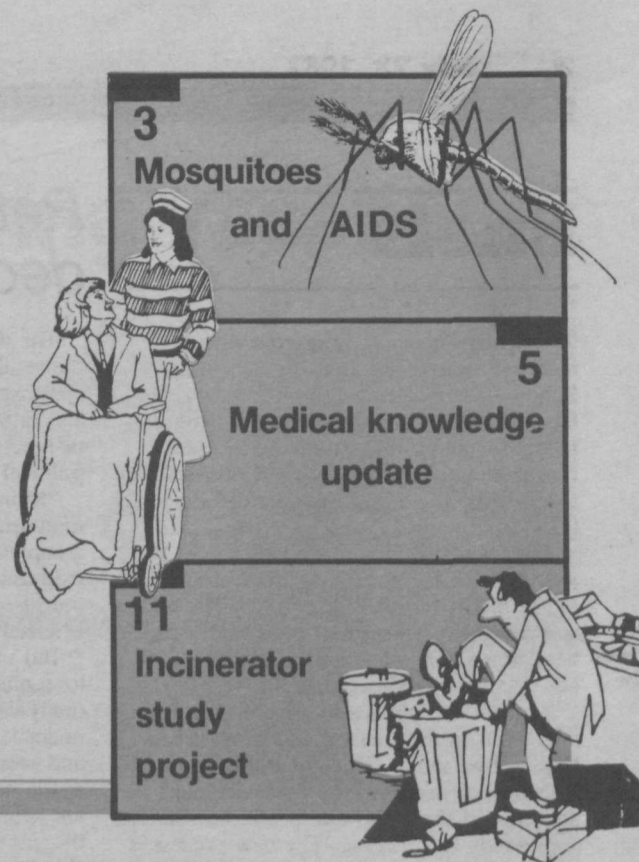


# Cornell CHRONICLE

Volume 18 Number 39 July 23, 1987



## Programs boost realistic look of computer scenes

Computer programs that render scenes and simulate moving figures with unprecedented reality have been developed by Cornell researchers.

The new techniques will prove important in a wide variety of applications, such as allowing scientists and engineers to "see," and thus better understand, computer simulations phenomena such as the inner workings of machines or the motions of robots.

In three papers to be delivered July 31 at the annual meeting in Anaheim of SIGGRAPH, the leading forum for computer graphics research, Cornell scientists will announce new methods for:

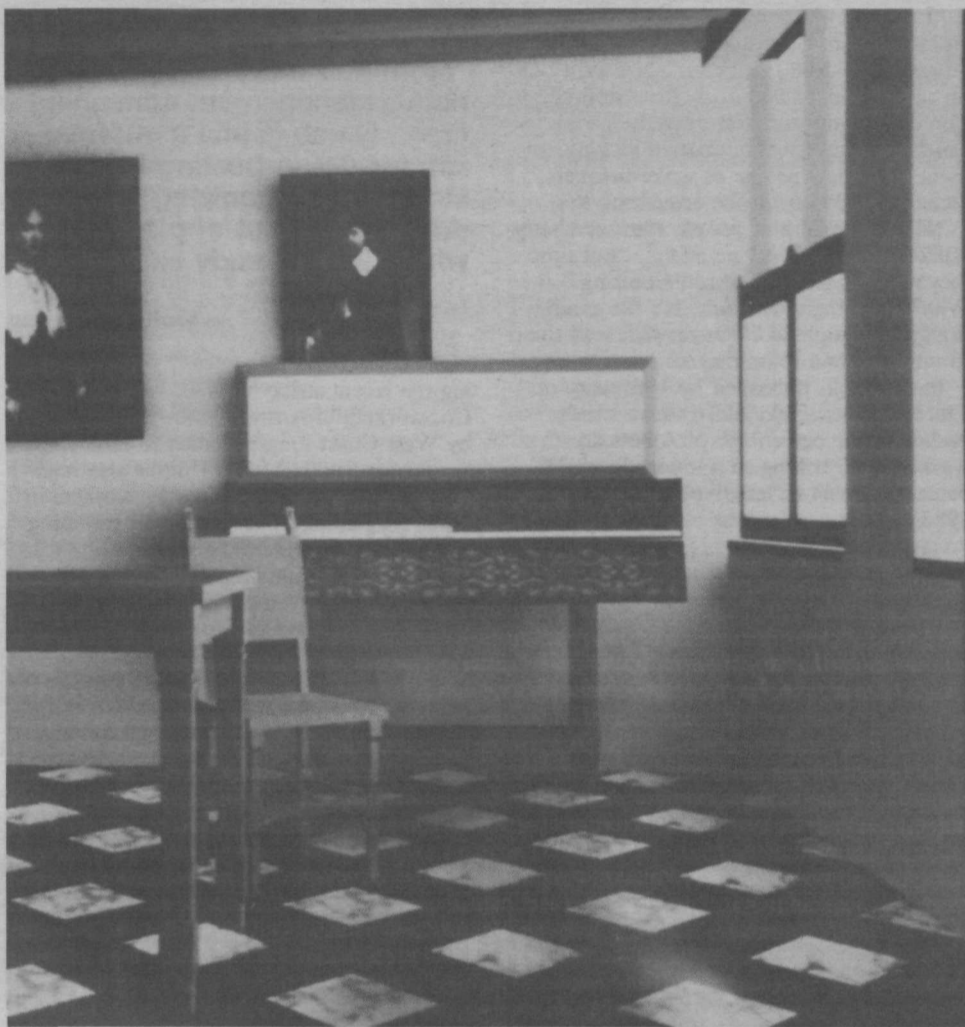
- Rendering more realistically the way light reflects within a complex scene that has objects with both mirror-like and diffusely reflective surfaces. Computer-generated scenes produced with the new technique have far more subtle lighting effects and realistic textures than do the plastic-looking surfaces of objects created by current methods.

- Depicting the subtle effects of atmospheric media such as fire, dust, smoke and fog. This new method involves calculating not only how the atmosphere attenuates light, but also how light reflects from the atmosphere onto surfaces and even interreflects within the atmosphere.

- Animating a linked figure such as a human on a swing, a swinging chain or a cracking whip. The new program is the first to combine kinematic control with dynamic integrity for animated figures with such physical properties as mass, inertia and springiness in linkages. Computer figures produced this way could even "learn" how to perform for animators as they gain "experience."

According to the researchers from Cornell's interdisciplinary Program of Computer Graphics, the new techniques represent "major breakthroughs" in their efforts to

For profile of Professor Donald Greenberg, see page 9.



**VERMEER ON THE SCREEN:** This computer graphic scene, inspired by the Vermeer painting "Lady and Gentleman at the Virginals" was rendered by Cornell engineers.

model true physical behavior.

SIGGRAPH is the Association for Computing Machinery's Special Interest Group on Computer Graphics. The Cornell researchers are Donald Greenberg, the Jacob Gould Schurman Professor of Computer Graphics and director of the Program of Computer Graphics; Kenneth Torrance, professor of mechanical and aerospace engineering; Michael Cohen, assistant professor of architecture; architecture graduate students Paul Isaacs and John Wallace, and mechanical and aerospace engineering graduate student Holly Rushmeier.

At the SIGGRAPH '87 conference, the

Cornell engineers will show scenes of etched glass, a vanity with mirror and a computer version of a Vermeer painting, "Lady and Gentleman at the Virginals."

They also will show videotaped computer movies of swinging chains, cracking whips, dancing marionettes, humans on swings and swaying trees that possess a natural grace and agility not seen before in computer animation.

### Greater realism in computer pictures

The technique of realistically rendering scenes will be reported by Wallace, Cohen and Greenberg in a paper entitled "A Two-

*Continued on page 8*

## Teachers focus on math, science misconceptions

There are college physics students who believe that a 50-pound ball falls faster than a five-pound ball of equal diameter.

Some elementary school students think they see by emitting rays from their eyes.

And the correct answers given in class by students of all ages sometimes are based on faulty explanations.

More than 400 educators from 27 nations will gather here July 26 - 29 to discuss improving course material and teacher

**"When it comes to science and math, students' knowledge is like marbles in a garbage can: small, unrelated pieces without any organization."**

— Joseph D. Novak

preparation to reduce widespread and tenacious misconceptions held by students in science and mathematics.

"When it comes to science and math, students' knowledge is like marbles in a garbage can: small, unrelated pieces without any organization," said Joseph D. Novak, program coordinator for science and mathematics education at Cornell and organizer of the international conference.

Much of the blame rests with education itself, which presents a "phony image" of knowledge as a set of objectively discovered, disconnected facts to be memorized and recalled, he added.

"The typical science class is so preoccupied with memorization of terms and 'cook book' laboratory activities that efforts to encourage meaningful learning are seen as a diversion," Novak charges in his book, "Learning How to Learn," co-written with education Professor D. Bob Gowin and translated into Spanish and Italian.

Also, teachers spend little time discovering the intuition or common-sense knowledge — often inaccurate — that students bring with them into the classroom, Novak

*Continued on page 11*



Thomas Meikle

Claude Levett

## Medical College dean leaves to head foundation

The dean of Cornell Medical College, Dr. Thomas H. Meikle, is leaving to become president of the Josiah Macy Jr. Foundation, the foundation's board chairman, Clarence F. Michalis, has announced.

Meikle will become the fifth president in the foundation's 57-year history when its board formally ratifies his appointment at its September meeting. He will succeed Dr. James G. Hirsch, who served as president from January 1981 to May 1987.

"Dr. Meikle brings to the presidency of the Macy Foundation an extraordinary record of achievement as a researcher, teacher and administrator," Michalis said. "His knowledge of critical issues in medical education and his previous work with the Macy Foundation uniquely qualify him for this important post."

In a letter to President Frank H.T.

Rhodes, Meikle wrote, "I reluctantly leave Cornell University, with which I first became associated as an entering freshman on the Ithaca campus 40 years ago. Cornell has been the focus of most of my formal education and professional life, and my Cornell friendships and experiences have defined and enriched my life. Your friendship and support, Frank, and that of the members of the boards and my colleagues on the faculty have been especially important to me over the years. I am grateful to have had my life so positively influenced and to have had the privilege of serving Cornell."

Rhodes responded in a letter to Meikle, "Yours will be extremely difficult shoes to fill. The problems the Medical College faced when you assumed its leadership were formidable, and you have played a major role in bringing the Medical College

to the preminent position it holds today."

Rhodes announced that he has appointed a search committee, including members of the faculty, the Medical College Board of Overseers, the Governors of The New York Hospital and the student body, to identify a successor to Meikle.

Meikle received his B.A. from Cornell in 1951, and his M.D. from Cornell Medical School in 1954, and served his internship at Jefferson Medical College Hospital in Philadelphia.

Following his internship, he served as a captain in the U.S. Army Medical Corps and in research posts at the National Hospital for Nervous Diseases in England and at the University of Pennsylvania Institute of Neurological Sciences.

In 1961, he joined the Cornell Medical  
*Continued on page 5*

## Briefs

■ **Cornell Enterprise magazine wins national award:** The Johnson Graduate School of Management alumni magazine, Cornell Enterprise, has received a bronze medal for all-around excellence in college magazine publishing from the Council for the Advancement and Support of Education (CASE).

The award-winning issue was a pilot project in electronic publishing for Cornell's Office of University Publications. The issue was designed, typeset and produced using Macintosh computers and the university's new Linotronic 300 equipment.

Text for the publication was entered onto a Macintosh disk, edited and provided to Phil Wilson in the Office of Publications. Wilson then arranged the type, designed and created the pages and produced finished copy ready for printing. The new process is expected to save \$3,000 an issue in typesetting, paste-up and correction costs.

■ **Graduate student wins first Resnick Fellowship:** Mechanical engineering graduate student Holly E. Rushmeier has been awarded the first Dr. Judith Resnik American Fellowship by the Educational Foundation of the American Association of University Women.

Rushmeier, a Ph.D. candidate in the College of Engineering, will use the fellowship to continue work developing computational methods for radiant heat transfer and computer graphics realistic image synthesis.

The fellowship is named for the NASA astronaut who perished in the Challenger space craft disaster in 1986 and is supported by a \$320,000 endowment raised by association members during the past year. Resnik was a 1975-76 AAUW fellowship recipient and an AAUW member.

The AAUW Educational Foundation is a charitable organization that offers support to women to help them achieve their potential through education, training and community service.

■ **Big Red Barn temporarily closing:** The Big Red Barn will be closed Aug. 3-21 for renovations.

■ **Two win National Research Council awards:** Graduate students Terry J. Rowden and Mayra P. Santos-Febres are among 40 predoctoral students nationwide who have been awarded fellowships by the Ford Foundation in the second year of a program designed to increase the representation of minorities on the faculties of American colleges and universities.

The predoctoral fellowships include individual stipends and grants to the graduate institutions in lieu of tuition and fees and may extend up to three years.

Fifteen doctoral students throughout the nation also received awards from the foundation.

Rowden is studying English; Santos-Febres is studying comparative literature.

## Rebound by labor unions predicted; decline blamed on employers

The decline of American labor unions is the result of aggressive anti-union tactics by employers and acquiescence by union leaders, rather than changes in the work force or types of industry, according to a Cornell political scientist.

"More and more companies are hiring management consulting firms, which is just a euphemism for union-busting firms, to stop union organizing and to drive unions out of plants where they already exist," said Michael Goldfield.

But unions, in the throes of a 30-year-long plunge in power and popularity, eventually will regain influence and respect under leaders who will be more idealistic and socially progressive than those currently at the helm, predicted Goldfield, an assistant professor of government and author of the just-published book, "The Decline of Organized Labor in the United States."

"Look at the air traffic controllers," Goldfield said. "You had a union that represented 15,000 workers. They went out on strike, and 11,000 of them were fired. The 4,000 who were left were the people least supportive of the union. The government hired new people as strike-breakers, including 2,000 from the armed services."

"Here's a group of people who seem very unlikely to unionize," he added. "But now they're all upset, they're re-unionizing. Why? Working conditions. It's the conditions that people work under that lead them to unionize and re-unionize."

In his book, published by University of Chicago Press, Goldfield traces a steady decline in the percentage of American workers who belong to a union, from 34 percent in 1954 to less than 20 percent in 1985.

### Disagrees with conventional wisdom

Conventional wisdom attributes the erosion of unions' standing to several factors:

- The move of population and jobs from the Northeast to the traditionally anti-union South and Southwest.
- The decline in the number of manufacturing and blue-collar jobs and the rise in the number of service and white-collar positions.
- The higher percentages of women, non-white and educated people in the work force.
- The perception that unions are corrupt and work for their own members' benefit to the detriment of most consumers and the economy.

None of those factors, however, can explain organized labor's steady decline over 30 years, Goldfield claims. Unions are losing members within the Northeast and within traditionally union-heavy industries such as mining and construction, while the Southwest is the only area where unionization rates are rising.

Surveys show that women, minority and white-collar workers are just as interested in joining a union as are white men holding blue-collar jobs, and unions' only major success since the 1950s has been in the nation's largest service industry — local, state and federal government — where 50 percent of all employees now belong to a union, Goldfield says.

And while opinion polls show decreasing confidence in union leaders, "Large numbers of union and non-union members believe that workers should have the right to join a union and that unions result in more equality at the workplace," Goldfield reports.

### Employers are to blame

It is attacks against unions by American employers — who, unlike their counterparts in other industrialized nations, "have never fully accepted the legitimacy of unions" — that are largely responsible for organized labor's decline, Goldfield asserts.

He says that employers' anti-union activities include:

- Using management-consultant firms that give union-busting advice.
- Forming trade associations to counter union organizing attempts.
- Delaying union certification elections.
- Illegally firing union supporters. Goldfield reports that, in 1980, when 200,000 workers voted in favor of unions in certification elections, 10,000 workers were illegally fired, according to the National Labor Relations Board.

Unions are at fault for not fighting back aggressively, Goldfield adds.

"Union leaders have narrowed their concerns and have cooperated with the companies in concession bargaining, to the detriment of workers," he says. National union leaders have worked with management to end many localized strikes, includ-

**"More and more companies are hiring management consulting firms, which is just a euphemism for union-busting firms, to stop union organizing and to drive unions out of plants where they already exist,"**

— Michael Goldfield

ing the recent strike by Geo. A. Hormel & Co. workers in Austin, Minn., and refusals by West Coast longshoremen to load ships bound for South Africa. Unions also have refused to honor picket lines by workers in other bargaining units, effectively dooming those strikes to failure, he adds.

"A growing capitalist offensive and an inadequate union response have helped change the relation of class forces in the United States," Goldfield writes.

"Diminished trade union organization . . . leads to decline in real wages and working conditions . . . decreases in social welfare benefits, losses of civil rights and civil liberties, and more social inequality."

"Union strength and weakness has been cyclical throughout the period of industrialization. In almost every situation, any union is better than no union in terms of defending workers."

— Mark Eyerly

## Building-trades workers agree on wage package

The Building Trades Council and Cornell have reached agreement on a wage package for the 1987-88 fiscal year, according to a joint announcement made by Art Baker, president of the local council, and E. Peter Tufford, the university's manager of employee relations.

The current three-year contract covering about 125 carpenters, plumbers, electricians and other trades personnel was negotiated one year ago and expires on June 30, 1989. It calls for the university and the Building Trades Council to renegotiate wages and the personal transportation allowance for each of the last two years of the pact.

"We are pleased with the new package," Baker said following the membership vote early July 13.

Tufford said, "The university looks forward to a continuing, positive relationship with the BTC."

Neither side would release details of the contract.

## Notable

**Donald J. Barr** and **LeNorman J. Strong** have won the Chester A. Berry Scholar Award for Excellence in Writing from the Association of College Unions — International for an essay titled, "Embracing Multiculturalism: The Existing Contradictions." Barr is an associate professor of human service studies; Strong is former director of Willard Straight Hall.

**Dale E. Bauman**, the Liberty Hyde Bailey Professor of Animal Science and a nutritional biochemist in the College of Agriculture and Life Sciences and a pioneer in the use of bovine somatotropin (bST), known more popularly as bovine growth hormone, to boost the production efficiency of dairy animals, has received the 1987 American Cyanamid Award.

Bauman received the award at the annual meeting of the American Dairy Science Association in June. The award carries a \$1,500 prize.

He was the first scientist in the United States to report on dramatically increased milk production in dairy cows when treated with either natural or recombinant hormone. He is studying the long-term effect of growth hormone on lactating cows.

The citation also noted, "Given clearance of FDA [Food and Drug Administration], the results of this research would be realized almost instantaneously — unlike a breakthrough in genetics or breeding, which would require months or years to produce noticeable change."

"Recombinant DNA techniques applied to the commercial production of bST will likely make the economics of its use so favorable that progressive dairymen will adopt it very rapidly."

**Robert A. Beck**, professor emeritus and former dean of the School of Hotel Administration, has been named to the College of Diplomates of the Educational Foundation of the National Restaurant Association.

The College of Diplomates was established in 1974 "to recognize outstanding members of our industry who have actively supported the advancement of professionalism through education," according to the association's announcement.

Beck, a member of the Cornell Class of 1942, served as dean of the Hotel School from 1961 until his retirement in 1981. A specialist in personnel administration and financial management, he joined the Cornell faculty in 1955.

**Alice H. Cook**, emeritus professor of labor relations and a feminist leader since the early 1930s, has been awarded a honorary doctor of science degree from her alma mater, Northwestern University.

This June, just 64 years after receiving a bachelor of letters degree from Northwestern, the 83-year-old scholar, author, labor activist and social worker was honored for her "pioneering work" at the university's 129th annual commencement. She was particularly cited for breaking "new ground in her research on married women in the workplace."

Cook has continued her scholarly and consulting work since retiring from the School of Industrial and Labor Relations in 1972. Last year, she completed a case book covering the application of comparable worth in the United States and is currently studying the interaction of work on the family.

