Blaine P. Friedlander Jr.

John Frank, deputy chief counsel to the U.S. House Agriculture Committee, will provide insight into the 1995 Farm Bill when Cornell agricultural experts assess the current and future economic conditions at the annual Agribusiness Situation and Outlook Conference on Dec. 12 on campus. It is sponsored by the university's Department of Agricultural Resource and Managerial Economics.

The morning plenary session begins at 10 a.m. at the David L. Call Alumni Auditorium in Kennedy Hall. John Brake, Cornell professor of agricultural economics, will address "The Current Situation and Outlook for the National Economy." Following Brake's lecture, Frank will present his invited talk, "Preparing Federal Farm and Food Policy for the 21st Century."

In the afternoon, three plenary sessions will run concurrently, beginning at 1:30 p.m.: "Session A, in the David L. Call Alumni Auditorium, will address the outlook for grains, feed and other farm outputs, as well as the dairy situation and outlook." "Session B, in Room 145 Warren Hall, will address the fruit, grape and wine situation and outlook, as well as the current perspective and future view toward vegetable crops," he said. "Session C, in Room 166 Martha Van Rensselaer Hall, will address "Consumers and Consumer Behaviour," as well as "Legislating Regulations and Consumer Food Choices." This concurrent session, offered for the first time, is sponsored by the Department of Consumer Economics and Housing.

Pre-registration is $15 through Dec. 1. Registration at the door is $20. For more information, contact Wendy Barrett at (607) 255-1581.
By Gaston Ceron '96

"How Can We Improve the Greek System?"

That was the question discussed by a student, faculty and staff panel before a small, but active, crowd at the David L. Call Alumni Auditorium of Kennedy Hall on Nov. 15.

The event, organized to discuss concerns about the future of Cornell's fraternities and sororities, was sponsored by the Cornell Political Forum's Debate Society.

Five panels addressed several issues confronting the Greek system, including perceptions of alcohol abuse and out-of-control parties, elitism and exclusion, and poor relations with faculty and administrators.

Student representatives on the panel were: James Mallios, president of the Order of Omega society; Vaughn Lowery, president of the Africana and Latino Greek Letter Council (ALGLC); and Erin Linehan, Panhellenic Council vice president for student and academic services, and Jennifer Mallios, president of the Order of Omega society; Vaughn Lowery, assistant dean of students and director of fraternity and sorority affairs, served as moderator.

Panels' introductory comments were followed by a question-and-answer period. One issue each of the panelists agreed on was the need for those involved with the Greek system to assume responsible drinking among students.

Mallios, representing the InterFraternity Council, explained the recent steps the IFC has taken to promote responsible drinking among students.

Mallios chided the media for often perpetuating inaccurate images, and he said problems with alcohol exist on campus beyond Greek houses. However, he suggested that fraternities and sororities need to return to stricter crowd and invitation controls for social events.

Linehan offered community service as an area in which the Greek system could improve, and Murphy called for a return to traditional values and ideals among fraternity and sorority members.

Lowery spoke of the recruiting problems that face Cornell's minority fraternities and sororities and of the differences between the IFC and ALGLC systems. He explained that minority Greek organizations at Cornell, and nationwide, started in reaction to racial discrimination and exclusion by mainstream fraternities and sororities, and the minority houses have continued to persevere.

"Our [the IFC's and the ALGLC's] cardinal principles are similar," Lowery said, "but I said the different histories and traditions of the systems have kept them separate. He also noted the importance of the ALGLC members' national organizations as agents for social change.

In response to a question about the perceived elitism of Greek organizations, Linehan pointed out that of the more than 700 women who rush sororities, approximately 95 percent receive bids to join houses. Mallios also argued for the diversity of fraternities at Cornell.

"With over 40 houses on campus, there really is a house for everyone," he said, adding, "Exclusion and choice are not unique to the Greek System."

Addressing the apparent lack of involvement by junior and senior sorority members, Linehan said she recognized a decline in interest after the sophomore year, but suggested that the large size of sororities may be at fault and that a solution may be to have houses promote a greater sense of community among all members. She also suggested that sororities take on more women's issues.

When asked about the faculty's opinion of the Greek system, Germer said, "Many members of the faculty find the Greek system foreign. They don't understand it."

But she said she felt faculty opinion could be improved through lectures and discussions sponsored by Greek houses.

