

Winter 2005

CNS Connections, Winter 2005-06

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CNS Connections, Winter 2005-06

Description

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CNS Connections

University of Northern Iowa

Long awaited changes begin in CNS facilities



Schematic (left) and site plan (below) of Physics Building and Lang Hall: North Elevation
Courtesy of Baldwin White Architects P.C.



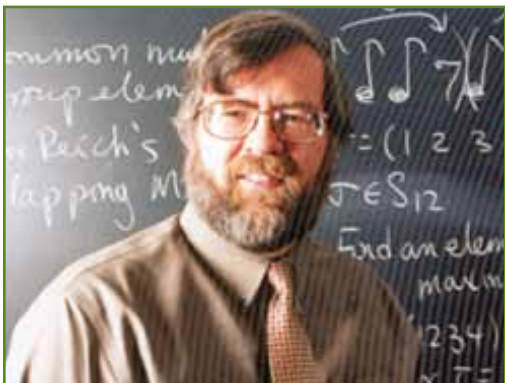
Schematic of Greenhouse: West Elevation (below)
Courtesy of Baldwin White Architects P.C.





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Joel Haack, professor of mathematics and former head of the Mathematics Department, became Interim Dean of the College of Natural Sciences in January 2005, when Kichoon Yang accepted a position at Northwest Missouri State University.

Message from the Dean

development has led to a greater emphasis on technology transfer and applications of the sciences. Change is also evident in pedagogies within the sciences, as we place more emphasis on student projects, internships, experiential learning, service learning, small group work, interdisciplinary projects, and research at both the undergraduate and graduate levels.

With all of this change, is there continuity in the UNI experience? Are there ways in which the institution is the same as before? A constant is our focus on the learning of our students and the scholarship of our students and faculty alike. Student-faculty interaction is unmatched in any public institution that I know. We continue to take great pride in the accomplishments of our students and faculty.

When new faculty members are recruited in CNS, we make it clear that we expect excellent teaching from them, as well as excellence in their areas of scholarship and research. The new faculty members who choose to come to UNI understand that student learning comes first, and they welcome the opportunity to be at an institution that also supports, encourages and recognizes their achievements in their scholarly endeavors. It should be clear that I am pleased and excited to be serving the College of Natural Sciences during another time of transition. I hope that you, too, value your association with us.

Joel K. Haack

Continuity within change: Here at UNI, as in many institutions, this is an ongoing theme. In fact, this was the title of my first column in this publication, written to you during my previous term as interim dean in 2000-01.

First, let's take a look at some of the recent changes at UNI and, in particular, within the College of Natural Sciences. An obvious personnel change within the College has been the departure of Dean Kichoon Yang. We wish him well in his new position as provost at Northwest Missouri State. During his service to UNI, the College created two new interdisciplinary programs: bioinformatics, and networking and system administration. Additionally, planning began for professional science master's degree programs, which we expect to be approved by the Board of Regents in the near future. This period also saw the beginning of several major construction projects, which are described in this issue.

Our total university enrollment this fall is 12,513, a recent low for UNI. One reason for the drop is that last year, UNI awarded more degrees in a single year than at any time in its history. Beginning next year, we anticipate that the overall enrollment will again be increasing because the number of students who are enrolling in UNI for the first time this fall is up from last year.

Not surprisingly in the sciences, our individual disciplines undergo change, as we learn more about the world and as new subdisciplines develop. Increased interest on the part of the state of Iowa in economic

AT LAST:

An updated home for Physics



The Science Laboratory, as it was then called, and the Gymnasium, circa 1912.

It's about time. Anyone would agree that 100 years is a long time to wait for a renovation, but after a century the UNI Physics Building is finally set to undergo a major facelift.

Work on the Physics Building is part of the Science Buildings Renovation, Phase I, at UNI, budgeted at \$11 million, which also includes the Greenhouse and part of old McCollum Science Hall. An earlier renovation, to improve the East Gym to house Computer Science and other programs, is nearing completion. All told, these renovations will affect the departments of Biology, Chemistry, Computer Science, Industrial Technology and Physics as well as Science Education.

The Physics renovation is expected to begin in April 2006, according to Cliff Chancey, head of the Physics Department. In August the Board of Regents approved the schematic for the project. "This is an opportunity for us to have upgraded teaching and research spaces, not to mention a modern heating and air conditioning system," he said. A new dock will make it possible to bring in large-scale equipment.

The main entrance to the renovated building will move to the south side, facing Maucker Union. A walkway, on the second-floor level, will connect the Physics Building and Lang Hall. The elevator tower, now on the west end of the structure, will be removed and replaced by a new elevator in the renovated building's central area.

During the past summer, the packing and moving of classroom equipment began, so that freshman

and sophomore physics classes could be offered in the Center for Energy and Environmental Education (CEEE), beginning in August. Then in mid-December, the department office and heavy equipment are scheduled to move to the CEEE. Faculty offices will move in March 2006 and will be split between Baker Hall and Sabin Hall, which will also house upper-level physics classes.

The Science Buildings Renovation, Phase I, is scheduled to be completed in summer or fall of 2007. "We are really looking forward to moving into our renovated space," said Chancey. "For students and faculty alike, it will be a vast improvement, in research space and instructional space that allows student interaction."

Two outdated teaching laboratories on the second floor of the old portion of McCollum Science Hall are being renovated for the Chemistry Department. They will become a new Organic Chemistry Teaching Laboratory and a new research laboratory for two biochemists. "The renovations will increase student safety in the organic lab and provide needed research space and facilities in the other lab," said Shoshanna Coon, interim head of the Chemistry Department.

Science Education has moved from the CEEE to remodeled and existing space in McCollum and Latham Hall. The McCollum space includes an updated, more user-friendly Science Education Resource Center, a laboratory and a suite of administrative and faculty offices.

The Greenhouse will have its 60-year-old mechanical system updated. The largest change will be the replacement of the headhouse area to include soil facilities, a soil sterilization area, cold room, safer pesticide room and application system, and a new teaching laboratory attached to the facility.

Most of the fourth floor of the East Gym is being renovated for digital technology. All Computer Science faculty and two Industrial Technology faculty members will move into this space, scheduled for completion in early spring of 2006. The renovated space will include two classrooms, two laboratories and faculty offices.



In July, students in the last class (General Physics II) held in Physics 101, learned some facts from their instructor, Michael Roth, associate professor of physics, about what was happening in the world of science when the building was new. For example, Albert Einstein's 1905 paper was about one year old, and **General Relativity** hadn't been published yet.

PSM degrees a coming attraction at UNI

The professional science master's (PSM) degree, a new type of degree for students interested in a wider variety of career options than provided by current graduate programs in the sciences and mathematics, is taking on new momentum in the College of Natural Sciences. As reported in last year's issue of **Connections**, the departments of Mathematics and Physics were each awarded development grants to explore the feasibility of offering the degree.

Now the two departments have been awarded implementation grants, of \$22,500 each, by the Sloan Foundation and the Council of Graduate Schools, and the departments of Biology and Chemistry are also planning to offer PSM degrees. A total of five PSM degree programs would be offered in the fall of 2006, pending Board of Regents approval. No other college or university in Iowa is offering the degree.

Designed to prepare professionals for work outside academia, PSM degree

programs are open to bachelor's degree holders in the sciences, mathematics or engineering. The programs prepare students for careers in business and industry, government, and nonprofit organizations in which science-related applications, such as research management, quality control and technology transfer, arise.

Each of the five PSM degree programs at UNI will include a business component, course work in the subject area and some form of experiential learning. "The idea is to give students grounding in the subject area, practical information about business and actual experience," said Cliff Chancey, head of the Physics Department.

PSM degrees to be offered are in applied physics, industrial mathematics (quality control or modeling), ecosystem management, biotechnology, and applied chemistry and biochemistry.