**John E. Kinsella**, the Liberty Hyde Bailey Professor of Food Chemistry and the General Foods Distinguished Professor of Food Science and director of Cornell's Institute of Food Science, has won the 1987 Babcock-Hart Award from the Institute of Food Technologists for his research contributions in the area of improvement of public health.

The award, which consists of an embossed plaque and a \$3,000 prize, is co-sponsored by the International Life Sciences Institute and the Nutrition Foundation. The award was presented to Kinsella at the annual meeting of the Institute of Food Technologists at Las Vegas in June.

In recent years, Kinsella has focused his research on fatty acids, including the omega-3 fatty acids found in fish oils. Scientists now believe these particular fatty acids can help reduce the incidence of heart diseases and may be helpful in combating arthritis, asthma and possibly certain cancers.

## Cornell CHRONICLE

EDITOR:  
Carole Stone

CIRCULATION MANAGER:  
Joanne Hanavan

Published 40 times a year, Cornell Chronicle is distributed free of charge to Cornell University faculty, students and staff by the University News Service. Mail subscriptions, \$25 per year; two-year subscriptions are \$45. Make checks payable to Cornell Chronicle and send to the Cornell Chronicle, Village Green, 840 Hanshaw Road, Ithaca, N.Y. 14850-1548. Telephone (607) 255-4206.

Second-Class Postage Rates paid at Ithaca, N.Y.

POSTMASTER: Send address changes to the Cornell Chronicle (ISSN 0747-4628), Village Green, 840 Hanshaw Road, Ithaca, N.Y. 14850-1548.

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## Obituaries

**Sally Van Etten**, manager of the Traffic Bureau since 1980, died July 10 at Tompkins Community Hospital after a long illness. She was 47.

A resident of Brooktondale, Van Etten joined the Cornell staff in 1967 as a clerk in the Safety Division.

Survivors include her daughter, Denise C. Frutchey, who is an office assistant in the Johnson Graduate School of Management;

her mother, Mildred A. English Davenport; and a grandson, all of Brooktondale.

Funeral services were conducted in Can- dor on July 14 with the Rev. W. Jack Lewis, director emeritus of Cornell Religious Work, officiating.

A memorial fund has been established in her name to benefit the Cornell Plantations. Gifts may be sent to Cornell Plantations, 1 Plantations Road, Ithaca, N.Y. 14853.

# First farm sitters reap rewards during vacations

It's easy to find someone to water your geranium and feed your dog while you're on vacation. But what if you also have 300 acres of crops and 100 cows on a modern farm with complex milking equipment, an array of machinery, computerized feed formulas and other high-tech wonders?

When bad luck drove Ed and Paulie Drexler out of dairy farming two years ago, they remembered the trouble they had finding someone to mind their farm when they were taking a trip in 1980. So they began a new and successful career: "farm-sitting," that is, doing the daily chores for vacationing farmers.

The young couple, who live in a house they built on 54 wooded acres in the town of Fabius near Syracuse, believe their occupation is unique.

"As far as we can tell, no one else has ever heard of anyone doing what we do as a profession," Ed Drexler said. "Farmers might be able to get help from neighbors for a short period of time, but it's tough to find someone who could fill the void for a week or two."

## Business is booming

Since the Drexlers became farm sitters one and a half years ago, they have worked on numerous farms in most of the northeastern states.

"We will milk in Tahiti if someone there pays our air fare," Paulie Drexler quipped in an interview. "Seriously, we go anywhere."

Their business is booming. They are booked solid this summer and fall, and February 1988 already has been taken, too. Many people make reservations months and even a year in advance, Ed Drexler said.

The Drexlers said that they draw deep satisfaction from helping many farmers to make a much needed escape from their grinding daily chores.

"Every time the phone rings, it's exciting because we know somebody out there needs us, and we try to schedule our time to help them get away," Ed Drexler said. "When we arrive at a farm, we get comments such as 'Where have you been the past 20 years?'"

Paulie Drexler said another reason they love farm-sitting is that "it's never boring," because they work at different farms.

**"As far as we can tell, no one else has ever heard of anyone doing what we do as a profession. Farmers might be able to get help from neighbors for a short period of time, but it's tough to find someone who could fill the void for a week or two."**

— Ed Drexler

## Animal science majors

The Drexlers are graduates of Cornell. They both majored in animal science. When Ed Drexler graduated in 1974, he went back to his family farm in Smyrna in Chenango County, where he was in partnership with his father. Paulie Drexler joined him a year later when she graduated.

The partnership didn't work out well. So the Drexlers decided to leave the family farm. For a while, they worked in Altamont near Albany as rural real estate agents, selling hobby farms for city people who



**FARM SITTERS:** Ed and Paulie Drexler, both Cornell graduates, work as professional farm sitters for vacationing farmers in the Northeast. Renee, one of their three children, was with them during a recent interview.

Claude Levett

wanted to live in rural areas.

While at Cornell, Ed Drexler took several courses in agricultural economics, including one on farm appraisal that he said helped a lot in the rural estate business.

Selling hobby farms was an interesting job, but "we missed cows," he said. In 1978, they bought their first farm — with 62 cows and 200 acres of crop land — in St. Johnsville in Montgomery County.

The farm thrived. Within 18 months, the Drexlers boosted their herd's average annual milk production from 14,000 pounds to 18,000. Their herd was designated the most improved in Montgomery County for 1980. The Drexlers also were named as New York Farm Bureau's Outstanding Young Farmers that year.

But because of its poor soil quality, they sold the farm in 1981 and moved to Pompey near Syracuse, where they bought a farm with 165 cows and more than 600 acres of cropland.

As they began expanding the herd, they ran into "a brick wall," as Ed Drexler described it. Some of the cows they had bought in Ohio were found to have Johne's disease, a bacterial infection that causes a chronic diarrhea fatal to afflicted animals.

From then on, it was a losing battle. "Within six months after we had bought 37 cows, we lost 27," Ed Drexler said. "Eventually, we had to send every one of our 185 cows to the slaughterhouse for beef."

Although the Farm Home Administration made a generous offer to help them rebuild their herd, the couple decided to call it quits. "A fight against a disease like that takes all your pizzazz out of you," Ed Drexler said. "So we were right back to square one."

They sold the farm in August 1985 and moved into a house they built that summer. They limped along that fall by selling Christmas trees and firewood from their property.

## An idea whose time had come

That was when the Drexlers came up

with the idea of farm-sitting. In February 1986, they attended a farm show in Syracuse, where they handed out mimeographed copies of a simple brochure explaining their farm-sitter service. "Right off the bat, we got two bookings. That astonished us," Paulie Drexler said.

The business soon brought in more jobs than they could handle. "The first year, we were turning down about five to six jobs for every one we could take," Ed Drexler said. "This year, we are booked 100 percent from the last week of June to almost Christmas."

Their going rate is \$100 per person per weekday and \$125 on Saturdays and Sundays. It's \$12 an hour if the job involves only temporary field work.

"If everything goes okay on a farm, anybody can come in and do it, but that isn't the case. Those who hire us are paying for insurance — the unexpected, not the routine work," Ed Drexler said.

On one occasion, for example, silos ran out of feed for the dairy animals. "The feeding program got shot to heck," Paulie Drexler recalled. "We had to use what knowledge we had and come up with a balanced ration fast; we had to readjust, among other things, protein levels for individual cows. When the owner came back, he found out that we were producing as much milk as when he had left. The bulk tank never lost a pound of milk," she said.

## Swimming in compliments

Farmers who have hired the Drexlers as farm sitters are happy with the quality of their work. Bill and Marilyn Bird of Asbury, N.J., wrote: "Everything was great. We can't think of any way to improve." A New York farmer, Stanley Connelly of Virgil, commented, "We were pleased with your services. The corn is coming along fine now. You helped a lot."

Some of the agricultural agents of Cornell Cooperative Extension are enthusiastic about the farm-sitter service, too. Kathryn A. Daxendell, a dairy agent with Cooperative Extension of Onondaga County, called

the farm-sitting a "fabulous idea," saying that farmers need people who are competent to run their farms while they are away.

Craig D. Trowbridge, also a dairy agent with Cooperative Extension of Jefferson County, said that he had heard about such a service. "Farming is a stressful occupation, and farmers, like anyone else, do need a break once in a while," he said.

The idea of farm sitting was new to agricultural agent Bruce P. Tillapaugh, who specializes in field crops management for Wyoming and Erie Counties. Many farmers, particularly those with small operations, can use such a service, he said.

"Small farmers usually can't get away because they have to do chores themselves," he said. "Generally, farmers are apprehensive about leaving their farms to a stranger who is not well qualified to run their farms. They must have a faith in the people they hire."

The Drexlers said that most of their clients are owners of small family dairy farms which, unlike large ones, usually don't have any extra help. Usually the farmers hiring the Drexlers want to get away on vacation. Some want to attend special events such as weddings, graduations, family reunions, conventions and farm shows.

The Drexlers want to farm-sit for up to two weeks on a job. "We have a job that's coming up this summer involving three weeks of our service, but this is a special situation," Ed Drexler said. "We have been to this particular farm several times, and the farmer has become a good friend."

When two of their three children are out of school, the Drexler family travels together and move right into the house of the farmer who hires them. "We have a camper, but we soon found out that the farmers wanted us to stay in their homes. We take care of everything, including watering plants and feeding cats and dogs," Ed Drexler said.

— Yong H. Kim

# No need to fear AIDS from mosquitoes, insect expert says

The AIDS (acquired immune deficiency syndrome) virus is neither old nor hardy enough to be spread by mosquitoes, according to a Cornell entomologist who warns against unnecessary use of pesticides.

"There's no need to fear that the next mosquito you encounter might give you AIDS," said Henry H. Hagedorn, responding to reports that the AIDS virus can survive for two or three days inside the bodies of mosquitoes. "Massive spraying programs are not in order."

Hagedorn is a professor of entomology in the College of Agriculture and Life Sciences and a specialist in the physiology of mosquitoes. The Florida Medical Entomology Laboratory and the National Cancer Institute reported June 30 on preliminary laboratory studies with blood infected with the AIDS virus. Although the study found evidence of AIDS viruses in mosquitoes, it did not determine whether the disease could be

passed on to the next victim of the mosquitoes' bite.

## Virus too new for insects

"The relationship between viruses and their vectors (the organisms that transmit disease) is ecologically complex, and develops over evolutionary time scales — over many thousands of years," Hagedorn said. Because the AIDS virus developed in its present form within the past one or two decades, "it is extremely unlikely that an insect would develop quickly such a relationship with a new virus."

A virus' simply being in blood consumed by a mosquito is not enough to transmit it, Hagedorn explained. "The virus must replicate (reproduce) within the mosquito, then find its way out of the mosquito during subsequent blood meals. This usually requires that the virus find its way to the salivary glands so that it can be ejected during the next blood meal."

Such an evolutionary relationship has developed between some of the hundreds of species of mosquitoes and older viruses, including those that cause yellow fever, encephalitis and dengue fever, the entomologist noted. Studies in Africa, where AIDS is thought to have developed, and in the United States have found no evidence of AIDS transmission by insects, he said.

## Mechanical transfer unlikely

Another means of transmitting viruses — mechanical transfer — also is highly unlikely for the AIDS virus, Hagedorn said. "Mechanical transfer requires that the virus be picked up on the mouthparts of the insect and survive long enough to be transferred to the next host."

"For mechanical transfer to occur, a virus must be extremely virulent and resistant to being exposed to the open-air environment," the entomologist said. "The AIDS

virus — according to all evidence — is neither virulent nor resistant, and it is unlikely this route could be used by the virus."

The Cornell scientist questioned the propriety of reporting to the public on experiments that do not answer the important question: Is AIDS, in fact, transmitted by insects? With the widespread concern over the deadly disease, any suggestion of a new means of transmission could lead to alarm and, in the case of mosquitoes, entomophobia — the unreasonable fear of insects.

Insecticide spraying is not particularly effective, and risks further pollution of the environment, Hagedorn said.

"Relax, and enjoy your walks in the woods with only a little deet (the insect repellent diethyl-m-toluamide) to protect you from the annoying bites of mosquitoes."

— Roger Segelken

# Cooperative Extension now helps small factories compete

For generations, specialists at the Cornell Cooperative Extension worked with farmers. Now they are helping to administer a program designed to aid factories losing the race in world competition.

Research experts from the College of Engineering and other departments are serving as consultants to manufacturers in the 10 counties around the university.

Some of the firms lack resources for extensive research to modernize their factories and improve their products, said Charles P. Yohn, director of corporate relations in the Engineering College. But to survive, they must increase productivity and profits, he said.

By serving as a link between companies and university laboratories, the Cooperative Extension program could help save those companies and the jobs of their employees.

## Back from bankruptcy

Among the new program's clients is Ozalid Corp., which builds wide-width industrial engineering copiers used by blue printers, architects, designers and engineers around the world. Its main factory and corporate headquarters are in Vestal in south central New York State. The company employs about 500 people.

Robert Poloncic, director of manufacturing, said that Ozalid has just come out of Chapter 11 of the Federal Bankruptcy Code.

"Even though most of the problems are

"I saw in the local newspaper that the Extension Service was offering to help small, struggling companies which lacked the resources to overcome their problems," the manufacturer said. "I knew about Extension work from my days in 4-H, both as a youth and later as an adult member of 4-H program committees."

To date, Ozalid has received assistance from Cornell experts in human relations, manufacturing engineering and mechanical engineering.

## Saving jobs in the southern tier

Another company improved its injection-molding machinery with guidance from Cornell engineers. Still another project involved production scheduling and inventory controls of a firm that manufactures fire-fighting apparatus.

Yohn echoed Poloncic's concern about retaining and expanding job opportunities in the state. "Over 100,000 manufacturing jobs in the southern tier of New York State have been lost in the past three to six years to foreign competition and to other parts of this country where labor and other costs are lower," Yohn said in an interview in his office.

"The impact of this drain has deeply affected the state's economy. Our goal is job retention and job development. A number of our New York manufacturers have not kept up with new technology and are operating with machinery and equipment from the 1950s."

Yohn spent 34 years with Aluminum Co. of America and then accepted an offer to return to his alma mater to direct the Industrial Extension Program. He graduated from Cornell in mechanical engineering in 1950.

His program manager is Berdell (Del) G. Boss, also a mechanical engineer who owned a fiber optic service business after working for 25 years as a manufacturing engineer and executive.

## Transferring technology

Boss, who spends a lot of time talking to civic clubs about factory improvements, said, "Our role is concentrated on getting knowledge developed in the academic arena out into the manufacturing industries."

President Frank H. T. Rhodes endorsed the industrial program in testimony before the House Subcommittee on Science, Research and Technology in Washington earlier this year.

"An industrial extension system such as I propose can help us to run faster than our

foreign competitors through innovation and productivity, and this will provide our industrial society with far better protection than import quotas, tariffs and other protectionist measures," Rhodes told the congressional subcommittee.

Ken Gottlieb, senior vice president of Anitec Image Corp., which manufactures photographic films and papers for the graphic arts industry in its Binghamton plant, considers universities important to his company.

"There are vast academic resources available to us in this region," Gottlieb said. "We have utilized State University of New York at Binghamton and Broome County Community College with excellent results."

"Now we are asking for help from chemical engineers and chemists at Cornell, and we feel that Cornell will provide even greater resources than we have received from other institutions. Universities provide tremendous resources at a reasonable price."

## "Our role is concentrated on getting knowledge developed in the academic arena out into the manufacturing industries."

— Berdell (Del) G. Boss

The Cornell program is being funded in this its second fiscal year with a grant of \$173,000 from the New York State Science and Technology Foundation and about \$154,000 in services from the university, Yohn said.

The foundation is helping to finance similar programs throughout New York State, while Cornell works with manufacturers in 10 southern tier counties: Broome, Chemung, Chenango, Cortland, Delaware, Otsego, Schuyler, Steuben, Tioga and Tompkins.

## Utilizing Cooperative Extension

The program, which started in March 1986, relies on the Cornell Cooperative Extension for most of its administrative support. Extension experts drafted the funding proposal, handle the payroll and provide an electronic mail service. Robert Kelchner, regional representative of the program, works in the Elmira Cooperative Extension office.

Yohn and Boss introduced Cornell's industrial resources to manufacturers, civic clubs and regional economic development

groups by direct mailings, speeches and news releases.

"We study problems which manufacturers bring to us and recommend potential sources of help," Yohn said. "Sometimes Del Boss and Bob Kelchner can provide the required assistance. Or we structure the problems so that they can be addressed as projects by faculty and students in the College of Engineering."

If Cornell lacks the answer, the manufacturer is referred to private consultants, development agencies or other organizations.

Although rooted in Cornell's engineering studies, the program calls on faculty from several disciplines to handle specific factory problems. Available are experts in chemistry, agriculture and life sciences, human ecology, industrial and labor relations, biotechnology, computers and management.

Yohn said that the program was introduced to executives of 102 companies during the first year. Forty of these firms requested additional information, and 32 of them now are being assisted by the Cornell program.

Five companies that the university is assisting employ 500 or more workers. But one-quarter of the participating firms hire fewer than 25 persons, and two-thirds listed fewer than 199 employees.

Factories in Cornell's 10-county area manufacture proprietary products, electronic goods, metal works, castings, ceramics, chemicals, plastics, packaging, food products and textiles.

"Prior to the conception of this program, these firms had no formal links to university or college departments through which they could communicate their needs," Yohn said.

"Many are old-line companies with shrinking markets and strong foreign competition. Manufacturing firms are, in some instances, using 20-year-old technologies."

Yohn said that large companies have learned to utilize information and expertise provided by university research staffs.

"However, unless the small to medium-sized firms, which employ the majority of people in the state, also have the opportunity to tap this know-how, their competitive advantage will gradually erode and regional economic and social infrastructures will weaken," he added.

— Albert E. Kaff

## "Over 100,000 manufacturing jobs in the southern tier of New York State have been lost in the past three to six years to foreign competition and to other parts of this country where labor and other costs are lower."

— Charles P. Yohn

behind us, there are still major issues such as cost reductions, retooling and the development of a total new technology to consider," Poloncic said in an interview. "We must go forward, and we welcome the opportunity to consult with the professional staff at Cornell's College of Engineering."

Poloncic's boyhood experiences in 4-H Club work led him to the Cornell program. In 1964, he was selected 4-H Boy of the Year in Broome County.

## Digital gives \$900,000 to Nanofabrication Facility

A research agreement between Cornell and Digital Equipment Corporation will provide the National Nanofabrication Facility (NNF) with up to \$900,000 in Digital computer equipment and software to help design and build supersmall devices for electronics, biology and physics.

"The new Digital computers will completely replace our existing computer resources," said Greg Galvin, deputy director of the NNF.

"This is one part of an overall upgrading of NNF equipment, to put us in a position to take further steps 'downward' to building ever-smaller devices over the next decade. During the past year, for example, about 70 percent of our instruments have been replaced with new state-of-the-art equipment."

Through the research agreement, the NNF will receive equipment from Digital that includes a VAX 8530 computer system and several color graphics workstations. The integrated computational capability has three components: central computation, computer-aided-design (CAD) workstation clusters and office automation. These systems interact through computer networks within the NNF and with the outside world.

The research agreement stipulates that NNF researchers will share technology developments with Digital engineers. These technology areas include advanced submicron photolithography, metallization for integrated circuits, ion implantation and advanced process modeling tools. The term of the research agreement is three years.

"Our relationship with Digital is an excellent example of the successful collaborations between the NNF and American industry in

areas of technology critical to our economy," Galvin said.