In discussing the Cornell administration's relations with the fraternity and sorority system, Murphy admitted that the attitude has often shifted between benign neglect and displeasure. Work needs to be done, she said, to strengthen administrative appreciation and support of the Greek system, including remembering the system's history of contributions.

Sarah Hunter, the evening's organizer and events coordinator for the Cornell Political Forum, said she was pleased with the discussion, despite the small turnout.

---

By Darryl Geddes

"Having their cake"

After cutting the cake commemorating the 70th anniversary of Willard Straight Hall, Brian Barrett, second from left, WSH program board co-chair, Michael Martin, center, WSH personnel coordinator, and administrative board chair, and Dean of Students John Ford, second from right, sample the cake and ice cream. Serenading the celebrants during the Nov. 20 event were Seth Kibei, far left, and W. Gary Weisheit. The anniversary celebration, in the Memorial Room, was co-sponsored by the Willard Straight Hall Administrative Board and Program Board, and units of the Office of the Dean of Students.

United Way quilt sells agency's message of caring and warmth

By Darryl Geddes

"With you, we're helping to make our vibrant crazy quilt called community,' a warmer place to be." This year's motto for the United Way of Tompkins County annual campaign has become a warm reminder.

A quilt bearing the campaign slogan and photos of individuals helped by United Way agencies is making its way around the county to help urge individuals to support the campaign.

"I thought it was important to tie the national campaign in with our local efforts," she added. "And the fact that it was created by volunteers makes the project that much more meaningful."

The idea for a quilt to help sell the agency's message came from United Way volunteer Ann Marie Tutton, assistant vice president of Tompkins County Trust Co. "The quilt actually is an extension of the national campaign," she said.

"I thought it was important to tie the national campaign in with our local efforts," she added. "And the fact that it was created by volunteers makes the project that much more meaningful."

Five members of the Tompkins County Quilters' Guild stitched together the nine-panel quilt. The panels spell out United Way and the names of the nine agencies.

"It took us about three weeks to complete," said quilter Brigid Hubberman, who was assisted on the project by Enid Velazquez. "The quilt actually is an extension of the national campaign," she said.

"I thought it was important to tie the national campaign in with our local efforts," she added. "And the fact that it was created by volunteers makes the project that much more meaningful."

"I thought it was important to tie the national campaign in with our local efforts," she added. "And the fact that it was created by volunteers makes the project that much more meaningful."

The quilt has been making the rounds of area businesses and institutions. It already has been displayed at Cornell, Ithaca College, Montgomery Ward, M&T Bank, Wegmans and Tompkins County Trust Co. Contributions to the United Way make the quilt's message complete. If you haven't contributed to the 1995 Cornell portion of the campaign, contact your division volunteer or Rhonda Velazquez at the Cornell United Way office at 255-6418 or <rhv2@cornell.edu>

The United Way campaign's message is caring and warmth.
Jazz workshop, concert for all ages is Dec. 3

Music lovers of all ages are invited to take part in a jazz workshop sponsored by Cornell's Department of Music. Dec. 3 at 4 p.m. in Barnes Hall.

The workshop, led by Karlton Hester, assistant professor of music, will answer many questions about jazz, including: what is jazz, where does it come from, who are the performers and what type of instruments are featured in jazz?

"We hope this workshop will educate individuals with a better sense of what jazz is, which will hopefully encourage more individuals to attend jazz performances," Hester said.

His opportunity to listen to live jazz will come hours later at 8:15 p.m. that evening when the Cornell Jazz Ensembles under the direction of Hester give their semiannual concert in Barnes Hall. The concert features bebop, swing and more contemporary music, along with student compositions from Hester's course on introduction to improvisational theory.

The workshop and the concert are free to the public.

Carnegie Hall performance Dec. 4 to benefit Cornell music department

By Darryl Geddes

Fortepianist Malcolm Bilson will perform works of Mozart, Haydn and Brahms in an evening of performances by faculty and students of Cornell's Department of Music on Monday, Dec. 4, at 8 p.m. in the new Recital Hall at Carnegie Hall, 881 7th Ave., New York City.

The evening, billed as "The Lincoln Hall Piano Trio" pays tribute to Cornell's music program and seeks to raise funds for the renovation of Lincoln Hall, the music department's home on campus.

