Natural Ingredients
Lately, the question I'm asked most frequently, both on and off campus, is "So what else is new at the College of Engineering?" It seems the college's increased productivity and visibility have led students, faculty and staff, alumni, and state government leaders to expect even more from us, in leadership, involvement, and innovation. Without hesitation, we welcome the challenge to become even better.

I also am eager to tell you about some of the highlights of the past few months.

Last year, the college proudly received reaccreditation for all six of its engineering programs from the Accreditation Board of Engineering and Technology, as it has for many years. This was accomplished through some extraordinary preparations by many of our faculty and staff members.

In October, we announced a remarkable milestone in our long-awaited Engineering Building modernization project. Distinguished alumnus Gary Seamans and his family provided the largest gift—$3 million—to our ambitious campaign, enabling us to reach our goal of $8 million. The Engineering Building will be renamed the Seamans Center for the Engineering Arts and Sciences, reflecting the Seamans family's gift and the unique educational experience the college offers its talented students.

Since October, demolition and construction have proceeded full steam ahead and on schedule. The new addition should be completed by the year 2000 and renovation of the existing building by 2001. In addition, the private fund-raising goal was raised to $11 million in January to enhance renovation of the existing building. We are deeply indebted to the college's alumni and friends for their wonderful generosity. It has proven to us how much confidence so many have in the project's mission.

The month of March brought two important validations of the college's academic programs. U.S. News & World Report recognized the college among its top 50 graduate engineering colleges nationwide for the fourth time in just five years. No smaller public engineering college in the country is rated higher. In addition, the March issue of Inc. magazine featured the College of Engineering's innovative Technological Entrepreneurship Certificate Program in its cover story. The success of this one-of-a-kind program is proof that our collaboration with other nationally acclaimed partners on campus, such as the Colleges of Business Administration and Medicine, is a wise move toward shaping higher education for the 21st century.

Now the college is engaged in a critical review of its curriculum. We are challenging ourselves to "think beyond the building project" about how we'll shape engineering education for the future—carefully studying not only what we teach, but how we teach. It is imperative that we create an academically nurturing environment for engineering professionals, from those just starting their careers to others who want to remain at the forefront of technological advances throughout their careers. As we continue to shape our curriculum, I will share our progress with you in future issues of Iowa Engineer.

For those of you who would like frequent updates on what's new at the college, I invite you to browse our newly enhanced Internet web site at http://www.engineering.uiowa.edu/. Revamped last year by two enterprising and talented undergraduate engineering students, the web site contains a wealth of information about the college—everything from academic programs to photos of construction in progress at the Seamans Center (see story on page 15).

As always, I hope you enjoy this issue of Iowa Engineer. Please continue to share with us what's new in your lives and your careers. And please visit the college whenever you're in Iowa City.

Richard K. Miller
Dean, College of Engineering
Table of Contents

4 Lilia Abron's leap of faith
Her motto must be "nothing ventured, nothing gained": Taking risks along with advice, this graduate has led her company to huge gains in helping solve one of South Africa's toughest problems.

6 Jerry Schnoor's miracle trees
With a little help from some Iowa-grown engineering, Mother Nature shows she's equipped to clean up our act.

14 Family's commitment to engineering
A group effort brings the building project to a new level and gives it a name that marks the college's unique programs.

16 Work's great boost for learning
A few years ago, an engineering professor and a manufacturing leader brainstormed a program in which students and industry help each other. Now their creation is embraced by a growing number of companies and several College of Engineering departments.

20 A die-hard Hawkeye's step aside
The University's head fund-raiser gives notice, in part, after a long career of garnering support for his alma mater.

23 Class notes
25 In memoriam
26 College news
27 Advisory Board/Development Council
Defying caution, alumna makes her own success

Lilia Abron laughs as she recounts what a business colleague asked her a few years ago.

“He said, ‘Lilia, you can go broke right here,’” she says. “‘Why bother going to Africa?’”

Fortunately, Abron ignored the head-waggers and nay-sayers, and today her engineering firm, PEER Consultants, is replicating its U.S. success by establishing a strong presence in two South African communities.

“Sometimes,” Abron says, “it just takes a leap of faith.”

But Abron, who in 1972 became the first African-American woman in the United States to earn a doctorate in chemical engineering, knows that hard work and perseverance also figure into the formula for success.

As a child growing up in Memphis, Tenn., Abron often heard her teacher-parents say, “education is the way up in America.” By the time she was in high school, the message was firmly entrenched.

Abron attended her parents' alma mater, LeMoyne College, where she earned a degree in chemistry. Shortly before she graduated in 1966, her adviser suggested that she consider graduate school in engineering.

“In 1965, blacks weren't getting jobs as engineers,” Abron says, “and women of any color weren't getting jobs as engineers. I looked at Dr. Williamson and said, 'I'm trying to get along with my life, and you tell me to get a degree that will condemn me to life in a post office?'

But curiosity got the better of her, and Abron decided graduate school could link her interest in health issues and her aptitude for technical fields. As a graduate of a historically black college, she was urged by several graduate schools to improve her skills by taking a fifth undergraduate year.

But when she applied for a grant to cover her expenses for that extra year, her former LeMoyne adviser blocked the application.

Abron went into Williamson's office and exclaimed, "I thought you were on my side!"

“She turned to me and said, 'I am on your side,'” Abron recalls. “Then she said, 'You already have a good education. You are ready for graduate school now.'”

Washington University agreed. Abron earned her master's degree in sanitary engineering from the St. Louis school in 1968, and after a stint at the Kansas City Water Department, she entered the program in civil and environmental engineering at the University of Massachusetts.

When her major professor transferred to The University of Iowa, Abron decided to move, too, and to refocus her studies on chemical engineering. Despite the disruption of changing schools and disciplines midway through her degree program, she found moving to Iowa an easy transition.

“I knew the College of Engineering offered an excellent program and that Iowans had a strong work ethic,” she says. “And my whole life I'd heard about the Midwest supporting the black cause during the Civil War. Iowa to me meant the Underground Railroad.”

Abron's irrepressible spirit and drive served her well not only academically but also financially. When she needed a job, she marched into the office of UI President Willard L. Boyd and announced, “Somebody needs to hire me.”

Someone did, and Abron soon was working on a new study investigating gender disparity in faculty hiring and promotion.

After earning her doctorate, Abron was flooded with offers whose salary figures dazzled the new graduate.

“By that time companies were falling over themselves to hire women,” Abron says. “And a black woman engineer had become the Holy Grail.”

But once again when Abron turned to a former mentor for support—this time, Professor Cecil Lue-Ing of Washington University—she was handed a bitter pill.

“You’re not worth those salaries,” Lue-Ing told her, “and five years from now you'll be earning the same thing while young white male engineers are being promoted right over you.”

After considering that warning, Abron decided to begin her career in the academic world.

“I was making less than half what I'd been offered in the private sector," she says. "but for me, teaching environmental engineering turned out to be the best way to learn.”

Despite her earlier work at Iowa on gender disparity, it wasn’t until she was a professor herself that Abron realized how difficult it could be for women to crack the upper ranks of faculty appointments. She also learned
that her personality was better suited to management than to research.

After 12 years teaching at
Tennessee State, Vanderbilt, and
Howard Universities, Abron de-

cided that in order to thrive, she
would have to move into the
private sector. In 1980 she left
academics to devote full-time
attention to nurturing the
growth of her new company.

And grow it did. Today, her
Washington, D.C.-based PEER
Consultants has a staff of 100
and offices in 10 American cities.

With Abron as president and CEO,
the environmental engineering
consulting firm has designed a
biostabilized management plan for
Prince George’s County, Md.,
studied air emissions in Philadelphia,
and conducted acid rain
risk analysis for the Environmen-
tal Protection Agency.

Building on PEER’s achieve-
ments, Abron decided to expand
her operations to Africa.

“Although we’ve done well,”
she says, “we’re still a small firm.
Large American engineering
firms employ several thousand
engineers. I’m looking to grow
the company — something that
takes a lot of nerve and a lot of
capital.”

She adds that it remains
difficult for African Americans,
particularly African-American
women, to secure the substantial
capital necessary to leap to the
next level of competition.

“It galls me when people criti-
cize affirmative action,” she says.
“It’s important to remember that
African Americans worked for
300 years without being paid a
cent. We haven’t had a chance to
accumulate wealth that we can
draw on to capitalize our busi-
ess ventures.”

Abron adds that there is not a
single black-owned engineering
firm in this country that employs
more than 300 people.

But Abron’s expansion into
Africa is motivated by more than
finances.

“African Americans constitute
the wealthiest and best educated
blacks in the world,” she says.
“When friends and colleagues
questioned our new work in
Africa, I told them we went by
choice and through obligation.”

The responsibility that Abron
feels to share her engineering
knowledge, skills, and experience
has sparked a novel solution to
one of South Africa’s toughest
problems.

“Black South Africans are in
desperate need of good shelter
that is also energy efficient,” she
says. “Although electrical energy
in that country is the cheapest in
the world, the average black fam-
ily still spends 50 to 70 percent
of its income on energy.”

The reason, she says, is that
most black South Africans live in
substandard housing, relying on
coal, kerosene, or paraffin for
fuel. Even those who do use
electricity must prepay their
monthly bills — something that
most cannot afford.

A serious by-product of the
housing problem is severe
environmental degradation.

“Air pollution is rampant in
South Africa,” Abron says. “The
ever-present smoke creates dan-
gerous levels of particulates
and carbon monoxide that can reach
lethal proportions.”

PEER’s solution is a steel frame
solar home that can be built for
just $3,500 beyond government
subsidy. The energy-efficient
South African homes are oriented
toward the north to take advan-
tage of solar energy. Since the
prototype ECO™ house was built
in 1995, Kuthwanong Township
has contracted with a black
South African engineering firm
to build 2,000 more.

PEER Consultants has helped
design affordable, energy-
efficient homes and duplexes in
other South African communities
and is looking to expand its effort
to Senegal. As the houses go up,
Abron’s efforts are attracting
attention around the world.

The Kuthwanong story is a
sterling example of how well-
designed, affordable housing
can help reduce greenhouse gas
emissions while satisfying eco-

PEER-sponsored projects generate
more than $7 million in annual
revenues, but as her company
continues to grow, Abron still
manages to find time for her two
sons and community service. She
has been president of the Wash-
ington, D.C., chapter of Jack and
Jill of America, Inc., is actively in-
volved in the service sorority Del-
ta Sigma Theta, and plays hand
bells at her church.
Got pollution?
A healthy environment is good business. That’s the message that Jerry Schnoor hopes will catapult Iowa into a cleaner, safer, more productive 21st century.