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CEEE celebrates 10 productive years

In a series of educational programs spanning three months, the Center for Energy and Environmental Education celebrated its 10th anniversary this year. "We are very proud of what we have accomplished during the past decade in terms of educating youth and the general public," said William Stigliani, CEEE director. "The CEEE has provided a host of programs ranging from the Buy Fresh/Buy Local campaign, to waste reduction initiatives, to K-12 energy education programs, to give citizens information about environmental issues of critical importance now and in the future."

Kicking off the celebration in January was, appropriately, a presentation on the roots of environmentalism at UNI. Subsequent presentations focused on how local utilities are adopting new sources of renewable energy while continuing to use older sources, how Iowa could link to remote areas as far away as Siberia to harness wind power to produce hydrogen from water, and how one Iowa family uses wood, wind and solar energy to meet all its home power requirements.

The program series also included a talk on the history of wind energy and a special screening of ***America's Lost Landscape: The Tallgrass Prairie***, a documentary co-produced by Daryl Smith, professor of biology and director of UNI's Native Roadside Vegetation Center. The film tells the story of the transformation of most of the nearly 240 million acres of prairie to farmland within 80 years.

The final presentation in the series was by Kevin Nordmeyer of RDG Planning and Design, and Tom McDougall of The Weidt Group, members of the team who designed the CEEE building in 1994, touted as Iowa's first "green" building.

One of the other highlights of the year for the CEEE was the 2005 Governor's Conference on Environmental Education in mid-June. Held every five years to promote understanding and appreciation of environmental education in Iowa, the conference in 2005 was a two-day road show traveling to five sites whose significant environmental education stories were presented to the participants. The CEEE at UNI was one of the five sites selected.



Bill Leighty, director of the Leighty Foundation and co-principal of the International Renewable Hydrogen Transmission Demonstration Facility, spoke on "What Hydrogen Economy? Running Our Cars on Water in a Carbon-Constrained World?" as part of a series of programs celebrating the CEEE's 10th anniversary.

In addition to its normal outreach programs for students in grades K-12 and its involvement in the Iowa Energy Poster Contest, Junior Solar Sprint and Electrathon, the CEEE initiated the Value Added program, which educates the public on the positive benefits of recycling on energy conservation. Another highlight of 2005 was the installation of a 900-watt photovoltaic system that is supplying power to the building.

"This year has been jam-packed with important activities," said Stigliani, "but we take special pride in marking a decade of service to the community and the state."



Participants at the 2005 Governor's Conference on Environmental Education browse displays in the CEEE, one of five sites selected state-wide for the conference.

CNS inaugurates special Preview Day

In a sign of changing times, the College of Natural Sciences began a new tradition this year and ended another one of long standing. For the first time, on September 26, the College held a Preview Day for high school seniors interested in exploring opportunities for majors and ultimately careers in the natural sciences. This event replaced the Science, Mathematics and Technology Symposium, a tradition in the College for 42 years.

"One of the reasons for this change was the gradual drop in numbers of students participating," said Joel Haack, CNS interim dean. "We wanted a more effective way to tell students about what the College has to offer." Another reason for the change was that the University recently put into operation an online scholarship application, which eliminated the need for students to come to campus for a scholarship competition.

During the Preview Day, high school seniors and their parents toured two CNS departments of their choice. There they participated in hands-on activities, such as conducting an experiment, seeing a planetarium show, or having an electrocardiogram. Visitors also learned about the programs the departments offer and met faculty and students.

The day's activities also included a tour of the campus, a visit to a dorm room, an opportunity to talk to UNI students about their experiences, and to find out about the Admissions process, financial aid and housing. One important session during the Preview Day focused on how to apply for CNS scholarships.

"The Science, Mathematics and Technology Symposium was a tradition on this campus for 42 years and many students benefited from it," said Haack. Each year, the Symposium was attended by hundreds of high school students, their teachers, counselors and parents. High school seniors competed for

scholarships in biology, chemistry, computer science, earth science, industrial technology, mathematics and physics. Scholarship competitors took a test in the morning, finalists were interviewed in the afternoon, and winners were announced at the conclusion of the one-day event.

"We regret to see the Symposium come to an end, but we hope that the CNS Preview Day will prove to be a better way of fostering student interest in these areas of study." Although this was the first Preview Day exclusively for the College of Natural Sciences, other UNI colleges have held special Preview Days. Several years ago, CNS held a Science, Mathematics and Technology Day for high school juniors.



Faculty and Student Research Highlights

Faculty research

Steve O’Kane, associate professor of biology, is continuing his research on the relationships of members of the mustard family (Brassicaceae), especially in the large genus *Physaria*. Some members of the genus are now under intensive study as a source for industrial lubricants. O’Kane also works on floristic studies of the western U.S.

The July issue of *New Mexico Magazine* featured an article on his



This new species, *Physaria okaneii*, found in Idaho and Montana, was discovered by Ben Grady, UNI biology graduate student, and named after his adviser, Steve O’Kane, associate professor of biology.

team’s efforts and includes photographs taken by him. His laboratory research is primarily directed at sequencing nuclear ribosomal DNA genes and noncoding chloroplast DNA sequences.

Martin

Chin, associate professor of chemistry, is working on creating a metal compound that will make the conversion of methane gas to methanol a more efficient process, which will enable methanol to be a competitive alternative to common liquid fuels. The research is funded by a \$33,000 Cottrell College Science Award from Research Corporation in Tucson, Ariz. Four UNI Chemistry majors assisted Chin with the project in the summer of 2005: **Devin Maurer, Neysa Allworth, Robbie Schwenker** and **Mitchell Parr**.

Paul Gray, associate professor of computer science, is continuing to develop computational science tools for the study of the efficacy for teaching science in middle and high school. The work is funded by a \$2 million grant from the National Science Foundation.

John Groves, associate professor of earth science, is investigating a range of topics in the general area of foraminiferal systematics and evolution. He is working on evolutionary patterns and phylogeny reconstruction within the Order Lagenida, with emphasis on the response of foraminifers to the end-Permian mass extinction and its aftermath.

Md Salim, professor of industrial technology, is co-principal investigator of a research project, funded by a \$113,000 grant from the Midwest Transportation Consortium, to implement a Web-based winter maintenance decision support system that allows transportation personnel in local and state government public works departments to access and visualize Iowa DOT GIS inventory data for their county or city in a Web-based GIS environment.

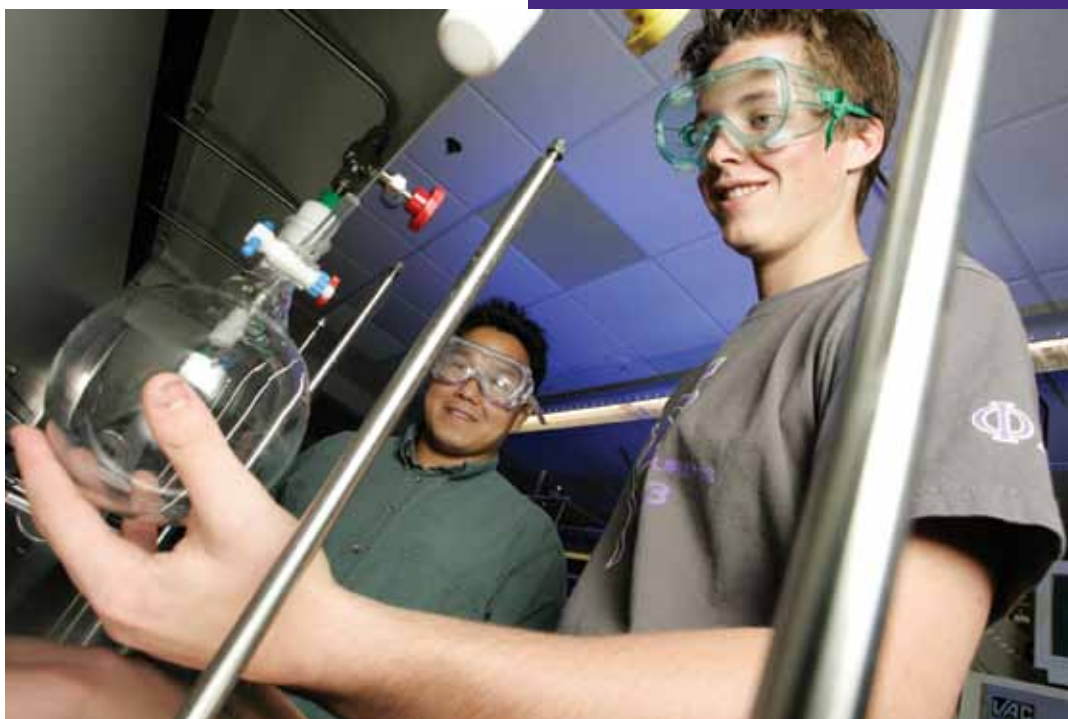
Min Ho Lee, professor of mathematics, whose monograph *Mixed Automorphic Forms, Torus Bundles, and Jacobi Forms* was recently published in the prestigious Springer-Verlag Lecture Notes in Mathematics series, is currently studying Hilbert cusp forms associated with mixed Hilbert cusp forms, soliton solutions of Lax