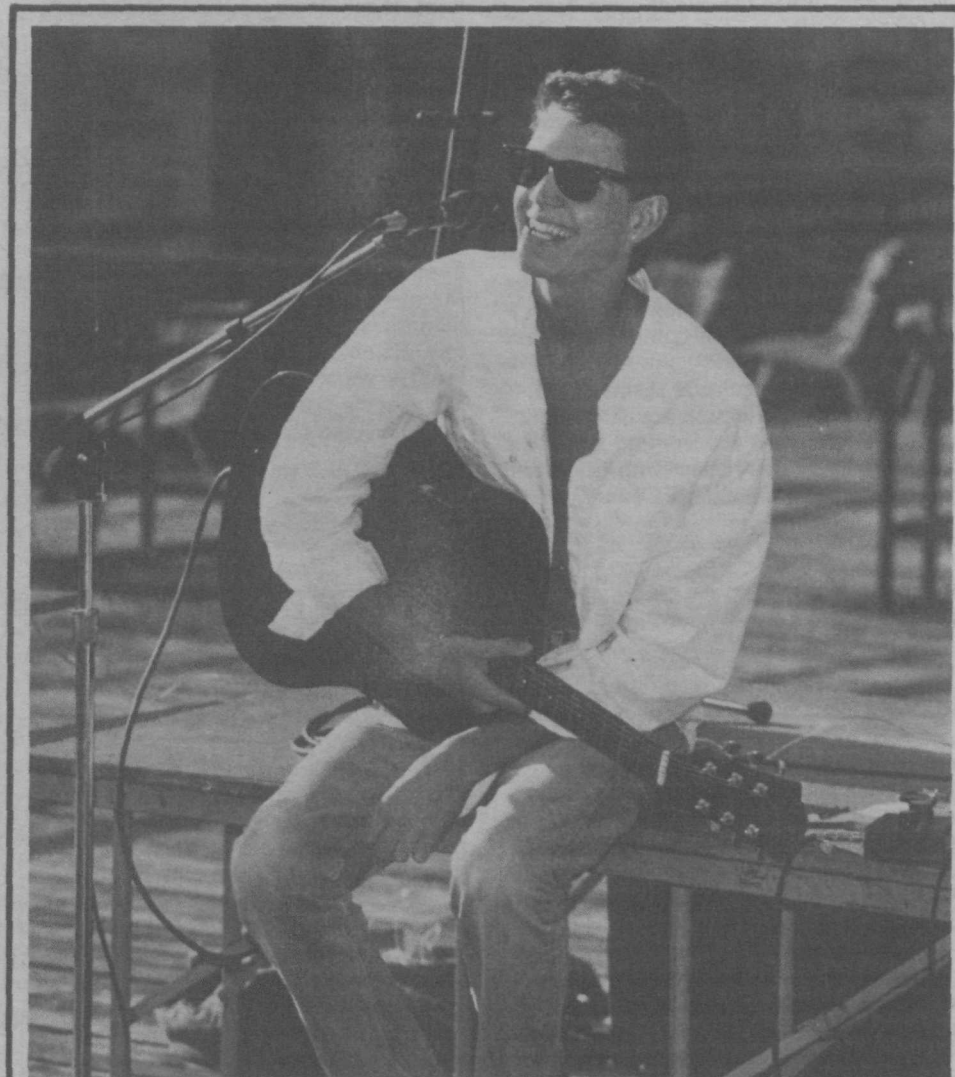
John W. McCredie, Digital's director of external research programs, said, "We were pleased to support Cornell's pioneering efforts in submicron research and fabrication, and are pleased to continue our support as the NNF shifts its focus to even smaller devices."

The NNF, founded in 1977, is supported by the National Science Foundation, industrial affiliates and Cornell. It is the only research center of its kind where visiting scientists from universities, industry and government can build supersmall devices for experiments in physics and biology, and for future generations of computers.

Housed in a superclean laboratory in the Knight Laboratory, the facility consists of some 30 machines for building, testing and visualizing tiny structures. Recently, the NNF announced that it has "lowered its sights," moving from building devices of about 250 nanometers (billionths of a meter) to 25 nanometers. This is about 2,000 times smaller than a human hair, or the size of many viruses.

Digital Equipment Corporation, with headquarters in Maynard, Mass., is the world's leading manufacturer of networked computer systems and associated peripheral equipment, and the leader in system integration with its networks, communications software and service products, according to McCredie. The company has partnership agreements that support more than 150 research projects at 75 colleges in the United States.

— Dennis Meredith



Doug Hicks

ON THE TERRACE AT WSH: Musician Steve Geffner chats with the audience between songs during the Sunset Concert Series on July 17. Sponsored by Willard Straight Hall and the Division of Summer Session, the concert series continues on Friday evenings through Aug. 7.

# Inside traders missed best-performing stocks, study says

The best-performing stocks fail to attract inside traders, according to a new study by Avner Arbel, a professor of finance, and one of his students, Brian Klapper.

Officers inside the big-gain corporations ignored those stocks that left the Dow Jones industrial averages in the dust during the first half of 1987, the study disclosed.

Arbel, who has made a career of studying neglected stocks, offers no explanation for the results of what he called the first research on insider trading in top-performing stocks.

But he said, "The study confirms that neglect is the common characteristic of stocks with the highest gains on the market. We know from earlier research that high-growth stocks represent both big and small companies. Now we have demonstrated that these stocks are not affected by insider trading. Insiders are not being attracted to their own neglected stocks despite their spectacular growth records, but we don't know why."

## Six-month study

Klapper, 22, has been fascinated with the stock market since childhood; his interest now has drawn him away from nutritional sciences in which he received his bachelor's degree in May.

Using computer bases, he compiled statistics on trading on the New York and American Stock Exchanges and over-the-counter sales from last Dec. 31 to June 30.

During that period, the Dow Jones average of 30 industrial issues gained 26 percent and the Standard & Poor's 500-stock index gained 10.9 percent.

But 20 of what Arbel calls neglected

shares on the Big Board skyrocketed during the same six-month period. Gains recorded by neglected issues ranged from 136.8 to 254 percent on the New York Exchange, according to Klapper's study.

Immediately before these major price increases, insiders traded only three of the 20 high-flyers, buying 25,000 shares (a

**"Insiders are not being attracted to their own neglected stocks despite their spectacular growth records, but we don't know why."**

— Avner Arbel

modest sum) of GEO International Corp. and selling 18,000 shares of Parker Drilling and 2,000 shares of RPC Energy.

Results on the American Exchange were even more spectacular. Twenty stocks, all neglected issues, recorded price gains of between 135.3 and 513.3 percent. But in the two months prior to the gains, insiders traded only two shares, selling 6,000 shares of Consol O&G and 10,000 shares of Swift Energy, Klapper reported.

The top 20 performers in over-the-counter sales, again neglected shares, showed price gains of between 240 and 1,800 percent during the six-month study. But insiders traded only two of the securities before prices increased, buying 100,000 shares of U.S. Energy Corp. and selling 3,000 shares of Apogee Robotics.

Insider transactions recorded in the Cornell study were compiled from reports filed

with the Securities and Exchange Commission as required by law.

## Company insiders surprised, too

Arbel said better-known blue chip stocks did not necessarily attract insider trading either.

"But Brian's study shows that company insiders are not effective in predicting the spectacular market growths of their own companies as reflected by their own market action," Arbel said. "It was as if they themselves were surprised by the success of their own companies in the market."

For more than 10 years, the finance professor, who teaches in the School of Hotel Administration, has been studying neglected stocks, which he defines as shares which largely are ignored by analysts and typically owned by fewer than 85 institutional buyers such as pension funds, insurance companies and mutual funds.

In contrast, about 1,650 institutions own stock in International Business Machines Corp., about 900 hold Exxon Corp. shares and about 700 institutions are invested in American Telephone & Telegraph Co.

Neglected stocks, with only a handful of institutional investors, are studied by few if any Wall Street analysts, whose reports influence securities trading.

## Trading 'generics' takes guts

"I call them generic stocks because they are not brand names," Arbel said. "As a group, they lack consistency, and little data is available on them. It requires research and guts to trade in neglected issues. But it's an American way to be an entrepreneur in the market."

"You don't get something for nothing."

You have to do a lot of research, be creative and have guts. What we are doing in neglected stocks is looking for tomorrow's IBMs. That's what the American economic system is all about."

Arbel says neglected stocks consistently out-perform blue chip shares. His book, "How to Beat the Market with High-Performance Generic Stocks," has sold thousands of copies in hard cover and paperback since publication two years ago and has brought him a flood of letters and telephone calls.

"We've received hundreds of calls asking us how to select neglected stocks, queries ranging from a farmer near Ithaca to the manager of a mutual fund worth \$40 billion," Arbel said.

Klapper, who took Arbel's course on investment management last year, put his nutritional science books aside and organized the Generic Stock Investment Service with Arbel and Steve Carvell, an assistant professor of financial management in the hotel school, as advisers.

"I've owned an active stock portfolio since I was 14 years old," said Klapper, who is from West Nyack in Rockland County, N.Y., where his father, a podiatrist, first interested him in the stock market.

"Originally I traded through a broker, but then I decided I could do better on my own, and I have," Klapper said. "We are the only consulting firm in generic stocks."

Klapper's investment service publishes a monthly newsletter and answers specific questions on how to beat the market with little-known stocks.

— Albert E. Kaff

# Medical lectures covers impotence, heart disease, osteoporosis

Topics ranged from heart disease to diarrhea and osteoporosis to impotence when Cornell Medical College faculty members gave a week-long lecture series, "Update Your Medical Knowledge," on campus last week. Among the nuggets of information imparted to the audience of doctors and laymen were these:

- At least 80 percent of sexual impotence in men is due to organic (physiological) problems, rather than psychological difficulties, according to Dr. Darracott Vaughn, professor of urology and surgery. Yet, many men who learn their inability to perform sexually is due to such correctable problems as inadequate hormones or blood flow do not seek medical treatment.

"Simply knowing that the cause of impotence is organic takes the pressure off the male to perform, and the female stops worrying she's not attractive to her mate," Vaughn said. That knowledge helps stabilize relationships, he added.

- It's about the only disease that obesity helps prevent: the bone-robbing condition of the elderly called osteoporosis. "Try to reach menopause with some fat on your bones," advised Dr. Lila A. Wallis, clinical professor of medicine and an authority on the prevention and treatment of the disease afflicting more than 8 million American women. "Being small and thin is bad for your bones."

Better yet, build a "splint" of muscles around the bones, particularly in the pelvic region where osteoporosis causes \$6 billion in hip fractures each year. "The next time you're standing in line at the bank, tense your abdominal muscles toward your spine," suggested Dr. Wallis, co-author of the handbook "Exercises for Prevention of Osteoporosis." "Then tense the gluteal muscles, the ones in the buttocks. That's the pelvic tilt." And it's good for the posture, too.

- Of all the things you can do to reduce the chance of coronary heart disease, exercise is among the least important, said Dr. Stephen S. Scheidt, professor of clinical medicine. Much more important coronary risk factors, he believes, are hypertension, cigarette smoking and LPD (low-density lipoprotein) cholesterol in the diet.

"If you don't smoke and watch your diet, you don't have to exercise," Scheidt said. Eating plenty of seafood with the beneficial HDP (high-density lipoprotein) cholesterol is advisable, he added, but swallowing fish oil capsules is not. "Fish oil is neither food nor drug, and is not regulated by the federal Food and Drug Administration. For all you know, the capsules are made in a bathtub in a backyard in New Jersey."

- One more disease for travelers to worry about is Japanese encephalitis, which is carried by mosquitoes in China, Hong Kong, Korea, Thailand, India and Nepal, and is fatal to 30 percent of its victims. Dr. Barry J. Hartman, assistant professor of medicine in New York Hospital's International Health Care Service, recommended a recently developed vaccine for travelers to those areas of Asia.

Hartman said cautious travelers — the ones who heed warnings about eating uncooked vegetables and fruit and drinking

local water — often overlook another source of danger in underdeveloped countries: hotel tap water for brushing teeth. "Brush your teeth with beer," he suggested.

- New superconducting materials that operate at higher temperatures probably won't help magnetic-resonance imaging (MRI) technology for 20 years, said Dr. Joseph P. Whalen, professor and chairman of radiology. MRI machines, which image the body with a combination of magnetic fields and radio-frequency energy, now cost about \$100,000 a year to cool their power-

ful magnets, Whalen said, and that cost should decrease with new superconducting materials.

MRI, which used to be called nuclear magnetic resonance or NMR, is safe because it does not use the ionizing radiation in x-ray machines. "About the only hazard," he said, "is that MRI will erase the magnetic codes on credit cards, and that may be an advantage. It worked on my wife's Bloomingdale's card."

— Roger Segelken

# Maternal nutrition during pregnancy topic of conference, course

A major conference and an intensive course to improve the quality of maternal nutrition and fetal well-being during pregnancy will be held here during the week of July 26.

Physicians, physicians' assistants, nurses, midwives, dietitians, nutritionists, childbirth educators and other health professionals from throughout New York State will attend the conference and take the course, according to Christine Olson and Kathleen Rasmussen, who are directing the two events.

The conference, "Current Topics in Maternal Nutrition During Pregnancy," is scheduled for July 26-27 at the Sheraton Inn and Conference Center. The intensive course will be conducted in Martha Van Rensselaer Hall on campus from July 26 through July 31.

The events are sponsored jointly by the March of Dimes Birth Defects Foundation and the Division of Nutritional Sciences, a joint unit of the colleges of Human Ecology

and of Agriculture and Life Sciences.

"These events are offered as part of Cornell Cooperative Extension's efforts in putting knowledge to work for the citizens of New York State," said Olson, an associate professor of nutritional sciences in the College of Human Ecology.

The conference will get under way July 26 with the keynote address by Dr. James R. Woods Jr., director of obstetrics and maternal-fetal medicine at the University of Rochester School of Medicine. He will discuss "The Health and Nutritional Implications of Cocaine Use During Pregnancy."

The intensive course to be conducted on campus will review the basic physiology of pregnancy and nutritional needs for optimal maternal and fetal well-being.

"The ultimate goal [of the course] is to improve the quality of nutritional care provided to pregnant women in New York State," Olson said.

— Yong H. Kim

## Meikle Continued from page 1

College Faculty as an instructor in anatomy, and he rose through the academic ranks to become a professor of anatomy in 1980. From 1974 to 1977, he served as associate dean for academic programs of the Medical College, and from 1976 to 1979 as deputy dean.

In 1980, he served as vice president of the Macy Foundation before returning to the Medical College as the Stephen and Suzanne Weiss Dean of the Medical College and provost for medical affairs of Cornell University.

A member of Phi Beta Kappa, he was

also a Markle Scholar in Academic Medicine at the Medical College from 1963 to 1968, and from 1969 to 1971 a Career Scientist of the Health Research Council of the City of New York.

He has served on numerous committees advising private foundations, professional societies and New York State on medical research and education. His service also includes membership on the boards of directors of the Burke Rehabilitation Center, the Marie and John Zimmermann Fund, and the New York City Health and Hospitals Corporation.



Doug Hicks

**NEVER MIND THE TIME — WHAT CENTURY IS IT?** Marc Whitney, assistant manager of C.U. Transit, takes a quiet break from his duties as range master for musket shooting at the first annual Mountaintop Frolic in Arnot Forest held July 19. The event was sponsored by the Newfield Rod and Gun Club and the Swampy Hollow Independent Trappers Association.

# CALENDAR

All items for the 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 must be received 10 days prior to publication and must include the name and telephone number of a person who can be called if there are questions.

Notices should also include the sub-heading of the calendar in which the item should appear.

## DANCE

### Cornell Folkdancers

The Cornell Folkdancers will meet every Sunday, 7 - 9:30 p.m. in the North Room of Willard Straight Hall during July and August. Call 257-3156 for more information.

## 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. Call 255-6464 for further information.

**Gallery Reopened:** The George and Mary Rockwell Galleries of Asian Art on the fifth floor are now open to the public with the exceptions of a few galleries that are still being renovated.

**Harry McCue: Journeys:** Drawings inspired by the artist's journeys through the landscape in which he has lived or visited will be displayed through Aug. 30. McCue is chairman of the Department of Art at Ithaca College.

**Eye Openers:** A three-part workshop exploring various aspects of landscape drawing, designed to introduce different age groups to the exhibition, "Journeys." For children 10-12 years old: July 28, 29 and 30, 10 a.m. to noon. For further information contact the Education Department of the Johnson Museum of Art at 255-6464.

**Outsider Art:** The work of 18 American and European artists selected from the Rosa Esman Gallery in New York City who work outside the "norms" of the art world will be displayed through Aug. 23.

**Guatemalan Textiles:** Created by the highland Mayas of Guatemala over the past 50 years, these brightly colored, intricately patterned textiles are based on a tradition that has existed since pre-Columbian times. The textiles will be on display through Aug. 30.

**Artbreaks:** Museum Director Thomas W. Leavitt will discuss works on display in the museum's newly re-installed outdoor sculpture court, July 26, 2-3 p.m.; Rosa Esman, a New York City gallery owner and organizer of the exhibition, "Outsider Art," will give a gallery talk on the show, Aug. 23, 1-2 p.m.

### Whittaker Seminar Room

Botanical drawings and watercolors, by Carl Whittaker, in the R.H. Whittaker Seminar Room, Corson Hall, Monday through Thursday 8 a.m.-4:30 p.m.; Fridays 8 a.m.-4 p.m.

## FILMS

Unless otherwise noted, films are sponsored by Cornell Cinema. An (\*) indicates that admission is charged. "Limited" means that the film is limited to members of the Cornell community.

### Thursday, 7/23

"Rise and Fall of the Borscht Belt" (1986), directed by Peter Davis, 8 p.m., Uris Hall.\*

### Friday, 7/24

"The Jewel of the Nile" (1986), with Kathleen Turner, Michael Douglas and Danny DeVito, 7:30 p.m., Uris Hall, limited.\*

"Aguirre the Wrath of God" (1973), directed by Werner Herzog, with Klaus Kinski and Ray Guerra, 9 p.m., Anabel Taylor.\*

"My Beautiful Laundrette" (1985), directed by Stephen Frears, with Saeed Jaffrey, Roshen Seth and Daniel Day Lewis, 9:45 p.m., Uris Hall, limited.\*

### Saturday, 7/25

"The Last Picture Show" (1971), directed by Peter Bogdanovich, with Timothy Bottoms, Jeff Bridges and Cloris Leachman, 9 p.m., Anabel Taylor Hall, limited.\*

"My Beautiful Laundrette," 8 p.m., Uris Hall, limited.\*

"The Jewel of the Nile," 10 p.m., Uris Hall, limited.\*

### Sunday, 7/26

Silent movies: "An Italian Straw Hat" (1927), featuring live accompaniment by David Borden; and "Entr'acte" (1924), directed by Rene Clair, 9 p.m., Anabel Taylor Hall.

"The Last Picture Show," 8 p.m., Uris Hall, limited.\*

### Monday, 7/27

"1919" (1986), directed by Hugh Brody, with Paul Scofield, Maria Schell and Frank Finlay, 8 p.m., Uris Hall.\*

### Tuesday, 7/28

"Lost Horizon" (1937), directed by Frank Capra, with Ronald Coleman and Jane Wyatt, 8 p.m., Uris Hall.\*

### Wednesday, 7/29

"The Pink Panther" (1964), directed by Blake Edwards, with Peter Sellers, Capucine and Claudia Cardinale, 8 p.m., Uris Hall, limited.\*

### Thursday, 7/30

"Backstage at the Kirov" (1977), directed by Derek Hart, with Kirov Theatre, dancers and orchestra, 8 p.m., Uris Hall.\*

### Friday, 7/31

"Labyrinth" (1986), directed by Jim Henson, with David Bowie, Jennifer Connelly and Toby Froud, 7:30 p.m., Uris Hall, limited.\*

"Gregory's Girl" (1981), directed by Bill Forsyth, with Gordon John Sinclair, Dee Hepburn and Chic Murray, 9:45 p.m., Uris Hall.\*

"The Official Story" (1985), directed by Luis Penzo, with Norma Aleandro, Hector Alterio and Analia Castro, 9 p.m., Anabel Taylor Hall.\*

### Saturday, 8/1

"Legal Eagles" (1986), directed by Ivan Reitman, with Robert Redford, Debra Winger and Daryl Hannah, 9 p.m., Anabel Taylor Hall, limited.\*

"Labyrinth," 10 p.m., Uris Hall, limited.\*

"Gregory's Girl," 8 p.m., Uris Hall.\*

### Sunday, 8/2

Silent Films: "Page of Madness" (1926), featuring live accompaniment by David Borden, directed by Teinosuke Kinugasa, with Nasao Inoue and Yoshie Nakagawa; and "Uberfall" (1928), directed by Erno Metzner, with Heinrich Gothe, Eva Schmi D-Kayser and Alfred Loretto, 9 p.m., Anabel Taylor Hall.