Schnoor, University of Iowa Foundation Distinguished Professor of Civil and Environmental Engineering, has studied environmental degradation in cities and rural areas around the world and the results of human influence on global climate change.

“There is no upwind anymore,” Schnoor says about the notion that local environments can be safely isolated from the impact of global change. “Everyone lives downwind from someone else.”

Schnoor’s students have analyzed sulfur pollution, lead, and soot at the peak of the Swiss Alps and in remote regions of Norway. Other researchers have discovered polychlorinated biphenyls (PCBs) in birds and mammals in the Arctic, Antarctica, and on Midway Island in the middle of the Pacific.

“Even though there are no pollution sources at those locations, and no human populations within 2,000 miles,” Schnoor says, “the chemicals are somewhat volatile and travel long distances before being ‘cold trapped’ in these sensitive areas.”

While Schnoor joins experts around the world in addressing global environmental issues, his work necessarily focuses on local sites and the polluting agents and mitigation methods particular to them. Two of his recent projects have tackled pollution at Iowa sites.

Between 1941 and 1975, the Iowa Army Ammunition Plant at Middletown operated waste discharges for chemicals such as TNT and RDX, which are used in the manufacture of explosives. The plant covers 20,000 acres, and soil and groundwater pollution there are so severe, Schnoor says, that the site has earned the dubious distinction of being the largest area in Iowa designated by the Environmental Protection Agency as a Superfund cleanup site.

“That means cleaning it up is a national—not just a state—priority,” he says.

Schnoor is applying the results of earlier research to mitigate the pollution at the site. During the past decade, Schnoor and three of his students demonstrated that certain plants can remove toxins quickly, effectively, and inexpensively from even severely damaged land. In 1988 Lou Licht (PhD ’90) planted poplar trees along a waterway near the Amana Colonies, west of Iowa City. The fast-growing trees took up fertilizer chemicals in rainwater runoff and transformed them into nontoxic substances that were stored in the plant tissue. In 1995 Licht launched a company, Ecolotree, to further research and develop phytoremediation—the use of vegetation for the in situ treatment of contaminated soils.

When Schnoor heard about the pollution at the Iowa Army Ammunition Plant, his thoughts turned to trees and other natural wetland vegetation.

“Hybrid poplars have a number of characteristics that make them not only effective but also practical to use in cleaning up sites like this,” he says. “They are

(continued on page 8)
capable of metabolizing a wide variety of toxic organic pollutants. They’re also easy to plant; basically, all you have to do is put a stick in the ground.”

In addition, poplars grow very rapidly, reaching heights of 20 feet in just three years. And while the trees can be harvested and used for veneer or fuel, such use doesn’t mean the end of the crop.

“Poplar trees have the interesting biological characteristic of ‘coppicing,’” Schnoor says. “If you cut one down, the roots remain viable and the tree regenerates. In fact, it grows even faster the second time around.”

Several Iowa alumni have joined Schnoor’s team in helping to clean up the site. Kevin Howe (BSCE ‘80) is the team leader at the Army Corps of Engineers in Omaha, Neb., and Leon Baxter (BSIE ‘73) is the Army Ammunition Plant’s quality assurance division chief and project manager for on-site remediation.

“We use various kinds of plants not only to help clean up the site,” Baxter says, “but also as assurance against future contamination. Phytoremediation should be a real plus for this project.”

Baxter adds that the Army plant maintains an active timber management program, which is looking into the possibility of harvesting the poplars and reinvesting the proceeds in the local community.

The toxic site cleanup at the ammunition plant has been done in two stages. First, the most highly contaminated soil was removed and isolated in a landfill. This soil is so damaged that no amount of vegetation can effectively detoxify it.

Next, the environmental engineering team led by Schnoor focused on the contaminated fringe areas that remained after the most toxic soil was removed. Schnoor, UI botany professor Diana Horton, and Howe have established wetlands containing specific plant species that will treat the noxious soil. Thousands of poplar trees surround aquatic ecosystems filled with arrowhead, water plantain, and reed canary grass.

The initial results have been dramatic. Laboratory tests showed plant assimilation of 84 percent of the TNT in just four days. Metabolites are yet to be determined and monitored.

Not all the environmental problems at the ammunition plant have been solved, however. A plastic explosive known as RDX has proved to be a particularly worrisome source of contamination because it is so mobile in the environment and is difficult to degrade. Despite these characteristics, the hybrid poplars took up the chemical quickly.

“In fact,” Schnoor says, “The trees worked so well that we began to worry that there wasn’t enough time for other processes to degrade the RDX or for the chemical to be metabolized from the leaves. That might cause a problem for animals like deer or worms that use the trees for food.”

While Iowa researchers continue to monitor phytoremediation at the site, they also are pursuing research questions in the laboratory. At the Center for Biocatalysis, pharmacy professor John Rossaza is investigating how poplars and other plants use enzymes to break down the toxic chemicals they take up from the soil.

Since 1988 Iowa researchers have planted more than 200,000 hybrid poplars in 40 sites from South Dakota to Slovenia. Phytoremediation has blossomed rapidly into a full-scale technology.

“It’s a technology on fire,” Schnoor says. “Just look at Ecolotree.”

In its infancy, Licht’s company was nurtured at the University’s Oakdale Research Campus. Now headquartered in Iowa City, Ecolotree also maintains a branch office in Portland, Ore. Five staff members are studying the efficacy of using vegetation to clean up 40 hazardous waste sites around the world, including an agricultural cooperative in Martelle, Iowa, the banks of the Iowa River near Amana, Iowa, and a municipal landfill in Beaverton, Ore.

The economic factors involved in preventing and solving environmental problems are important considerations, Schnoor says. Environmental solutions that also benefit the state’s economy should provide a real incentive to entrepreneurs and large corporations alike.

“For real change to occur in our actions on environmental issues,” he says, “we need a strong market signal.”

And that signal, he believes, is now being heard. Schnoor notes that Iowa imports 98 percent of its fuel, which includes mostly nonrenewable and environmentally degrading fossil fuels. Each year Iowans spend $5 billion on
fuel—largely dollars that leave the state. On the other hand, the recent development of renewable corn-based ethanol has created 12,000 new jobs in the state.

“Our research shows that in addition to these new uses for corn, Iowa farmers should be looking toward two new commodity crops that have proven to be highly successful in cleaning up hazardous waste sites,” Schnoor says.

The first crop with market potential, of course, is the hybrid poplar tree. The second is switchgrass, a prairie grass whose effectiveness as a fuel is being tested by Schnoor’s colleagues at a site near Centerville, Iowa. Switchgrass burns more slowly than coal and releases less sulfur oxide and carbon dioxide into the atmosphere. In addition, the vegetation is free of noxious sulfur oxide, a serious environmental byproduct of burning coal. Both gases have been implicated as “greenhouse gases” that have damaged the ozone.

Currently the research site consists of 4,000 acres dedicated to the production of switchgrass. But during the next four years, the Conservation Reserve Program wants to dedicate 40,000 acres in Iowa to switchgrass in the hope that it will become a viable commodity crop for Iowa farmers. In this way, Schnoor says, switchgrass—like poplar trees—will be both an environmental and an economic solution.

Schnoor acknowledges that some environmental solutions will cost more in the short term. But, he notes, studies in Maine have shown that about 30 percent of the people surveyed said they would agree to pay $10-20 more per month for “green” energy—energy that reduces the release of greenhouse gases. Schnoor believes many Iowans would be willing to make such a modest investment in a “green” future.

Schnoor’s work on mitigating damage to local environments and developing renewable energy resources has earned him a reputation as one of the leading experts in a burgeoning field. In 1992 he joined scientists from around the world who pooled their knowledge during the United Nations Conference on Environment and Development, held in Rio de Janeiro. In addition, he coauthored the Iowa Greenhouse Gas Action Plan for the Iowa Department of Natural Resources. The plan calls for reduced emissions of greenhouse gases to help achieve the national goals established by the United Nations at the recent Kyoto conference.

“We know that greenhouse gases are rising rapidly,” Schnoor says. “We also know that this increase is due to human activity—mainly fossil fuel combustion. If we can decrease our use of fossil fuels and begin providing renewable plant resources for fuel, we will have gone a long way toward reaching that goal.

“In the 21st century,” he adds, “we will need to prevent pollution and develop renewable resources that protect the environment. The ultimate goal is to safeguard our resources for future generations.

"After all, we have not inherited the earth from our forefathers; rather, we have borrowed it from our children.”

— Jean C. Florman

In March Schnoor began a lecture tour to several American universities, as part of a 1997-98 Distinguished Lectureship from the Association of Environmental Engineering Professors.
Dedicated alumni inspire new goals
Gift 'from the heart' helps expand aims

In my last message, I wrote about the May 1997 groundbreaking for the building addition, which is part of the facilities upgrade for the College of Engineering.

Since then the college has seen another landmark: On October 31, UI president Mary Sue Coleman announced that one of our distinguished alumni, Gary Seamans, and his wife, Cammy, had donated $3 million to the Engineering Building Campaign. To recognize their generosity, Coleman said, the Engineering Building would be renamed the Seamans Center for the Engineering Arts and Sciences.

Never before has the college received a gift of this magnitude. In addition to giving the building campaign a significant boost, the Seamans family's gift sets a wonderful example for other alumni and for many years to come. We are deeply indebted to Gary and Cammy for their generosity.

I wish you could have been at the press conference to hear Gary's comments about the gift. He reminisced about his time at the college and the profound impact his engineering education has had on his career. It was clear that this gift came from the heart.

The Seamans' commitment is indicative of what Dean Miller and I have seen among alumni as we've worked on the early stages of the Engineering Building Campaign. The alumni of the college have really stepped up to the plate to make a difference for the future of their college. Each alumnus has a different ability to contribute. But as a group, our alumni are unanimous in their gratitude for the fine education they received at Iowa and their conviction that this project is long overdue and that the college deserves their support.

The Seamans gift has helped us to achieve our original goal of $8 million. The Campaign Steering Committee, at its meeting last fall, decided to increase the goal to $11 million in order to provide enhancements to the construction and renovation, such as completion of the fourth floor and more extensive remodeling of the existing Engineering Building.

In February Dean Miller and I contacted all 9,000-plus engineering alumni, inviting them to show their support for their college. You'll read about the results in a future issue of Iowa Engineer. If you would like to support the campaign but haven't yet heard from us, please feel free to contact the dean's office (319-335-5764). I hope you are proud of what is taking place in the building campaign and at the college, and I certainly encourage you to be part of it.