equations of several variables, Rankin-Cohen brackets on pseudodifferential operators, and torus bundles associated with cocycles.

Michael Roth, associate professor of physics, received a \$39,000 grant from the American Chemical Society’s Petroleum Research Fund to study, using improved computer simulations, the behavior of hexane on graphite, a hydrocarbon of particular interest because it presents a phase like a liquid in some ways and a solid in others. The project will afford a better understanding of surface phase transitions (such as melting) and their mechanisms.

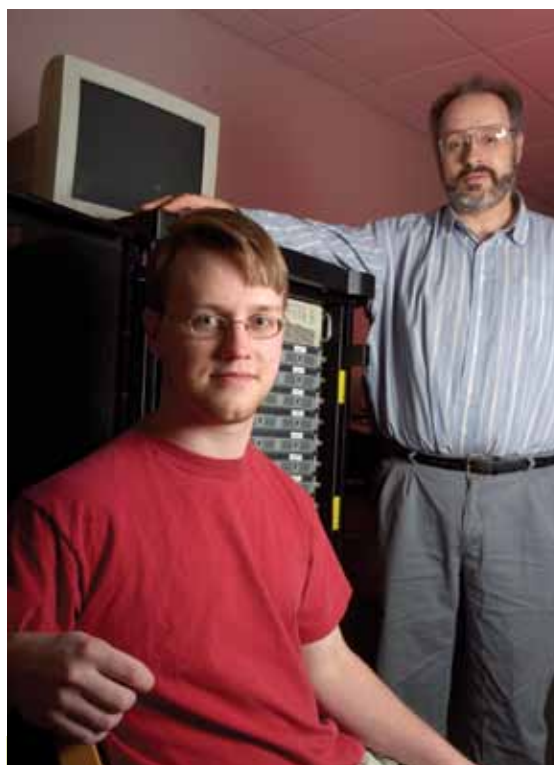
Paul Shand, associate professor of physics, was awarded \$123,000 by the National Science Foundation as part of a collaborative research effort with the University of Nebraska on the Magnetic Properties of Disordered Rare-Earth Nanostructures. Shand and his team will study crystals to find out how disorder at the atomic level affects the crystals’ magnetic properties.

Chemistry major Mitchell Parr collects some solvent to use in a reaction while Martin Chin, associate professor of chemistry, looks on.



Student research projects

- **Colleen Chisman**, a senior majoring in biology, with an emphasis in ecology and systematics, was one of 25 students in the nation selected to give a presentation on her research at the 2005 American Association for the Advancement of Science annual meeting in Washington, D.C. in February. Chisman conducted research on tiger salamanders and temperature for two summers at UNI.
- UNI's solar electric boat team was recognized for developing the most commercially viable hull design during the 12th World Championship of Intercollegiate Solar Boating, in June 2005 in Buffalo, N.Y. **Panther**, UNI's solar boat, ranked third in the qualifying events, and the UNI team placed 11th overall, out of 19 teams. Team members were **Cullen Hall**, **Doug Bechthold**, **Mike Boomer** and **Brent Cheeseman**. Adviser for the solar electric boat project was **Recayi Pecan**, associate professor of industrial technology.
- **Kevin Biggerstaff**, a biology major, was one of seven UNI students who spent summer 2005 as an intern in Washington, D.C. through a program sponsored by the UNI Cooperative Education/Internship Program and The Washington (D.C.) Center. Biggerstaff received a \$9,000 scholarship to work with the Environmental Protection Agency.
- Physics major **Cary Pint** was a finalist for the 2005 American Physical Society (APS) Apker Award, the premier undergraduate research award in physics in the U.S. As a finalist, he received \$2000 and the UNI Physics Department received \$1000. This was one of several honors Pint won this year: He was one of five undergraduate students across the nation selected to speak on his research at the annual meeting of the APS Division of Atomic, Molecular and Optical Physics in Lincoln, Neb., in May. He presented his work at an international conference on nanotechnology in California, competing against fellow undergraduates as well as those with doctorates. He received a grant from the National Science Foundation to conduct physics research in the summer of 2005 at Montana State University. Finally (at least by press time), Pint won second place, a \$250 award and a \$250 travel grant, in the 2006 Outstanding Student Paper Contest, Undergraduate Division, from The Minerals, Metals and Materials Society of Warrendale, Pa.
- At UNI's 12th annual Sigma Xi Student Research Conference, held in spring 2005, **Pint** received the award for the best undergraduate paper for "Chain Length Dependence of the Phase Transition Mechanisms in Short-chained n-Alkanes on Graphite." Biology major **Ann Schwemm** and environmental science graduate student **Elodie Pasco** won the award for best graduate student paper for "Iron and Acetate Enhance Phosphorus Sequestration in Wetland Sediments."
- Two CNS students won awards from the UNI Graduate College: **Francois Bera**, an environmental science major, received a third place for Outstanding Master's Thesis for "Modeling and Measuring the Dispersion of Odors from Hog Confinements," and **Shishonee Hughes**, a science education major, won first place for Outstanding Master's Research Paper for "At-Risk Students: Will Scientific Inquiry Lead to Meaningful Learning?"
- Some biology students are enjoying a new opportunity to serve as undergraduate student research assistants (UGRAs) in the department. Undergraduate Career Scholars and Provost Scholars, who have received \$2000 from the UNI Student Financial Aid office, are eligible to earn an additional \$1000 for working 10 hours per week in the laboratories of Biology faculty. Fourteen students are serving as UGRAs during the 2005-06 academic year, double the number of last year.
- Senior geology major **Breanna Hennessy** participated in a National Science Foundation-funded Research Experience for Undergraduates during summer 2005 titled "Field and Laboratory Research on Glacial Sedimentology in Brazil and Surficial Geology of West Central Minnesota."



Cary Pint, physics major, a finalist for the 2005 APS Apker Award, and winner of numerous other honors this year, and his research adviser, Michael Roth.



Heather Bremer-Miller
Director of Development
College of Natural Sciences

Purple Pride

Mark October 6, 2006 on your calendar and help us celebrate UNI Purple Pride Day!

Whether you wear your purple tie to work, contact your college roommate or plan a trip back to campus, take time to celebrate the "purple" in your life. Take pride in your education or association with UNI! As a College of Natural Sciences graduate, you have a lot to be proud of. Some of the achievements include:

- For the eighth consecutive year, the University of Northern Iowa is ranked second in the Midwestern Universities-Master's category for public universities according to ***U.S. News & World Report's 2005 America's Best Colleges***.
- The UNI chemistry program, certified by the American Chemical Society, leads all Iowa colleges and universities in the number of students graduating with bachelor's degrees each year.
- Biology is one of the largest majors on campus, with approximately 110 new students enrolling in undergraduate programs each year. More than 60 percent of biology graduates enter health care-related fields.
- The College of Natural Sciences offers almost 50 bachelor's degree (B.A. and B.S.) programs, 13 master's degree programs, and one doctoral degree. Roughly, 1,900 students have their majors in the College of Natural Sciences.