"Legal Eagles," 8 p.m., Uris Hall, limited.\*

### Monday, 8/3

"The Holy Innocents" (1984), directed by Mario Camus, with Francisco Rabal and Alfredo Landa, 8 p.m., Uris Hall.\*

### Tuesday, 8/4

"South Pacific" (1958), directed by Joshua Logan, with Mitzi Gaynor and Rosanno Brazzi, 8 p.m., Uris Hall.\*

### Wednesday, 8/5

"Whatever Happened to Baby Jane?" (1962), directed by Robert Aldrich, with Bette Davis and Joan Crawford, 8 p.m., Uris Hall, limited.\*

## LECTURES

### Cornell Summer Session

"The Chinese People Hope for a Good Life," Nien Cheng, author of "Life and Death in Shanghai," July 29, 8:15 p.m., Bailey Hall.

"The Good Life: Name Dropping and the Varied Worlds of Dick Schaap," Richard J. Schaap, ABC News and Sports, Aug. 5, 8:15 p.m., Bailey Hall.

## MUSIC

### Willard Straight Hall

Dan Sieling, guitar and banjo, 5-7 p.m., on the terrace at Willard Straight Hall.

Stuart Pilch, piano, July 31, 5-7 p.m., on the terrace at Willard Straight Hall.



Cloth dolls and soft sculpture by French artist Michel Nedjar are among works by 18 "outsider" artists on display at the Johnson Museum of Art through Aug. 23. Nedjar credits his interest in the art form to his sister's doll collection and trips to India and Mexico.

### Bound for Glory

Patti Meyer and Gary Lee, playing blues, traditional ballads, and old rock and roll on duo guitar, July 26; **Colorblind James and the Death Valley Boys**, Aug. 2, three sets — 8:30, 9:30 and 10:30 p.m. — Commons Coffeehouse, Anabel Taylor Hall.

### Cornell Summer Session

The Hangar Theatre Company, will perform a musical revue, "A Hangar Cabaret," July 23 and 24, 8:30 p.m., Barnes Hall Auditorium.

**Festival of Traditional Jazz**, featuring Charlie Mussen's "I Love Jazz" Band, The North Country Preservation Jazz Band, Peggy Haine and the Lowdown Alligator Jass Band, The 'B' Side and the Ithaca Jazz Ensemble, July 25, noon to 6 p.m., Arts Quad.

**Six Fisted Jazz: A Jazz Piano Summit**, featuring Marian McPartland with Joanne Brackeen and Patti Bown, July 25, 8 p.m., Bailey Hall Auditorium. Tickets \$9, available at Ticketron outlets.

**An Evening of Javanese Dance and Gamelan**, performed by Cornell Gamelan, July 27, 8:15 p.m., Barnes Hall Auditorium.

**Cayuga Lake Brass Quintet**, performing pop and light classics, July 28, 7 p.m., Arts Quad.

**Bill Keith and Summit**, playing bluegrass, July 30, 7 p.m., Arts Quad.

**Some Enchanted Lyrics: A Musical Celebration of the Words of Oscar Hammerstein II and Stephen Sondheim**, performed by SUNY College at Cortland Summer Theatre, July 31 and Aug. 1, 8:15 p.m., Barnes Hall Auditorium.

**Peggy Haine and the Lowdown Alligator Jass Band**, playing on Aug. 4, 7 p.m., Arts Quad.

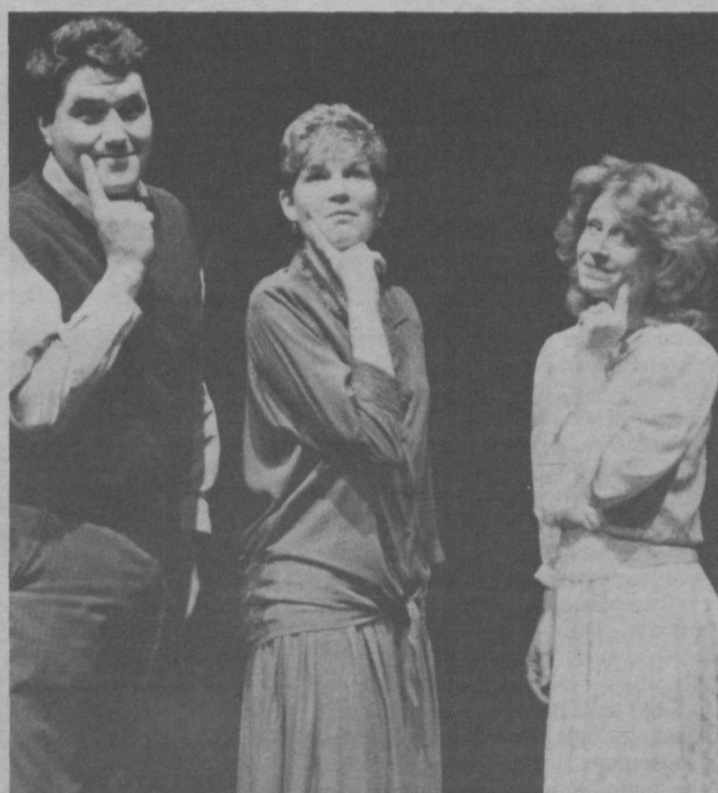
**Ithaca Opera Association** will perform "Jacques Brel is Alive and Well and Living in Paris," Aug. 6 and 7, 8:15 p.m., Anabel Taylor Courtyard.



Bill Keith and Summit will perform traditional bluegrass and fiddle tunes as well as original compositions July 30 at 7 p.m. on the Arts Quad.



Jazz pianist Marian McPartland will be one of three musicians featured at the Six-Fisted Jazz Concert July 25 at 8 p.m. in Bailey Hall. McPartland is well-known for her award-winning radio show "Marian McPartland's Piano Jazz." She will be joined by artists Joanne Brackeen and Patti Bown.



The SUNY College at Cortland Summer Theatre, featuring vocalists Diane Ouckama, Graham Stewart and Teresa Wilson, will present "Some Enchanted Lyrics: A Musical Celebration of the Words of Oscar Hammerstein II and Stephen Sondheim" July 31 and Aug. 1 at 8:15 p.m. in Barnes Hall auditorium.

## RELIGION

### Catholic

Mass: Sunday at 10 a.m., Anabel Taylor Auditorium.

### Episcopal (Anglican)

Every Sunday, 9:30 a.m., Anabel Taylor Chapel.

### Friends (Quakers)

Summer meetings for worship, 10:30 a.m., Hector Meeting House, Perry City Road.

### Jewish

Morning Minyan: Young Israel House, 106 West Avenue. Call 272-5810.

Conservative/Egalitarian Services: Friday, 7:30 p.m., Anabel Taylor Founders Room.

Orthodox Shabbat Services: Saturday, 9:15 a.m., Anabel Taylor Edwards Room.

### Korean Church

Every Sunday, 3 p.m. Anabel Taylor Chapel.

### Muslim

Sunday through Thursday, 1 p.m., 218 Anabel Taylor Hall. Friday 1 p.m. Anabel Taylor Edwards Room.

### Sage Chapel

"Charitas," Katherine Gottschalk, associate director of the John S. Knight Writing Program, July 26, 11 a.m.; "The Sower," Hilary Ford, coordinator of graduate student programs, Dean of Students Office, Aug. 2, 11 a.m., Sage Chapel.

## THEATRE

### Cornell Summer Session

The Hangar Theatre Intern Program will present "The Taming of the Shrew," July 26, 4 p.m., Anabel Taylor Courtyard.

## SEMINARS

### Cornell Summer Session

"Inventing the Good Life: The Consumer Revolution in Jacksonian America," Stuart M. Blumin, professor of history, July 23, noon, 213 Ives Hall.

### Sandwich Seminar

"The Self-Destructive Book: Challenges in Book and Paper Conservation," conservation librarian John F. Dean, July 30, noon, 213 Ives Hall.

"Are the Golden Years Growing Tarnished? Retirement Patterns and Policy Issues," Olivia Mitchell, associate professor of labor economics, July 6, noon, 213 Ives Hall.

## MISC

### Garden Tours

A.D. White House Garden, led by Robert G. Mower, professor of floriculture and ornamental horticulture, July 29, noon, at rear of A.D. White House.

### Alternatives Library

Located in 122 Anabel Taylor Hall, this library contains more than 5,000 books, 180 periodicals and 350 tapes and slide shows on

topics of individual, social and ecological transformations. Areas include eco-justice, holistic health, Native Americans, sustainable agriculture, appropriate technology, gay issues, political and economic analysis, and spirituality and mysticism.

### Great Books

**Great Books**, a discussion of literature led by Jonathan B. Monroe, assistant professor of comparative literature, on "Toni Morrison's Sula," July 28 and Aug. 4, 11:30 a.m., 204 Uris Hall.

### CUSLAR

Committee on U.S./Latin American Relations meets at 5 p.m. on Mondays in the Commons Coffee House. For more information call 255-7293.

### Fuertes Observatory

Fuertes Observatory, located on the hill behind Helen Newman Hall, will be open to the public every clear Friday night this summer from 8 p.m. until midnight. Call the observatory at 255-3557 after 8 p.m. on clear Fridays for more information.



# Computerized detective for chemicals to go worldwide

A research tool that has helped to save poison victims, catch criminals, battle pollution, rescue oil-soaked birds, classify plants and animals, fight insect pests and even aid the international trade balance will soon have increased power and availability for scientists worldwide, as a result of a joint project by Cornell and the American Chemical Society.

It's a tool for identifying unknown chemical compounds that has been used millions — perhaps even billions — of times by chemists over the last three decades, and it is already incorporated into thousands of analytical instruments sold by U.S. companies.

The invention is a set of two powerful computer programs called Probability-Based Matching (PBM) and Self-Training Interpretive and Retrieval System (STIRS) developed by Cornell chemist Fred W. McLafferty and his colleagues.

## Sifts through analytical data

Scientists use the PBM/STIRS programs for high-speed identification of unknown chemicals they have fed into an analytical instrument called a mass spectrometer, a device for breaking apart chemicals into component parts. By sifting through data from the spectrometer, the PBM program either matches the unknown with one of 115,000 compounds in its database; or if the compound is not in the database, the STIRS program uses "artificial intelligence" to deduce information about the size and structural parts of the unknown molecule.

Under a \$318,000 grant from the National Science Foundation, Cornell and the American Chemical Society's Chemical Abstracts Service (CAS) will develop an on-line search system for the CAS Scientific and Technical Information Network, a computer database that includes some 8

million compounds.

The Cornell and CAS scientists will work to increase the accuracy and speed of PBM/STIRS and to coordinate it with other information in the CAS database, so that scientists around the world can identify unknown compounds using their computers over telephone lines and computer networks.

## Now available on CD-ROM

In another milestone for the research tool, PBM/STIRS and its massive database also have just been released by publisher John Wiley & Sons Inc. on a laser-read compact disc called a CD-ROM. The new disc allows any scientist with a microcomputer and a CD-ROM player — basically the same as used for audio compact discs — to have the database at his or her fingertips. Apparently, this is the first database of spectra to be made available on this medium.

PBM/STIRS works like a master puzzle-solver: mass spectrometry is basically a technique of breaking an unknown molecule into pieces and then laying out the pieces according to size. The complex pattern of pieces is usually unique for each molecule, and PBM/STIRS, in effect, figures out how the pieces might have fit together to arrive at the most probable structure. Despite its immense database size, the high-speed matching system of PBM/STIRS allows it to identify several unknown mass spectra per minute.

Most mass spectrographs are run so that they analyze compounds streaming out of a separation device called a gas chromatograph, which isolates individual components from complex mixtures of chemicals. The resulting system of linked instruments, called GC/MS by chemists, has become the most widespread system in science for iden-

tifying mixtures of unknown compounds. The number of compounds that stream out of such a system make a computer program to analyze them absolutely necessary, said McLafferty.

To make sense out of this data deluge, McLafferty began in the 1950s to develop the program that became PBM and the huge database of computer-coded mass spectral data as the program's catalogue. His first system — before CD-ROMS or even personal computers existed — used a computer card sorter with spectra stored on punch cards, and it advanced to each new level of computer technology that became available. PBM quickly evolved into more than rote pattern-matching, said McLafferty.

## Reports its reliability

Included in PBM were sophisticated techniques to sort out data from contaminants and compensate for experimental differences. Using statistical methods, PBM reports the "reliability" of its identification — the probability that the answer is correct.

McLafferty and his co-workers developed STIRS to attack the problem of unknowns that weren't in the database. STIRS figures out the possible size of an unknown molecule and recognizes patterns of molecular puzzle pieces that represent structural parts of the compound.

The result of McLafferty's three decades of development is a database of more than 115,000 chemical compounds and a computer program that can match an unknown almost as fast as the data can stream out of the machine, with an accuracy far higher than any other mass spectral identification algorithm.

The software has been available free to individuals and instrument companies, and since 1975 Cornell also has offered a limited

computerized service for identifying compounds from data fed in over phone lines.

As a result of its popularity, PBM/STIRS has been incorporated into numerous commercial instruments, including Hewlett-Packard Co.'s GC/MS machines, McLafferty said. "This has helped U.S. companies, especially Hewlett-Packard to market about \$75 million in instruments worldwide each year, aiding our competitiveness in international markets," he added.

The analytical system including PBM and STIRS has been used for an enormous range of analyses, said McLafferty, including:

- Stomach contents of victims of poison or attempted suicide.
- Explosives and "designer drugs" in criminal investigations.
- Complex mixtures of water pollutants.
- Natural oils in the feathers of waterfowl. Biologists used this information to develop an artificial oil, which was used to replenish the natural substance when birds were cleaned after they had been exposed to oil spills.
- Oils or other natural substances from plants or animals for "chemical taxonomic" classifications of plant and animal species, from eucalyptus trees to waterfowl.
- Drug metabolites in blood, to help the Food and Drug Administration decide whether to approve new pharmaceuticals.
- Natural sex attractants in insects that have become the basis for a new class of chemical lures to trap insect pests.

— Dennis Meredith

## SIGGRAPH. Continued from page 1

Pass Solution to the Rendering Equation: A Synthesis of Ray Tracing and Radiosity Methods."

The new method involves the first marriage of the two major techniques for producing computer graphic scenes — ray tracing and radiosity.

Computing a picture by ray tracing involves constructing a scene from a huge number of individually calculated light rays as they reflect off objects and arrive at a single point in space — the viewpoint of the observer.

Ray tracing is good for depicting shiny or reflective objects, because it quickly calculates the path of light among those objects from a single point of view. But it does not depict the interreflections among all the objects in a scene, in which the color of one object subtly affects others. Ray tracing is the most widely used technique to generate graphics for television commercials.

Radiosity, on the other hand, is a method for rendering a scene based on the relationships between light coming off diffuse surfaces. Each surface has a subtly different color because of surrounding surfaces.

Because radiosity computes the "look" of an entire environment regardless of the viewer's position, it is overwhelmed when asked to render mirrored, or specular, surfaces. Such mirrored surfaces, in effect, change color with each tiny shift in position of the viewer.

"Each of these approaches has good and bad points," Cohen said. "So what we've done for the first time is to combine them in a scheme that is much more effective than the two individually."

The computer first develops the scene using the radiosity technique, computing the global appearance of the picture, and then it uses the results of the radiosity picture to calculate the scene using ray tracing.

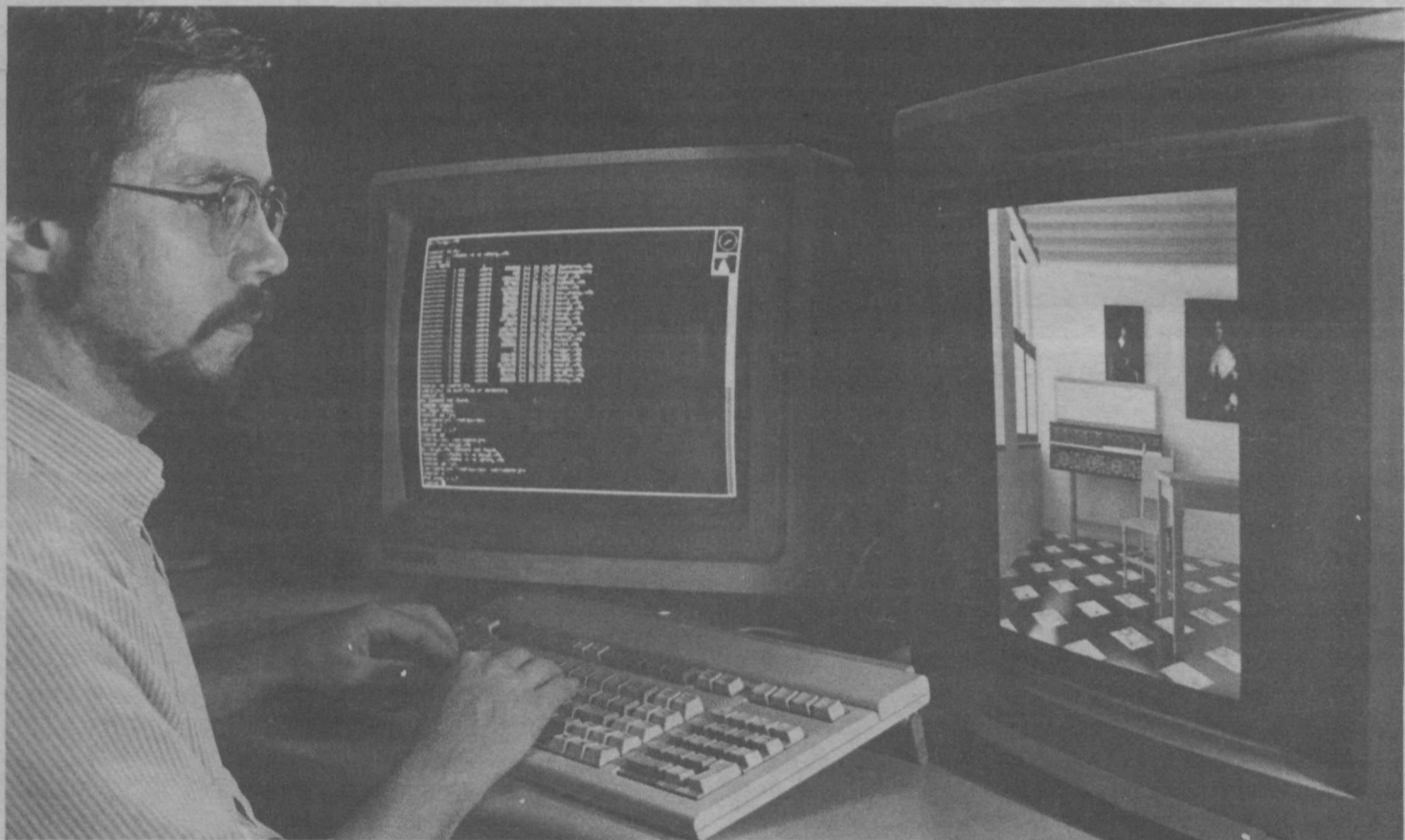
The resulting picture renders mirrorlike surfaces, diffuse surfaces and blends of the two with extreme realism.