Rick Wretman
Director of Development
College of Engineering

Classroom gets upgrade with equipment grant

The College of Engineering's electronic imaging classroom got a boost late last year that will keep it a leader in engineering education and provide a high-speed network link to The University of Iowa Hospitals and Clinics. The boost came in the form of an equipment grant from Hewlett-Packard, which added instruction and research equipment including memory upgrades for student workstations, a 240-MegaHertz computer for instructors, and a high-end 300-MegaHertz personal computer.

The Quantitative Imaging Electronic Classroom, in use since 1996, was set up with H-P grants of equipment and visual display upgrades, plus supporting materials from the college. The facility's developers say the funding shows that the classroom is considered a success.

"The grant is a direct result of our accomplishments in electronic delivery of image processing instruction, leadership in web-based image processing educational material, and college and University support," says Milan Sonka, associate professor of electrical and computer engineering.

Sonka and Edwin Dove, professor of biomedical engineering, have used the classroom to develop a curriculum that uses the World Wide Web. Students receive lectures on their computer screens and can interact with each other and the instructor, or use the workstations for independent problem solving. After class they can review class materials on the web, re-playing the visual part of the lecture, with the freedom to complete their homework anywhere they have computer access.

Electronic Imaging has become increasingly important in a variety of fields, including industrial design and medicine. The classroom complements existing UI strengths in medical imaging and image processing, educational psychology, and instruction design. It will be used to design new classrooms and courses throughout the college's $26-million modernization project, to be completed in 2001.

The digital imaging processing web site is: http://www.icaen.uiowa.edu/~dip/

Preferred reunion year

Some alumni prefer to attend the reunion celebration for a class other than the one with which they graduated. Alumni who ask for "preferred reunion year" status automatically receive reunion mailings for their desired class year. To request "preferred reunion year" status, write to the Alumni Association, 400 Leff Center for University Advancement, The University of Iowa, Iowa City, Iowa 52242-1797; or call Alumni Records or the Reunion Director, 800-IOWALUM (800-469-2586).
Racers, start your bagels!

Biomedical engineering seniors studying design with Professor Malcolm Pope last fall crafted vehicles from a variety of foods in one of their classes. The idea was to learn about choosing parts in engineering design: Are the parts available? Do they work together with other parts? Are they durable? After applying finishing touches, the students raced their creations. Several wheels stayed on, and there were snacks afterward.

Iowa’s span rules

University of Iowa engineering students built the bridge that won the contest—the Steel Bridge Competition, that is, sponsored by the American Society of Civil Engineers at its upper midwest regional conference.

ASCE student chapter bridge builders from seven universities gathered at the University of Wisconsin-Platteville in February to assemble their entries and prepare them for judging.

The UI entry, an underslung truss of triangular section, was constructed by a team of civil and environmental engineering students: junior Jason Smith, from Clinton, Iowa, and seniors Brad Ketels and Tom Nagle, from Waterloo, Iowa, Brandon Miller, from Brooklyn, Iowa, and Steve Suarez, from Carol Stream, Ill.

Forrest Holly, one of the UI team's faculty advisers, called the Hawkeye bridge “definitely the classiest and most innovative” at the competition. The team made a clean sweep by finishing first in all six judging categories: stiffness, aesthetics, economy, efficiency, lightness, and speed of construction.

Iowa went up against teams from Lakehead University, Thunder Bay, Ontario, Canada; North Dakota State University (second place); South Dakota State University (third place); the University of Minnesota; the University of North Dakota; and the University of Wisconsin-Platteville.

ASEE meeting returns to UI

For the first time in more than a decade, the College of Engineering last fall hosted the annual meeting of the North Midwest Section of the American Society for Engineering Education (ASEE). The session, held in October, was titled “Outcomes Assessment in Engineering.”

Norb Malik, professor of electrical and computer engineering, chaired the conference, which included talks by Richard Seagrave, professor at Iowa State University and former chair of the Engineering Accreditation Commission; Ed Moldt, entrepreneurial consultant for the Ewing Marion Kaufman Foundation and the University's John Pappajohn Entrepreneurial Center; Michael Pritchard, philosophy professor at Western Michigan University; Richard Emmert, vice president (retired) of Du Pont, National Academy of Engineering member, and UI Distinguished Engineering Alumni Academy charter member; and Louis Frank, the Carver James A. Van Allen Professor of Physics at Iowa.

In addition to attending technical sessions, participants took tours of world-class research under way at the University in facilities such as the Iowa Institute of Hydraulic Research, the Iowa Driving Simulator, and the Iowa Spine Research Center. They also attended workshops on personal growth in engineering education and improving technological literacy of K-12 students.

The ASEE is committed to furthering education in engineering and engineering technology by promoting excellence in instruction, research, public service, and practice.

Scholars, too

College of Engineering students are among several UI student-athletes who have received academic awards from the University's Board of Control of Athletics. The awards recognize student-athletes who maintained a B average or better in consecutive years. Bronze I honors one year of B average, Bronze II recognizes two, Silver three years, and Gold four.

Laurie Geers, industrial engineering sophomore from Maple Grove, Minn. (rowing), and Stephanie Homewood, mechanical engineering sophomore from Rockford, Ill. (swimming), received Bronze I awards. Jessica Levai-Baird, mechanical engineering junior from Albuquerque, N.M. (rowing), was a Bronze II winner, and Jennine Cota, a civil engineering graduate from South Milwaukee, Wis., (swimming), won a Silver. Gold winners were Jennifer Hahn, civil engineering senior from Tucson, Ariz. (softball), and Kirsten Pauling, a mechanical engineering graduate from Des Moines, Iowa.

Elizabeth Katz, industrial engineering sophomore from Scottsdale, Ariz., (swimming), won the Prairie Lights Golden I Book Award for academic excellence and embodiment of the team's philosophy.

Entrepreneur guy

An Iowa engineering student who earned a certificate in technological entrepreneurship in May was featured in Inc. magazine's March issue in a story on college entrepreneur programs. Tony Mirchandani, whose photo graced the magazine's cover, has vowed to earn his first $10 million by age 35. Go, Tony!
From start to finish, students find help in one right place

Engineering students wondering about scholarships, what classes they need, and how to get an internship or even land a job no longer have to run all over campus to get the help they need. Expert advice is theirs when they walk through the door of the College of Engineering's new Student Development Center.

The center, just down the hall from the dean's office, offers one-stop shopping for student services. It houses the college's offices for admissions and scholarships, academic development, career services, and the engineering registrar all in one place. Each of the four offices helps students from the moment they enter the College of Engineering to the time they graduate from it.

Nancy Schneider, director of the Academic Development Office, says ease of access and coordination were the college's chief goals in bringing the four offices together.

"It provides a more seamless service to the students," Schneider says. "When prospective students come in to see Jane Dorman in admissions, Jane can quickly introduce them to me and mention that they'll see me at orientation. Then she can walk them right down the hall and show them the Career Services Office."

Future engineers do a lot of learning outside the classroom, says Cathy Bunnell, director of the Career Services Office.

"Our mission is to provide information, guidance, and resources that allow students to develop and achieve their own career goals," Bunnell says.

Even if students don't have immediate questions, the center is still a good place to stop and browse. Shelves are lined with a variety of engineering magazines, brochures about organizations to join, booklets with interviewing tips, videos on writing résumés, and more.

The center's four directors say they like being all in one area because it helps them collaborate and communicate with each other.

"We have different roles, but by working together we serve students better," Bunnell says. "For example, if I'm talking with an employer who wants to know the exact course work in an area of study, I can quickly ask Julie Fell in the Registrar's Office to help."

Bunnell adds that the Engineering Career Services web page has been redesigned and is updated every day. It includes career information for students and alumni as well as links to companies that recruit the college's students.

"Last year between 400 and 500 companies recruited students and alumni from résumé referrals," Bunnell says.

Dorman says that when she meets with new students at the Admissions Office, she encourages them to visit the Career Services Office right away in their freshman year.

"They just laugh and say: 'But I'm just starting college.'" Dorman says.

But getting students to think ahead toward their careers is one of the center's chief aims, says College of Engineering dean Richard K. Miller.

"We are trying to expand their vision beyond next semester's courses, even beyond graduation," Miller says. "We want them to think along the lines of career plans, not just academic plans. We're stressing the importance of co-ops and internships to their careers."

The results are already noticeable. On-campus interviews doubled from 94 during fall 1996 to 196 during fall 1997. Undergraduate students who registered with career services numbered 63 during academic year 1995-96 and 302 in 1996-97, and the number of students who did co-ops and internships has doubled, from 85 in 1995-96 to 182 in 1996-97.

"It's been much more successful than we anticipated," Miller says.

When the idea of the center was first developed five years ago, the college didn't have the money, the space, or the staff to support it. But those who envisioned the Student Development Center were committed to seeing their idea realized. They knew that with a central student services office, the college could do an even better job helping students succeed not just in school but in their professions, too.

"You have to decide what needs to be done and just do it," Miller says. "Our new center sends a message to students about how important we think they are."

—Valica Boudry
Then and now: Grads reminisce

When Russell Crawford graduated from the College of Engineering in 1926, another Iowan and engineer, Herbert H. Hoover, occupied the White House. According to Crawford, who is the college’s oldest known graduate, life as a 1920s engineering student in Iowa City was at once a sober business and a lot of fun.

“We boys were pretty serious,” says the New Hampton, Iowa, native. “There was no monkey business—at least as far as classes go.”

In those days, professors wore suits and ties on campus. So did wealthier students, although Crawford notes that the attire of students who weren’t as well off—herself included—“could be pretty rough-looking.” Course work included plenty of physics and math. In an era of optimism about the benefits of technology and a booming economy, Iowa engineers had no problems finding good jobs.

After graduation, Crawford began work in Chicago as a consulting engineer for Alvord, Burdick & Hawson. Forty-two years later, he retired from the same firm.

Today, much about the college, including the building, would be familiar to Crawford. But he notes one important change in engineering education at Iowa.

“We had only one woman student,” he says, “for a while, at least.”

Although the 96-year-old Crawford says he and his engineering peers were a serious bunch, he admits they didn’t ignore entertainment when the opportunity presented itself. In the era of Prohibition, “there was always a skirmish to be the first to get bootleg liquor,” Crawford laughs.

And does this particular Iowa engineer have first-hand knowledge of such doings?

“Don’t ask,” he replies.

Each March during MECCA Week, the college sponsored a decidedly legal celebration of the profession’s achievements. Engineering students built a monument in the intersection of Washington and Clinton Streets, put on a play at the Englert Theater, and organized a parade. The innovative float designs were constructed in the Engineering Shops, which were located where the University’s Main Library stands today.