Student's First Campaign

Kudos from the UNI Foundation to those who showed their purple pride in support of the Students First Campaign that concluded on June 30, 2005. The campaign raised over \$112 million in support of scholarships, programs and various capital projects. Highlights include the financing and construction of the McLeod Center (basketball arena), scheduled to open in late fall 2006, and the raising of just over \$1.2 million in equipment funding for the new McCollum Science Hall addition, dedicated in October 2003.

Endowing the Future

As important as it is to celebrate the success of our past fund-raising initiatives, we continue to focus our efforts on keeping Students First. Our goal is to secure future purple pride by creating endowments. Endowing a scholarship or program at the University not only assists the students of today, but will also secure funding for the students of tomorrow.

Dean's Fund for Excellence

We also invite you to show your purple pride through your continued support of the Dean's Fund for Excellence. Your funding provides the Dean with discretionary resources for programs and activities that are not eligible for funding from other sources. This year Dean Haack will utilize the Dean's Fund to support student travel to attend conferences and make presentations, to bring world-renowned experts to UNI to work with students and faculty, and to support program and equipment needs. We continue to expand our alumni calling efforts to invite more alumni and friends to support the Dean's Fund. We look forward to talking with you again in 2006!

Again, thank you to those who helped make the Students First Campaign a huge success. I invite you to continue to support your alma mater and its students. Please call me at 1-800-782-9522 or 319-273-6078 if you have any questions or want to make a contribution.

I encourage you to show your UNI purple pride every day, not just on UNI Purple Pride Day. An education at the University of Northern Iowa is truly something to be proud of!

UNI offers many opportunities in the classroom and beyond

In a recent interview, James Arns, a B.A. physics graduate of UNI and a member of the CNS Advisory Board, reflected on his education at UNI and how it prepared him for his professional experiences.

Since I grew up not far from UNI, in Denver, Iowa, it was natural for me to consider going there for college. My brother was a UNI graduate, so I was familiar with the campus. I found that UNI in general--and the Physics Department in particular--was an appropriate size for my learning needs. There is a close relationship between students and faculty because students take class from professors rather than graduate assistants. They also, in many cases, have an opportunity to know faculty outside of class.

Of course, when I attended UNI, there was no B.S. physics major, as there is now, but I think the B.A. physics major was actually an advantage in my case. The B.A. program exposes students to a broader spectrum of subjects outside of their selected discipline. This exposure helped me and, I'm sure, other students understand that the real world does not narrowly focus on one area, such as science, for solutions. Many disciplines are typically involved, and the B.A. program helps us be more prepared.

Because I believed then—and still do—that an important part of any education is derived from participation in non-academic activities, I took full advantage of the opportunities UNI had to offer. I was a student senator, member and president of the UNI chapter of Sigma Tau Gamma fraternity, a member of the Interfraternity Council, a member and president of the Physics Club and a member of the CNS Dean's Student Advisory Committee. Each of these groups gave me a better understanding of how different organizations are structured, conduct business and work with various goals in mind. By participating in all kinds of groups, from the highly structured to the informal, I learned that goals can be accomplished in different ways.

While at UNI, I developed an interest and a rudimentary capability in holography, which was a major factor in obtaining my first position, as a member of the technical staff of Hughes Aircraft Company in Los Angeles. Hughes was developing holographic technology to support various military applications, and I enjoyed the challenges of designing, developing and fabricating holograms to support state-of-the-art optical displays for the more than 14 years I was with Hughes. In 1991, I was honored to receive Hughes Aircraft's Hyland Patent Award, the company's highest recognition to inventors responsible for patents considered significant to the future of the company.

My interest in research and development of new holographic technologies and applications led me in 1993 to join Kaiser Optical Systems, Inc., in Ann Arbor, Mich., as a principal optical systems engineer. At Kaiser, my primary responsibility has been the development of Volume Phase Holographic (VPH) technology, with further responsibility for developing VPH-based optical gratings for use in military, scientific and telecommunications applications. To date, I have 12 U.S. patents with additional applications pending and have authored and co-authored several articles on VPH gratings.

Looking back at my own experience at UNI, I would advise students to concentrate on their studies without ignoring activities beyond the classroom. Both experiences are needed to build a strong foundation for their future. At UNI, it's easy to become involved and there are many choices. Students just need to find something they can be passionate about.

All in all, I would say the academic program at UNI is fantastic, and extracurricular activities offer a broad spectrum of experiences from which any student can benefit.



James Arns

Update from the Centers

Here's what has been happening during the past year at the Science center for Teaching, Outreach and Research on Meteorology (STORM), the Metal Casting Center (MCC), the Recycling and Reuse Technology Transfer Center (RRTTC), and the Native Roadside Vegetation Center (NRVC). Activities in the Center for Energy and Environmental Education are reported in the article on its 10th anniversary.

STORM

STORM continues to provide summer course offerings for science educators in Iowa and elsewhere. In summer 2005, 23 science educators participated in a one-week course on weather forecasting. STORM also cosponsored a two-week summer institute, funded primarily by the Iowa Board of Regents and the Iowa Department of Education, in which 10 northeast Iowa teachers learned about the GLOBE program, STORM, weather forecasting and educational technologies.

Three graduate students completed research projects on air quality: on the distribution of very fine particulate matter over Iowa, a computer simulation of particulate matter transport over Iowa, and a strategy for siting hog confinements with consideration of odor dispersion. The focus on air quality is expanding this year, with the development of a new summer course on air quality for science educators.

MCC

The MCC's efforts to acquire new industrial business have centered on methods to deal with the metal casting industry's inability to secure zircon and silica sand molds. The Center recently completed test molds that compare the cooling rate of zircon and silica sand molds. The data will be used to develop a method for quickly and easily estimating thermal conductivity.

Other research at the MCC has focused on reducing the detrimental effects of silica sand expansion. The project has demonstrated differences in the thermal expansion of several base materials, including

lake or dune sand and high-purity round grain silica sand. This knowledge may allow sand to be custom-blended to achieve minimal expansion or resistance to penetration.

The MCC is still under consideration for federal funds to establish a Center for Advanced Bio-based Binders (CABB). Because of the need to meet stricter government pollution control requirements, the Center would use bio-based binders to replace sand binders, many of which produce harmful emissions.

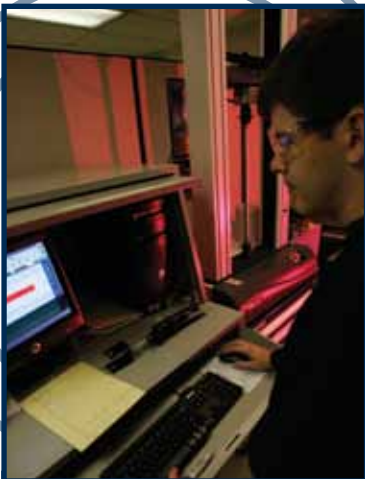
RRTTC

The RRTTC's Materials Innovation Service (MIS) continues to assist Iowa businesses with developing products that have recycled content and with re-engineering their manufacturing processes to reduce waste. The MIS was recently able to purchase, through a Solid Waste Alternatives grant from the Iowa Department of Natural Resources, a Universal Testing Machine, which is used to test a material's mechanical properties. The new piece of equipment will also be used in teaching and student projects.

