

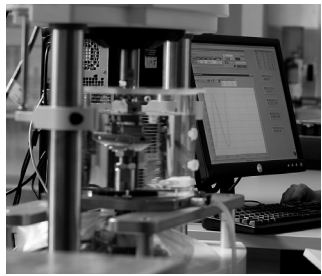
## IN THE WORKS



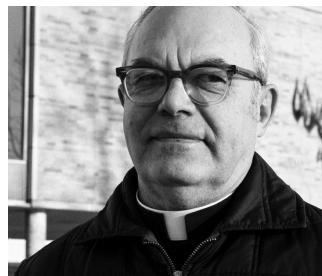
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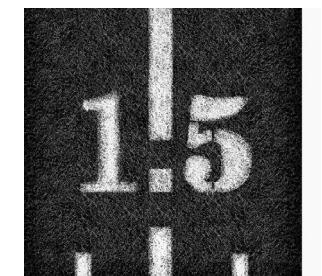
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## GEM to launch new chapter for science, engineering grad students

By Gail Hinchion Mancini

GEM, a science- and engineering-education nonprofit that assists underrepresented groups, is moving from Notre Dame to the East Coast to be in closer proximity to the federal and professional agencies that provide lifeblood funding and support.

The departure follows a 30-year relationship at Notre Dame that grew from the civil rights activities of President Emeritus Rev. Theodore M. Hesburgh, C.S.C. During its three decades at Notre Dame, the organization grew to be acknowledged as an exemplary program for shepherding the education and careers of some 3,000 science and engineering students from underrepresented populations.

Formally known as the National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc., GEM will leave in April. Its new support partner is the Educational Testing Service (ETS), which has offices in



College of Engineering Dean Joseph Hogan, left, presents an award of appreciation to Ted Habarth, one of GEM's founders and early presidents. Before serving as GEM president, Habarth was Johns Hopkins University Applied Physics Laboratory affirmative action officer. *Photo provided by Elizabeth Hogan, University Archives.*

Washington, D.C. and Princeton, N.J.

The decision to move has been more than a year in the making. The GEM board of directors approved the move late last summer. ETS and GEM made a joint announcement about the move in late September, describing it as a strategic decision to position GEM closer to centers of influence, such as federal science institutes and professional organizations, as well as sources of funding.

The seeds for GEM were planted in the early 1970s, when corporations and the National Academy of Engineering began calling for increased minority representation in the profession. In July 1974, Father Hesburgh hosted a campus meeting of 40 representatives from 13 research organizations

to develop methods to increase minority representation. Educators led by Father Hesburgh then sketched the mission of GEM. In 1976, the first fellowships were awarded to six master's degree candidates in engineering.

In 1990, GEM introduced fellowships for doctoral degree candidates in science and in engineering. In 2000, it launched a partnership with the Society of Hispanic Professional Engineers. In 2004, the Building Engineering and Science Talent (BEST) Blue Ribbon Panel named GEM the "sole exemplary graduate-focused program."

In addition to being the host institution, Notre Dame is a university affiliate that enrolls GEM students, and will continue to do so. For example, Damon Woodard earned his doctorate from Notre Dame in 2005 and held a post-doctoral appointment here before joining the Clemson faculty as assistant professor of computer science this fall. Georgia Tech, Purdue, Stanford and MIT traditionally enroll large classes of GEM students.

Jeffrey Kantor served on the GEM board in his capacity as vice president for graduate studies and research before returning to the classroom last summer. He was involved in the lengthy discussions about GEM's potential move and says he believes it is a good one for GEM.



It's business as usual at the headquarters of the National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM), where four full-time staff are preparing as many as 1,000 applications for GEM fellowships to be reviewed by a selection committee. GEM is moving its headquarters to the East Coast and will leave Notre Dame in April. *ND Works staff photo.*

## Bookplates, posters will mark library's Fiesta Bowl purchases

By Carol C. Bradley

When the University announced in late 2005 that \$1.5 million of the revenue from the Fiesta Bowl would go to library acquisitions, Marsha Stevenson and other librarians began to think of ways to acknowledge the source of the purchased materials.

Stevenson, head of the library's department of arts, architecture and media, says, "One thing we came up with was bookplating the books purchased with the money."

Traditionally, a book is labeled with a paper bookplate pasted inside the cover.

But library staff members also decided to use electronic bookplates, which are associated with both electronic and paper volumes in the online catalog, and can be placed on the electronic materials.

Electronic bookplates are searchable, Stevenson says, so a patron may eventually be able to use the bookplate to pull up a list of every book purchased with the Fiesta Bowl money.

Of course design requires graphic designers, which is where Robert Sedlack, assistant professor of design, comes in. Sedlack assigned the book

project to his undergraduate advanced graphic design class. Every year, the professional practice class works on projects for on- and off-campus clients. Previous clients have included the Potawatomi Zoo and Transpo.

Stevenson "gave us the opportunity to be as creative as we wanted," Sedlack says. "I assigned the project to everyone in the class, 16 students. Each came up with two ideas. Ideas ranged from an icon to a whole campaign, from a small Web graphic to a large poster." The library offered small cash awards for the winning designs.

In the end, the first-place award was split between two students. "We couldn't choose just one. There were too many ideas we wanted to use," Stevenson says. The librarians chose four of the bookmark designs as well.