In addition to learning technical aspects of engineering, Crawford says, he also learned some important rules of life at Iowa. One came from the building itself. Each day as he entered what was then the main door, Crawford walked beneath an inscription: “The main asset of the engineering profession is its reputation for honesty. It is the duty of all engineers to keep that reputation unsullied.”

“That’s something I’ve tried never to forget,” Crawford says.

Seventy-one years after Russell Crawford earned his engineering degree at Iowa, the college’s youngest alumnus, 19-year-old Ashish Sahai, earned his degree in biomedical engineering. Although he admits that “college life could get hectic—especially during exam week,” the Webster City, Iowa, native says he still had plenty of time to play basketball at the Field House and participate in Alpha Eta Mu Beta, an honorary organization affiliated with biomedical engineering. Like many of his contemporaries, Sahai took advantage of on-the-job education during his time at Iowa. As a student assistant, he helped develop prototype biomedical devices at UroSurge, a thriving start-up company located on the Oakdale Research campus.

As a first-year medical student at Iowa, Sahai thanks his engineering education for providing “a rigorous background, unique perspective, and the ability to think logically and independently.” He adds that computer training distinguishes him from traditional medical students.

“Engineers today are constantly being challenged to keep up with all kinds of new technology,” Sahai says. “Computers also have changed teaching styles in engineering.”

He notes that the trend is away from lecture format and theoretical subject matter, and toward team learning of practical subjects that can fulfill the market demands of an exploding technology/information-based economy. Future engineering students, he predicts, will be challenged to understand and design new technology at a dizzying pace. Sahai also foresees a beneficial increase in the number of women entering the field.

Despite the changes in the life of a typical engineering student during the 20th century, Sahai says that engineers of any era will continue to share certain characteristics, including creativity, commitment, and persistence.

— Jean C. Florman

Ashish Sahai (BSE in BE ’97) is part of a unique extended family based in Webster City, Iowa. Among the engineering students receiving their degrees from the University in May 1997 were Ashish’s twin cousins, Aalok K. and Rohit K. Sahai. Like their younger cousin, they graduated early from high school and earned their biomedical engineering degrees at Iowa in three years.

All three cousins now attend medical school at Iowa. Ashish says they did not plan their educational courses together, “It just happened.” And, he admits, “There’s a little competition among us, but it’s always friendly.”

This May, Ashish joined his family in cheering his 21-year-old sister, Preeti, as she walked across the Hancher stage to receive her diploma. The biomedical engineering student has applied to several medical schools, including Iowa.

Another cousin, Sanjeev Gupta, rounds out the family’s contingent at the engineering college. A junior, Sanjeev also is earning a biomedical engineering degree and hopes to enter the medical profession.
Every morning as he walked to elementary school, young Gary Seamans passed The University of Iowa’s Engineering Building, never suspecting what an important landmark it would become in his life. Now, thanks to a contribution of $3 million made by Seamans and his wife, Camille, that landmark has a new name.

“The Seamans Center for the Engineering Arts and Sciences will pay tribute to one of the college’s most generous and accomplished alumni,” says University of Iowa president Mary Sue Coleman. “Gary Seamans embodies the ‘can-do’ spirit that has always fueled our engineering students, faculty, and alumni, and that same spirit is leading the college into a very bright future.”

Seamans earned a bachelor of science in electrical and computer engineering at Iowa in 1971. During the following years, he gained valuable experience as an officer in the U.S. Air Force and as an engineer and executive at AT&T and MCI. In 1987 he became CEO of Westell Technologies, Inc., a leader in the emerging field of high-speed Internet access and video transmission to homes. In 1991 Seamans was named chair and CEO of the Chicago-based firm.

Through those years, Seamans maintained close ties to his alma mater. He has served on The University of Iowa Foundation board of directors and has chaired the class of ’71 fund-raiser. Today, he chairs the College of Engineering Building Campaign Steering Committee and the Engineering Development Council. In 1977 he received the Alumni Association Distinguished Young Alumnus Award and in 1996 he was named a charter member of the college’s Distinguished Engineering Alumni Academy.

“My time at Iowa truly broadened my thought processes,” Seamans says. “Like many engineering students, I wanted to understand the ‘whys’ of the world, and the college curriculum encourages students to reach out and take courses in art, psychology, and literature.

“My engineering education also taught me an approach to achievement that has served me well in my professional and personal life. And from my professors and advisers, I learned a model for mentoring. Even then, I knew that all these were arrows I wanted to put in my own quiver and use throughout my life.”

The building’s unique name recognizes the College of Engineering’s important ties with the College of Liberal Arts.

“It’s quite fitting for the distinctive character of education we provide,” says engineering dean Richard K. Miller. “The college has a long history of broadly educated graduates who go on to make their mark in many fields. These alumni benefit greatly from their exposure to liberal arts, business, law, medicine, and other fields of study. The building’s new name will be a signal to prospective students, employers, and industry representatives. It will help attract those who aspire to be leaders.”

Seamans emphasizes that the building’s new name honors his late father, Frances (“Fritz”), as well as his mother, Cheryl, and brother, James, who still live in Iowa City.
"My parents instilled in me the importance of the Golden Rule and of acting legally, morally, and ethically in all that we do," Seamans says. "They also encouraged us to be thankful for all that we had and to leave things better than we found them.

"And despite the fact that my parents were never well off, they always gave generously to help others," he adds. "Frankly, in proportion to what my parents gave to causes they believed in, what Cammy and I are doing here is not at that same level of giving."

Seamans' protests notwithstanding, the new gift is a generous and important contribution to the college's future. And the first step to that bright future is the building modernization.

"Gary has never lost sight of our goal of creating a student-centered environment that will secure the University's position as one of the very best engineering colleges in the country," Miller says. "The college always has been able to count on support and encouragement from engineering alumni like Gary."

And Iowa's engineering alumni truly are generous. Thanks to their extraordinary response to the call for contributions, the original goal for alumni giving has been raised from $8 million to $11 million.

As it has with many of its alumni, Iowa's College of Engineering clearly prepared Gary Seamans for a fruitful career. Now he has returned the favor.

—Jean C. Florman

Seamans retired from Westell in April 1998. He was profiled in the fall/winter 1995 issue of Iowa Engineer.

All set for cybervisits

What's every color of the rainbow, can be read all over (anywhere you can take a laptop, anyway), and provides fresh news just about every day, all year long? The College of Engineering web site, of course. And who made this stop on the World Wide Web so inviting? College of Engineering students, naturally.

Last year Jennifer Mich and Matt Warren, both juniors in chemical engineering, accepted a challenge to upgrade and expand the college's existing web site. Mich worked on the HTML code and Warren put together the graphics and together they came up with a bright, colorful, and eminently navigable web site.

"We wanted to make it easy to use for students, faculty, alumni, and the general public," says Mich, who learned some of the web coding skills she used for the project in an Internet systems design class she took last fall from industrial engineering professor Peter O'Grady.

The design experience was a step up for Warren, too.

"Before, the only project I'd designed was my own home page," Warren says. "The college's site involved accommodating a broader set of goals. With each page our skills grew, and that showed on subsequent pages. It was a good confidence booster."

The site covers the college's academic programs, students, faculty members, and alumni, its links with community, business, and industry, and much more. Plus there is a calendar of events for the college, a clear index and links to the Seamans Center construction page and the University's home page.

So surf on over to http://www.engineering.uiowa.edu to check out Mich and Warren's handiwork, see the latest building construction photos, and learn what's happening at the College of Engineering right now.
Realit

Students team with industry to design solutions and get a taste of work as engineers
In medicine, students learn the real stuff of being doctors through hands-on experience in clinics and hospitals. Couldn't on-the-job education be just as important for future engineers?

Ted Smith and Larry McMullen thought so in 1994, and the work-and-learn program they started then is proving them right.

Smith, University of Iowa professor of mechanical engineering, and McMullen, manager of engineering at John Deere Dubuque Works, built upon the long-standing relationship between the College of Engineering and Deere Dubuque to set up a program that charges engineering students with making a difference for industry while learning from it.

In creating their Program for Enhanced Design Experience, or PEDE, Smith and McMullen drew heavily on Deere Dubuque's resources—and needs. The two spent several weeks defining PEDE's goals and identifying potential design projects for Smith's mechanical engineering students to carry out.

When PEDE kicked off in fall 1994, the students who signed up divided into three teams and chose the PEDE projects they would complete during the following academic year. They designed a low-effort steering system, a track/tension adjuster, and a hydraulic control for blade pitch. All three projects were destined for Deere-Dubuque's production line.

Now, driven by three years of success, the program is expanding. More mechanical engineering seniors sign up for projects at Deere-Dubuque, and students from other engineering disciplines are participating in PEDE programs at other companies.

A team of electrical engineering students is well into its first PEDE project. Last August five undergraduates and one graduate student began working with Rockwell-Collins, in Cedar Rapids, to design a custom integrated circuit for a communication device that will be used in commercial aircraft.

The partnership was sparked by a mealtime conversation between Smith and Guy Gooch, a Rockwell-Collins engineering manager.

"Ted and I sat together at a dinner meeting last year," Gooch says, "and he told me about the work PEDE teams were doing at Deere. Not too long afterwards, one of our suppliers decided to stop manufacturing a part we use. The loss of the supplier, plus a technology change, forced us to consider building the part ourselves."

"But first we had to be able to produce the part in our Rockwell foundry," Gooch continues. "The redesign project seemed ideally suited for a PEDE team."

But there were security and licensing issues that required the work be performed at a Rockwell-Collins facility.

"So we decided to further cement our cooperative effort with the University by developing a workstation for PEDE teams at our Coralville plant," Gooch explains, adding that the University owns the computer workstations and Rockwell-Collins owns the software application programs.

Brian Lown, a teaching assistant in electrical and computer engineering, coordinates the students' work with Rockwell-Collins. Lown, who had industrial work experience before joining Iowa's graduate engineering program, knows the value of PEDE-style training.

"The big advantage is that students are getting the same kind of experience they'll have in their design careers," Lown says. "And the added motivation is that this part will actually be used in a jet some day."

Lown says the tie to industry also challenges instructors with helping students make the leap from what's taught in class to how concepts apply at work. For example, in order to redesign the custom integrated circuit, the students needed fluency in a text-based VHDL programming language. They took Rockwell-Collins classes in the language alongside Rockwell engineers, but Lown, who is well-versed with VHDL, gave them the additional instruction they needed to do the work.

"As an instructor, I stay current with design methods and techniques," Lown says. "And this project has helped me teach students how engineering concepts apply in industry."

"That's an incentive for both students and instructors." The PEDE programs with Deere Dubuque and Rockwell-Collins span an academic year. But market conditions can make such long-term commitments impractical for companies. To fill a need for shorter-term projects, the College of Engineering has begun offering students one-semester design courses.