Hosts for the evening's activities, which feature a champagne reception immediately following the concert, are Cornell President Hunter Rawlings and his wife, Elizabeth; Carnegie Hall board chairman Sanford Scherf; and his wife, Jessica Weill Billibowicz. Weill, his daughter and son-in-law are Cornell alumni.

Bilson, the Frederic J. Whiton Professor of Music, has been in the forefront of the period instrument movement for more than two decades. Last year in a New York City appearance, Bilson performed the complete cycle of Beethoven sonatas on early keyboards. His performances on period instruments have contributed greatly to the restoration of the fortepiano to the concert stage and to recordings of "mainstream" repertoire.

-Joining Bilson on stage will be pianist Yuki Bjerken, David Borden and Edward Murray. The faculty and student members of the Cornell Chamber Singers under the direction of Scott Tucker. The program will feature the music of Mozart, Chopin, Gardensky and Stravinsky.

Kellock will perform the world premiere of Alter? When the Hills Do, a composition by doctoral student Anna Wieicer.

The Cornell Department of Music has had three separate addresses on campus since its creation in 1903. No site has been ideal for students in music studies. Lincoln Hall, which the department moved to in the 1960s, gave faculty and students more elbow room in a stone structure, originally built for the study of civil engineering and architecture, remains inadequate for music instruction and appreciation.

The $15 million Lincoln Hall renovation and expansion project would provide the department with 50 percent more space. Key elements of the project include a climate control system to ensure the proper maintenance of instruments and library collections, a two-story rehearsal room and a computer laboratory.

For more information on the "Lincoln Hall Reinaissance" or for tickets, call 8-301-3603.

Soprano Bryn-Julson to perform Dec. 8

Soprano Phyllis Bryn-Julson will perform works by Schumann, Kurtág, Aperghis and Ives on Friday, Dec. 8, at 8:15 p.m. in Barnes Hall. Xak Bjerken will provide the accompaniment.

His performances on period instruments have contributed greatly to the restoration of the fortepiano to the concert stage and to recordings of "mainstream" repertoire.

-Joining Bilson on stage will be pianist Yuki Bjerken, David Borden and Edward Murray. The faculty and student members of the Cornell Chamber Singers under the direction of Scott Tucker. The program will feature the music of Mozart, Chopin, Gardensky and Stravinsky.

Kellock will perform the world premiere of Alter? When the Hills Do, a composition by doctoral student Anna Wieicer.

The Cornell Department of Music has had three separate addresses on campus since its creation in 1903. No site has been ideal for students in music studies. Lincoln Hall, which the department moved to in the 1960s, gave faculty and students more elbow room in a stone structure, originally built for the study of civil engineering and architecture, remains inadequate for music instruction and appreciation.

The $15 million Lincoln Hall renovation and expansion project would provide the department with 50 percent more space. Key elements of the project include a climate control system to ensure the proper maintenance of instruments and library collections, a two-story rehearsal room and a computer laboratory.

For more information on the "Lincoln Hall Reinaissance" or for tickets, call 8-301-3603.
**Regional and City-Legal Planning**


**Cornell Cooperative Extension**

The monthly forum will be held Dec. 4 from 8:30 to 10 a.m. in 410 McGraw Hall.

**Ecology & Systematics**

"Evidence for Balancing Selection in the Porphyrins' Incorrelated Gene in Two Species of Field Cricket," Laura Katz, ecology & evolutionary biology, Dec. 6, 4 p.m., A106 Corson Hall.

**Electrical Engineering**

"Demonstrated High Density Optical Recording and Constellation Shaping," Steve McLaurin, 219 Phillips Hall.

**Entomology (Jugate)**

"The Role of Vision and Olfaction During In- 

giant Sizes of Insects in Wind-Dispersed Semiochemicals," Oliver Zeren, Nov. 30, 4 p.m., A106 Corson Hall.

"Small Scale Spatial and Spatial Heterogeneity of Insect Populations in Agricultural Soils," Mike Hackett, Dec. 5, 2:15 p.m.

**Fruit & Vegetable Science**

"Fruit and Vegetable Cultivars in Tropical Homegardens Systems," Eric Fernandes, soil, crop science, Dec. 7, 4 p.m., 404 Plant Science Building.