The two students who split the first-place prize utilized the \$1.5 million theme. "Nina

Pressly came up with the idea of '1.5' on a jersey, with 'Hesburgh' where the player's name would be, Sedlack said. The visual catch is that it's unusual to see a decimal on a jersey."

James Rudy used a '1.5' spray-painted onto a football field. The two projects were conceptually similar, so Sedlack says it made sense to split the first prize between them.

These and other student designs will become bookplates, Web graphics, posters and bookmarks. The designs may also be used on T-shirts.

The student-designed projects, Stevenson says, "were amazingly

creative. It was fun to work with Robert and the design students. I was enormously impressed with their creativity."

In addition to the honor of having their designs chosen for the current project, Sedlack notes, the bookplates will be perpetual. "From now until the end of time, you'll check out books and open the cover to see the bookplate. One of these kids might come back to campus in 40 years, swing through the library, and see their design work."

The winning designs will be on view in the Hesburgh Library concourse through January.



Librarian Marsha Stevenson, right, and design instructor Robert Sedlack conceived the student project to design bookplates and other items commemorating the purchase of library materials with proceeds from the Fiesta Bowl. Clockwise from Sedlack are James Rudy, Nina Pressly, Victoria Lane and Julie Ruffin. Their designs are shown on page 8. *Photos by Carol C. Bradley.*

# Benninghoff and Notre Dame: a perfect fit

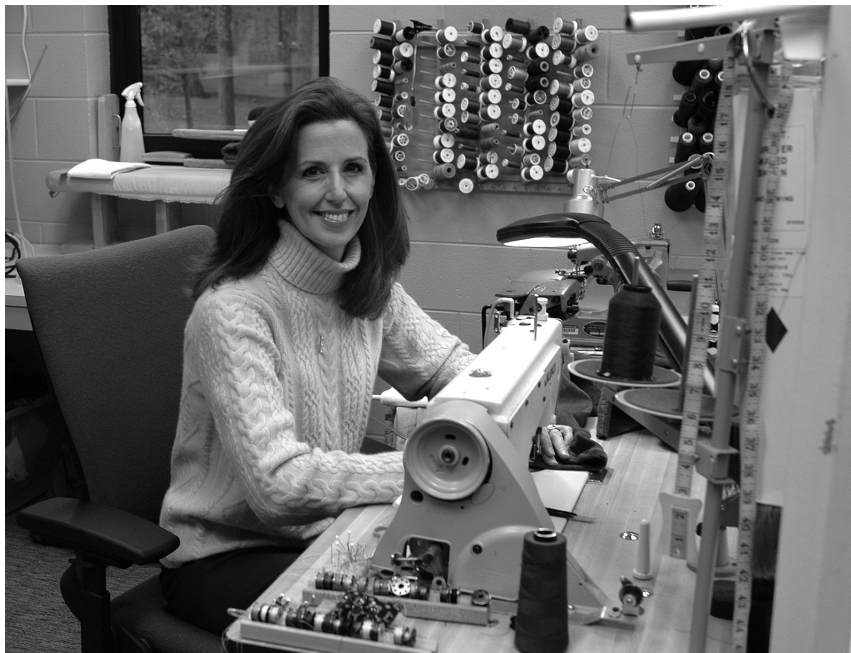
By Carol C. Bradley

At one time, Karen Benninghoff dreamed she'd move to New York and see her designs on Broadway. That dream was never realized. But she did see her work on national television recently when "60 Minutes" profiled Charlie Weis.

"I said, 'Oh, I hemmed Charlie's pants,'" she says, "And altered those cheerleader's costumes. And made the leprechaun costume."

Benninghoff is one of two tailors employed by St. Michael's Laundry. Her shop is in the Campus Distribution Center, behind the Main Building. Benninghoff started sewing at age eight—she was taught by her mother—and learned tailoring at Szalay's Tailoring in South Bend, which for many years was located on Colfax Ave. across from the South Bend Tribune building. She's worked at St. Michael's for a little over 10 years.

She handles whatever tasks come her way, from hems, buttons and zipper repairs to expert tailoring and costume design. The range of her skills can be seen in the variety of projects hanging on the rack in her work area: suits, a child's jacket in need of a zipper, a swing choir dress, a football jersey, a cheerleader's costume and a bridesmaid's dress. The bridesmaid, a student, is flying out of town for her brother's wedding, and had the dress shipped to campus for alterations.



Karen Benninghoff, tailor at St. Michael's Laundry, handles all manner of tasks, from hemming pants and repairing zippers to annually designing new costume for the leprechaun mascot. **Photo by Carol C. Bradley.**

Good tailoring is important, Benninghoff says. "Most people we meet at work will never know what kind of car we drive or what kind of a house we live in, but we are judged by our appearance," she says. "Clothes don't have to be expensive to look good." Expensive clothing that doesn't fit well doesn't do much for the image, she adds.

Oftentimes, she says, customers will purchase a suit off the rack and bring it in to be fitted before they ever wear it. "With a minimal investment, they end up with a custom-made look for hundreds less than what custom would cost. Good fit can cover flaws and accentuate good features just like makeup and a good haircut can do for our faces."

One of Benninghoff's favorite projects is designing two costumes for the Notre Dame leprechaun each year, starting as soon as the mascots are chosen in April.

She and cheerleading coach Jo Minton get together and choose the fabrics. "I make a few changes every year," she says. "Sometimes they're single-breasted, sometimes they're double-breasted. When I go to the games, I'm not watching the players, I'm watching the leprechaun to make sure he doesn't pop his buttons or split his pants."