The RRTTC provides grants to established researchers in the areas of solid waste, public health, sustainable by-product re-utilization and industrial ecology. Recently funded projects include "Value Added: Quantifying the Amount of Energy Saved by Recycling," "Reactive Iron: Using Solid Waste to Provide a Simple Solution to a Complex Environmental Health Problem Caused by Recycled Animal Waste," and "Remediation of Chromated Copper Arsenate Treated Wood."



NRVC director Daryl Smith, NRVC program associate Dave Williams and graduate student Amy Carolan light a backfire line for a prescribed burn at the UNI Tallgrass Prairie Preserve.



Jeff Rose, MIS program coordinator, tests a redesigned product for Standard Golf on the recently purchased Universal Testing Machine.

NRVC

The film *America's Lost Landscape: The Tallgrass Prairie*, produced through the NRVC's Prairie Institute, was broadcast on Iowa Public Television during its fund-raising festival in the spring. PBS has accepted the film for national prime-time broadcast pending minor editorial changes. In December the film won the International Documentary Association's 2005 Pare Lorentz Award, the documentary filmmaker's equivalent of an Academy Award. The film was in excellent company; among the eight nominees for the award was *March of the Penguins*.

The NRVC's Iowa Ecotype Program released 21 ecotypes of 16 species of Iowa source-identified prairie seed to native seed growers and agencies. Initiated in 1990, the program has had a major impact on native seed production in Iowa by increasing the availability of source-identified seed at a commercially competitive price. A new greenhouse will be constructed adjacent to the NRVC, beginning in October, to provide much-needed space for starting seedlings.

The Center conducted advanced workshops in spring 2005 to train Natural Resources Conservation Service personnel on developing prescribed burn management plans for conservation acreages. In September, the NRVC's Roadside Management Program presented the 19th annual Iowa Roadside Conference in Des Moines, which focused on the production and use of Iowa native prairie seed.

Two Programs increase diversity in Math Department

Two programs, both funded by the National Science Foundation and the State Board of Regents, are increasing diversity in the Mathematics Department: the Alliance for Graduate Education and the Professoriate (AGEP) at the graduate level and the Alliance for the Production of African American Ph.D.s in the Mathematical Sciences at the undergraduate level. All three Regents universities are participating in both programs. The project director is Phil Kutzko of the University of Iowa.

The goal of AGEP, according to Jerry Ridenhour, head of the Mathematics Department, is to increase the number of Ph.D.s awarded to underrepresented U.S. minorities in the STEM (science, technology, engineering, mathematics) areas. AGEP provides opportunities for graduate study as well as the chance to participate in summer programs at the three Regents universities. The students are provided with mentors and opportunities to get to know the university community. There are currently six graduate students in the AGEP program at UNI.

The Alliance program brings undergraduates from historically black colleges and universities to Iowa to study mathematics in summer programs provided by the Regents institutions. Mentors from the Regents schools visit the participating colleges

and universities during the year, and the students select one of the Regents universities to visit for an 8-week summer session. UNI will participate in the program for the first time in the summer of 2006, when six students will come to the campus to study differential equations. Similarly, program participants study linear algebra at the University of Iowa or work on undergraduate research at Iowa State.



Douglas Mupasiri, associate professor of mathematics, and AGEP students (l. to r.) Ken Smith, Jasmine Harris, Frederic Douglas, and Erica Naves. Not pictured are Erica Dawson, Tiffany Poche and Mickell Bruce.

CollegeNews

• Timothy Cooney, professor of earth science, Larry Escalada, associate professor of physics, and Roy Unruh, professor emeritus of physics, are the authors of the recently published **PRISMS PLUS** (Fairfield, O.: Center Pointe Learning).

PRISMS PLUS is intended to expand on the existing PRISMS (Physics Resources and Instructional Strategies for Motivating Students) materials and make them more consistent with national science education standards, benchmarks of science literacy.

• The Center for Energy and Environmental Education held a series of workshops on a method of construction that was later used in a Habitat for Humanity home in Waterloo, dedicated in December 2004. Called Insulating Concrete Forms, the construction method produces exceptionally strong and well-insulated walls.

• Internationally known ethnobotanist Walter Lewis, the real-life "medicine man" whose work inspired the 1992 movie of the same name, gave a public lecture and visited with students at UNI in the fall of 2004. Lewis and his wife, Memory Elvin-Lewis, specialize in discovering new drugs from plants used in folk medicine by native tribes in South America and other tropical parts of the world.

• Internationally known math educator John A. Dossey, emeritus distinguished professor of mathematics at Illinois State University, presented a lecture on "School Mathematics: Comparisons, Concerns and Directions" on the UNI campus in April 2005 as part of the Hari Shankar lecture series.

• UNI's Science Education program was selected as a national finalist for the Christa McAuliffe Excellence in Teacher Education Award, sponsored by the American Association of State Colleges and Universities (AASCU). Six programs from across the country were invited to compete for national recognition at the AASCU annual meeting in Charleston, S.C., last November.

• For the fourth summer, the Department of Earth Science and the Iowa Limestone Producers Association co-sponsored, with assistance from Basic Materials Corporation and the Iowa Geological Survey, the Geology of Iowa for Teachers short course in June. Some 25 science teachers from around the state participated in field- and lab-oriented activities involving the geology of Iowa. The course focused on providing teachers with subject-matter knowledge, materials for student labs and classroom experiences, contacts with resource persons, and field experiences designed to encourage them to organize field trips for their own students.

New faculty

The following faculty members joined the College of Natural Sciences as assistant professors in the fall 2005 semester:

Biology: Peter Berendzen, Ph.D., University of Minnesota; John D. Ophus, Ph.D., University of Idaho



Teachers look for fossils in the limestone and shale units exposed in the Messerly Quarry near Finchford in the Geology of Iowa for Teachers short course in the summer of 2005.

Chemistry: Nalin Goonesekere, Ph.D., Princeton University

Computer Science: Aleksandar Poleksic, Ph.D., Florida State University

Industrial Technology: Julie (Zhe) Zhang, Ph.D., Iowa State University; Jin (Jeanna) Zhu, Ph.D., New Jersey Institute of Technology

Mathematics: Shangzhen Luo, Ph.D., University of Missouri-Columbia; Bridgette B. Stevens, Ph.D., University of Missouri-Columbia; Brian E. Townsend, Ph.D., University of Missouri-Columbia.

Physics: Tim E. Kidd, Ph.D., University of Illinois-Urbana

Professional awards and recognition

• **Fred Behrozi [Physics]** is president-elect of Central States Universities, Inc., a consortium of 11 midwestern universities dedicated to improving instructional and research programs in science, mathematics and engineering.

• **Lynn Brant [Earth Science]** received the Iowa Academy of Science Distinguished Service Award in April of 2005.

• **Leah Goepferd [senior majoring in chemistry teaching and Spanish teaching]** won the CNS Dean's Award for Superior Achievement as a Student.

• **Paul Gray [Computer Science]** was awarded the 2005 CNS Dean's Award for Teaching Excellence in Departmental Programs.

• **John Groves [Earth Science]** is head of an international Task Group to select a Global Stratotype Section and Point for the base of the Moscovian Stage of the Carboniferous Period.

• **Doug Hotek and Charles Johnson [both Industrial Technology]** accepted the Outstanding Technology Education Program Award, College/University Level, for UNI's Department of Industrial Technology's technology education program from the Association for Career and Technical Education's (ACTE) Technology Education Division. The award was presented at the ACTE Convention and Career Expo in December 2005.

• **Ali Kashef [Industrial Technology]** served as regional director of the National Association of Industrial Technology for 2004-05.



RRTTC director Catherine Zeman (center) received the 2004 Recycler of the Year Award. Students and staff from the RRTTC in the photo are (l. to r.) UNI grad students Jeff Orr and Israel Msengi, Zeman, Jeff Rose, program coordinator of the Materials Innovation Service, Leslie Rash, then an undergrad student assistant at the RRTTC, and Michaela Rich, RRTTC program manager.