As a result, more companies have begun sampling the partnership programs. Last fall HON Industries, Monsanto, General Electric, and Pella collaborated on projects with mechanical engineering students. Monsanto also gave a project to a team of chemical engineering students.

"Since senior students are not flexible commodities and can't switch class schedules at the last minute, the one-semester trial gives company executives time to see what students can design," Smith says. "It also gives a com-

(continued on page 18)
During fall 1997, 100 percent of senior design projects in the Department of Mechanical Engineering were supported by industry, says L.D. Chen, professor and chair of the department.

pany time to develop working relationships with University personnel before committing to longer projects."

Last year PEDE was joined by another work-and-learn program, Leveraging Expertise through Applied Projects (LEAP) is a spring-semester project course for industrial engineering students coordinated by Peter O'Grady, professor and head of industrial engineering. O'Grady says the one-semester approach ties in well with the kind of work industrial engineers do.

"Since we analyze processes rather than products, our projects require faster turnover," O'Grady explains. "They can be completed in one semester.

"Fourteen students enrolled last spring," he continues. "Our student teams made substantial cost-saving recommendations to the three companies involved."

An ingot plant simulation at ALCOA, in Riverdale, Iowa, led to recommendations that will save the company $1.63 million yearly. A supplies replenishing process study for Rockwell-Collins yielded a proposal for an inventory reduction plan with projected annual savings of $91,521. And a material handling process study for General Mills in Iowa City resulted in a boost in efficiency with a projected three-year benefit of $51,142.

O'Grady does not expect industrial engineering students to work with the same companies year after year.

"We need to look at different processes each time, so we're recruiting new companies for our studies," he explains.

The LEAP program's most valuable result is that it gets students "out of the ivory tower of academics and into the real world," O'Grady says.

"Students are required to take the initiative," he continues. "They have to make contacts, set schedules, and determine a plan of action. They study the dynamics of a real company rather than reading examples from a textbook. They discover that the best solutions are worthless if they can't get others to buy into them."

Smith and McMullen would like to see more companies involved in PEDE, and more opportunities for students across the engineering disciplines.

Above: Rockwell-Collins engineer Jim Ross (top) advises electrical engineering students Christopher Phan, Brent Bergan, and Christopher Chan (clockwise) as they work at the company's Cedar Rapids facility.

Right: Cheng B. Saw, associate professor of radiology, works with industrial engineering students Keri Christensen, Dusty Robinson, Kelly Leyu, and Josh James (clockwise from top) on a method to transfer oncology X-ray information electronically from Samaritan South Clinic, in Clinton, Iowa, to University Hospitals and Clinics, in Iowa City.
For example, McMullen says, "Deere has ergonomical projects relating to operator comfort that could be tackled by biomedical engineering students. And we have automation projects that electrical engineering students might choose."

Bill Lewis, a Deere engineering manager who advises PEDE teams, agrees that training programs need to be expanded and diversified.

"In today's competitive world, American industry requires talented, well-rounded engineers who are team players—engineers who can communicate ideas to technical and nontechnical associates," Lewis emphasizes. "The structures of organizations are changing, so engineers may have bosses without engineering degrees. They'd better be able to use everyday terminology to get their ideas across."

McMullen, who sits on the College of Engineering Advisory Board, emphasizes what he considers PEDE's chief virtue: the opportunity for teamwork.

"Let's face it—most educational programs enforce individual learning," he says. "Students are responsible for completing assignments on their own, and they are graded individually.

"Even though they work on lab teams, it's not the same," he continues, pointing out that typical senior design projects involve assignments that a student can complete without interacting with industry personnel.

"Since some 60 percent of all graduates move directly into industry jobs, and it takes anywhere from three to five years before they're truly productive, students and employers need ways to jump-start the training process," McMullen adds.

Gooch agrees and cites another of PEDE's virtues.

"Co-operative education, internships, and other on-the-job training courses are excellent tools for companies to use to evaluate good job candidates," he says, adding that Rockwell-Collins supported co-op and internship programs for many years before it became a collaborative partner with PEDE.

"We have a high demand for designers, and these programs give us the opportunity to observe students before we offer them jobs," Gooch says. "Many co-op students and interns are hired by Rockwell-Collins after they graduate. We expect to find good candidates among PEDE team members as well."

Clearly, work-and-learn programs open doors for everyone involved. Or, as Larry McMullen says, "A good on-the-job training program is like a three-legged stool. It's good for students, it's good for the University, and it's good for industry."

—Donna J. Wolmuth

Learning curve

Collaborations such as PEDE and LEAP will become increasingly important to the College of Engineering's academic programs into the next century, says a curriculum advancement task force appointed last year by Dean Richard K. Miller.

The task force cited co-ops, internships, and other work-and-learn programs as opportunities that help underpin the two defining characteristics of Iowa's engineering programs: flexibility in support of individual student aspirations and commitment to student success.
UI chief engineer of development shifts gears and keeps moving

While Iowa alumni are known for their dedication to the University, only one has led a four-decade quest for private gifts to his alma mater. And it should come as no surprise that this tireless advocate for Iowa’s largest University is also a College of Engineering graduate.

As president of The University of Iowa Foundation for the last 35 years, Darrell Wyrick (BSChE ’56, MS ’57) has raised millions of dollars for dozens of University buildings, renovations, programs, and projects. Students, faculty, parents, alumni, and thousands of other Iowans can thank Wyrick for his efforts whenever they stroll through Iowa’s Museum of Art, admire the John Pappajohn Business Administration Building, or cheer for the Hawks in Carver-Hawkeye Arena.

Last fall Wyrick decided to step down from the position he has held since 1962. But even though he is retiring as the foundation’s president, he will continue to work part time as a major gifts fundraiser. He’ll also maintain many of his professional ties, including those with the College of Engineering during its building modernization campaign.

“I’ve worked with the key contributors to this university,” Wyrick says, “some of them for more than 30 years. I have every intention of continuing to work with them to build an even stronger university. One way I can accomplish this is by continuing to work as a member of the College of Engineering Campaign Steering Committee and Development Council.”

With finesse, aplomb, and a sense of humor, Wyrick has earned renown as a fund-raiser. “The minute Darrell asked for contributions to build Carver-Hawkeye Arena, we had to jump out of the way of the money,” says Marvin Pomeranz, a Des Moines businessman who is a
member and former chair of the foundation’s board or directors and has served as president of the State Board of Regents.

Wyrick, a native of Fort Madison, Iowa, always knew he would attend The University of Iowa.

“My parents both had sixth-grade educations,” he says, “but from the time I was young, they always told me I was going to Iowa City for college.”

Even in his first years on campus, Wyrick made quite an impact on the University. He was an officer of the student chapter of Tau Beta Pi, a member of Omicron Delta Kappa leadership fraternity, and the editor of the engineering student magazine, The Transit.

Like many “Chem-E’s” of the era, Wyrick looked to Karl Kammerneyer as a teacher and adviser.

“One of the best things Professor Kammerneyer taught me wasn’t even about chemical engineering,” Wyrick says. “It was how to interview for, get, and keep a job.”

Apparently the message stuck. In his remarkably successful career, Wyrick has held all of two jobs. Shortly after earning his master’s degree, he and his new bride, Shirley, moved to Minneapolis, where Wyrick began work as a design and process engineer for Archer Daniels Midland. After five years, the couple returned to Iowa City so Wyrick could begin a new job as the first full-time employee of the fledgling UI Foundation.

“There was much about engineering work that I enjoyed,” says Wyrick, who to this day sometimes arrives at meetings with engineering alumni sporting the belt-loop slide rule and Clark Kent glasses he wore in college. “But I’d already decided that I was less interested in the technical side of engineering than in marketing and sales.”

When Wyrick began as the foundation’s executive director in 1962, total gifts and commitments to the organization fell short of $100,000 and assets were less than $500,000.

Today Wyrick has been joined by a staff of more than 100. Annual gifts and commitments exceed $75 million, and through careful planning and investment, the foundation’s assets have grown to more than $500 million.

Under Wyrick’s guidance, the foundation has spearheaded more than 20 single-purpose capital campaigns. The generosity of Iowa alumni and other friends has enabled the nonprofit organization to raise funds to build and improve University resources such as the Health Sciences Library and the Museum of Natural History’s Iowa Hall, and to restore Old Capitol. Major efforts have created more than 50 endowed faculty chairs and 120 endowed graduate fellowships.

The Iowa Endowment 2000 Campaign is just one measure of Wyrick’s success as head fund-raiser. Launched in 1985 with a campaign steering committee, Wyrick is both campaign staff member and volunteer for the Engineering Building modernization.

“I take great pride in working alongside Dean Miller and all the other people involved in this very important engineering college project,” Wyrick says. “Although improving the entire University will always remain paramount for me, no other college is as close to my heart.”

During the last 36 years, Wyrick frequently has been recognized for his extraordinary efforts on behalf of the college and the University. He was named an honorary Iowa Letterman by the National Iowa Letterman’s Club. In 1992 he received the Alumni Association’s Distinguished Alumni Award, and in 1996 he was inducted as a charter member of the Distinguished Engineering Alumni Academy. In addition, Wyrick is a member of the board of directors of The University of Iowa Alumni Association, the Presidents Club, and The University of Iowa Research Foundation.

Last fall, he rode in a Model-T Ford coupe as Grand Marshall of the Homecoming parade. “Foundation staff members and their families—170 in all—marched behind us cheering, singing, and playing kazoos,” he says. “It was great.”

But despite his many kudos, the modest Wyrick always deflects praise onto the people with whom he has worked for so long.

“I can’t tell you how proud I am of my staff and of the Iowa alumni and friends who always come through to support this superb institution,” he says.

They’re proud of you too, Darrell.

—Jean C. Florna

Left: Wyrick on a late-winter visit to one of his works-in-progress, the Levitt Center for University Advancement since May the new home of The University of Iowa Foundation.
Alumni champions honored at breakfast and induction

The College of Engineering has inducted two new members into its Distinguished Engineering Alumni Academy. John W. Morris (MS ’48) and Richard H. Stanley (MS ’63) were welcomed to the academy at a Saturday morning breakfast on February 28, part of the college’s celebration of National Engineers Week.

Morris, a retired army lieutenant general, is president of J.W. Morris Ltd., a global engineering construction and consulting firm. He is a member of the National Academy of Engineering (NAE) and in 1996 became one of only 81 engineers ever to receive the NAE Founders Award.