What she enjoys about the job is the variety. "Just when I think I know how to do everything, someone comes in with something different that I've never done before." The hardest thing, she says, is that clothing designs and fabrics change so much, so quickly.

Time management is her biggest problem. "You try to stay busy, but not so busy that you can't help if someone has an emergency," she says. One recent morning, Benninghoff was making a last-minute repair to a football jersey an upcoming game. "They tear them up every weekend."

# 7 Days, 7 Plays! All in an hour

By Gail Hinchion Mancini

The lights already have gone dark on the theatre department's participation in the national drama experiment "365 Days, 365 Plays!," which occurred during the lunch hour Monday in Reckers. Students performed seven of the short plays.

In the space of that brief hour, theatre faculty Wendy Arons and Siiri Scott had the satisfaction of fulfilling a goal. "We've been trying for a while in the department to get more theatre happening on campus in more different ways. This was a good opportunity to do a different kind of theater," says Arons, assistant professor of theatre.

But there's still the drama of how the year-long event will play out. It will be at least 365 days, if not more, before they'll know.

"365 Days, 365 Plays!" is the brainchild of Pulitzer Prize-winning playwright Suzan-Lori Parks. In 2002, she committed to writing a play a day for an entire year.

She and her producing partner, Bonnie Metzgar, have since been organizing a yearlong national festival in which the plays are performed—in one-week or seven-play groupings—in major cities and on college campuses across the country. It launched the week of Nov. 13.

Arons heard about the project from Parks at the annual conference of the Association for Theatre in Higher Education. The rules were few. She would have to have students perform a group of seven plays in a week, and in the order in which they had been written (although whether it happened on one day or over seven days didn't matter). Someone would have to videotape the event. And, students would not be allowed to charge for the performance. Reckers cooperated by loaning them the space at no charge.

Sometime when it's over, Arons expects a Parks and Metzgar to produce a book chronicling the event, and possibly a video, that will give her a sense of the entire project. She knows that Yale performed Week One, and Notre Dame performed Week Two, but thus far, she has no idea where Week Three will be performed, or any of the events after that.



Wendy Arons, left, and Siiri Scott enjoy the bustle as their acting students prepare to present seven plays from "365 Days, 365 Plays!" **Photo by Bryce Richter.**

# University to establish Energy & Environmental Committee

ND Works staff writer

Executive vice president John Affleck-Graves has reconstituted a committee of faculty, staff and students called the Energy & Environmental Committee whose members are to be directly involved in developing and promoting our environmental policies.

The committee will have its first meeting before semester's end and will ultimately address environmental policy issues including air quality and energy conservation.

Jim Lyphout, vice president for business operations, will serve as chair. He will be joined by administrative members Paul Kempf, director of utilities; Bob Zerr, director of risk management, and Tim Flanagan, general counsel's office.

Faculty appointees are Joan Brennecke, director of the Notre Dame Energy Center, and her

engineering colleague Frank Incropera, of aerospace and mechanical engineering; Leo Burke, Executive MBA program; Ron Hellenthal, biological science; and Darcia Narvaez, psychology and a faculty fellow with the Center for Social Concerns. Junior Kerry O'Connor is one of two student representatives. A second will be named later.

The first meeting is expected to be held in the next few weeks

"The University community is interested in assuring that Notre Dame follows a responsible environmental strategy that supports a healthy campus, and the well-being of the area in which we live," says Affleck-Graves. "My hope is that this committee will be instrumental in establishing an environmental and energy strategy and promoting a culture of environmental stewardship."

Affleck-Graves decided to reconstitute the committee after reviewing a report by the Air Quality

Task Force he appointed last January.

Consisting of eight faculty and staff, it was charged with studying the air quality on campus and its relationship to air quality in the surrounding county. Overall, the task force's findings were positive. It concluded the University is not a major contributor of such pollutants such as carbon monoxide, nitrogen oxides or volatile organic compounds, emissions that are commonly found around power plants like the one on campus.

Negative impacts on campus air quality predominantly come from counties upwind of St. Joseph County with such industries as steel mills, the

committee learned. The committee also explored illnesses related to air quality, finding that incidents of disease such as lung cancer mirrored those of Indiana in general.

Nevertheless, the task force urged the University to continue vigilant work to control emissions. And it concluded that there are proactive steps the University can take to promote a healthy campus environment. Identifying and publicizing plans for energy conservation and monitoring the University's environmental status are among its potential charges.

Affleck-Graves says the committee also might help the University examine practical, proactive stewardship, such as installing bicycle paths, adding hybrid vehicles to its fleet, identifying and adopting efficient energy building design, and collaborating with other regional environmental groups.

The committee reconstitutes one established in 1990 called the Environmental Issues Committee, whose primary charge was to help the University establish a smoking policy. That committee's recommendations were adopted in 1992.

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Works

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Becky Wiese

# Mentor matches can be life-changing

By Gail Hinchion Mancini

Offensive lineman Dan Santucci would like to play professional football after this season with the Fighting Irish.

But if the football thing doesn't work out, Santucci has prepared himself to make use of his bachelor's degree in marketing and the additional skills he's picked up in computer application classes this fall.

He attributes part of that preparation to a relationship he struck up with marketing professor Kevin Bradford as part of an honors program established by the Office of Academic Services for Student Athletes (ASSA).