- **Syed Kirmani [Mathematics]** was this year's winner of the CNS Dean's Award for Superior Achievement in Research.
- **Min Lee [Mathematics]** won the 2005 Regents Award for Faculty Excellence.
- **John McCormick [Computer Science]** was elected chair of the Association of Computing Machinery, Special Interest Group in the Ada Programming Language.
- **Jihwa Noh [Mathematics]** received the Western Michigan University Graduate Research Scholar Award in April of 2005, which is presented to a doctoral student or graduate in recognition of outstanding accomplishments and potential in research.
- **Wendy Olson [Biology]** was the winner of the Beta Beta Beta Award for Excellence in Teaching.
- **Susan Salterberg [Center for Energy and Environmental Education]** was elected to the board of directors of the Iowa Natural Heritage Foundation, which supplements government efforts to protect Iowa's natural resources.

- **Hari Shankar [Mathematics]** was elected to the executive committee of the Indian Society of History of Mathematics in December of 2004.
- **Marius Somodi [Mathematics]** received the University Book and Supply Outstanding Teaching Award for the College of Natural Sciences.

- **Carl Thurman [Biology]** was a visiting scientist at the University of the West Indies in Mona, Jamaica, in March of 2005 and received the Visiting Scientist Award from the University of South Carolina, Bell Baruch Laboratory, in June of 2005.
- **Jeff Weld [Biology]** served as president of the Iowa Science Teachers Section of the Iowa Academy of Science in 2004-05 and received the CNS Dean's Award for Teaching Excellence in Departmental Programs.
- **Russell Wiley [Chemistry]** was awarded the Class of 1943 Excellence in Teaching Award in fall of 2005.
- **Catherine Zeman [Recycling and Reuse Technology Transfer Center]** was the keynote speaker at the EURO Summer School Programme on renewable bio-energy in the Netherlands in June 2005. Zeman also received the Recycler of the Year Award for 2004 from the Iowa Recycling Association.

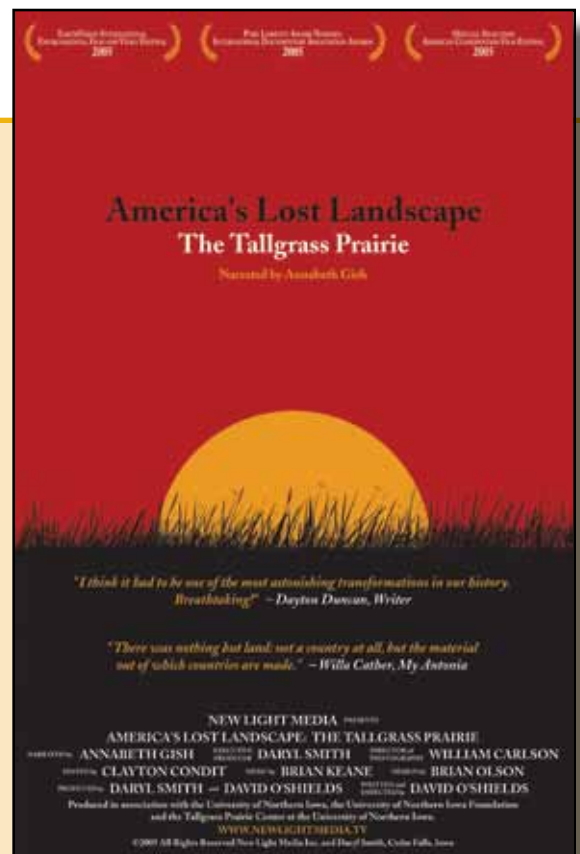
Tallgrass Prairie film wins awards

America's Lost Landscape: The Tallgrass Prairie, the documentary that traces the prairie's transformation from natural landscape to farmland, won awards of excellence and merit from the Iowa Motion Picture Association in May 2005.

Produced by Daryl Smith, director of the UNI Native Roadside Vegetation Center, and David O'Shields of New Light Media, the film received awards of excellence in the categories of Director of Photography, Editing, Script Writing and Soundtrack Audio Mix. Awards of merit were given to **America's Lost Landscape** in the categories of Direction, Documentary and Original Music Score.

The film, which aims to inform the general public about the history of the tallgrass prairie and its impact on the region, debuted at UNI in April of 2004.

A poster advertising the award-winning **America's Lost Landscape: The Tallgrass Prairie**.
Courtesy of New Light Media.



ChemWall provides passport to chemistry at UNI

The interactive ChemWall in McCollum Science Hall invites students to use sight, sound and touch to learn about chemistry at UNI and about chemistry in general.

ChemWall, a new teaching tool located in the addition to McCollum Science Hall, is probably the only interactive periodic table of its kind in the world. The brainchild of Chemistry faculty members, ChemWall is a cutting-edge way for students to find out what chemistry involves and if it is something they are interested in pursuing.

"This is a great way for students and visitors to learn about chemistry at UNI," said Shoshanna Coon, interim head of Chemistry.

ChemWall consists of two plasma screens embedded in a wall of lighted boxes, each representing an element in the periodic table. When the screens are not in use, they also display the chemical abbreviations for elements in the periodic table.

By simply touching one of the screens, the viewer can access the UNI website and all of its information, including maps, program offerings, student life and financial aid. Or the student can visit the Chemistry Department's website for information on chemistry courses, majors and minors, faculty and student research and activities. But ChemWall isn't just about the Web.

Perhaps the most innovative aspect of ChemWall is the video clips it presents. With a touch of a screen, students can view "Chemistry in Action," a series of videos on such topics as the thermite reaction or reversible metachromacy. Or they can try their hand at solving chemistry riddles,



"ChemWall gets as many of your senses involved as possible—sight, sound and touch," said Coon. "It's entertaining, informative and fun."

learn about the timeline of chemistry, or watch a chemistry magic show demonstration. In other videos, UNI chemistry alumni talk about what their education at UNI has meant to them, adding a personal dimension to the experience.

"ChemWall gets as many of your senses involved as possible—sight, sound and touch," said Coon. "It's entertaining, informative and fun." A Web camera called Chem Cam, accessible through the Chemistry Department website, allows people from anywhere in the world to see ChemWall, but to use ChemWall, you have to be at UNI.

The idea for a video information center for the department in the McCollum Science Hall addition originated with Kirk Manfredi, professor of chemistry. Chemistry Department faculty fleshed out the information to be presented and provided some of the original content. John Strochota of BWBR, the architectural firm that designed the addition, incorporated Manfredi's vision into a wall-sized periodic table. As the periodic table concept for the wall evolved, Morris Mikkelsen and Steve Pavelec of UNI Facilities Planning, Marilyn Drury, Jason Vetter and Joe Marchesani of UNI Information Technology Services, and others provided design ideas and helped in software development and/or construction of ChemWall. Cardinal Construction was the general contractor, and the subcontractor was General Sheet Metal.

Industrial Tech students build

renewable energy system at area park

The hydro-wind renewable energy station at Hickory Hills Park, 35 miles southwest of Cedar Falls, represents a perfect example of technology transfer: The park, whose remote location contributes to high electrical costs, gained a renewable energy-based electrical power generation system, and the students in UNI's electrical and information engineering technology (EIET) and manufacturing technology programs, who built the system, gained valuable real-life, hands-on experience.

"This project represents a unique opportunity for UNI to achieve distinction in comprehensive technology transfer in the area of renewable energy generation," said Recayi Pecen, associate professor of industrial technology, who is directing the project.

The aim of the applied research project was to design and construct a 5 kW-capacity renewable energy station for generating zero-emission electricity for cabins and RV outlets in the park. The overall system includes two clean-energy technologies: wind turbine and hydroelectric units. Partial funding for the project was provided through the UNI Foundation by a \$30,000 grant from a UNI alumnus.