The technique is still expensive in terms of computing time, Cohen said, adding that as computer costs drop, it could be applied to any case where realistic visualization is important.

One of the researchers' aims, for example, is to allow architects or stage designers to show building exteriors, interiors or sets before they are actually built.

## Adding smoke and fog

In a second SIGGRAPH paper, Rushmeier and Torrance will describe the first complete method for incorporating effects



**MARRIAGE OF TWO TECHNIQUES:** Graduate student John Wallace displays a scene using two computer graphic techniques — ray tracing and radiosity — that produce more realistic computer pictures.

Claude Levit

of atmospheric medium into computer pictures.

Until now, some techniques have allowed for the scattering of light by dust, smoke or fog. But in reality, the atmosphere reflects light back onto a surface and reflects light within itself, as in the inner glow of fog.

In their paper, "The Zonal Method for Calculating Light Intensities in the Presence of a Participating Medium," the Cornell engineers will report a new radiosity technique that accounts for all the effects of atmosphere — including all the ways light can be scattered, absorbed and reflected among the atmospheric particles and the surfaces in a scene.

The new technique is extremely computer-intensive, requiring as much as 24 hours of computing on a powerful mini-computer for a single scene, Rushmeier said. Thus, while it may be too expensive for commercial graphics systems, it could prove valuable in scientific research. It could, for example, allow scientists and

engineers to understand visually how smoke or particles affect heat transfer within a furnace.

In a third paper, Isaacs and Cohen will describe a new system called DYNAMO, which stands for DYNAMIC MOTION system, for lifelike animation of linked figures ranging from the human body to automated robot systems.

"Traditionally, artists have animated figures by simply drawing the motions they undergo frame by frame," Cohen said. "There have been computer programs that predict the forces on jointed figures, but none that allowed animation."

"DYNAMO represents a shift from animation to simulation," Cohen continued. "With this system, the details of motion arise from the underlying physics of the environment."

According to Cohen, a user feeds into DYNAMO a physical description of the system, including details of the mass, inertia and linkages, plus a description of the driv-

ing motion that is to take place. For example, to animate a hand cracking a whip, the researchers supplied the physical characteristics of the whip and the action a hand would go through.

DYNAMO then calculated the position of the hand and whip from instant to instant, based on the physics of each. In creating the animation, it calculated each "time step," which can range from one-thirtieth to one-thousandth of a second, based on the velocity, accelerations and geometry of the previous step.

The Cornell scientists said it is possible to construct figures that "learn" how to perform a motion. "For example, a computer graphic person swinging on a swing might 'learn' that it can swing higher by timing its pumps in different ways," Isaacs said.

The Cornell work is supported by the National Science Foundation, and was performed on equipment donated by Digital Equipment Corporation and Hewlett-Packard Co.

— Dennis Meredith

# Donald Greenberg: Teaching the light fantastic

In an architectural design class, a team of students renders an office building in three dimensions on a computer screen. With the touch of a few keys, they turn their new creation this way and that — a process impossible with paper drawings — to discuss its complex architectural features.

In engineering classes, faculty-developed programs let students "build" 12-meter yachts, design computer chips, explore differential equations and even put the cartoon character "Snoopy" through Olympic training, all on computer screens using sophisticated design and simulation programs.

In a computer graphics lab, a graduate student summons up a computer picture of an office interior. The display is surprisingly real in its subtle interplay of light and shadow and in its delicate color shadings. Even more surprising is that the experimenter can twirl a few knobs to "walk through" this complex graphic, recomputing each picture with stunning speed.

## A pioneer in computer graphics

The teacher-researcher whose efforts have helped bring all these facilities about is a visionary in the most concrete sense of the word. Donald Greenberg is a founder of computer graphics at Cornell and, in fact, a pioneer in the field of using computer pictures to communicate. He is the director of Cornell's Program of Computer Graphics and the Jacob Gould Schurman Professor of Computer Graphics.

More than 15 years ago, Greenberg saw that computer-generated pictures could become a powerful medium to link the human mind with the rapidly burgeoning power of the computer. Because of his early vision and his determination to follow it, Cornell now possesses perhaps the finest combination of computer graphics equipment, software, and research and teaching talent in the country.

So creatively have faculty and students used these facilities that Cornell recently received a grant from the U.S. Department of Education to share the university's techniques and tools with other institutions. In a project called SOCRATES, co-directed by Greenberg and Professor Tony Ingraffea, Cornell faculty will give workshops and distribute software to help other universities achieve Cornell's success in educational computer graphics.

And so respected has Greenberg become in his field that this summer he will receive its highest professional award — the Steven A. Coons Award for Outstanding Contributions to Computer Graphics. The Association for Computing Machinery's Special Interest Group for Computer Graphics will present the award to Greenberg as a "pioneer of original ideas and a teacher of these ideas to numerous students."

There was no such award, no such group, and very little equipment or software for computer graphics when Greenberg launched his efforts at Cornell in 1965.

## Trained as an engineer

For Greenberg, it was a return to the university he had known since childhood. His father was a Cornell graduate, class of '22, and a dedicated one. So loyal was the elder Greenberg, in fact, that he put his brothers through college here, honey-mooned at Cornell, and later so championed Cornell that young Donald — as well as about one-fourth of his high school classmates at Woodmere High School on

**"We got some crazy reviews. Some people were wildly enthusiastic about the idea, while others said that the hardware would never support what we wanted to do."**

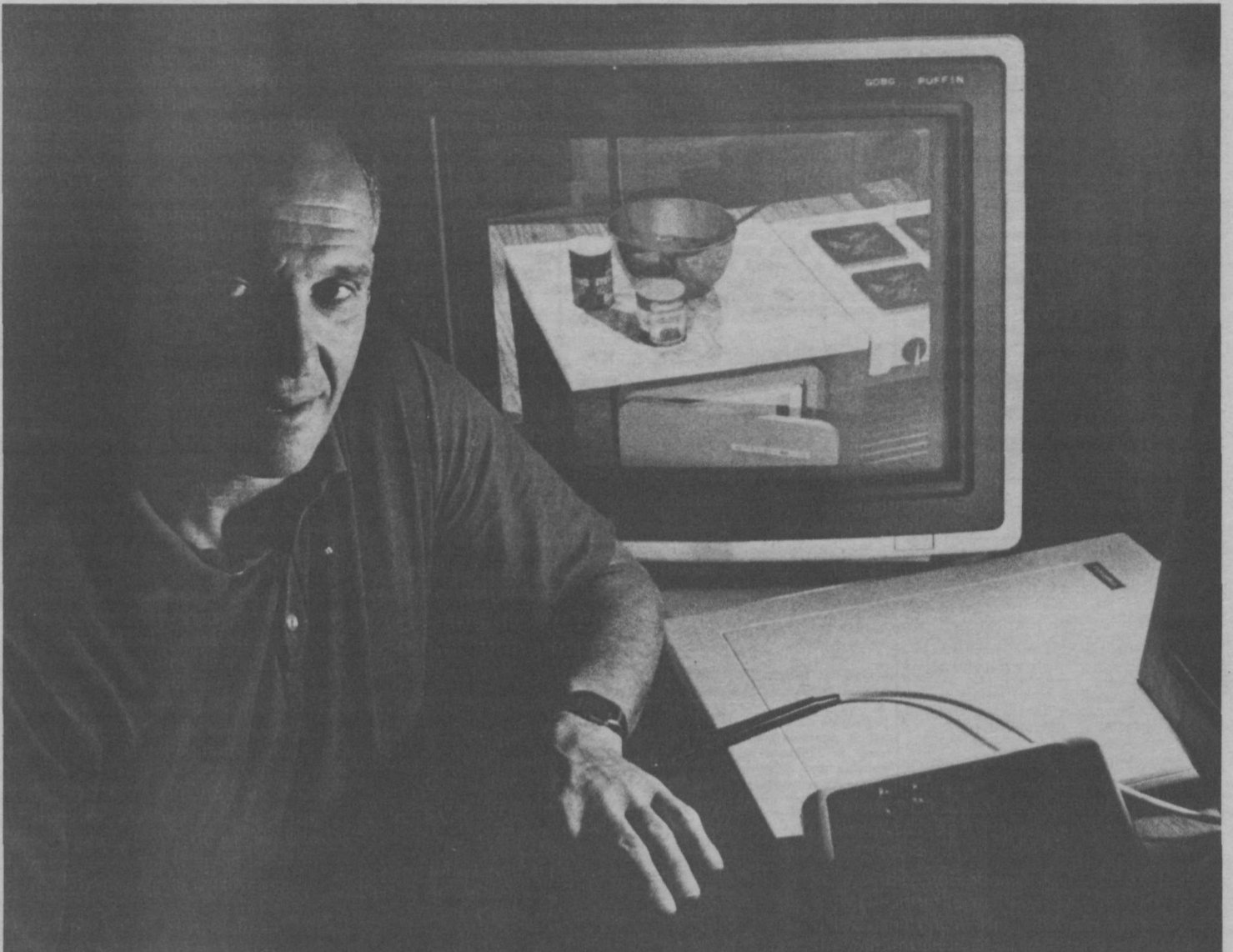
— Donald Greenberg

Long Island — came to Cornell.

Don Greenberg entered Cornell in September, 1951 with the idea of becoming an animator or working in advertising.

"I was good in both art and math, so I was advised to study in the Architecture School," he said. "Later, Dean Tom Mackessey felt that my engineering skills were better than my design skills, so he suggested I move to structural engineering." Greenberg received a bachelor's degree in structural engineering from Cornell in 1958.

His first professional job was with Severud Associates of New York City, an engineering firm he chose because of its outstanding architectural clients. Indeed, he got to work on some of the most striking



Professor Donald Greenberg displays a computer graphic kitchen scene created with scientists' latest techniques.

Claude Levett

## Highest professional computer graphics award goes to Greenberg

Donald P. Greenberg, director of Cornell's Program of Computer Graphics, will receive his field's highest professional award this summer — the Steven A. Coons Award for Outstanding Contributions to Computer Graphics.

The Association for Computing Machinery's Special Interest Group for Computer Graphics will present the award to Greenberg at an annual conference July 27-31 in Anaheim, Calif.

"Greenberg is both a pioneer of original ideas and a teacher of these ideas to numerous students — including this year's recipient of the Computer Graphics Achievement Award," said

Bert Herzog, SIGGRAPH awards chairman.

The achievement award is being given to Robert Cook, who did his master's degree work at Cornell. Cook is being honored for his contribution in form of algorithms for realistic rendering of images.

While participating in the computer graphics program at Cornell, he co-authored a paper on "Synthetic Texturing using Digital Filters." In 1981, he joined the computer research group at Lucasfilm in California.

structures of the time, including the St. Louis Arch and the New York State Theater of the Dance at Lincoln Center.

He began work on his Ph.D. at Columbia, but transferred to Cornell in 1965. Greenberg saw the promise of the infant field of computer graphics, but he was stymied by the lack of equipment until a friend helped him get permission to use the sophisticated General Electric Co. computer graphics laboratory at night. For years, his days were spent teaching, and two to three nights a week were spent in all-night sessions at General Electric in Syracuse.

The result was a landmark film, "Cornell in Perspective," a computer graphic representation of a walk through the Arts Quadrangle as it appeared chronologically since 1900.

## Doubters and supporters

In 1972, he submitted a proposal to the National Science Foundation for a computer graphics center at Cornell, and encountered resistance from some scientists who reviewed the proposal.

"We got some crazy reviews," he recalled. "Some people were wildly enthusiastic about the idea, while others said that the hardware would never support what we wanted to do. But the NSF was great. They asked me to answer the questions posed by the negative reviews, and when we showed them 'Cornell in Perspective,' they were convinced."

With the pioneering NSF grant, Greenberg went to then President Dale Corson for longer-term support. His words to Corson could have been spoken by any visionary whose ideas were long before their time.

"I said, 'Look, Dale, I'm frankly not sure what we're doing. But if it works, we need an interdisciplinary center for computer graphics and support for its operator after the NSF funding runs out.' "Corson, too,

could see the future promise of computer graphics, and Greenberg had his center. However, there were still doubters.

"Some architects were really afraid of getting technological, and some engineers couldn't see any sense in drawing pretty pictures," he said.

However, faculty were drawn to the new Program of Computer Graphics by the increasingly powerful hardware and software, and the effort blossomed. Thanks to donations of millions of dollars in equipment from such companies as Digital Equipment Corp. and Hewlett-Packard Co., the facility is now among the most sophisticated in the country.

## Students learn the tools

In 1979, Greenberg founded CADIF, for Computer-Aided Design Instructional Facility, to allow engineering students access to the latest computer graphics tools. Today, that state-of-the-art facility is used by more than 1,500 students yearly from 30 different courses in all areas of engineering.

Similarly, because of pioneering work by Greenberg and his colleagues, Cornell architecture students have the most advanced educational computer graphics system in the country. It's a system that allows them to move their designs from paper to terminal with extraordinary ease.

"We can sketch and design a project in the regular manner on paper, then go to the computer screen and in 20 minutes have a 3-D mockup of what we've done," said one student, Keith Howie.

Because of their access to computers, Cornell students possess a unique grasp of the variety of tools available to the designer, according to another of those students, Nick Gabriel.

"We'll come up with something on paper, go to the computer to render it in three dimensions, go back to paper, build physical models out of cardboard and tie them

together in the whole process," he said. In fact, students have "pushed the envelope" in the laboratory, considerably improving the tools and techniques they were given, Gabriel added proudly.

## More realistic pictures

Just as Greenberg inspires his students to break new ground in their classes, he and his colleagues Professors Ken Torrance and Michael Cohen, are carrying the science of computer graphics into a new realm of reality. For example, they have led in developing a new technique of computing realistic graphics called "radiosity." This technique is basically a set of equations that allows the computer to calculate the total pattern of light reflections from the many objects in a scene, and therefore to render the complex shadows and shadings of that scene more realistically.

Greenberg and his colleagues are exploring the difficult process of how to render realistically such phenomena as shadows, translucent objects and smoke or fog. Greenberg is also exploring ways to visualize the complex results of problems run on supercomputers, to allow scientists to cope with the new computing power these behemoth machines allow.

From architects designing buildings, to earthquake engineers calculating how tremors can make them collapse, a wide variety of professionals have come to depend on such research. But to Greenberg, computer graphics still has far to go, and its evolution will require changes in computers and changes in humans.

"We have to try to change the way people think and the way they pose problems, because these new tools can give them answers they never had before," he said. "Now we tend to use computers to do things faster, but this means using only one-hundredth of the power of these machines."

— Dennis Meredith

# Job Opportunities

In compliance with the Immigration Reform and Control Act of 1986, Cornell University is now required to check the identity and employment eligibility of all new hires.

Effective June 1, 1987, if you accept a position, you must show documents on or before your first day of work, that indicate your identity and employment eligibility; for example, a state issued driver's license and a birth certificate. For more information, contact Staffing Services, 255-5226.

July 23  
Number 27  
University Personnel Services  
Cornell University  
160 Day Hall  
Ithaca, New York 14853-2801

-Employment and employee transfer applications forms are available at both Staffing Services locations-160 Day Hall and East Hill Plaza.

-Requests for referral and/or cover letters are not accepted unless specified in the ad.

-Cornell University is an Affirmative Action/Equal Opportunity Employer.

-This listing is also available on CUINFO, Cornell's computerized info service.

## Administrative and Professional

Minimum salaries listed are for recruitment purposes only.

### ASSOC. VP FOR CORP. LIAISON (PA2719) VP, Research & Adv. St.

Principal officer at Cornell with specific continuing responsibility for liaison with corporations. Reports to VP, Res. & Adv. Studies; also provides assistance to other sr. admin. & academic officers, incl. President, on matters dealing with corporate liaison. Oversees & encourages univ. programs to interface with corporations through outreach efforts & technology transfer functions; promotes cooperation between corporations & interested univ. faculty members & relevant univ. programs.

Req.: Ph.D. & distinguished performance of research in a field of industrial interest. Exp. as effective mgr. of research at sr. corporate or professional levels. Demonstrated ability to successfully organize new programs & bring them to fruition. Familiarity with & commitment to academic values. Understanding of industrial research needs & motivations for interactions with universities. Initiative, willingness to travel, excellent interpersonal skills at a sr. mgmt. or sr. faculty level. Send cover letter & resume/vitae to Search Committee, VP, Research & Adv. St., 312 Day Hall, by 8/15.

### COORD., MGMT. INTERN PROGRAM (PA2716) School of Hotel Administration

Provide assistance to Dir., Mgmt. Intern Program, in admin. of program, incl. interviewing prospective interns, reviewing academic & job related qualifications, suggesting assignments, & confirming recommendations with appropriate properties. Coordinate & assist in grading of mgmt. reports & learning journals. Compute final grades. Until 7/31/88.

Req.: BS/BA; MS helpful. Hospitality industry exp. & ed. highly desir. Must have exc. org., interper. & oral/written comm. skills. Send cover letter & resume to Cynthia Smithbower by 7/30.

### ASST. COACH (P2717) Physical Education & Athletics

Plan & supervise practices, prepare games as assigned, evaluate indiv. performances, make recomm. to head coach about individual participation in games. Identify, evaluate & encourage application & acceptance of student athletes at Cornell in accordance with Ivy League, NCAA & Univ. policies as assigned by head coach. Teach phys. ed. classes as assigned. 10 month, full-time.

Req.: BS in PED or rel. field. College level Field Hockey/Lacrosse exp. Proven success & potential in coaching, teaching, recruiting, & working with college-age students & athletes. Send cover letter & resume to Search Committee: Asst. Coach by 7/31.

### ADMIN. SUPERVISOR (PA2714) Human Development & Family Studies

Under general dir. of Admin. Mgr., perform, supervise, direct & advise work related to budget & acctg., facil. & personnel aspects of dept.

Req.: BS or equiv. Working knowl. of micro-computer hardware & software systems (IBM & MAC) & LOTUS 1-2-3, WordPerfect & MacWrite software helpful. Strong interper. & written comm. skills nec. Send cover letter & resume to Cynthia Smithbower by 8/7.

### PROJECT COORDINATOR II (P2708) Agricultural Engineering

Respond to technical inquiries from Small Business Energy Efficiency Prog. field staff located in 15 NYS regions; investigate improved energy conservation methods & procedures & make this info. available in writing & training sessions.

Req.: BS with major in relevant tech. field; NYS energy technician cert.; valid NYS driver's lic. 3 yrs. paid exp. in energy conservation. Computer skills desir. Send cover letter & resume to Cynthia Smithbower by 8/7.

### ELECTRONIC PUBLISHING SPECIALIST (PA2715) Univ. Relations-Publications

Work closely with design & editorial staff members to provide computer support for development & production of univ. publications. Electronically design & layout major portions of publications incl. producing computer-generated supporting visuals such as graphs, charts & tables.

Req.: AAS or equiv. Strong background in Macintosh computer software. Working knowl. of Microsoft word & pagemaker essential. Exp. with object graphics software & some layout skills desir. Send cover letter & resume to Cynthia Smithbower by 8/7.

### TECHNICAL WRITER II (PT2710) Computer Services

Develop & prepare basic written info. about computer systems. Consult with users on use of systems in their environ., determine user needs & detect problems.

Req.: BS or equiv. 2-3 yrs. exp. in dual areas of technical expertise: computer software & technical writing. Knowl. of at least 2 major programming languages, e.g., Natural & large-scale operating system. Some programming in dBase III pref. Strong interper. & comm. skills. Send cover letter & resume to Judith Pulkinen by 8/7.