Irish swimmer Ted Brown describes his participation in the honors program for student-athletes at a reception for the 40 student participants and their mentors earlier this fall. **Photos by Carol C. Bradley.**

"He always said, 'Work hard, keep doing what you're doing. Always keep your options open,'" says Santucci, who met with Bradford through last academic year while he was still an undergraduate.

"It was just a great chance outside of football to talk to faculty, to get their opinion on school material and the outside world," says Santucci, who valued the opportunity to "get to know a faculty member kind of as a friend."

The honors program is comprised of membership among student athletes who are achieving both in the classroom and on the field, court, track, or in the pool. The goal is to provide them with an opportunity to experience a faculty-student relationship in a unique and meaningful way.

Student athletes are paired with faculty mentors and usually meet in informal, no-pressure one-on-one sessions.

"The mentor can help guide these

exceptional students to opportunities for internships, research, scholarships and future jobs. They also may simply be a person the student athlete can talk to. The personal relationships that develop are essential to making this program successful," says Laura Kerls, who administers the program for ASSA.

Fencer Rachel Cota worked last year with anthropologist Daniel Lende, who helped her identify an eight-week summer service program in Africa that she says was a life-altering experience.

ASSA is charged with supporting and challenging all student athletes as they strive for academic success. A few of the services offered through ASSA include tutoring, time management and monitored study halls.

"Sometimes these students are so focused on their sport and academics, they don't make the time to develop relationships with faculty. Their time is so structured," says Kerls.

On the faculty mentor side, the program attracts an amazing array of professorial supporters whose participation bears the truth of the saying: "If you want to get something done, ask someone who's busy."

"I think the best thing we can do for students is sit down and talk with them one-on-one," says Mark Roche, O'Shaughnessy Dean of the College of Arts and Letters and a concurrent professor of philosophy and German. Roche mentors track team member Michael Popejoy.

Forty student athletes are paired



Mark Roche, dean of the College of Arts and Letters, chats at a reception with runner Michael Popejoy. Roche is Popejoy's mentor in the honors program sponsored by the Office of Academic Services for Student Athletes (ASSA).

with mentors, whose ranks include John Affleck-Graves, executive vice president and finance professor; Dennis Jacobs, associate provost and chemistry professor; and Frances Shavers, executive assistant to the president.

Popejoy sought out Roche's support, while Santucci relied on the program administrator to do the matchmaking. That is how physics professor Malgorzata Dobrowolska-Furdyna met soccer player Matthew Besler. She teaches physics to pre-med students, and he wants to go to medical school. "It fits nicely. I know more or less where they're going and what they need."

"And it's fun," says Dobrowolska-Furdyna. "These are smart kids."

They're hardworking. It's a pleasure to be part of their success story."

Valerie Sayers, acting director of the Office of Undergraduate and Post-Baccalaureate Fellowships, recently met with six honors program students whom Kerls says are interested in post-graduate fellowships.

"I just thought they were magnificent," says Sayers, who helps students apply for such fellowships as the Rhodes and Marshall scholarships and Fulbright awards.

Noting that the visitors included sophomores and juniors, Sayers added she was pleased the fellowship office would be able to meet with them early. "All are potentially strong candidates for fellowships."

# Conference to tackle faith's role in healing

By ND Works staff writer

When it comes to the human spirit, God and healing integrate nicely.

Health care providers have learned this as they have observed how patients rely on their faith to pull them through illness. Social and health science research has shown that patients who take a spiritual view of illness often are in better shape a year later than those who do not. Priests and other religious ministers well understand how people turn to God and prayer in the face of sickness.

But as much as God and illness seem to have a connection in the human spirit, there is a disconnect in academia.

A conference next month titled "Faith and Health: An Interdisciplinary Conference on the Dynamics of Religious Coping" will attempt to find common ground among the theologians and social and health scientists. Scheduled for Sunday, Dec. 3 through Tuesday, Dec. 5 in McKenna Hall, it is believed to be the first event to bring members of these groups to the same table. Faculty and staff are welcome and do not need to register.

Conference organizer and psychology professor Thomas Merluzzi, a specialist on coping with cancer and a conference presenter, can't wait to see what comes of the mix.

"Both sides could learn something from the other," says Merluzzi, whose ambitious goal is to plant the seed of a new interdisciplinary area of study.

The conference could open up a new world of potential collaboration. "The goal of the conference is more integration among the fields. A multidisciplinary approach would be the next step."

The time is right for building such bridges, notes Merluzzi, who has seen an explosion in research on spirituality and health in the social sciences and health

sciences. The conference will begin and end with presentations by the leading experts on such research.

Dr. Harold Koening, co-director of the Center for Spirituality, Theology and Health at Duke University Medical Center, will provide an overview of research and findings on spirituality and health at 8 p.m. Sunday, Dec. 3. Dr. Christina Puchalski, director of the George Washington Institute for Spirituality and Health, will close the conference with a presentation, "Spirituality and Health: Clinical and Educational Perspectives."

More than a dozen speakers will explore the historical perspective on the link between religion and healing, the theological foundations for religious coping and associated clinical research, and the potential bridges between theology and the practical aspects of religious coping.

Among Notre Dame theologians illuminating the subject will be Prof. Lawrence Sullivan on the role of healing in world religions and Prof. David Aune on Christ the Healer.