During the first phase of the project, completed in 2004, a feasibility study for wind availability was conducted. Satisfactory wind potential was confirmed by a 30-foot tower and an anemometer with data-logging instrumentation. Solar radiation maps indicated that the proposed location of the system in the park is exposed to enough solar power during the summer and winter seasons for a future solar power addition to the original system.

The next phase consisted of designing and building a 47-foot wind tower, a 3.2 kW Whisper 175 windmill and a 0.5 kW microhydro turbine generator power unit. "Since winter months in Iowa are generally windy, summer months are sunny, and spring and fall are rainy, we thought a combination of wind, hydro,

and solar power units would be an effective way to generate electricity throughout the year," Pecen explained.

During Phase 3 of the project, now in progress, the wiring of the electrical systems in the powerhouse will be completed, the hydro and wind systems will be operated, and field test measurements will be conducted. Depending on available funding, a 2 kW photovoltaic array station will be added to the system, making it multi-renewable with solar, hydro and wind resources.

"This project and similar research projects have helped the EIET program, Iowa's first and only four-year engineering technology program, to offer state-of-the-art electrical energy and electronics technology education to UNI undergraduates," said Mohammed Fahmy, head of the Department of Industrial Technology. Media reports of the Hickory Hills project have generated considerable interest from area residents interested in pursuing small-scale wind power projects for their farms and homes.



Industrial Technology students construct a wind tower at Hickory Hills Park.

Alumni News

1950s

Robert A. Mehlhouse, BA '51, retired after 40 years as manager of the by-products production and sales division of Wilson Foods in Oklahoma City. He enjoys traveling, woodworking hobbies and bowling.

Carl L. Heller, BA '52, MA '55, who is retired, recently spent a month in New Zealand touring both islands in a motor home.

1960s

W. Jack Magruder, MA '61, was named president emeritus of Truman State University in Kirksville, MO, in 2003 after serving nine years as president, 22 years as chemistry and science education professor and five years as academic vice president.

He retired after 39 years at Truman (formerly Northeast Missouri State). His wife Sue was granted the title of First Lady Emerita.

Jerry Nelsen, BA '61, taught seven years at Coe College and one year at the University of Oklahoma and spent 25 years with the U.S. Atomic Energy Commission as a health physicist, industrial hygienist, environmental engineer and director of research collaboration. He received an MS from Michigan State University in 1966 and a PhD from the University of Oklahoma in 1974. Now retired, he preaches in jails in South Carolina. He has two sons and three grandchildren. He remarried after the death of his first wife, **Kathryn Claussen**, BA '61. About 1960, he trained President Koob as a lab assistant under Dr. Kercheval in Chemistry.

Thomas J. Milleman, BA '62, retired in 1998 as department head and professor of the electronics technology department at the College of DuPage, Glen Ellyn, IL. He continues to teach part-time in the department and substitutes in several industrial disciplines at the Technology Center of DuPage. He is active in the DuPage Woodworkers Club and enjoys building furniture. He received his MA from the University of Northern Colorado and his PhD from the University of Missouri, Columbia.

Mary Ellen (Hagaman) Barry, BA '63, retired in April of 2004 from Mercy Medical Center Inpatient Pharmacy after 23 years of service. She lives in Kissimmee, FL, with her son and his wife, where she is catching up on her reading, doing crafts and enjoying the theme parks.

Denny White, BA '63, retired in 2003 after 40 years (three at New Providence and 37 at Mt. Pleasant Community School District) as a science teacher and coach. He was recently inducted into the Iowa Track Coaches Hall of Fame and is one of three high school referees for the Drake Relays. He remains active in state track organizations and resides in Mt. Pleasant with his wife Mary. They have three sons and six grandchildren, all living in Iowa.

Harold D. Anderson, MA '66, taught chemistry and physics at Stephens College in Columbia, MO, for 22 years before going on disability. He remembers Dr. Wilson and Dr. Poppy as two of the best teachers he had.

Sterling H. Hartman, BA '66, retired in 1997 after working 30 years in the Department of Defense as an electrical engineer. He then worked three years as a consultant to the Pentagon. He is currently designing "gizmos" for his wife, who suffered a stroke. He remembers Dr. Poppy as the finest teacher he ever had, one who had a unique ability to make the most complex subjects easy to understand.

Robert Nelson, BA '67, MA '68, retired in May 2004 from teaching in the science department of Cedar Falls High School after 36 years. He received the Gold Star Award for Outstanding Teaching in 1996 from the R.J. McElroy Trust and KWWL-TV, and in 1980 was honored for Excellence in the Teaching of Chemistry by the Iowa Academy of Science.

Ron Newland, BA '68, MA '70, retired in spring 2005 after 36 years as a physics/chemistry teacher, three in Wausaukee, WI, 22 in Monticello and 11 years at College Community Schools. He continues to be active in the Iowa chapter of AAPT and enjoys fishing, woodworking, travel and amateur astronomy.

Dennis R. Duerling, BA '69, retired after 35 years in education. His last position was as high school principal in the Clinton School District. He is now in the auto transport business with his son and daughter. His favorite professor at UNI was John Longnecker.

Jerry Stephens, BA '69, is superintendent of the Meskwaki Settlement School in Marshalltown.

1970s

Robert Miller, MA '70, retired from the Charles City Community Schools in 1996, where he was an industrial technology instructor at the senior high school. He and his wife Marilyn have four grandchildren.

David S. Peters, BA '78, is president of Peters Construction Corporation. UNI presented him with the Heritage Honors Alumni Achievement Award at spring 2004 commencement. He is also active on numerous professional, civic and university boards and committees. He received the professional designation of Certified Professional Constructor and is an adjunct instructor at UNI.

1980s

Todd Stanislav, BA '85, is associate professor of biology and director of the Center for the Advancement of Teaching at Xavier University of Louisiana in New Orleans.

Kennard G. Larson, DIT '87, is professor and chair of the department of industrial technology at the University of Nebraska-Kearney. He recently completed a sabbatical leave to the University of Rostock, Germany, where he researched moisture transport within wood frame construction.

1990s

John Reimann, BT '90, is a supplier warranty administrator in the construction division of John Deere Davenport Works. He received an MBA in supply chain management from Arizona State University in May 2003.

Michael Collins, BS '92, has worked at Los Alamos National Laboratory for 11 years.

Dr. Michael Lee, BS '92, recently joined Central Iowa Orthopaedics and serves as the group's foot and ankle surgeon. He has also been elected to the board of directors of the American College of Foot and Ankle Surgeons.

Bradley Block, BA '93, is chief of interpretation at Custer (SD) State Park. He was elected director of the National Association for Interpretation, Region 5, which is made up of seven states and two Canadian territories and has over 500 members.



Marcy Seavey

Marcy Seavey, BA '95, MA '03, was awarded the Environmental Protection Agency's Region 7 Educator's Environmental Excellence Award for 2005. She is the program director for the Iowa Academy of Science and coordinates the GLOBE program, a worldwide network of students, teachers and scientists working together to study

the global environment, and Project WET (Water Education for Teachers) in Iowa.

Amy (Vanous) Baton, BA '96, is a pediatrician with Vanderbilt Medical Group in Nashville, TN, and assistant professor of pediatrics at Vanderbilt University. She and her husband Joshua have two children, Amelia, born 11/01, and Jackson, born 4/04.

Teri Bedard, BA '96, has begun a new job as senior radiation therapist at Northwestern Memorial Hospital in Chicago. She received a certificate in radiologic technology from the Mayo School of Health-Related Sciences in 1999 and attended Fairview University Medical Center/University of Minnesota School of Radiation Therapy from 1999-2000.

Martha (Davidson) Burton, BS '96, is an athletic trainer/physical therapist assistant with Physiotherapy Associates in Cedar Rapids. She married Tim Burton in 2002. Their daughter, Gabrielle, was born 9/24/04.

Scott A. Doherty, BA '96, DPM, has completed his surgical residency and accepted a physician position at the VA Gulfcoast Healthcare system. He is assigned to the VA Pensacola (FL) outpatient clinic, which is slated to become the largest VA outpatient clinic in the nation.