Appointed the army’s 44th chief of engineers in 1976, Morris spent the next decade developing the corps of engineers’ focus on environmental objectives. In 1977 Engineering News Record named him Construction Man of the Year. He has received the Defense Meritorious Service Medal, the Army Distinguished Service Award, five Legions of Merit, the National Parks and Recreation Association Humanitarian Award of the Year, the Palladium Medal, an Audubon Society award, and a presidential award for management from Lyndon Johnson.

Morris was named to the first endowed chair in construction management at the University of Maryland and is an honorary professor at East China Technical University, a trustee of the Association of Graduates of the U.S. Military Academy, and an adjunct professor at the University of Maryland.

Stanley, a native of Muscatine, chairs the board of Stanley Consultants and is vice chair at HON Industries and a director of Dover Resources. He is president of The Stanley Foundation, a private organization that encourages promotion of arms control initiatives and strengthening of the United Nations. He also has served on the Emergency Coalition for U.S. Financial Support of the United Nations and has chaired the board of the Northeast-Midwest Institute.

In 1984 Stanley helped found the Muscatine Health Support Foundation, a grant-making body that supports community health and development of the Muscatine area medical care system. Stanley serves the organization as president and director.

The induction ceremony, hosted by Theta Tau, National Professional Engineering Fraternity, celebrated the Academy’s third year and brought its membership to 23.

Nominations

Every year the College of Engineering welcomes nominations for its Distinguished Engineering Alumni Academy. Membership in the academy recognizes contributions to personal engineering achievement, leadership, and service to the profession and society.

Inductees for 1999 will be honored during National Engineers Week, to be held in February.

Eligibility criteria

In order to be nominated, individuals should meet the following criteria.

• They must hold an engineering degree from The University of Iowa, maintain a close association and supporting role with the College of Engineering, and be living at the time of selection.

• They must have made distinguished contributions to the theory and practice of engineering or demonstrated major accomplishments of guidance in emerging fields of engineering technology.

• They must have managed or directed an organization that has made noteworthy national or international contributions in design, construction, production, or service delivery through application of complex engineering principles.

• They must have contributed exceptional service to their community and to the College of Engineering.

How to submit nominations

Complete nomination information should be sent in letter form to the college’s award selection committee. Nominations should include as much of the following information as possible.

• Nominee’s name, title, address, and telephone

• A list of noteworthy accomplishments

• A record of professional experience, especially extraordinary and unique contributions

• Principal technical society memberships, activities

• A list of noteworthy public service accomplishments

• Seconding letters of recommendation and support

• A list of awards and their selection criteria

• A résumé, including important contributions, publications, and patents

Nomination materials should be sent to Distinguished Engineering Alumni Academy Review Committee, The University of Iowa, 3100 Engineering Building, Iowa City, IA 52242-1527. Nominations are due by September 15, 1998.
Readers who would like to correspond with alumni mentioned in Class Notes can get address information from the University’s alumni office. Contact Alumni Records, The University of Iowa, 400 Levent Center for University Advancement, Iowa City, IA 52242-1797; phone 319-335-3297. E-mail: alumni-records@uiowa.edu

**1930s**

Theodore F. Taylor (BS in EE '30) is retired and lives in Hendersonville, Tenn. He reports that every day is beautiful—and the weather's nice, too.

**1940s**

Albert L. Fillenwarth (BSE '41) still lives in Palm Harbor, Fla., and spends time sailing in the Bahamas and the Caribbean. He retired in 1984 from GATX Corp.

David K. Hart (MS '41) owned his own company until 1986, when he sold it to an employee. Still known by its original name, the David K. Hart Company makes attachments for business forms printing presses. Hart and his wife, Thelma, live in Alexandria, Va.

Robert Hughes (BSE '41) is retired and lives in Sun City Center, Fl.

George A. Meyers (BSE '41) writes that he is still retired and enjoying it all. Meyers lives in Fort Collins, Colo.

Guadalupe E. Allen (MS '42) remembers that in September 1941 he began work as a University of Iowa research assistant for Dr. Olin in the chemistry/chemical engineering department, where he was when news of the attack on Pearl Harbor came in. Upon finishing his master's degree, Allen went to work at Dow Chemical Co., where he worked for 31 years before retiring. One of his assignments was on the start-up crew for a magnesium plant in Ludington, Mich. Allen lives in midland, Mich.

Louis E. Davis (MS '42) lives in Los Angeles and is a professor emeritus at UCLA Anderson School.

John W. Nore (BSE '43) was president of his company, B-JAC International, Inc., until October 1986, when he sold it to Aspen Technology, of Cambridge, Mass. Nore lives in Midlothian, Va.

Richard E. Brink (BSE '44) spent two years in the U.S. Navy Reserve fixing radio/radar sets before going to work at 3M as an engineer in 1946. That year he also married Helen Laddig. After earning a J.D. from William Mitchell College of Law, he was a patent counsel at 3M. In 1959 he coauthored a book, *An Outline of United States Patent Law.*

Brink served on his city's school board from 1960 to 1970, chairing the group for several years. He and Helen had two children. Helen died in 1997.

In 1989 Brink married Ruth Brandy Cozins. The two spend time in Atlanta, Ga., and White Bear Lake, Minn. where Brink is a charter member of White Bear Lake United Methodist Church.

Fawad N. Khanbaz (MS '47) is retired and has lived in California since 1981, since emigrating from Beirut, Lebanon, with his wife and four children. Khanbaz writes that he would love to hear from his fellow Alpha Chi Sigma members, with whom he shared the fraternity house on East Market Street in 1946-47.

William W. Ellsworth (MS '48) retired in 1983 as associate technical director for systems development at the David Taylor Research Center and joined Engineering Science Associates as a consultant and chair of the board of directors. When that concern closed in 1994, he began his own firm, Ellsworth Engineering, to work as a consultant in naval engineering. Ellsworth lives in Bethesda, Md.

John W. Morris (MS '48) spent 37 years in the army before retiring in 1980 as a lieutenant chief of engineers. He writes, "We had 15 army officers in my class, and we remain friends." Now Morris is a professor at the University of Maryland, trustee emeritus of the U.S. Military Academy, and chair of J.W. Morris, Ltd., where he does international consulting work. He lives in Arlington, Va.

In February Morris was inducted into the college's Distinguished Engineering Alumni Association (see story on page 22).

Howard Weger (BSE '49) has moved to Sun City West, Ariz.

**1950s**

Gerald Lucke (BSE '50) retired from Texas Instruments Inc. in 1989, after 32 years on the company's technical staff. Then he served as vice president of Master Publishing, Inc., of Richardson, Tex., until 1996, when the business was sold. He now owns Lucee Enterprises and continues as a consultant to Master Publishing. Lucee lives in Rockwell, Tex.

Vern L. Petersen (BSE '50) lives in Davenport, Iowa, and reports that his new is 94. He maintains a daily routine of care for his wife, Dorothy, who has experienced some disability for the past four years. Petersen, who is retired from Palmer Broadcasting, operates amateur radio W0DJD and says that engineering is "still part of living."

Bingman Lin (MS '47, PhD '51) has received the Arland lands Hydraulics Engineering Award from the American Society of Civil Engineers, Lin, a charter member of the College of Engineering's Distinguished Engineering Alumni Association, also has been awarded the title "Distinguished Worker" by the National Science Assembly of China. He is a member of the Chinese Academy of Science and an honorary member of the International Association of Hydraulic Research.

Lowell R. Aspholm (BSE '57) retired from Boeing in 1985, after 38 years with the company. He spent much of his time in computer engineering, helping Boeing integrate computer-aided design into its operations. He lives in Gig Harbor, Wash.

Tesfagleid Hagos Asgedom (BSE '58, MS '65) died in Cincinnati, Ohio, in May 1989, writes his daughter. Sofia Asgedom was an electrical engineer with the Ethiopian Electric Light, and Power Authority and had responsibility for bringing electricity to various regions of Ethiopia. After retiring in 1985, he assisted the electrical power authority of Eritrea. He was buried in his ancestral village of Alebi, Eritrea, in June.

Howard D. Wairath (BSE '59) was named a Top Ten Telereporter last October by Teleprofessional Magazine, which called him a "founding father of the call center industry." In the early 1970s, Wairath led the Rockwell International team that developed the automatic call distributor (ACD), the first computer-controlled, all-digital call distribution system in the industry. Wairath's ACD was first put to use by major commercial air lines to support their growing network of reservation centers. Wairath retired in 1985 as vice president of strategic planning and venture analysis at Rockwell. Before that he worked for Collins Radio Company from 1955 until the company merged with Rockwell in 1973. He also served on the College of Engineering Advisory Board during the 1970s. Wairath and his wife live in Shady Shores, Tex.

Duane V. Greenfield (BSE '60) retired in 1990 after serving as public works director, deputy city manager, and interim city manager for the city of Barstow, Calif. Greenfield and his wife now live in Pueblo West, Colo.

George W. Heasley (BSE '60) retired in 1993 from Northrop Grumman Corp. He and his wife travel full-time, spending time in Florida and in various cities across the U.S.

Gerald E. Mann (BSME '60) retired in late 1993 as senior vice president of Magnatek, Mann lives in Waukee, Iowa.

Paul F. Morgan (BSE '60) lives and works in Rochester, N.Y., where he is senior patent counsel for Xerox Corporation.


Darvin E. Schroeder (BSME '67) is a human resources consultant in Minneapolis, Minn., in Minnesota, Ill., where he currently serves on a short-term assignment coordinating technical recruitment for the company's elevator escalator (KONE) and manufacturing design. Schroeder lives in Bettendorf, Iowa.

Joseph M. Trentle (BSE '61) recently retired from General Electric after more than 33 years with the company. Trentle, who worked for the past 20 years in GE's Medical System Division, spent most of his career in manufacturing, retiring as manager of manufacturing for GE's ultrasound diagnostic imaging group.

Trentle has kept in touch with the University through recruitment work and has served on the engineering dean's advisory council. He and his wife, Andrea, who graduated from Iowa's College of Nursing in 1959, live in Wisconsin, Wis.

William D. Ashton (BSE '62, MS '63) is a partner in Ashburn-Barnes Engineers, Inc., of Des Moines, Iowa. The firm recently won the Iowa Engineering Society's Eminent Consultant Small Firm award for a flood protection project in Keokuk, Iowa. The $5 million project enabled Keokuk's Roquette America to move ahead on a $400 million plant expansion that will protect the city's wastewater treatment plant during flood events.

Richard H. Stanley (MS '63) was induced in February into the college's Distinguished Engineering Alumni Association (see story on page 22).

J.D. Thoreson (BSEE '64, MS '65) has developed a method to measure, calculate, scale, and diagram the economic power of individual enterprises. Thoreson's work has been published by Valuable Information Ltd., a Texas firm, which reports that the titles of Thoreson's books are "The Information Advantage, Mean of Time, and Information Secrets."