Dr. Rudy Navari, assistant dean and director of the Indiana University School of Medicine-South Bend and the Notre Dame Cancer Institute, will discuss qualified spiritual care for terminally ill cancer patients.

Theology and social sciences have led separate lives in part because controversies arise quickly, Merluzzi explains. For example, if researchers prove conclusively that faith and religious grounding have measurable healing powers, what can medicine do about it? Will someone try to invent a faith shot or spirituality pill?

Without tackling nettlesome philosophical conundrums, Merluzzi says, the conference can at least pave the way for an experience in which social and health sciences workers with a faith-based background, and ministers who appreciate the guiding knowledge of research, can enhance their understanding.

# Pinderhughes insists on the best of both worlds

By Gail Hinchion Mancini

*Editor's Note: This is one in a series of stories about faculty and staff who have recently relocated to Notre Dame.*

Hybrids and blends had defined Dianne Pinderhughes' destiny long before an academic career that bridges two departments—long before she was born, in fact.

In 1902, her great-grandmother petitioned a Providence, R.I., court to change the family name from Hughes to Pinderhughes. Great-grandmother's maiden name was Pinder, and she wanted it preserved. "If someone tells me they've met a Pinderhughes, it's bound to be one of my cousins," says the recently arrived faculty member. "It's a fun name."

Dual interests began marking her career early on. It is firmly planted in political science—she is, in fact, president-elect of the American Political Science Association. But since her first appointment in the government department of Dartmouth College, she has been involved in the burgeoning field of African-American studies.

At Dartmouth, she served on the advisory committee for the African and African American studies program. She then held a joint appointment at University of Illinois in political science and the Department of African-American studies, which she directed for 13 years.

Pinderhughes has reviewed the impact of African-American studies programs at several Ivy League and state universities as a consultant for the Ford Foundation. "We concluded that they had been very important in really energizing the liberal arts in ways that would not have been possible without those programs," she says.

Along with gender studies, the programs have helped open up departments in liberal arts to "different conceptual and theoretical approaches," she says.

Pinderhughes' research interests include voting rights issues and racial and ethnic politics. Next semester she will introduce a course on black Chicago politics, and the students, she says, already seem to be buzzing about it.

"Profound and intense segregation" characterizes

Chicago, says Pinderhughes.

She plans to have students examine the overall demographic, historic, cultural and economic patterns that have led to a "racially self-conscious approach to public life."

Pinderhughes came to the attention of the Africana Studies faculty because her students were often accepted as Erskine Peters Dissertation Year Fellows, a Notre Dame program for outstanding African-American doctoral candidates in the arts, humanities and social sciences. She had, herself, known Peters and she had worked on professional committees with political science chair Rodney Hero.

When friends learned she was leaving the more diverse Illinois campus for Notre Dame, they openly wondered what cadre of scholars she'd be joining. "There's no one there," they would comment.

Her pool of colleagues may be smaller than at her previous posts, "but like the rest of the University, they're very careful, deliberate, thoughtful people." She appreciates that the University recognizes the gifts of its African-American scholars with administrative appointments, which is the case with Richard Pierce, chair of Africana Studies; Hugh Page, head of First Year of Studies, and Don Pope-Davis, interim vice president for graduate studies and research. And she appreciates the additional influences of Hispanic politics, through the work of Hero, African-American politics by Alvin Tillery, and the gender-related political analysis done by Christina Wolbrecht.

Bridging two academic worlds already, she also is casting her attention toward the Helen Kellogg Institute for International Studies, whose work is compatible with her interest in racial, ethnic and political comparisons between the U.S. and such countries as Brazil. Interdisciplinary by nature, Kellogg is well suited to accommodate such interests.



Dianne Pinderhughes, president-elect of the American Political Science Association, holds positions both in political science and the new Africana Studies department. **Photo by Bryce Richter.**

*College of Engineering researchers conduct a vast amount of research that is as healthy and safe. The revolution in their fields is matched by the students they are taught.*

## Using biometrics in the name of security

### Special to ND Works

Most of us are aware that our fingerprints represent a unique signature of our identity that can be measured, catalogued and referenced. Breaking new ground in the field of biometrics, researchers in the Department of Computer Science and Engineering are determining whether and how the face, ear, gait and iris can provide similarly unique information.

Kevin W. Bowyer, the Schubmehl-Prein Chair of computer science and engineering, and Prof. Patrick J. Flynn, his departmental colleague, direct the college's biometrics efforts.

Undertaking research whose purpose has been shaped by the terrorist attacks of Sept. 11, 2001, Bowyer, Flynn and a cadre of graduate and undergraduate students have become a go-to resource for federal agencies seeking ways to keep the public safe. Their work, funded by agencies such as the National Science Foundation, includes first-of-a-kind comparisons of face photographs, face thermograms, 3-D face images, iris images, video of human gait, and even ear and hand shapes.

"The thrust of our research is to evaluate the practicality, performance and usefulness of these technologies as a means of recognizing people," says Bowyer.

Seeking breakthroughs in face recognition, Bowyer and Flynn have assembled one of the world's largest databases of two- and three-dimensional facial images. Students, staff and faculty have served as their subjects over a four-year period, submitting to several sets of images taken between six and 14 weeks apart. The researchers then assembled topographies, or maps, of the faces.

More than 75,000 of the images are being used as part of the 2006 Face Recognition Grand Challenge (FRGC), sponsored by several federal agencies including Homeland Security and the FBI. The goal of the FRGC is to reduce the error rates in current systems so that they may be deployed for real-world applications.