### PATENTS & LICENSING OFFICER (P2718) Patents & Licensing

Assist Dir. in Technology Transfer, invention evaluation, patent solicitation, software protection, licensing matters & technology marketing. Req.: BA/BS pref. in biol. sciences or elec. engr., law degree desir. Registered to practice before U.S. Patent & Trademark Off., strong written & verbal skills, demonstrated ability to work with faculty. Send cover letter & resume to Cynthia Smithbower by 8/24.

### EDITOR-MANAGER (PC2709) Publications, Geneva

Manage Station's Publications Unit in its editorial, public info., printing, photographic, graphic arts design, publication & mailing distribution sections, incl. computerized wp & phototypesetting operations. Represent Station to various Ithaca-based CU media depts. & to local newspapers & other media svcs. Edit scientific manuscripts for publication in Experiment Station series; prepare news released for media; write & edit special brochures on research & extension accomplishments, etc.

Req.: BA in comm., pref. with some exp. in agricultural journalism. Must have exc. managerial abilities & strong interper. skills. Send cover letter, resume & 3 references to Mrs. C.A. Hibbard, Personnel Off., Jordan Hall, NYS Ag. Experiment Station, POB 462, Geneva, NY 14456 by 8/10.

### ASSOC. DIRECTOR DEVELOPMENT (PA2712) Alumni Affairs & Development, Off. of Dean, ALS

Provide leadership for planning & implementation of development strategies necessary to meet development needs of college. Monitor existing funds & provide leadership where necessary; take active leadership in organizing & supporting several other campaigns & funds in support of college needs.

Req.: BS/BA with significant coursework in commun., educ., org. or leadership development. Exp. in recruiting or training volunteers & in org. development. Exc. speaking & writing skills. Writing ability. Exp. in developing proposals & demonstrated evidence of proposal success. Send cover letter & resume to Cynthia Smithbower by 8/17.

### ASSOC. DIR., ALUMNI AFFAIRS (PA2711) Alumni Affairs & Development, Off. of Dean, ALS

Under direction of Dir., Alumni Affairs & Development, ALS, responsible for implementation of programs & leadership support for ALS alumni & Alumni Assoc. Serve as ALS liaison with univ. Alumni Affairs; front-line staff person responsible for individual alumni requests & alumni. Board & Committee support.

Req.: BS/BA with significant coursework in commun., educ., org. or leadership development. Exp. in recruiting or training volunteers & in org. development. Speaking skills. Send cover letter & resume to Cynthia Smithbower by 8/17.

### ASSOC. DIR., CORNELL FUND (PA2704) Univ. Development

Sr. fund-raising position to work with Dir., Cornell Fund in planning & implementation of Univ.'s annual campaign. Responsible for operat. & admin. aspects of Cornell Fund incl. direct mail, phonathons, Reunion Campaigns & Parents Fund.

BS/BA. Extensive successful fund raising exp. in alumni campaigning (3-5 yrs.); mgmt. & org. skills; able to supervise & motivate staff & work creatively with volunteers. Send cover letter & resume to Cynthia Smithbower by 8/17.

### HEALTH EDUCATOR (PA2606) Univ. Health Services

Responsible for overall planning, development, coordination & evaluation of outreach programs on birth control, STD's & AIDS. Coordinate Peer Sexuality Ed. program, provide in-service training, & assist Dir., Health Ed.

Req.: MS in Health Ed., HSS or Human Develop. & Family Studies. 2-3 yrs. exp. providing sexuality or AIDS ed. programs. Must have exc. written & oral comm. skills. Exp. working with college age men & women desir. Send cover letter & resume to Cynthia Smithbower by 8/1.

### PERSONNEL ASSOCIATE I (PA2613) Coop. Ext. Admin.

Assist Personnel Mgr. of Coop. Ext. with mgmt. of liability, unemployment & worker's compensation programs. Provide leadership in coordination of special projects, workshops & training opportunities in all areas of responsibility within the Personnel Office. Will also perform personnel generalist duties.

Req.: BS/BA or equiv. in personnel mgmt. or busn. admin. with 2-3 yrs. exp. in insurance, personnel or paralegal field. Personnel research background helpful. Send cover letter & resume to Cynthia Smithbower by 7/31.

### APPLICATIONS PROGRAMMER / ANALYST II (PT2614) Computer Services

Design, develop, modify & document straightforward applications software in support of distributed administrative system.

Req.: BS or equiv. with computer related courses. 2 yrs. micro-computer exp. in business environ. Knowl. of at least 2 languages - PL/I, Natural, or COBOL pref.; knowl. of applications for interactive & batch administrative systems, data base mgmt. systems, machine architecture, system utility, programs, VM/CMS. Send cover letter & resume to Judi Pulkinen by 7/31.

### APPLICATIONS PROGRAMMER / ANALYST II (PT2604) CPA/COMEPP

Resp. for programming, maintenance & development tasks associated with a lab for programmable automation, incl. (but not limited to) aiding in maintenance, development & dissemination of large sophisticated software pkg., routine backup, maintenance & installation chores assoc. with modest local area network, aiding dev. of special purpose hardware & educating students & visitors. 1 yr. appt.

Req.: BS in tech. field with emphasis on math (partic. geometry), programming, computer system organization, computer circuitry physics & mechanics. 2-3 yrs. exp. 1 or more sci. programming lang., good grounding in data & control structures & familiarity with common programming tools (editors, linkers, etc.) essential. Send cover letter & resume to Judi Pulkinen by 8/7.

### ADMINISTRATIVE MANAGER II (PA2608) Animal Science

Full responsibility for operation of business office of dept. with 200+ regular employees, several large animal units & a very complex budget. Supervise staff of 4. Represent & reflect views of dept. chair, in daily interactions with dept. faculty & staff & college & univ. admin. personnel. Assist chair with financial planning.

Req.: BS or equiv. in business or accounting with computer courses. 5-10 yrs. successful exp. in business office or equiv.; pref. statutory business exp. Must have demonstrated exc. knowl. of basic acctg. principles, facility in using micro-computers, able to effectively supervise employees & interact with faculty & admin. personnel. Send cover letter & resume to Cynthia Smithbower by 7/31.

### DIRECTOR, WILLARD STRAIGHT HALL (PA2602) Unions & Activities

Admin. responsibility for all aspects of building, student activities programming, revenue operations, personnel supervision, facilities mgmt. & maintenance, program develop., marketing, evaluation, budget develop. mgmt., & strategic long range planning.

Req.: Master's degree. Extensive related exp. Send cover letter & resume to Cynthia Smithbower by 8/1.

### SR. ASSOC. DIR. ADMISSIONS/SYSTEMS & RESEARCH (PA2605) Undergraduate Admissions

Responsible for development & mgmt. of Admissions Information System & market research. Supervise operations & collaborate in development of recruitment strategy.

Req.: BA/BS & courses with concentration in research methods or quantitative analysis req. Extensive exp. in higher ed. (min. 5 yrs.), pref. admissions. Strong background in market research & analysis, stat. modeling & mgmt. info. systems. Able to teach, train & supervise wide variety of individuals. Send cover letter & resume to Cynthia Smithbower by 8/15.

### ASST. DIR. OF CORNELL ABROAD (PA2612) Cornell Abroad

Advise undergraduates regarding study abroad programs; coordinate admissions process; transfer of credit, special orientation sessions & preparation & dissemination of information.

Req.: MS or equiv. in academic subject pref. Exp. & skill in teaching, advising, writing, knowl. of 1 or more foreign languages, study abroad pref. Send cover letter & resume to Cynthia Smithbower by 7/31.

### MANAGEMENT ACCOUNTANT (PC121) Dining Services-repost

Maintain & supervise centralized finan. acctg. & reporting systems for dept., a Univ. enterprise service org.

Req.: BA in busn. or acctg. & 3-5 yrs. related exp. or equiv. combination of ed. & exp. Cert. mgmt. acctg. (CMA) ideal. Exc. org., comm., & supv. skills. Send cover letter & resume to Esther Smith by 7/24.

## Clerical

**REGULAR EMPLOYEES** Submit an employee transfer application, resume & cover letter. Career counseling interviews are available by appt. **EXTERNAL APPLICANTS** Submit an employment application & resume. Interviews are conducted Wed. from 1-6pm at Staffing Services, East Hill Plaza by appt. Contact Esther Smith (255-6878) or Lauren Worsell (255-7044).

### BUILDING ATTENDANT, GR16 (C2715) Access Srv., Olin Library

Perform libr. security functions incl. working at exit control & stacks control desks; variety of clerical resp.; collection mgmt. duties in stacks. 39 hrs. per wk.: Sunday-Thur., 12:00-8:30 p.m.

Req.: H.S. dip. or equiv. Familiar with libr. & an academic setting. Some public service exp. Strong org. skills.

Minimum Biweekly Salary: \$401.78

### STACKS ASST., GR16 (C2714) Access Srv., Olin Library

Maintain book stacks; shelve high vol. of materials; process incoming serials on daily basis; maintain orderly academic environ.; other duties incl. staffing libr. security desk. 39 hrs. per wk.: M-Th, 8-5; Friday, 10-6.

Req.: H.S. dip. or equiv. Familiar with libr. & an academic setting. Some public service exp. desir. Strong org. & comm. skills.

Minimum Biweekly Salary: \$401.78

### OFFICE ASST., GR16 (C2721) Dining Services

Provide recep./clerical support to central office. Greet visitors; answer phone; handle mail; type; file; off. supplies. Other duties as assigned.

Req.: H.S. dip. or equiv. Min. 6 mos. to 1 yr. clerical exp. Exc. org., interper. & comm. skills. PC & wp exp. helpful. Med. typing.

Minimum Biweekly Salary: \$401.78

### OFFICE ASST., GR18 (C2703) Student Employment/Financial Aid

Maintain student records for CU Tradition Fellowship program; assist in daily support. Maintain on-line data; handle all mailings; assist in prep. of reports.

Req.: AAS or equiv. Some clerical exp. & familiar with PC & wp. Knowl. of CU mainframe & PC's helpful. Able to set priorities & work in a complex active environ. Med. typing.

Minimum Biweekly Salary: \$444.37

### OFFICE ASST., GR18 (C2710) Division of Summer Session, Extramural Study & Related Programs

Provide clerical, logistical & research support to dept.; wp; file; answer phones; sort mail. Other duties as assigned.

Req.: H.S. dip. or equiv. Busn. or sec. school desir. Min. 1-2 yrs. off. & wp exp. Exc. org., interper. & comm. skills. IBM PC, WordPerfect & Mac exp. pref. Med. typing.

Minimum Biweekly Salary: \$444.37

### ADVERTISING & PROMOTION ASST., GR19 (C2706) C.U. Press

Provide assist. to dept. in all aspects of advertising & promotion.

Req.: BA or equiv. Knowl. of wp. Good writing skills. Close attention to detail. Heavy typing. Minimum Biweekly Salary: \$470.80

### ADMIN. AIDE, GR19 (C2717) HDFS/FLDC

Provide admin. support to FLDC admin. staff & 2 programs. Completion & final production of quarterly & final reports; manuscripts, training guides & proposals implemented on computer-based Mac system; responsible for travel arrangements & voucher processing. Full-time until 8/31/87, contingent upon funding.

Req.: AAS in busn. or equiv. Min. 2-3 yrs. off. exp. with considerable Mac wp exp. Med. typing.

Minimum Biweekly Salary: \$470.80

### ADMIN. AIDE, GR20 (C2720) Mechanical & Aerospace Engr.

Provide clerical & admin. support to Dir. & assist in related admin. projects. Handle Dir.'s daily schedule; arrange mtgs.; handle phone & mail; assist in prep. of reports & presentations. Other duties as assigned.

Req.: AAS or equiv. Min. 3-5 yrs. admin. /tech. sec. exp. (pref. some at Cornell). Exc. wp. spelling & grammar skills. Some form of shorthand or dictation ability. Good math aptitude. Able to prepare tables & charts from dept. stats. for reports. Good org. interper. & comm. skills. Heavy typing.

Minimum Biweekly Salary: \$496.80

### SR. SPECIAL COLLECTIONS ASST., GR20 (C2708) Dante Project (Rare Books)-Olin Library

Catalog monographs with Libr. of Congress or member copy incl. in Dante Collection utilizing RLIN system. Other duties as assigned. Full-time until 10/01/88. Possibility of continued employment.

Req.: BA or equiv. pref. Min. 1 yr. previous exp. in libr. especially in tech. svcs. Knowl. of Italian req. Med. typing.

Minimum Biweekly Salary: \$496.80

### CATALOGER, GR22 (C2709) Law Library

Resp. for cataloging & classifying monographs for which there is no copy or RLIN member copy available. Resp. for overseeing monographic card production & student employees.

Req.: BA or equiv. Strong writing & proof-reading skills essential. Computer exp., esp. wp. desir. Cataloging exp. in an academic environ. req.

Minimum Biweekly Salary: \$556.14

### ACCTS. COORDINATOR, GR22 (C2713) Agronomy

Assist dept. Chair & Admin. Mgr. in all matters related to operation of large dept. busn. off. Resp. for coord. & daily spvn. of internal budget operations, incl. direct & daily involvement in a portion of tasks assoc. with those operations.

Req.: AAS in acctg. or equiv. BS desir. Exp. with Lotus 1-2-3 software essential. Knowl. of CU (Statutory) acctg. pref.

Minimum Biweekly Salary: \$556.14

### OFFICE ASST., GR20 (C2612) Sponsored Programs

Provide a broad range of sec./off. admin. services in direct support of 1 or more Grant & Contract Officers. Resp. for processing various aspects of sponsored program proposals, incl. document revision, drafting straight-forward to moderately complex corresp.; provide clerical support.

Req.: AAS or equiv. Min. 2-3 yrs. related exp. Able to operate WP. Med. typing. Knowl. of CU procedures. Attention to detail. Able to set priorities & work in a complex, active environ.

Minimum Biweekly Salary: \$496.80

### ADMINISTRATIVE AIDE, GR21 (C2618) Integrated Pest Mgmt.-Geneva

Assist dir. of IPM programs in administering an office support group. Supervise & train office staff; coord. off. activities; maintain financial records, personnel & appt. forms, & data & corresp. records; assist in preparing operating budgets; oversell all WP & data entry activities; attend mtgs.

Req.: AAS in sec. sci. or 2-4 yrs. admin./sec. exp. with acctg., bookkeeping, & supv. responsibilities. Exp. with microcomputers essential. Supervisory/microcomputer exp. essential. Med. typing. Confidentiality a must.

Minimum Biweekly Salary: \$527.69

## General Service

**REGULAR EMPLOYEES** Submit an employee transfer application to Staffing Services, East Hill Plaza. **EXTERNAL APPLICANTS:** Employment applications are available at Staffing Services, East Hill Plaza 9-noon, Mon.-Thurs.

### CASHIER, GR15 (G2704, G2705 - 2 positions) Dining

Transact cash & credit sales; tabulate daily figures & prepare deposits.

Req.: H.S. dip. or equiv. 1-2 yrs. related exp. Basic reading & computational skills. Good interper. & comm. skills req.

Minimum Biweekly Salary: \$382.62

### SALES ASSISTANT, GR17 (G341) Dining Services-repost

Maintain efficient market operation through training, scheduling & supv. of cashiers, food service workers & other staff. Operate cash register; assist customers; stock shelves; inventory goods; monitor time cards for accuracy; assist in preparation of performance appraisals; ensure sanitary procedures & unit security. Mon.-Fri. incl. some evening hrs.

Req.: H.S. dip. or equiv. 1-2 yrs. related exp. Able to operate cash register. Good interper., org. & supv. skills essential. Some clerical skills pref.

Minimum Biweekly Salary: \$421.81

### ANIMAL TECHNICIAN, GR18 (G2706) La' Animal Svcs.

Daily care of lab animals (care, feed, water, exercise); general cleaning & maintenance of

cages & pens. Maintain I.D., breeding & inventory records.

Req.: H.S. dip. or equiv., AAS in Animal Sci. pref. Asst. Animal Tech. Certif. desir. Previous animal handling exp. in institutional environment desir. NYS driver's lic. & ability to lift 100 lbs. Pre-employment physical req.

Minimum Biweekly Salary: \$444.37

### DISPATCHER II, SO18 (G2526) M&SO Customer Service-Endowed-repost

Serve as primary communication link between campus community & M&SO for maintenance requests. Issue job tickets utilizing mainframe terminal. Dispatch tradespersons & assistants via radio comm. system. Mon.-Fri., 7:30 a.m.-4:00 p.m., shift subject to change.

Req.: H.S. dip. or equiv. Med. typing. Exc. interper. & phone skills. Able to work under pressure with careful attention to details. Exp. with computers & radio comm. helpful. Training or exp. in public relations, sales or service pref.

Minimum hourly rate: \$5.71

### LANDSCAPE EQUIPMENT OPERATOR, SO20 (G2527) Grounds-Endowed-repost

Operate wide variety of landscape maint. equip. & motorized vehicles. Mow turf, plow snow, provide manual labor using hand tools, other duties as assigned. Mon.-Thur., 7 a.m.-3:30 p.m.; Fri., 7 a.m.-2:30 p.m.; 24 hr. emergency call, occasional overtime & weekends.

Req.: H.S. dip. or equiv. Min. 1 yr. exp. as landscape equip. operator or CU groundsworker exp. req. Able to operate, adjust & maintain landscape vehicles & equip. NYS class 5 driver's license req., NYS class 3 desir. NYS Pesticide Applicator's cert. desir. Good oral & written comm. skills. Able to perform rigorous physical work for sustained periods; able to lift 100 lbs.; pre-employment physical req. Able to work without close supervision.

Minimum hourly wage: \$6.34

### LIFE SAFETY SPECIALIST, GR21 (G2603) Life Safety Services

Provide life safety surveillance for Univ. bldgs., dormitories & personnel. Provide testing & maintenance of life safety equip., inspect bldgs. & facilities for hazards; inspect alarm & sprinkler systems. Respond to emergencies (gas leaks, rescues, fires). Assist in training employees & Univ. community by speaking & demonstrating equip. at seminars. Conduct fire drills.

Req.: AAS or equiv. in construction technology or related field. Knowl. of codes & standards appropriate to safety field. Exp. with blueprint reading & bldg. construction. Electrical, mechanical abilities. Good written & oral comm. skills. NYS driver's lic. req.

Minimum biweekly salary: \$527.69

### APPRENTICE REFRIGERATION MECHANIC (G2601) M&SO

Assist Journeyman in troubleshooting, repair & installation of refrigeration & air conditioning equip. Respond to trouble calls & maintain all types of refrigeration & air conditioning equip.

Req.: 2 yr. technical or trades school or 2 yrs. exp. in related field req. Working knowl. of refrigeration & basic knowl. of electric, plumbing & controls trade. NYS driver's lic. req. Must belong or be eligible to join union within 30 days.

### MAINTENANCE MECHANIC, SO22 (G2701) Residence Life-Endowed

Resp. for general maintenance of assigned residence areas incl. physical plant facilities & dept. equipment. M-F, 8 a.m.-4:30 a.m.



# Alumna prospers giving advice on life management

With a wireless microphone clipped discretely to the lapel of her smart red, black and white outfit, and with every hair and every thought in place, Marjorie McKee Blanchard strode to center stage in Bailey Hall at Cornell's 1987 reunion and asked:

"How many of you remember a time when you only got mail from people you knew?"

For the next hour, Blanchard held 1,500 attentive people in the palm of her hand as she amiably lectured them on how to organize their busy lives. About six times a month, the 1962 Cornell Arts graduate leaves home and office in San Diego to speak on life management — "Make the rest of your life the best of your life" — or on how to improve company productivity, or on how to deal with aging parents.

There's also how to have an affair with your spouse: "Pay as much attention to the relationship that is already dear to you as you would to a brand new relationship, and don't rely on leftover time," she confides to her audience.