Wesley A. Vincent (BSE '65) lives and works in Kokomo, Ind., where he is a product line manager in integrated circuit design.

(continued on page 22)
Continued from page 23

remediation at Delco Electronics. Vincent also chairs a training council for engineers and writes that he would like to correspond with fellow alumni who are involved in engineering training and technical training.

Richard William Tock (BS '63, MS '64, PhD '67) is professor and interim chair of chemical engineering at Texas Tech University. Tock has been on the Texas Tech faculty since 1974. He lives in Lubbock.

Scott E. Dahms (BSIE '80) is senior manager for welding and welding maintenance for Jefferson Industries, of West Jefferson, Ohio. Dahms lives in Dublin.

1970s

David R. Allbaugh (BSME '79) has been promoted to manager of worldwide tractor engineering at John Deere Waterloo Works, where he has worked for many years as manager of the drivetrain division. He lives in Waterloo, Iowa.

Roger M. Moore (BSME '79) is a project manager at Boeing Aerospace, Canoga Park, Calif. After graduating from Iowa, he worked to build nuclear-powered generating stations, then signed with Rockwell International to work on power, space, and defense technologies. Moore earned an M.B.A. from California Lutheran University in 1986, and in 1995 he was awarded a patent for a solar/gas electrical generating system. He also teaches a conflict management class over the Internet. Moore lives in Newbury Park.

William J. Molls (BSME '77, MS '78) is project manager at American Home Products, of Waukegan, Wis. Molls, who writes that he enjoyed the 40th reunion of the class of 57, lives in Madison.

Chris D. Trehan (BS '72) lives and works in Longmont, Colo., as president of Quist Business Appraisals, Inc.

Leon Baxter (BS '73) has been promoted to division chief for quality assurance at the Iowa Army Ammunition Plant, in Middletown, Iowa. Baxter is project manager for on-site

1980s

Tammy Sandwich James (BSIE '82) is chief engineer at the Duke University and Medical Centers, Durham, N.C. After graduating from Iowa, James worked in industry in several years before earning a master's degree in environmental engineering from George Mason University. Since then she has worked to reengineer workplace in order to reduce pain and discomfort for employees. James lives in Raleigh with her husband and daughter.

Andrew Leopold (BSIE in BMIE '84) is vice president for engineering at Murray, Inc., which provides product and equipment engineering services to the medical and plastics industries. Leopold works in Buffalo Grove, Ill., and lives in Hawthorn Woods.

1990s

John Behrens (BSIE in ME '90) writes that he has been a project engineer with the U.S. Army Corps of Engineers for seven years. He develops plans and specifications for construction projects along the upper Mississippi River's lock and dam navigation system and various reservoirs in Iowa, including the Coralville Reservoir. He works in Rock Island, Ill., and lives with his wife, Kelly, and daughter, Alisa, in Davenport, Iowa.

Kumar V. Chauhan (BSIE in EE '90) reports that he completed his M.S. in electronics from University of California Los Angeles and is now working on a Ph.D. at University Science Malaysia, where he is researching technology transfer and management for developing countries. He also is senior engineer for computer engineering at NORTEL (Northern Telecom) Malaysia.

1990s

John W. Crowley (BSIE in ChE '94) is a production engineer at Mason & Hanger Corp., Middletown, Ohio, where he works on ordnance production for the army military operations command, in Rock Island, III. Crowley writes that he recently was married and enjoys spending time with his wife, the Crowleys live in West Burlington.

Thomas Miller (BSIE in ChE '94) recently was promoted to superintendent of the phosphoric acid department at Cargill Fertilizer, Inc., in River View, Iowa. He lives with his wife, Sherry, and their two children in Vail, Iowa.

Michael M. Sweeney (BSIE in EE '90) left Nucor Steel to join Northrup Grumman's commercial aircraft division, where he is lead manager of manufacturing technology engineer in the machine shop, concentrating on producing tail sections and control surfaces for all Boeing airplanes as well as the C-17, B-2, and wings for the Gulfstream business jet. Sweeney lives and works in Dallas, Texas.

Tom Erdahl (BSIE in EE '91) is an electrical engineer at Camp Dresser & McKee, Inc., a global environmental engineering consulting firm in St. Paul, Minn. Erdahl works on water and wastewater treatment plant projects, primarily on process control systems upgrade for the 33-million gallon-per-day St. Paul Metro wastewater treatment plant. Erdahl lives in Mendota Heights.

John B. Gieselerich Jr. (BSIE in EE '91) lives and works in Farmington, Minn., where he is a sales engineer at Dakota Energy Alternatives, Inc. Gieselerich and his wife, Vicki, welcomed their son, Trenton Daniel, last November. Their first child, Tyler, is 3 years old.

Wu-Joon Kim (PhD '91) works in the ship performance department at the Korea Research Institute of Ships and Ocean Engineering, where he specializes in computer software.

Julie Vitello (BSIE in EE '91) earned an M.B.A. from Lake Forest College in 1997, with honors. Now she is a marketing engineer with S&G Electric Company, of Chicago, where she specializes in products for the electric utility industry. Vitello lives in Mt. Prospect, Ill.

Thomas F. Blaskey (BSIE in EE '91) and Misty Scarff (BSIE in EE '94) were married last October. They both work for International Paper, he as senior process manager for maintenance and she as senior project engineer in the paper mill and powerhouse areas. Blaskey reports that he earned an M.B.A. in 1996 from Texas A&M. The Blaskes live and work in Texarkana, Texas.

Hutchins B. Coburn (BSIE in EE '92) has joined Seagate Technologies, in Minneapolis.

Jeffrey L. Johnson (BSIE in ME '94) is president of Johnson Machine Works, a family-owned steel fabrication company in Charleston, Iowa. Johnson lives in Urbandale.

Terry Rounds (BSIE in EE '92) is a quality manager for Lurcher Truck Equipment, of Brandon, S.D. He writes, "Now that I'm in the workplace, I realize how much I miss my well-rounded education at Iowa State University." Rounds lives in Stcox Falls.
Helen Begin Donta (MS '93) lives and works in West Roxbury, Mass., where she has returned to Donatek Consulting half-time after the birth of identical twin boys, Nik and Max. Donta is an engineering consultant to the biotech industry.

Julie L. Muenchow Hicks (BSE in CH '93) is an environmental engineer at Nalco/Exxon Energy Chemicals, L.P. She lives and works in Sugarland, Tex.

Erneka A. Amaranze (BSE in EE '94) is studying law at the University of Pittsburgh School of Law, where he is president of the Intellectual Property and Technology Law Society and editor-in-chief of the Intellectual Property and Technology Law Review. Amaranze took the patent bar examination in August 1997 and graduated this May.

Karen E. Bellsmit (BSE in CE '94) joined Vistawall Architectural Products, of Terrell, Texas, after graduation. She began as a structural designer and now is a project manager. Bellsmit also is working toward registration as a Professional Engineer and is pursuing an M.B.A. in engineering management at the University of Dallas.

Thomas Carroll (M.S. '94) lives and works in Joliet, Ill., where he is a civil engineer for the city.

Matt Lane (BSE in IE '91, MS '94) earned his MBA from Iowa in 1995. He is a marketing manager for supply chain programs at Hewlett-Packard, in Cupertino, Calif., and previously was responsible for launching electronics test outsourcing services for H-P. Lane writes that his wife, Lara, is a OB/GYN physician at Kaiser Permanente, in Santa Clara, the Lanes live in San Jose.

Brian Elstead (BSE in CE '95) and Jason Elstead (BSE in CE '95) are both design engineers in Houston, Texas. Brian at Cagle, Conti, and Jumper, and Jason at Haynes-Whaley Associates, Inc. They report that they just hang out together in Houston, strumming their guitars, and they’re still Hawks fans.

Vincent Ackerman (BSE in CH '96) works at Anderson Consulting, in Chicago. He lives in Des Plaines, Ill.

Sarah Christ (BSE in CE '94, MS '96) is a first lieutenant in the U.S. Air Force, stationed at Eglin Air Force Base, in Florida. She calls Clear Lake, Iowa, home.

Randy L. Krutzfeld (BSE in CE '95, MS '96) has been promoted from civil engineer to project manager at McClure Engineering Co., of Iowa City.

Brendan P. McLennan (BSE in CE '96) works in Chicago, where he is a civil engineer with Ecology & Environment, Inc. McLennan reports that he is a member of the Superfund technical assessment and response team, which provides technical support for the U.S. Environmental Protection Agency. He lives in Glen Ellyn, Ill.

Joseph J. Norris (BSE in EE '96) is an electrical engineer at Bodine Electric Co., in Chicago, where he works in the engineering product design group. Norris lives in Downers Grove, Ill.

Brad Skoff (BSE in CE '96) is a structural engineer at Trus Joist MacMillan, an engineered lumber manufacturer company in Edina, Minn. Skoff reports that his company's products are used in residential construction as well as in commercial applications, such as for floor and roof systems. Skoff lives in Minneapolis.

Salman Tariq (BSE in ME '96) is a research assistant at the University of Wisconsin-Madison, where he is working toward a master's degree in mechanical engineering and doing research in polymer processing and rheology. Tariq lives in Madison.

Bradley W. Comer (BSE in CE '97) is working toward a master's degree in business at the University of Colorado. Comer lives in Denver, where he catches Hawkeye games with a crowd of Iowa fans at the Sports Column. Comer reports that the establishment's owner, who also owns the Sports Column in Iowa City, won't allow Colorado Rockies or University of Colorado football games on his big screens when the Hawkeyes are playing.

Jim Jordahl (PhD '97) is a project and soil scientist at C1225 Hill, of Portland, Ore. He lives in Lake Oswego.

Carl Mannheim (BSE in CE '95, MS '97) is a water resources engineer at Bonestrod, Rosene, Anderlik & Associates in Minneapolis, where he works in stream restoration and rainwater basin drainage analysis.

Lorri M. Schrock (MS '97) is an environmental engineer working on industrial remediation projects at ICF Kaiser Engineers, of Pittsburgh, Pa. She lives in Wexford.

Scott Wright (MS '97) works at Philip Williams & Associates, Ltd., in San Francisco, where he does sediment and water quality modeling for river and wetland restoration projects and flow modeling for flooding issues.