Bowyer and postdoctoral researcher Ping Yan seek a similar outcome in their research on ear recognition, in which they have captured multiple images of ears from more than 400 individuals. The ear's potential as a biometric tool is known, but insufficiently explored.

Applying several approaches, Bowyer and Yan found that ears are geometrically complex and require a complex set of algorithms to assess the collected data. It appears that ear recognition based on a three-dimensional approach is more than 90 percent accurate. Using both the ear and the face in a multi-modal system results in a statistically significant improvement in recognition.

How about the way a person walks? Can an analysis of gait determine if a subject is carrying a concealed load, such as a bomb? This is the question that Flynn, James M. Ward and Michael G. Wittman, both recent graduates, have attempted to answer by videotaping subjects simply walking; walking while wearing a 31-lb. vest, and then wearing a 42-lb. vest.

Among points of analysis, they found consistent signs of the subjects' lower bodies compensating for extra weight. The signs are strong enough that Flynn recommends a continued search for patterns.

Anyone who sees action movies has the gist of iris recognition: High-resolution cameras quickly capture, store, and analyze images without touching a person or damaging the eye. But while the technology might work well in a corporate laboratory or military base (or a James Bond movie), it is not yet practical in public where people are moving around and room lighting is inconsistent.

Another federal challenge, the Iris Challenge Evaluation (ICE), is researching these questions with the use of image data sets provided by the Notre Dame researchers. The goal of the challenge is to advance iris recognition technology so that useful images may be acquired at greater distances, from a variety of angles, under limited lighting conditions, and with or without the subject's knowledge.

Which of these technologies will become the next fingerprint? Maybe not



Prof. Pat Flynn's research includes studying how extra weight can affect an individual's gait.



Kevin W. Bowyer, Schubmehl-Prein Chair of the Department of Computer Science and Engineering, helps graduate student Deborah Thomas capture another entry to a database of facial images *Photos by Matt Cashore.*

just one should prevail, the research suggests. Iris recognition fails on people with a syndrome called albinism; speaker recognition won't work on a mute person. Gait technologies may fail on people with back, hip or leg problems. And some wear veils for religious reasons, which means that facial recognition systems will not work on them either.

Bowyer and Flynn suggest that the future of biometrics lies in the use of multi-modal systems that offer a robustness of data which provides more accurate assessments while maintaining avoiding invasive searches and

violations of civil liberties.

Still in its infancy, biometrics will continue to evolve to meet the challenges of identification, verification, and security that are prevalent in today's world. It will continue to help nations assess what cannot always be seen with the naked eye.

## They seek relief for your aching back, creaking knees and worn-out hips

### Special to ND Works

The new College of Engineering Multidisciplinary Research Laboratory is like a sleek late-model do-everything cell phone: It's a marvel that so much can happen in such a relatively small entity.

Opened last summer, the 25,000-square-foot facility houses research on practical issues that affect us all, such as osteoporosis, bone fracture, and skeletal damage due to intense physical activities. Five faculty from aerospace and mechanical engineering and their graduate students and postdoctoral fellows occupy this state-of-the-art facility wedged in between the Hessert Laboratory for Aerospace Research and the Facilities/Maintenance Center.

The researchers include Glen L. Niebur, associate professor, and Ryan K. Roeder, assistant professor, who direct a project to design and develop compounds that will bind to fractures so they can be highlighted on X-ray or

CT scans. Roeder and Niebur are the first researchers in the country to use this technique to assess bone quality. They hope their findings will translate to improved methods for the diagnosis and prevention of fractures.

Support of projects in Engineering North comes from such diverse pockets as the U.S. Army Medical Research and Materiel Command, the Centers for Disease Control and Prevention, and the National Institute of Arthritis and Musculoskeletal and Skin Diseases program.



Glen L. Niebur, associate professor of engineering, and student Yifei Dai conduct research on assessing bone quality in a new facility north of campus.

*of inquiry dedicated to keeping  
y widespread changes in the way*



Diane R. Wagner discusses her work with graduate student Alan Arico. She investigates the causes of osteoarthritis and disc degeneration at the microstructural level.



Ryan Roeder, background, works with student Matt Landrigan.

Roeder appreciates the new space for a number of reasons. “As flexible as the space in Fitzpatrick Hall has been, it was not designed for biomaterials processing or cell and tissue culture,” he says.

For the past three years Roeder had been partially utilizing the lab space of JoEllen Welsh, professor of biological sciences. That put an added burden on

## Engineering good health

### Special to ND Works

In the new Multidisciplinary Research Building, there may not be a doctor in the house, at least not the kind with a medical degree. But there is considerable activity being dedicated to finding cures, all by researchers with traditional engineering degrees.