Maggie A. (Sellers) Casebolt, BA '98, a chiropractor, has owned Atlas Family Chiropractic for three years. Her husband Matt is a football coach for Iowa City High and helped lead its team to the state semifinals. They have a daughter Emma, 2.

Lucas P. Dix, BS '98, is a melting engineer at the American Cast Iron Pipe Co. in Birmingham, AL. He received his MS in metallurgical engineering from the University of Alabama in August 2004.

Chris Elder, BS '99, is a project engineer in the cooking division of Whirlpool Corporation. He and his wife live in southwest Michigan.

Suzanne Shontz, BA/BS '99, is a postdoctoral associate in the department of computer science and engineering at the University of Minnesota, Minneapolis, where she is conducting numerical linear algebra research as it applies to material science. She received a PhD in applied mathematics from Cornell University in Ithaca, NY, in January 2005, and MS degrees in applied mathematics and computer science from Cornell in 2002. She lives in St. Louis Park, MN.

2000s

Robert Shontz, BS '00, graduated from the University of Iowa College of Medicine in May 2004. He received the Margaret Lunsford Award in Anesthesia and is in the first year of a four-year anesthesiology residence program at the University of Iowa Hospitals and Clinics. He spends his leisure time attending University of Iowa football games.

Roger Cannon, BS '01, is a project manager with Interstates Construction Services in Madison, TN. He received his Project Management Professional Certification in 2004. His son Charles Arthur was born 12/9/04.

Nathan Holst, BS '01, is an engineer with PCL Construction in Denver, CO.

Abigail "Abby" Peterson Shontz, BA '01, is a software engineer at Pearson Inc. in Iowa City.

Chad Boudreaux, BS '02, is a port engineer with C.F. Bean Corp. in St. Rose, LA.

Rhiannon Harms, BA '02, is a certified nuclear medicine technologist at Allen Memorial Hospital in Waterloo. Her husband **Brad Harms**, BA '02, is an assistant county assessor for Buchanan County in Independence.

Rachael Harter, BA '04, is an osteopathic medical student at Des Moines University. In July of 2004 she was commissioned in the U.S. Navy as part of the Health Professional Scholarship Program.

Heidi L. Koepf, BA '04, recently relocated to Minnesota to begin a new job as development specialist with LSS Data Systems in Eden Prairie.

Marriages

Mary Pat Rosman-Bakehouse, BA '78, a family physician, married Rev. David Denman January 1, '05.

Wendy Shepard, BA '00, & **Nathan Holst**, BS '01, were married in July of '03.

Abigail "Abby" Peterson, BA '01, & **Robert Shontz**, BS '00, were married in August '02. They live in Iowa City.

Chad Boudreaux, BS '02, and **Melissa Scholl**, BA '01, were married in September '04.

Births

Ronda Moss, BA '93, Littleton, CO, gave birth to her first child, Alexa Nicole.

Deaths

William C. Little, BA '47, Pueblo, CO, died Nov. 4, '04.

Dean M. Baum, MA '60, Fruitland, WA, died in October of '04.

CNS Advisory Board

The College of Natural Sciences Advisory Board provides advice, guidance, support and advocacy for the College's undergraduate and graduate programs: The Board members help to align the College's curricular offerings with changing educational needs; help to identify outside funding sources for the College and internship and other professional opportunities for students; and serve as advocates for the College by promoting positive relations with the external community.

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James Arns
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Engineer
Kaiser Optical Systems, Inc.

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Royal Caribbean International &
Celebrity Cruises

Michael Williams
Teacher
Keota High School

New CNS Advisory Board member

The most recent addition to the College of Natural Sciences Advisory Board is Michael Williams, a 1970 UNI graduate, who has taught junior and senior high school life and physical science courses for 35 years in the Keota school district. A member of the National Science Teachers Association and the Iowa State Education Association, he holds an M.A. degree in science education from Truman State University in Kirksville, Mo.

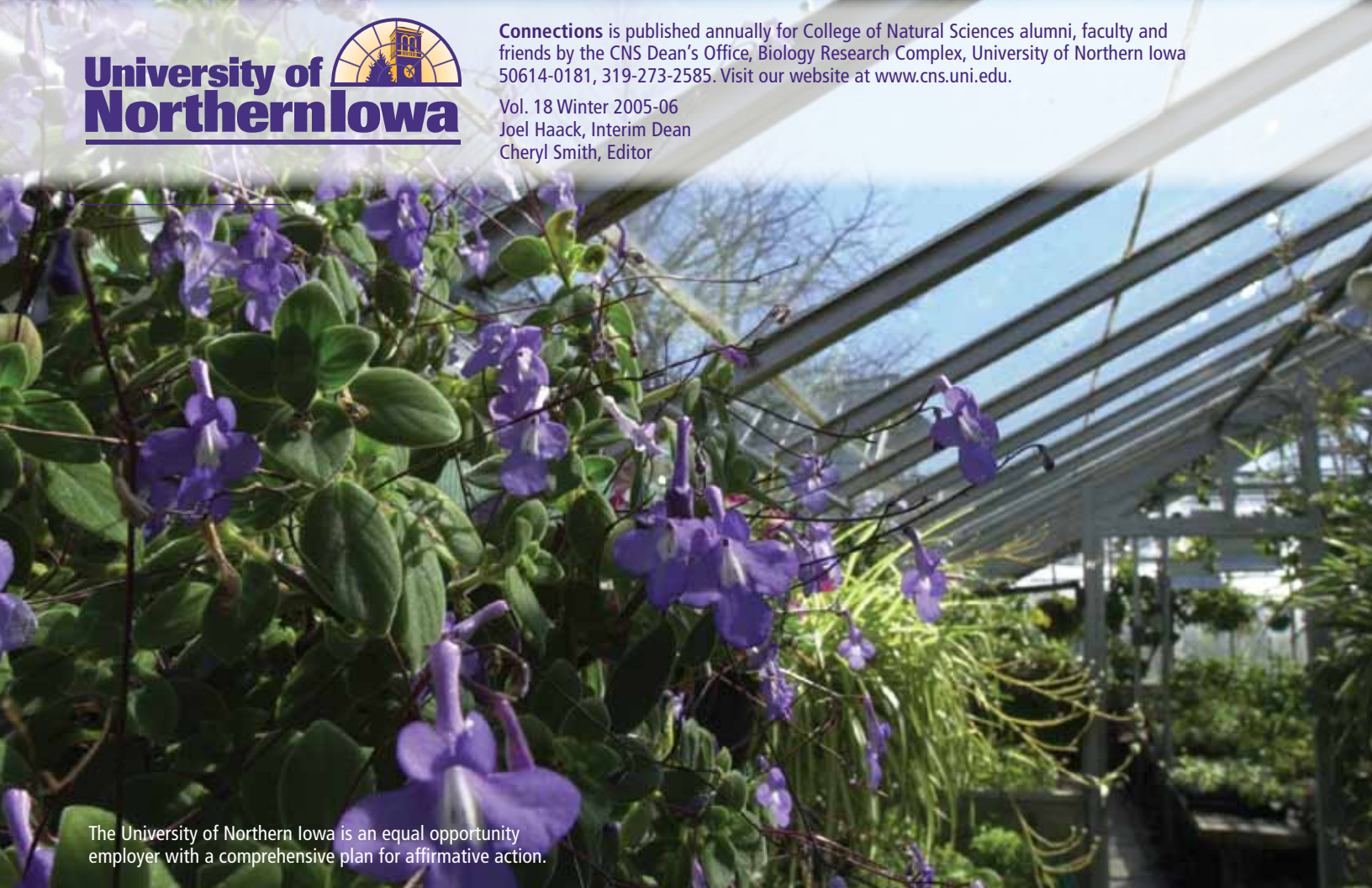


Michael Williams



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