Husband Kenneth Blanchard, chairman of the board of Blanchard Training and Development Inc., accepts an out-of-town speaking engagement 10 times a month at a much higher fee than corporation president Marjorie commands. He is, after all, the author of "The One Minute Manager."

He is a folksy, anecdotal speaker. His Cornell Ph.D. is in educational administration. Marjorie McKee Blanchard exudes the professional platform technique that has been hers since she came to Cornell to study speech therapy, later augmented by a Ph.D. in communications studies.

## It all comes down to PACT

"The number one fear in this country is public speaking," she tells her audience. "More than death!" The laughter lets her know she has hit another responsive note. Then Blanchard boils her philosophy of living effectively down to easily remembered points:

Perspective. Autonomy. Connectedness. Tone. PACT.

She elaborates on these points, spicing her commentary with anecdotes. People who avoid stress feel they are in control of their lives; they have choices," she says. Discussing relationships, she asks: When you arrive at the office, are people glad to see you? Do they know you? When you come home, are they glad to see you?

"If you ask for what you want and don't get it, you have broken even," she asserts.

"You didn't have it in the first place."

It all complements the One Minute Manager's precepts on how to treat employees as winners. "You want to look for opportunities to catch people doing things right," she says in her talk, echoing a precept from his book. "Everytime you chew somebody out, every time you criticize your spouse, every time you redirect your secretary, every time you remind your teenager of something he or she didn't do, hopefully you've caught them doing something right four times."

## Starting out as a speech therapist

Marjorie McKee was the daughter of Cornell parents who urged her to come here for a speech pathology program, including courses in theater and in psychology.

State aid was available to employ school speech therapists, and Blanchard got a job in the Hamilton, N.Y., area, where Ken was attending graduate school at Colgate.

"But after a year, I realized I didn't know very much, so I was absolutely thrilled to come back here to Cornell" for a two-year master's program that included courses with such memorable professors as Urie Bronfenbrenner and clinical training in the Ithaca schools, she recounted. Ken worked on his Ph.D. They lived in dorms as head residents.

"My feeling about Cornell is that it's a rare, rare university that combines the prestige of the Ivy League with the down-to-earth quality of the land-grant college," Blanchard said. Reminiscing about their life in the dorms, she said: "You have kids who went to Exeter or Bronx Science in the next room to a kid who misses the farm and has some hay in his room. I wonder sometimes if the students appreciate it."

After jobs at Ohio University in Athens, where Ken joined the faculty and Marjorie supervised a speech program, they moved to the University of Massachusetts at Amherst, where Marjorie completed her Ph.D.

She also took elective courses in group dynamics, human relations and values clarification, and was asked to teach a class in life planning at Westover Air Force Base. "It was all adults, and I loved it," she said. "I just fell in love with teaching continuing-education students, people who had been out in the world."

Next stop was California. "I took every course that I could find in wellness and holistic healing. And I loved it. I thought it was the most exciting mind-body connection pheno-



Marjorie Blanchard

Charles Harrington

menon, and after awhile I had learned enough that I began teaching it," she recalled.

At the end of that year, the Blanchards opened a own consulting business in San Diego.

"One of the things I'm doing is working with companies to help them set up wellness programs that are not just exercise programs, that include perspective, career planning, autonomy, enhancing skills, connectedness, newsletters, tone to promote people's good intentions at the work site. What I'm doing is helping people strategically plan so the wellness program is not a one-shot deal."

As their own firm got off the ground, "I think what I brought to the company was this interest in the whole person. A lot of our work now is with management retreat groups, which include manager and spouse. Companies are changing. Companies don't ask people to leave their problems or their joys at the door."

"Programs that blend life management with traditional management training are becoming very important," she reported. "You know, bad bosses can make people sick."

Otherwise, programs are fragmented, "and when times get tough, the first thing that companies eliminate is stress management, or health promotion."

"One of the things we're doing now in our company is working with long-term performance appraisal and productivity improvement," Blanchard said. "We're getting companies to work with us for nine months or a year, to support the internal people in putting these programs into practice."

"If we can train managers to do four-to-one — to look for ways to praise a person so you'll have done it four times in relation to making a criticism once — we're going to get people who work harder, who know better what they're supposed to be doing. We're going to get a higher level of productivity, and then you don't have to lay people off. It's very exciting."

— Irv Chapman



Charles Harrington

Animal physiologist Ari van Tienhoven and his wife Ans enjoy a moment together after he presented the first annual Ans van Tienhoven Endowment Fund award to a Mann Library librarian. van Tienhoven said he established the fund in honor of his wife because "wives and librarians are the two most underrated professions in the world." Sam Demas, head of Collection Development, was the first recipient of the award.

## New IBM supercomputer installed

International Business Machines Corp. technicians and field engineers have successfully installed IBM's most powerful computer, the 3090-600E, at the supercomputer center. This gives the Cornell National Supercomputing Facility the highest peak speed of the five national supercomputer centers.

Also, much to the surprise of CNSF managers, the load factor on the new machine immediately rose to 95 percent, meaning that the 3090-600E was being used essentially to full capacity from the outset.

"The installation went very smoothly and is a credit to everyone who participated," said CNSF Director Larry Lee. Hardware installation began the morning of July 7, and the new computer went into operation the morning of July 9, after systems software testing, he said.

Among the scientific studies that benefit from the increased computing power of the new machine are those involving how proteins fold to make working molecules in the living cell, how atoms "stick together" to form molecules and how flames affect the structure of metals, said Lee.

The 3090-600E represents a \$7-million upgrade of the supercomputing facility's previous computer, the 3090-400, which was being fully used. The upgrade involved a considerable exchange of hardware. As Lee put it, "Basically, they kept the cabinets and replaced everything inside."

The new machine has about 60 percent more processing capability than the 3090-400, and includes six processors that can be operated in parallel on computing problems, versus four in the 3090-400. This parallelism is a unique capability among the supercomputer centers.

"We have already tested the six-way parallelism of the 3090-600E, and it works very effectively," Lee said.

The upgrade also increases the peak speed of operation of the IBM 3090 system from 432 megaflops (million floating point operations per second) with the 3090-400 to 696 megaflops with the 3090-600E. The CNSF system also has five attached processors from Floating Point Systems. Combined with the 3090-600E, they bring the total megaflop rating of the CNSF to 886.

"With this upgrade, the CNSF now has the highest peak megaflop rating of any of the NSF centers," Lee said. "It also possesses the largest disk storage system directly accessible by the supercomputer."

The new 3090-600E system surpasses the 3090-400 in other ways, too. Its cycle time, or the minimum time to perform an operation, is 17.2 nanoseconds, or billionths of a second, down from 18.5 nanoseconds for the 3090-400.

Also, real memory, which is memory directly accessible by the hardware, has doubled from 128 megabytes, or million characters, in the earlier system to 256 megabytes. Early next year, the CNSF will increase the expanded storage, or memory used by the operating system as a fast paging device, from 512 to 1024 megabytes.

According to Lee, the immediate full utilization of the machine was unexpected.

"We thought that users might take some time to work up to using the full capability of the machine," he said. "But it's obvious that there was a considerable pent-up demand and that users were ready with ideas and programs."

— Dennis Meredith

# Networking

A Cornell Newsletter Published by Employees for Employees

Volume 8, Number 7

Thursday, July 23, 1987

## Judy Waldren Receives Dedicated Service Award for July



Judy Walden joined the staff of what was then the Graduate School of Business and Public Administration on March 20, 1961. Her assignment with the school, which was then housed in McGraw Hall, was as a secretary in the Admissions Office. The 26 years that followed saw the school move to Malott Hall, change names twice, and gain national prominence. Throughout all of this, Judy has supported, trained, covered for, and generally been indispensable to 6 different directors of admissions. She now serves as secretary to the Johnson School's associate dean for administration.

Judy's tenure at the school has seen interest in getting an MBA at Cornell increase dramatically, a development that has affected her greatly because until 1985 all applications for admission crossed her desk. Thousands of the school's alumni remember hers as the first voice

from Cornell that they heard when they called up to ask for an application. Hundreds have gotten to know her personally after they arrived in Ithaca. And all agree that Judy's helpfulness, pleasant disposition, and (after you get to know her) sly wit make Malott Hall a better place to

**All agree that Judy's helpfulness, pleasant disposition, and (after you get to know her) sly wit make Malott Hall a better place to work and study.**

work and study.

Judy has seen the office workplace at Cornell go through several generations of office equipment. Most recently, she became one of JGSM's experts in word processing and computer applications. A re-

cent example of what she contributes concerns the scheduling of classrooms in Malott Hall, a task that over the years has been a constant problem for a variety of administrators and staff because the school has too many students and special events and not enough classrooms. Since Judy took over this job, it is no longer a problem, or even an issue. Faculty and students alike have already forgotten the arguments and squabbles that Judy's quiet competence has eliminated.

Judy lives with her parents on Congress Street Extension, just outside of Trumansburg. She enjoys gardening and shares an interest with nearly all of her colleagues in cats. Some time on most Monday mornings in the the student affairs-admissions area of the Johnson School is spent comparing the weekend adventures of the staff's various feline companions. Judy's pets often win the prize for the most outrageous antics.

## Employee Day Update Plans, Proposals in the Works for 1987 Event

**DATE:** Saturday, September 26, 1987. It's the Cornell vs. Colgate football game.

**TIME:** Dinner will begin at 3:30pm with continued service until 6pm. Kickoff for the game is at 1pm.

**PLACE:** Dinner will be served in Barton Hall. The football game will be played in Schoellkopf Field.

Now is the time to mark your calendars for Saturday, September 26 and make plans to enjoy a great afternoon of Big Red football and chicken barbecue at Cornell's 13th annual Employee Day.

The Employee Day committee anticipates that about 2,500 Cornell employees, retirees, and their family members will attend Employee Day this year - an event which recognizes the importance of each individual to the University.

Employee Day strengthens our University community - a community in which all members perform vital roles. This special day also enables us to share in a social event while supporting the Big Red football team as they take on Colgate University in the home opener.

The committee responsible for planning the 1987 Employee Day reports that they are making progress in finalizing details for the September event. Several items are resolved while others require more work.

The Touchtones, an a cappella singing group, have agreed to perform. The committee has sent out a request for bids on

providing the dinner. The results of those bids will determine the exact menu. All bidders will provide a chicken barbecue -- the accompanying side dishes are still open for discussion.

The Employee Day committee is always in search of new talent. "Every year we are fortunate to have an influx of new people to the committee," says member George Peter. "They bring with them new ideas and new enthusiasm. We'd be sunk without them." Any employee interested in becoming a committee member is urged to contact George Peter at 5-5274. If you are willing to set up, serve, tear down, or otherwise help out on Employee Day, please contact Esther Roe at 5-5072.

If you have a performing group and would like the chance to perform during Employee Day, the committee has agreed to solicit auditions. Singing, dancing, magic -- any stage act is welcome to audition. It may be the big break your group needs! To arrange an audition, please call Donna Updike at 5-4429.



Photo by Doug Hicks

Employee Day entertainment by the Cornell Big Red Band delights Cornell employees and their families during a past event. Employee Day 1987 is set for September 26.

## Brown Bag Luncheon

### Child Care Committee Established by Employee Assembly

by Theresa Vander Horn

On July 1, 1987 the Employee Assembly approved a motion 8 to 0 with 1 abstention to establish an ad hoc committee of the Assembly to work on the issue of child care. The proposal for a standing committee was brought to the floor by nonexempt, endowed representative Theresa Vander Horn in late May. The motion to alter the proposal to establish an ad hoc committee was brought to the floor by Employee-Elected Trustee George Peter and quickly approved. Mail received and two well-attended brown bag lunches held on the child care issue, established a broad employee interest in the issue.

Employee Assembly members Nancy Simmons and Theresa Vander Horn will



serve on the committee. The committee meets for the first time to establish itself TODAY on July 23, at noon in the third floor board room of Day Hall. While the committee will establish its own goals, broad goals set by the Assembly during discussion include: provide a forum for concern on the issue; make recommendations to share employee perspectives with the administration; work with other groups involved in the issue. Employee involvement and hard work is critical to the success of any committee, and so much so for this committee. Any member of the Cornell community interested in serving on the committee is welcome to join. If you wish to serve on the committee, please notify Theresa (5-7504) or Nancy (5-6199) or the Office of Assemblies in Day Hall.

# Employee Education: Getting in the Habit

**by Theresa Vander Horn**

The following is the first in a series of Employee Education articles written to expound on themes common to many of the comments made on the employee education survey taken last year.

On the surveys taken by the Employee Education Committee in August '85, many respondents commented about supervisor resistance to course work, time management for class and lack of night course offerings.

However, if these issues are to be properly addressed, employees must first be aware of the multitude of educational op-

## Involvement, whether it be through a course or a committee, is habit forming.

portunities which are offered at Cornell. Virtually all of the classes for which employees indicated interest on the employee education survey are already offered at Cornell.

Your employee-elected trustee, George Peter, recently hosted a brown bag lunch on the topic of employee education, at which time Judy Atcheson, of the Office of Human Resources, gave an overview of education alternatives and answered questions from the audience.

The Employee Education Committee is concerned that while we all work at one of the finest educational institutions in the country, few of us are taking advantage of the abundance of opportunity Cornell makes available.

The opportunity for employee education is offered to all regular part- and full-time employees. Employees need not be enrolled in a degree program to take courses and extramural courses need not be job-related. While it is still a privilege, as opposed to a benefit, "supervisors are encouraged to work with their employees to make it possible for staff to take advantage of the education opportunity," says Judy Atcheson.

INVOLVEMENT, WHETHER IT BE THROUGH A COURSE OR A COMMITTEE, IS HABIT FORMING.

The many avenues for education participation are listed here along with the office to contact. Remember, if you don't see a course in the Cornell catalog or in the Contact sheet which interests you, Tuition Reimbursement may be of value

Any employee seeking education in a specific area and unable to locate the course may contact: 1. The Office of Continuing Education Information Center, B12 Ives Hall. 2. The school or department in which the course would most likely be offered. 3. The University Office of Human Resources in Day Hall. 4. The Employee Education Committee through your Assembly Office in Day Hall.

Program	Information Contact	Comment
Extramural Study	Office of Continuing Education Information Center B12 Ives Hall ext. 4987	Up to 4 cr. hrs. per semester, (up to 6 cr. hrs. for retired and laid-off employees). Most courses offered to undergraduates, as well as many graduate courses, are open to employees. Course descriptions are found in the University Admissions Catalog, obtained from the University Admissions Office and most department business offices.
Workshops and Seminars	Office of Human Resources 107 Day Hall ext. 7170	Offers short courses of interest to employees. Advertised in Contact.
Tuition Reimbursement	Office of Human Resources 107 Day Hall ext. 7170	Tuition reimbursement for job or career-related course work at other educational institutions. Funds are limited and reimbursement is made on first-come, first-served basis.
Employee Degree Program	Office of Human Resources 107 Day Hall ext. 7170	Special procedures apply.
TC3 courses on the Cornell Campus	TC3 Continuing Education Center, TC3 Campus 844-8211 (ext. 315)	Master schedule comes out 3 times each year (Fall, Spring and Summer); mailed on request.
ILR Extension	ILR Conference Center ext. 2125	Management programs
Experimental College	523 Willard Stright Hall ext. 7131	Non-credit courses

to you. Questions regarding the relevance of course work can be directed to the Office of Human Resources in Day Hall.

Perhaps the least "intrusive" employee education program is found in the seminar, brown bag lunch and workshop offerings which provide information and discussion on various topics of interest to employees. Topics for BBL's are advertised individually via posters, The Chronicle, and Contact. The Employee Education Committee welcomes suggestions of topics for brown bag lunches.

NO AMOUNT OF INTEREST OR SUPPORT CAN REPLACE AN EMPLOYEE'S OWN INITIATIVE.

Several people commented on the employee education survey that they are interested in course work but "lazy about signing up." Nothing, no amount of interest or support, can replace an employee's own initiative in seeking out and attending classes.

Employees considering taking a class for the first time, especially if supervisor support may be a factor, may find courses which are job related to be the easiest "first course" to try. Many employees feel supervisors would not support their initiative. This obstacle will be the focus of a later article in our series. For now, let it suffice to say that as a su-

pervisor's silence may be misinterpreted as disapproval, low employee participation rates may be equally misinterpreted as disinterest.

Education need not be found only in the formal, standard day time class. For example, employee involvement in committee work provides not only education, but experience that is often useful on one's resume. Your Employee Assembly, 5-3715, can put you in touch with a committee working on an issue of interest to you. Involvement, whether is be through a course or a committee, is habit forming. Get in the habit! No one can do it for you.

## Consumer Fraud

**by Officer George Smith**  
Department of Public Safety

What is consumer fraud?

Consumer fraud is the means used to separate thousands of people from their money every year. It is a scheme or con devised to mislead and deprive a potential buyer of property or services. Consumer fraud can take many forms, from a simple con game to a complex scheme devised by organized groups or companies. The con artist can be anyone. There is no stereotype when it comes to making money illegally. Don't let your guard down just because someone appears to be honest.

Who are the victims?

Anybody can be the victim of a fraud

scheme. It's an equal opportunity operation, without regard to age, sex, race or religion.

How can I tell if I'm being ripped off?

Many fraud schemes are well planned and thought out, but if you listen closely there are warning signs of a possible fraud:

- you will get something free or at far below regular prices
- you have been specifically selected
- you have to decide right now
- you must sign something, but "you don't need to read it"
- you must pay in cash
- I'm not a salesman; I'm an advertiser or doing a survey
- you can make high earnings, but

**Reputable merchants encourage customers to complain about faulty products or poor service.**

only after spending money yourself no experience or skills required we will pay you for referring or recruiting others

What can I do about it?

Don't throw anything away. Keep all evidence that will help prove that you have been ripped off.

If you receive unordered merchandise through the mail and bills for it follow, you are under no obligation to pay them. If you prefer, an unopened package may be marked "Return to Sender" and mailed back at no cost to you.

If you feel you have been ripped off, contact the merchant or company immediately with your complaint. Reputable merchants encourage customers to complain about faulty products or poor service.

If the person you talk to cannot or will not help you, go to his or her superior. Continue up the line until you get your complaint resolved.

If all these efforts fail, you can possibly seek both civil and criminal action against the company or parties involved.

If you have been ripped off, don't be embarrassed. You're not the only one. Contact the Department of Public Safety at 255-1111 or your local police department.

## Leadership Leads Teamwork

**by George Peter**

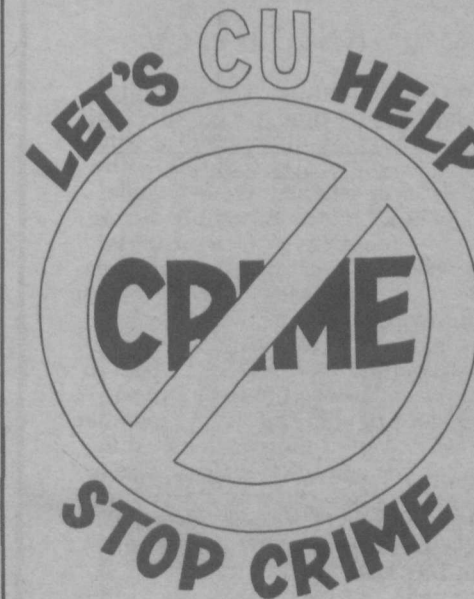
This is a year for celebrations. It's the 200th anniversary of the signing of the Constitution -- September 17, 1787. At Cornell this is the 100th year of Cornell football. And Cornell football is getting better every year.

What makes for a good team? It doesn't matter whether we are talking about football or running a department or writing a Constitution, a good team comes about from leadership that develops a team concept. A team concept gives credit to the linemen who make a backfield look good. A team concept gives credit to every individual in the organization and recognizes the value of each.