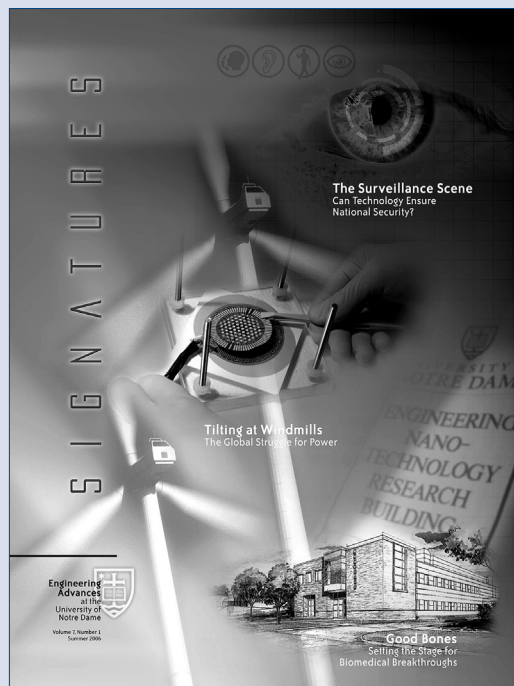
In this age of modern medicine, biomedical engineers combine the traditional strengths of engineers—a knowledge of materials and mechanical systems, experience in the design and control of systems, and expertise in materials processing—with some of the strengths of biologists and surgeons.

For example, Steven R. Schmid, associate professor of aerospace and mechanical engineering, and James J. Mason, formerly a faculty member and now a researcher at Zimmer, Inc., worked with the Warsaw, Ind.-based company—a leader in the design, manufacture, and distribution of orthopedic implants and fracture management products—to produce devices that could be used in minimally invasive surgical procedures.

The team pioneered a hip fracture implant featuring curable, metallic and polymer components that causes less trauma, promotes a shorter hospital stay and readies the patient for a faster rehabilitation process. In addition, the surgical incision needed for this implant is more than 90 percent smaller than the traditional incision.

Zimmer began clinical trials of the device in February 2005. More than 350,000 hip fractures occur in the U.S. annually; some 4 percent who undergo the procedure die during the initial hospital stay; another 40 percent need long-term care. So the potential impact of a smoother recovery is huge.

Opportunities for collaboration among engineers, biologists, and physicians expanded in 2005 with the opening of the Ernestine Raclin and O.C. Carmichael Jr. Hall, which houses the Indiana University School of Medicine-South Bend and the W.M. Keck Center for Transgene Research. “Our efforts, which mesh so well with the Catholic mission of the University,” says Schmid, “will continue to impact the quality of life as we know it ... in very tangible and direct ways.”



For more information about engineering research, visit the on-line version of Signatures on the College of Engineering Web site. **Image by Engineering Graphics and Publications.**

her facilities, says Roeder.

Tissue research is the essence of work by Diane R. Wagner, assistant professor, who looks into the causes of osteoarthritis and disc degeneration at the microstructural level. She studies how orthopedic soft tissue is remodeled, a process that not well understood. As she studies these processes, she hopes to learn, as well, about tissue engineering, in which cells are induced, often with mechanical loading, to create material for damaged tissues. Her research

combines theoretical, experimental, and computational mechanics with biological technique.

The building also houses laboratories for nano-mechanical characterization, biomaterials processing and characterization. A tribology laboratory, tissue mechanics lab, manufacturing area, biomedical imaging lab, and histology and specimen preparation area are also part of the new facility.

“Moving into a new building is

always exciting, particularly since we [the faculty moving into the facility] were able to work very closely with the architects to design cutting-edge research space,” says Timothy C. Ovaert, professor of aerospace and mechanical engineering. A key benefit of the new building, according to Ovaert, is the synergistic environment created by placing faculty and students who share common interests together. “We will be able to focus more on research and interaction with other groups, instead of logistics.”

## Overseeing the evolution of engineering teaching

By Carol C. Bradley

When John J. Uhran Jr. arrived at Notre Dame in 1966 with his doctorate from Purdue, the primary teaching technology available to engineering professors was the old-fashioned blackboard and a slide rule.

“A few years later, we had white boards and you could use colors, which was certainly an innovation,” he says.

Uhran, professor of computer science and engineering, and electrical engineering, recently stepped down as senior associate dean of the College of Engineering. Uhran, whose leadership was instrumental in the establishment of the Department of Computer Science and Engineering, was recognized with a 2006 Presidential Award by Rev. John I. Jenkins, C.S.C.

During his tenure, he has observed the progression of engineering teaching from textbooks and mimeographed notes to the information age.

“Now there’s a chance for textbooks to be eliminated altogether,” he says. “Today we can show pages projected on a screen, or through WWW links.”

Of course the most dramatic changes over the past 40 years have been in the area of computing.

When Uhran began his career, campus computing consisted of the UNIVAC 1107 in the computing center. The first computer his department obtained, he recalls, was a PDP-8, which had 4K of memory and was used to teach students about computing.

“Storage was done on paper tapes, or magnetic tapes,” Uhran says. “In order to enter information into the PDP-8, you had to use punched paper tape, and the answers came out on punched paper tape or a teletype.”

That machine was superseded by the IBM 1130, which required punch cards to operate. “We printed out on long sheets of green paper. If you wanted to save the program, you had to save the paper tape or the cards.”

Today, Uhran notes, he can receive an electronic copy of a scholarly journal that looks, on the screen, like a printed magazine. “When I go to turn the page, it looks like a page actually turns.”

One major change in engineering teaching is that many labs have been replaced with computer tools.

“A lot of what we would have done in laboratories—taking a battery and hooking it up to a circuit and making it work—we can do that in simulation,” Uhran says. “Today, we can design buildings, design complicated integrated circuits or do architectural layouts, all on the computer. Students can do much



When professor of computer science and engineering John J. Uhran Jr. arrived at Notre Dame in 1966, engineers used slide rules, not computers. **Photo by Carol C. Bradley.**

more complicated things than they could have 30 or 40 years ago.”