**Genetics & Development**

"Molecular Genetics of Sexuality in Chlamydomonas," Ursula Goodenough, Wash­

**Geological Sciences**

TBA, Kim Maasch, University of Maine, Dec. 5, 4:30 p.m., 1120 Uris Hall.

**Immunology**

TBA, Hesean Kwak, immunology, Dec. 1, 1:15 p.m., Boyce Thompson Auditorium.

**Materials Science & Engineering**

"Growth of Single-Phase Silicon by Vapour Phase Deposition Under Gas Source MBE and MOVPE and Their Charac­

**Neurology & Behavior**

"Sexual Selection for and Evolution of Eyesia- 

**Ornithology**

"Sex for the Influences in the Watfitted Jasous Canes Zona Conflict," Peter Weigs, neurobiology & beha­

**Physics**

"Deep Eutectic Solvents: An Approach to the Synthesis of Potentially Toxic and/or Biologically Active Compounds," D. P. Lee, chemistry, Dec. 8, 4 p.m., Robertson Library.

"Dispersions are an important class of bioenergy materials for the future," John Weits, New York University, Dec. 7, 12:30 p.m., 106 Corson Hall.

**Psychology**

"TBA, Heesen Kwak, psychology, Dec. 1, 1:15 p.m., Boyce Thompson Auditorium.

**Plant Biology**


**Plant Breeding**


**Pathology**


**Russian Literature**

"The Dialogue Between the Jew, the Christian and the Philosopher (M. Grigorevich, V. Rozanov and V. Ivanov). The Problems of National Identifi­

**Science & Technology Studies**

Computers and Privacy Panel Discussion.

**South Asia Program**

"The Impact of Structural Adjustment on Pov­

**Wildlife Science**

"Conservation Biology of the Florida Scrub Jay in the Context of Regional Conservation," Elizabeth Layer, wildlife science, Dec. 6, 4 p.m., A106 Corson Hall.

**World Wide Web**

"The Online Access Reference Services Division is sponsoring the following classes in the Uns Listed Division of the Information Center.

**Theatre Arts**

William Shakespeare's Measure for Measure will be performed Nov. 30 and Dec. 1-2 at 8 p.m. in the Proctorumus Theatre. Tickets are $8 and $5. Call 254-4255 for information.

**Varsity teams excelled continued from page 1**

Cole Sue Medley's volleyball team compiled a 20-10 overall record — its first 20-win season since 1989 — and swept through the Ivy to rob competition, with the regular season No. 1 seed in the tournament, where the Big Red won 2-2 Senior Adrienne Gravet was named to the Ivy first team. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfully through its first three schedule against seven teams in the East. The 11 wins tied the school record for most victories in a season set by 1980's team. The Aquatic Center, completed seven races to the last weekend, and the Red finished tied for second with an unbeaten 5-0-2 mark. The women's soccer team, under Coach Randy May, competed successfull...
November 30, 1995 Cornell Chronicle

film series on Dec. 1.
"Impressionism: Caring for Your Art on Paper," a conservation workshop with Tatyania Petukhova, Dec. 3, 2 to 4 p.m. Contact the museum at 255-6644 for information.

Cornell Library
"Painting: Linear, Clay & Stowe: The Written Word Materialized," through Jan. 5, Kroch Library. Monday through Friday, 9 a.m. to 5 p.m., Saturday, 1 to 5 p.m.

Harriet Gallery
M.F.A. Candidate Group Show, through Dec. 2.

Mann Library
"Localizing the scope of the Department of Food and Vegetable Science's activities at the exhibit in the library. Exhibits of techniques and publications, highlighted by fruits and vegetable decoration and art, will be on display through December.

Tjaden Hall Gallery
"Paintings by Spencer Baker, through Dec. 2. "The Thief of Bagdad," by Marcelle Pecot; "Ragnarok Superstrings" by William Rowley; and "Zona" (scenes from a man, presented by Pentangle, 7:30 p.m., Uris, free.

Willard Straight Hall Art Gallery
"Photographs and dioramas celebrating 70th anniversary of WISH, through Dec. 1. Ceramics studio and WISH darkroom show and sale. Dec. 4 through 8.

Bellocchio, with Gaetano Mazzu. 7 p.m.
"I Wasn't Made for These Times," 9:30 p.m.