To repeat this truism over and over won't make any changes. When every leader begins to practice the concept, winners will be forthcoming all over the place.

## Is Your Campus Address Correct?

If your campus mail is incorrectly addressed or you have recently changed work locations, to correct the address, please send the following information to Human Resource Information, 147 Day Hall: your name, your social security number, new address. Allow three weeks for the change to become effective.



SEE IT... HEAR IT...  
REPORT IT!  
255-1111  
DEPT. OF PUBLIC SAFETY  
CORNELL UNIVERSITY

# Is There Life After Retirement?

## News from the Cornell Retirees Association

by **Betty Corrigan**

Is there life after retirement?

Yes indeed, say 2,300 Cornell retirees who are members of a group called the Cornell Retiree Association which was formed in 1984. Cornell Retiree Association members include retirees, faculty, and staff, and spouses are associated members.

How do these retirees find their lives?

Very satisfactory, they say in letters and phone calls from all over the country. They remember careers at Cornell with great pleasure and have interesting stories to tell about a great University changing over the years.

The majority of retirees do not miss their structured working years, but do miss the daily interchange with working colleagues and the feeling of being a part of the University - the laboratories, libraries, classrooms, and yes, even the students.

Retirees welcome news of campus activities and events. Many of them volunteer or work part time at Cornell. Many more volunteer in their home community (Tompkins County and elsewhere). Many have renewed old interests. High on the list are gardening; reading, both seriously and for pleasures; helping others in frail health; playing or listening to music; traveling; exercising; weaving; painting; sculpture; and standing on one's head.

One retiree writes "I like going by my

own clock. It tells me when to go and when to stop, when to sleep and when to have fun."

When asked, all retirees said they wish they had done more advanced planning for retirement. Some claim that ten years advanced planning is not too soon to start. They suggest that planning should certainly include financial affairs but that planning should also include mutual dis-

cussions with a spouse concerning the place to live, the shared responsibilities and pleasures that each prefers and a clear understanding of what to do in cases of poor health for either one.

The area of most concern, understandably, is health. The University policy of continuation of health insurance into the retirement years is a fringe benefit they only barely recognized as active employ-

ees. "We have been able to keep our home," writes one retiree, "thanks to the health insurance from Cornell and the health assistance at home needed for my husband. God bless you," she finishes. Need we say more to prove that the group finds satisfaction and challenge in these wonderful years.

Look for more news from the Cornell Retiree Association in future Networking.

## CRC:

### Dinner Theater, Cayuga Lake Dinner Cruise, and Annual Golf Tourney Planned

CRC trips have been very popular this summer. To this point CRC has sponsored trips to Montreal, the Yankees' Old Timers Day, and the German Alps Festival. Summer is but half over and there are still more fun things to do. Join us!!

**VERNON DOWNS RACETRACK:** July 25 - There may be a few spots available if you call now. The price is \$26 per person and includes transportation, admission to the track, and a full buffet dinner. Spend a summer evening at the races.

**CAYUGA LAKE DINNER CRUISE:** Au-

gust 1 - Only ten places remain on this new event. The group will meet at Kelly's Dockside Cafe, Taughannock Blvd. at 5:45pm. Launch time is 6pm. For the price of \$26 per person (including tax and tip) enjoy your choice of prime rib, chicken Florentine, or seafood dinner salad. A cash bar will be available. The captain will provide a narrative of places of special interest. The three-hour trip will end at approximately 9pm. A great way to enjoy the Ithaca summer.

**SPRINGSIDE DINNER THEATRE:** Au-

gust 8 - For a delightful evening of dinner and theatre join CRC for a trip to Auburn and the Springside Dinner Theatre. The production will be "The Fantastics" and dinner choices are prime rib or brook trout. The price is \$38 and includes transportation, dinner and theatre. Sign ups end July 31st.

**WALT NELSON MEMORIAL GOLF TOURNAMENT:** September 12 - We are still putting together this annual event. For more information, call the CRC Office, 5-7565, after August 1st.

## Plantations Sponsors Herbal Activities This Weekend

### Demonstrations, Lectures, and Garden Tours Planned

Save the weekend of July 25 and 26 this year to savor the delights of herbs. Cornell Plantations in Ithaca and Baker's Acres in North Lansing are sponsoring two days of activities to demonstrate techniques of herb gardening and how to utilize herb garden produce. There is a \$2 admission charge, which will admit you to both events.

One of the featured attractions at the Plantations will be the assortment of food to sample, grown in upstate New York

and prepared by a chef from Abby's Restaurant of Ithaca, all flavored with herbs. Food will be served from noon to 2pm each day.

For those interested in learning more about the several hundred herbs at the Robison York State Herb Garden, informative guided tours will be conducted by Plantations staff both days at 10am and 3:30pm. At the same time a slide show will be presented indoors about growing and using herbs.

Saturday morning at 11am Dorothy Leys, a member of the Auraca Herbarists, will talk about the May Apple. At 11:30 Lynn Hartman of Hartman's Herb Farm will give a demonstration on making herbal arrangements using an assortment of dried and fresh herbs. Also on Saturday

***A featured attraction will be an assortment of food to sample, grown in upstate New York and prepared by a chef from Abby's Restaurant, all flavored with herbs.***

afternoon, at 2pm, Raylene Gardner, education coordinator at the Plantations, will give a talk on scented geraniums. She will provide information about propagation techniques and their many uses. At 2:30 Lynn Hartman will demonstrate techniques involved in making herbal wreaths and will construct a wedding wreath.

Sunday morning at 11am Lynn Hartman will repeat the demonstration on making herbal wedding wreaths. Sunday

afternoon there will be a talk about native American herbs by Dorrie Norris, a member of Auraca Herbarists. At 2:30 Diane Miske, the gardener in charge of the Plantations' herb garden, will talk about the drying and harvesting of herbs. Following her talk at 3pm there will be another demonstration by Lynn Hartman.

Information about recipes will be available. Herb plants and a variety of herb products will be on sale.

Events will be held simultaneously at Baker's Acres including a nature walk, demonstrations on making various products with herbs, demonstration on making a herbal chicken barbecue, garden tours, and lectures on designing a herb garden, use of basil, and demonstration on making a herb wreath.

For more information about events at Baker's Acres, or to make a reservation for the chicken barbecue, call (607) 533-4653. Baker's Acres is located on Rt. 34 between Ithaca and Auburn.

Cornell Plantations is located at One Plantations Road (off Judd Falls Road via Rt. 366 just east of the Cornell campus) in Ithaca. For more information call (607) 255-3020.



Unclassified Ads

- 1. Please submit all unclassified ads to Networking Unclassifieds, 240 MVR - no phone calls please.
- 2. For our information your name and campus phone number MUST be submitted with ads. Otherwise your ad will be omitted.
- Any ads that are hand delivered to 240 MVR Hall will be omitted. Send through campus mail ONLY.
- 4. All unclassified ads are free of charge to Cornell faculty, staff and students and will be printed in the order received as space permits.
- 5. Please limit your ad to 30 words or less. If an ad is longer than 30 words it may be shortened by the Networking staff.
- 6. Unclassified ads are for nonbusiness purposes only.
- 7. The deadline for the August 20th issue is August 6th.
- 8. If an error appears in your ad, please resubmit the ad to be included in next available Networking.

For Sale

1985 Dodge Daytona Turbo, front wheel drive, exc gas mileage. Kelly 5-8686 (W) or 659-4429 (H).  
1984 Chevrolet Cavalier, 4 cyl, 5-spd, \$3,600. Lisa (H) 257-5493 or (W) 255-3438.  
1982 tan Escort hatchback, exc cond: AC: AM-FM cassette; visibility group, incl. RW washer-wiper, RW defrost; cold weather pkg, incl. engine block heater; light pkg, incl. hood, trunk, glove comp lights; exc gas mileage; front wheel drive, \$2,200. Curt 5-5014 after 5pm 589-4214.  
1982 CM Honda 250cc (gray) like new, under 1,400 miles, windshield, luggage rack, helmet, \$600. 272-2199 after 5:30pm.  
1981 Sporster, 7k miles, exc shape, \$3,000. George 272-7070.  
Kawasaki LTD 250cc, 1980 street bike, exc cond, 6k miles, red, looks great, \$575, helmet, rainsuit included. 277-5859 after 7pm.  
1979 AMC Spirit, 4-spd, hatchback, only 68k miles, well cared for, \$1,000. Carol 257-3564 after 4pm. 5-1610 days.  
Station wagon, Plymouth Volare, 1979, 76k miles, 4-dr, 6 seats, radio, 2 snow tires, \$900. 277-6143.  
1978 VW Rabbit, 4-spd, 46k miles, new brakes, exhaust system and new Michelin tires, good cond, runs well, asking \$1,400 neg. 272-5205 or 5-5712. Xiao-Hong Sun  
1978 Buick Century, 8 cyl, automatic, power steering

Recent Transfers and Promotions

Congratulations to the Following Employees

E. Abplanalp	Department
Dawn Bryant	University Libraries
Arlene Calhoun	Arts & Sciences
Janet Christopher	Hotel Administration
Christine Cummings	Ornithology
Christine Day	Geneva
Deborah Ditzell	Traffic Bureau
Graham Dobson	Geneva
Patricia Dougherty	Computer Services
Darlene Drake	Arts & Sciences
Deborah Durnam	Graphic Purchasing
Frank Frost	Arts & Sciences
Sarah Fox	General Stores
William Harrower	Graphic Purchasing
Joycelyn Hart	Animal Science
Douglas Hornig	VP, Human Relations
John C. Howe	Computer Services
Roger Jordan	Grounds Division
Joyce Knuutila	Dining
Shirley Kozlowski	Nutritional Science
Leah Lucas	Food Science
Harold Martin	Hotel Administration
Janet Matcheck	Plantations
Jane McDaniels	Architecture
Susan McNamara	VP, Human Relations
E. Neithamer	Hotel Administration
Mary J. Newhart	Residence Life
Kathleen Orzino	Summer Session
Edgar Parker	Public Affairs
James Pethica	Animal Science
Joyce Poyer	University Libraries
Florence Prince	Chemistry
Lisa A. Proper	Hotel Administration
William Reynolds	Animal Science
M. Sharpsteen	Athletics
Jennifer Shea	Hotel Administration
Ruth Sherman	Arts & Sciences
Robert Snedeker	Natural Resources
Eric Stevens	LASSP
Diane Stewart	Animal Science
Donna Taber	JGSM
Douglas Vorhis	Computer Services
Peggy Walbridge	Athletics
Arthur Weaver	Arts & Sciences
William Webster	Grounds Division
Marc Whitney	Human Resources
Glenn Withiam	Transportation
Linda Young	Hotel Administration
	ILR

Networking

Deadlines

Notice: Networking summer deadlines:

August 13 for August 27 issue

Send all ads to Donna Updike, 240 MVR  
Send in campus mail only.

No phone calls please.

and brakes, 68k miles, \$1,500. Celia 5-2142 or 273-5022.  
1977 Ford Granada, very good cond, \$900 OBO. 257-1583.  
1977 Oldsmobile Cutlass Supreme, AT, 4-dr, 8 cyl. Lokesh 5-7655 days or 347-6647 after 6pm.  
New rims for 185-7013R tires, Honda make, \$35. 272-5205 or 5-5712. Xiao-Hong Sun  
RC plane engines OS, 10, OS, 15, \$40 ea; Enya .40 4 cycle \$90 never used. James 5-3935 or 257-4014.  
Tandem bicycle, 15-spd, Peugeot, all alloy components, front and rear racks, fenders, water bottles, generator lighting, spare parts, great cond, \$750. Also Adidas cleated cycling shoes, size 10, \$25. 273-2572 eves. Jeffrey 5-4464.  
USA Fender Stratocaster guitar, \$500 and Peavey Renown amplifier, \$325, both mint cond, both for \$750. Mark 533-4576.  
II Aluminum storm windows. Call for sizes 255-5469.  
Loveseat-sofabed, sleeps 2, brown plaid, exc cond, \$100; Kimball electric organ and storage bench, special sound keys for cymbals, drums, etc. \$50 takes all; men's brown loafers, size 10 1-2 M, never worn, Endicott-Johnson brand, Orig \$25 asking \$12. 5-3152 or 272-4271 after 5pm.  
TV 13" color, good cond, 4 yrs old, \$100 OBO. 257-1583.  
Commodore 64 computer with disk drive, printer, monitor (TV) some software, \$450. 277-4280.  
21 drawer oak antique cabinet, \$75; weathered barn boards: old glass; shutters, various sizes, \$2 pr; hand cart, \$5; milk can, \$20; antique stove, \$50; ornate antique stove, \$150; workbench, \$20; typewriter, \$75. Mary Cowell 5-4251.  
Woodstove and electric stove stove. 387-6174 5-8pm

and weekends.  
Deluxe self-cleaning electric range, top cond, \$300; rubber raft, paddles, life preservers; draperies and curtains, rods, hardware; canners. 273-2614.  
One sofa, green, 84" 3-cushion, Harden, \$25; sailboat, 14', mainsail JIB, \$500. 257-2857 eves.  
Whirlpool 3-cycle washer, 2 yrs old and commercial grade electric Maytag dryer, very good cond, \$500 both. 273-6423 or 5-9761 Bill.  
Little-used Vitamaster rowing machine, stores upright in very small space, \$75 OBO. 387-9207 eves and weekends.  
14x8x6 Tandem trailer, 110 & 12 volt. 2 tilt-out windows with awning, fold down rear door, texture 111 siding. Susan 5-2449 or 844-4590 eves.  
14x70 mobile home, 3 bdrms, 2 full baths, exc cond, must be moved, priced to sell at \$12,000. 5-2331 days or 347-4443 eves.  
Mobile home, 12x60 with expando, w-w carpeting, new washer-dryer, gas heat, furnished, storage shed, nice location in Bethel Grove, 5 min drive to CU or IC, \$8,000. 516-781-5629 or 315-497-0250.  
Blood bay 3-4 Arab gelding, 7 yrs old, VB Dezalee x safari princess, \$1,500 OBO. Kathy 3-3941 days or 594-2752 after 9:30pm.

Wanted

Female Basset puppy, 6 weeks old. 539-7432 after 3pm. Little tykes playhouse. Susan 5-2449 or 844-4590 eves.

For Rent

Cozy one bdrm house plus den, quiet neighborhood.

West Hill area, avail Aug 15. 273-8546 after 5pm.  
Two bdrm, large, modern, \$350 plus. 844-9745 or 844-9133.  
Roommate wanted, male 1st year Vet student seeks responsible male roommate, 2 bdrm apt on Ellis Hollow Rd, approx. \$230 per month including utils. Marlene 253-3314.  
Three bdrm, 1-2 house, convenient Fall Creek location, avail Aug 31-Sept 1, suitable for 2 or 3 persons, separate study, dining area. 277-4863 eves and weekends. Grad students or professionals preferred.  
One-half of three bdrm apt in Ithaca, \$225 per month, utils included. 277-2341 eves.

Lost

Two Wilson tennis rackets in Wilson case, \$100 reward for recovery. 273-0749 or 5-2151.

Employee Calendar

Events of Particular Interest to Cornell Employees

Thursday, July 23. Employee Assembly committ meeting on Child Care, noon, Day Hall Board Room, 3rd floor.  
Thursday, July 23. Open blood pressure clinic. Emerson Hall-Bradfield Hall, Room 1107 Bradfield, 9am-3pm.  
Saturday, July 25. Visit Vernon Downs Racetrack; \$26 per person includes transportation, admission and full buffet dinner. Call CRC, 5-7565, for more details.  
Saturday, July 25. Herb Days, 10:00am to 4:00pm, donation \$2, members \$1. Cornell Plantations.  
Sunday, July 26. Herb Days, 10:00am to 4:00pm, donation \$2, members \$1. Cornell Plantations.  
Saturday, August 1. Cayuga Lake Dinner Cruise. Only ten places remain so call CRC soon!!  
August 7-18. CRC trip to Alaska. Call Kip at Stone Travel at 257-2515, Donna Vose at 5-6358, or the CRC Office at 5-7565 for more information.  
Wednesday, August 12. Empire State Farm Days. Reservations are requested; they can be made by calling CU Transit 255-3782, between 8am and 4pm through August 10th.  
Saturday, August 8. Springside Dinner Theatre. The price of \$38 includes transportation, dinner and theatre. Call the CRC Office, 5-7565, for more information, sign-ups end July 31st.  
Thursday, August 13. Open blood pressure clinic. Warren Hall, Room B-32, 9am-3pm.  
Saturday, August 22. Kids Day: Plant detecting, 1:00 to 4:00pm, donation \$2 per child, member \$1 per child. Children must be accompanied by a parent. Cornell Plantations.  
Tuesday, August 25. Open blood pressure clinic. Fernow Hall, Room 212, 8:30am-12 noon.  
Wednesday, August 26. Open blood pressure clinic. C.U. Development Conference Room, 9am-12 noon.  
Saturday, September 12. Walt Nelson Memorial Golf Tournament. For more information, call the CRC Office, 5-7565, after August 1st.  
Saturday, September 19. Mushroom Festival, 1:00 to 5:00pm, donation \$2, members \$1. Cornell Plantations.  
Saturday, September 26. Employee Day, Cornell vs. Colgate football game and chicken barbecue.



Questions to the Director

Comments from the Employee Attitude Survey

During the fall of 1986 Cornell contracted with SRI, an independent survey research organization, to conduct an employee attitude survey. SRI mailed the questionnaire to a stratified random sample of 2,000 full-time nonacademic employees and received responses from 76% of those asked to participate (1769 individuals).

In addition to answering the prepared survey questions, participants were invited to write comments, questions, concerns, etc. on the last page of the actual survey. The comment pages were forwarded by SRI to the Director of the Office of Human Resources Lee M. Snyder.

The questions and concerns from those of you who participated are proving to be, in addition to the results tabulated by SRI, a very valuable means for hearing and understanding employee concerns and frustrations.

These responses are also proving to be a very valuable tool for planning. We thank you for taking the time to respond and want you to know that your concerns and questions are being evaluated and over time we will address many of your concerns and attempt to clarify policy.

SRI delivered the survey results to Cornell this spring and communication of

the findings has been a priority. So far the results have been reviewed by the Executive Committee of the Board of Trustees, the Employee Assembly and the Personnel Support Group. Also, results from individual units have been reviewed by the respective executives and deans.

Summary results have been printed in a special Chronicle insert and the complete results are available in the University libraries, the Offices of the Ombudsman, Equal Opportunity, and Human Resources.

With this issue of Networking we are introducing a new column, Questions to the Director, in which we will each issue address some of the concerns and questions which were directed to Lee Snyder via the employee attitude survey comment pages.

"One great concern of mine is that no one, and I mean no one, with whom I work has a job description."

Check with your supervisor. There may be a job description on file for you. If not, ask your supervisor to work with you to write a description of your current duties. (See appendix #9 of the Personnel Manual for a sample of the Cornell Nonacademic Position Description Form.) If you need assistance, contact Compensation, 5-7400.

You are entitled to know your duties and responsibilities and, at the time you were hired, should have been given a current job description which outlines the major duties you are expected to perform. Later on in your your employment, this description can be a helpful standard when you meet with your supervisor to discuss your performance.

"My work does not fit my job description anymore."

Job assignments and duties can change and it is possible for job classifications to change as well. If your work has changed substantially, your department head should work with you to revise your job description and then request that Compensation review the position. (See Personnel Manual policy #202.)

Open Blood Pressure Clinics Scheduled

July 23, 1987 - Emerson Hall-Bradfield Hall, Room 1107 Bradfield - 9am-3pm.  
August 13, 1987 - Warren Hall, Room B-32 - 9am-3pm.  
August 25, 1987 - Fernow Hall, Room 212 - 8:30am-12 noon.  
August 26, 1987 - C.U. Development Conference Room - 9am-12 noon.

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