John E. O'Toole (BSCE '34), of Lafayette, Ind., March 1885
Horace E. Sykes (MS '35), of Downers Grove, Ill., December 17, 1996
W.J. Wehmsmeyer (BSCE '37), of Melbourne, Fla., June 24, 1997
Arthur L. Munson (MS '38), of Evaston, Ill., August 21, 1992
Henry E. Hughes (BSCE '40), of West Covina, Calif., January 18, 1992
Carl F. Izzard (MS '40), of Arvington, Va., July 8, 1997
Robert A. Stock (BSCE '42), of Chappaqua, N.Y., May 3, 1991
Harold Hansch (BSCE '43), of Tucson, Ariz., January 25, 1996
George E. Mathiowig (BSCE '50), of San Pedro, Calif., August 28, 1983
John Earl Maddox (BSCE '50), of Rockledge, Ga., November 28, 1993
W. Jack Sward (BSCE '50), of Arcadia, Calif., August 1978

James E. King (BSE '50, MS '51), of Barstow, Calif., September 6, 1994
William C. Larson (BSE '51), of Lancaster, Pa., August 16, 1995
Herbert "Petie" Knese (BSCE '51), of Moline, Ill., July 28, 1997
John C. Nutt (BSE in IE '56), of Bloomington, Minn., August 26, 1997
Donald L. Stoecker (BSCE '57), of Cedar Rapids, Iowa, July 22, 1997
Tesfadiet Hagos Asgedom (BSE '50), of Addis Ababa, Ethiopia, May 1997
Thomas A. Woodruff (BSCE '59), of Lewiston, Pa., November 16, 1988
Andrew J. Hauer (BSME '60), of Center Point, Iowa, September 25, 1987
Harry W. Alexander (MS '66), of Denver, Colo., January 20, 1997
Michael W. Hansen (BSE in IE '91), of Muscatine, Iowa, August 28, 1997
Danelle L. Harrington, graduate student in industrial engineering, November 23, 1997
Louis Landseeburger, professor emeritus of mechanical engineering, January 19, 1996

In memoriam
New faculty

Joseph M. Reinhardt
Assistant professor of biomedical engineering
B.S. (’85) in electrical engineering, Carnegie Mellon University
M.S. (’88) in electrical engineering, Northeastern University
Ph.D. (’94) in electrical engineering, Pennsylvania State University

Professional experience
Systems engineering at Raytheon Co.; postdoctoral fellow and assistant research professor in the UI Department of Radiology

Research interests
Measurement and segmentation of the human airway tree; lung strain analysis

Specialization
Medical imaging processing, 3-D and 4-D image processing, computer vision, medical information systems

I was excited to join the College of Engineering because of the opportunity to teach engineering courses at both the undergraduate and the graduate level. The University of Iowa also offers a great place for my research, which focuses on medical imaging.

We are using 3-D X-ray CT imaging to examine the mechanical and physiological properties of human lungs. Iowa has a renowned medical center, and I have access to collaborators from electrical engineering, biomedical engineering, radiology, and pathology to help with my research projects.

David G. Wilder
Associate professor of biomedical engineering
B.S. (’74), M.S. (’78), Ph.D. (’85) in mechanical engineering, University of Vermont

Professional experience
Vibration and Seating Lab director, Iowa Spine Research Center; senior designer, Biomedical Engineering Laboratory, University of Iowa; research associate professor and lecturer in biomechanics, University of Vermont; consultant to U.S., U.K., and Canadian government agencies, to business and industry, and to vibration standard-setting groups

Research interests
Human response to whole-body impact and vibration

Specialization
Spinal biomechanics, ergonomics, biomechanics, whole-body vibration

Engineers are artists who use engineering tools to meet challenges. The results of our creative endeavors are the creation of jobs, wealth, and new perspectives and understanding.

My goals are two-fold. First, I want to teach through unforgettable methods and images. Second, I hope to help reduce pain, suffering, and the annual $100 billion unnatural disaster of low back pain for the U.S. economy. That involves using engineering methods to understand and solve problems in the human lumbar spine.

Biomedical Engineering
Sarah Anderson, a junior from Robbinsdale, Minn., was a senator in the 1997-98 UI student government.

Malcolm H. Pope, professor, has been appointed to a three-year term on the board of directors of The University of Iowa Research Foundation. The foundation manages inventions and intellectual property at the University of Iowa. Pope also was named deputy editor of the Journal of Spine, elected to the board of directors’ research board of the American Spinal Research Foundation, and named an expert consultant for Consumer Reports on Health, a national magazine published by Consumers Union.

David G. Wilder, associate professor, was elected to the board of directors of Systems Unlimited, an Iowa City engineering company.

Civil and Environmental Engineering

A. Allen Bradley, assistant professor, received a National Science Foundation Career Award in Fall 1997 for his research on improved estimation of extreme rainfall for flood hazard assessment.

Robert E. Ettema, professor, has been named editor of Journal of Hydraulic Engineering, published by the American Society of Civil Engineers. He succeeds A. Jacob Goad, professor, who had served as editor since 1993.

Forrest M. Holly, professor, organized and chaired the 27th Congress of the International Association of Hydraulic Research, held last August in San Francisco by the American Society of Civil Engineers Water Resources Engineering Division. The meeting was attended by more than 1,000 hydrosciences and fluid engineers, educators, planners, policy makers, practitioners, researchers, and students worldwide.

Wilfrid A. Nixon, associate professor, was recognized in September as a member of the lead state team in competition at the Second SHRP Implementation Lead State Conference in St. Louis, Mo. Nixon was a member of the anti-icing/roadway weather information systems lead state team.

Chemical and Biochemical Engineering
Faculty members and graduate students participated in the American Institute of Chemical Engineering meeting held last November in Los Angeles. Chalering sessions or presenting papers were David Murhammer, associate professor; Jonathan S. Dordick, professor; Victor G. J. Rodgers, associate professor; David G. Rethwisch, professor; and Tonya L. Peebles, assistant professor. Student participants were Jennifer Poelke, senior from Indiana, Iowa, and Heather Jewell, junior from Waterloo, Iowa, both of whom presented papers; Jennifer Mich, junior from Oskaloosa, Iowa; Benjamin Nothwehr, junior from Spencer, Iowa; Jonathan Parke, junior from Center Point, Iowa; Justin Paul, junior from Iowa City; and Mylinda Rodgers, junior from Chicago.

John M. Wiencek, associate professor, received the distinguished Iowa Faculty Scholar Award to study advanced techniques in protein structure determination by X-ray diffraction. His findings will be applied in the department's newly established X-ray diffraction facility.

David W. Murhammer, assistant professor, spoke on developing a chemical process safety laboratory at an American Society of Engineering Education summer school held last August in Snowbird, Utah.
Industrial Engineering

Al Halline Jr., instructor and graduate student, is one of two volunteers visiting Estonia to help install economic programs for that nation's elementary and secondary schools. Halline is working with a Junior Achievement program that has collaborated in short-term teacher exchanges with the Baltic nation.

Peter J. O'Grady, professor, won the Norman A. Dudley Award for the best paper published in International Journal of Production Research in 1996. O'Grady received the award last October in London.

Mechanical Engineering

Christoph Beckermann, professor, has been appointed associate editor of the American Society of Mechanical Engineering's Journal of Heat Transfer.

V. C. Patel, professor and director of the Iowa Institute of Hydraulic Research, received the 1997 Fluids Engineering Award from the American Society of Mechanical Engineers International.

Sharif Rahman, assistant professor, received a certificate of recognition from the American Society of Mechanical Engineers (ASME) Pressure Vessels and Piping Division for his service as volume editor and his development of technical sessions at ASME conferences. He also was awarded a certificate of recognition by the National Aeronautics and Space Administration for his research on ceramic reliability analysis made through the 1997 NASA/ASME Summer Faculty Fellowship Program. Rahman also was elected vice chair of the ASME's Materials and Fabrication Technical Committee, Pressure Vessels and Piping Division, for 1998-2001 and technical program representative for the 1998 ASME/ASME Pressure Vessels and Piping conference.

Electrical and Computer Engineering

Thomas L. Cassavant, associate professor, is on a team of University of Iowa researchers who received a $30.7 million grant to identify and locate genes in the rat genome. The grant was awarded by NIH's Heart, Lung and Blood Institute and the National Human Genome Research Institute, which provides primary research funding for the human genome project.

Soura Dasgupta, professor, has been elected to the rank of fellow of the Institute of Electrical and Electronics Engineering.

Norbert R. Malek, professor, organized and chaired the 59th Annual North Midwestern Section Annual Meeting of the American Society of Engineering Education October 9-11 in Iowa City, Iowa. The event, which centered on outcomes assessment in engineering, was the first of its kind to be held at The University of Iowa in more than a decade.

Advisory Board members

Lila A. Abrom
President
PEER Consultants, PC
Rockville, Md.

Joseph Adamski
Senior Staff Engineer
Amana Appliances
Amana, Iowa

John Calhoun
President
Calhoun-Burns & Associates, Inc.
West Des Moines, Iowa

Pearl Cheng
Associate Director, Information Systems
NASA-Ames Research Center
Moffett Field, Calif.

George Ebel
President and CEO
McDonnell Douglas Corp.
USC Division
Downtown, Calif.

Larry G. McMullen
Manager, Product Development
John Dewar and Sons
Dubuque, Iowa

Karen Kjar
Senior Project Engineer
Energy Management
3M Company
St. Paul, Minn.

Terry L. Martin
President and CEO
Brown Engineering Company
West Des Moines, Iowa

Joseph B. Summers
President
Summers Engineering, Inc.
Hammond, Calif.

Greg G. Thomopoulos (board chair)
President
Stanley Consultants, Inc.
Muscatine, Iowa

Timothy M. Wilkinson
President
Aluminum Company of America
Bettendorf, Iowa

David N. Wormley
Dean, School of Engineering
The Pennsylvania State University
University Park, Pa.

Development Council members

Ronald W. Dunmire
President (Ret.)
Cedar Rapids, Iowa

Philip H. Francis
President
Management Consulting, LLC
Schaumburg, Ill.

Thomas R. Hanson
Managing Partner
Hannan Anderson Sales
Downtown, Iowa

Samuel X. Kaplan
University of Iowa
Santa Monica, Calif.

Thomas J. Lowenberg
Director of Facilities, Engineering and Real Estate (Ret.)
3M Company
St. Paul, Minn.

Henry J. Meyer
Senior Vice President (Ret.)
Bayonne Group
Chair and CEO (Ret.)
Amana Refrigeration, Inc.
Amana, Iowa

Randall Meyer
President (Ret.)
Exxon Corp.
Houston, Tex.

Gary E. Sayman (council chair)
Chair and CEO (Ret.)
Winston, Inc.
Oswego, Ill.

Clifford V. Smith Jr.
President (Ret.)
GE Foundation
Fairfield, Conn.

R. William Van Sant
Chair and CEO
Lucas, Inc.
Coatesville, Pa.

Darrell Wyrick
President
University of Iowa Foundation
Iowa City, Iowa