Tuesday, 12/5
"The Earth" (1983), directed by Almed Alshick, with Rod Taylor and Tippi Hedren, 7 p.m.
"From the Pole to the Equator" (1967), directed by Vervant Graan, 7:30 p.m., CTA Film Forum.
"I Wasn't Made for These Times," 9:30 p.m.

Wednesday, 12/6
"The Year of Living Dangerously" (1983), directed by Peter Weir, with Mel Gibson, Sigourney Weaver and Linda Hunt, 7 p.m.

Thursday, 12/7
"Reassemblage/Navajo Talking Picture" (1982/1996), presented by Pentangle, 7:30 p.m., Uris, free.

Raging Bull, starring Robert DeNiro, will screen at Cornell Cinema Dec. 1 at 8:45 p.m. Academy Award-winning film editor and Cornell alumn Thelma Schoonmaker '61 will introduce the film. Schoonmaker, who has collaborated with Martin Scorsese since 1965, also will introduce this weekend two films by the late British director Michael Powell, to whom she was married.

Department of Theatre Arts
The Dance Theatre Fall Concert, a compilation of original faculty and student choreography, will be held Dec. 7 to 9 at 7:30 p.m. in the Class of '56 Auditorium of Goldwin Smith Hall, as part of the Center at the Center for Theatre Arts (CTA) Saturdays and Sunday evenings (8:30). Films are narrated by Norman Grossman, former executive director of the Johnson Museum of Art. Cornell Cinema's Website is: <http://www.cinema.cornell.edu/ctafilm/indoc.html>.

Thurs., 11/30
"First Kiss" (1994), with guest filmmaker Shu Lea Ching, 7 p.m.
"The Jar" (1919), directed by Erich von Stroheim, with Behzad Khodaveisi, 9:45 p.m.

Friday, 12/1
"The Jar," 7:30 p.m.
"Kids" (1995), directed by Larry Clark, with Leonardo, Jason Patric and Chloë Sevigny, 7:30 p.m., 9:45 p.m., midnight, Uris.

Raging Bull" (1980), directed by Martin Scorsese, introduced by guest editor Thelma Schoonmaker '61, 8:45 p.m.

Saturday, 12/2
"The Thief of Bagdad" (1940), directed by Michael Powell, with Sabur and Conrad Veidt, introduced by Thelma Schoonmaker, "The Thief of Bagdad" (1963/1995), directed by Michael Powell, with Roger Livesey, Deborah Kerr and Anthony Walbrook, introduced by Thelma Schoonmaker, 6:45 p.m.
"Kicks," 7:15 p.m., 9:45 p.m., midnight, Uris.
"I Wasn't Made for These Times," 9:30 p.m.

Sunday, 12/3
"China Is Near" (1968), directed by Marco Bellocchio, with Gaetano Mazzu. 7 p.m.
"I Wasn't Made for These Times," 9:30 p.m.

\[\text{12/2} \text{Raging Bull, starring Robert DeNiro, will screen at Cornell Cinema Dec. 1 at 8:45 p.m. Academy Award-winning film editor and Cornell alumn Thelma Schoonmaker '61 will introduce the film. Schoonmaker, who has collaborated with Martin Scorsese since 1965, also will introduce this weekend two films by the late British director Michael Powell, to whom she was married.}\]

**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: 255-6644.
"Master Prints From Upstate New York Museums," through Dec. 3.
"12 O'Clock Sharp: Thursday Noontime Gallery Talks. On Nov. 30, the talk will be on "Japanese Woodblock Prints" by Masako Watanabe, assistant curator of Asian art.
"World AIDS Day Events: In observance of World AIDS Day on Dec. 1, the Johnson Museum is planning a series of events through Dec. 15. In the galleries there will be four portrait drawings from the Mariposa collection by the California artist Don Bachardy. The portraits were commissioned by Mariposa to document prominent figures in the gay rights struggle. In galleries throughout the museum, special labels, noted with a red ribbon, will highlight works that exhibit histories and the permanent collection. The works will be used to point out the complexities of the AIDS crisis and provoke thought. The museum education department will be running an all-day conservation workshop with Tatyania Petukhova, Dec. 3, 2 to 4 p.m. Contact the museum at 255-6644 for information.

Cornell Library
"Painting: Linear, Clay & Stowe: The Written Word Materialized," through Jan. 5, Kroch Library. Monday through Friday, 9 a.m. to 5 p.m., Saturday, 1 to 5 p.m.

Harriet Gallery
M.F.A. Candidate Group Show, through Dec. 2.

Mann Library
"Localizing the scope of the Department of Food and Vegetable Science's activities at the exhibit in the library. Exhibits of techniques and publications, highlighted by fruits and vegetable decoration and art, will be on display through December.

Tjaden Hall Gallery
"Paintings by Spencer Baker, through Dec. 2. "The Thief of Bagdad," by Marcelle Pecot; "Ragnarok Superstrings" by William Rowley; and "Zona" (scenes from a man, presented by Pentangle, 7:30 p.m., Uris, free.

Willard Straight Hall Art Gallery
"Photographs and dioramas celebrating 70th anniversary of WISH, through Dec. 1. Ceramics studio and WISH darkroom show and sale. Dec. 4 through 8.

Bellocchio, with Gaetano Mazzu. 7 p.m.
"I Wasn't Made for These Times," 9:30 p.m.

Tuesday, 12/5
"The Earth" (1983), directed by Almed Alshick, with Rod Taylor and Tippi Hedren, 7 p.m.
"From the Pole to the Equator" (1967), directed by Vervant Graan, 7:30 p.m., CTA Film Forum.
"I Wasn't Made for These Times," 9:30 p.m.

Wednesday, 12/6
"The Year of Living Dangerously" (1983), directed by Peter Weir, with Mel Gibson, Sigourney Weaver and Linda Hunt, 7 p.m.

Thursday, 12/7
"Reassemblage/Navajo Talking Picture" (1982/1996), presented by Pentangle, 7:30 p.m., Uris, free.

Social scientist's University Lecture will focus on America's welfare system

By Darryl Geddes
One of the nation's foremost social scientists, France Fox Piven, will speak on "The Assault on the American Welfare State" at 7:30 p.m. in Hillos Commons, Auditorium of Goldman Smith Hall, as part of Cornell's University Lecture program. Ms. Piven is a distinguished Professor of Political Science and Sociology at the Graduate School of the City University of New York. She is also the co-author of nine books, including the seminal piece on the welfare system, "Regulating the Poor: The Politics of Welfare Reform" (Pantheon Books, 1971, 1993). The Politics of Tur-

Her honors include the C. Wright Mills Award for her book, "Regulating the Poor, and the Founders Award from the Society for the Study of Social Problems."

Piven is the founder of Human Serve, an organization which seeks to raise voting by poorer and minority people by making voter registration such as welfare and unemployment offices.

African Studies & Research Center 12:15 p.m. And Perspectives on the Development of Women's Studies in South Africa (Black Univer-
sities," Veliswa Tshabalala, University of Transkei, Thursday, 1/9, 3:30 p.m., A.D. White House.

"Women's Experiences in Exile," Marika Abraham, executive director of Federation is Global and author of Women in Exile, Nov. 30, 7:30 p.m., Alternate Space.

"Cognitive Studies/Linguistics Circle
"One Foot in Front of the Other," Louis Garnier, with Marcia Kinsella of Astro, Dec 7, 4:30 p.m. 106 Morrill Hall.

East Asia Program
"Family Planning and Maternal Child Care in China in the 1990's: A Grassroots Approach," Steve Holcombe, UNFPA-UNICEF joint project in China, Nov. 30, 4:30 p.m., A. White Hall.

Floriculture & Ornamental Horticulture
"Biological Control: How Political is the Science, How Scientific is the Politics," Michael Villani, Dec. 7, 12:00 noon, Plant Science Building.

Science & Technology Studies
"Monitoring and the Integrity of Science," Jane Feeney MacDonald, biochemistry, Dec. 7, 12:00 noon, Plant Science Building.

Southeast Asia Program
"Japanese Religious Policy Towards Christian Churches in Japan," Dr. Tadahiko Sekita, Sakai Terashii, SEAP visiting fellow, Nov. 30, 12:15 p.m., Kahin Center, 640 Stewart Ave.

Women's Studies Program
"Mothering Under Pressure: A Preliminary Study of Predictors of Poor Women's Sense of Self-Efficacy," Cybele Cohen, 3:30 p.m., I.A. Faculty Lounge, 220 Ithaca Hall.
Continued on page 10