They still must understand the basics and the end result, though, he emphasizes. “You can use a calculator, but you need to know how to multiply,” he says. “They should always be able to fall back and start from scratch, without needing a calculator or computer. They always give you an answer, but not necessarily the right answer.”

While the technology has changed over the years, students are different today as well, he notes. “They’ve seen TV since they were in the crib. They’re much more visual than when we were kids. It has affected the way we need to educate our young people.”

On the future of engineering teaching, Uhran hesitates to speculate. “It’s hard to see where all this is headed,” he says. “The delivery of education is evolving as we sit here. Distance learning—we’ve run classes where faculty might be physically located in another country. I can’t tell you if it’s good or bad, it’s just going to happen. People are doing more work through telecommuting, too. But you can’t beat the one-on-one mentoring that a teacher can give to a student. Ultimately, you can’t beat face-to-face communication.”

## Nominations sought for Wall of Honor

### ND Works staff writer

Notre Dame has been blessed with some legendary figures. And if we can't remember any of their names, we can see them and their biographies mounted on the **Wall of Honor** on the ground floor of the Main Building.

Rev. John I. Jenkins, C.S.C., is preparing to add new legends to wall, and he is seeking input on names of "exceptional men and women whose contributions to Notre Dame are lasting, pervasive and profound."

An on-line nomination form can be found at <http://www.nd.edu/~honorwal/>. In addition to a name, the form has an area for describing the attributes that make the nominee worthy. Nominations, which may

be submitted anonymously, will be accepted through Friday, Dec. 15, according to Rev. James E. McDonald, senior assistant to Jenkins.

Honorees come from all walks of life, and so should the nominees. There are famous Holy Cross priests such as founder Rev. Edward A. Sorin, C.S.C.; Rev. Theodore M. Hesburgh, C.S.C., and Rev. Edmund P. Joyce, C.S.C.

The names include accomplished scholars and researchers—chemists Rev. Julius Nieuwland, C.S.C. and Emil Hofman; biologist George Craig, and English professor Frank O'Malley.

Honored staff also include Brother Borromeo Malley, C.S.C., who oversaw the construction of the power plant and campus fire department, and custodian Currie L. Montague, for 30 years the principal custodian of the

Main Building. Representatives of the arts, athletics, benefactors and Board of Trustee members also are included.

## United Way update

The University's 2006 United Way campaign has raised nearly \$300,000 for charities in St. Joseph County. Donations to the newly established Employee Compassion Fund total nearly \$7,000, reports Dee Dee Sterling, coordinator of the campus campaign. This year, 975 employees pledged or donated to the fund.

A special weekend of bowling at Strikes and Spares in Mishawaka, organized by David Harr, assistant vice president for auxiliary services, drew 421 employees and raised an additional \$2,105.

All those who pledged were eligible for prizes. Top prize winners were **Barbara Winquist**, security monitor at the Snite Museum, who won two round-trip airline tickets to anywhere in the continental United

States; professor of psychology **John Borkowski**, who won an Apple iPod, and **Warren Outlaw**, director of Educational Talent Search, who won two tickets to the Notre Dame-Army football game. **Jackie Strabley** and **Beverly E. Frecker** will have reserved parking places during 2007.

## 'Sneak preview' planned for next Gibson film

A free "sneak preview" of Mel Gibson's new film **Apocalypto** will take place at 4 p.m. on Sunday, Dec. 3 in the Browning Cinema, Marie P. DeBartolo Center for the Performing Arts. The film, a mythic action-adventure set against the end times of the great Mayan civilization, will open in theaters on Dec. 8. The event is free but ticketed. Call the box office at 631-2800 to reserve tickets.

The 2006 film **U.S. vs. John Lennon** will be screened on Friday, Dec. 8 at 7 p.m. and 10 p.m. and Saturday, Dec. 9 at 7 p.m. and 10 p.m. The film is a compelling and provocative look at John Lennon's transformation from musical artist to anti-war activist, and details the U.S. government's attempts to silence him.

The 1944 film noir classic "**Double Indemnity**," starring Fred MacMurray and Barbara Stanwyck, will be shown at 3 p.m. on Saturday, Dec. 9.

Tickets for both these films are \$5 for faculty and staff, \$4 for senior citizens and \$3 for students. Purchase tickets by calling the box office, 631-2800 or by visiting <http://performingarts.nd.edu>.

## DISTINCTIONS

The University welcomes the following employees, who started working here this fall. Joining the faculty and staff in September were:

**Melissa N. Stuckey** and **Nazera S. Wright**, African and African American studies

**Summer J. Arrigo-Nelson**, anthropology

**Christian M. Brown**, **Pramod Kumar Giri** and **Hilary Hagedorn**, biological sciences

**Melissa L. DeClercq**, Campus Ministry

**Xuejun Wang**, chemical and biomolecular engineering

**Taegee Kiehm**, **Weimin Lin** and **Sameet Sreenivasan**, chemistry and biochemistry

**Bo Zhou**, computer science and engineering

**Samuel E. Avants**, **Carolyn L. Barfell**, **Steve W. Closson**, **Raquel D. Heard**, **Kathleen A. McCoy**, **Cathryn A. Niedbalski**, **Larry Parker** and **Caroline M. Walsh**, building services

**Patricia Snell**, dean's office, College of Arts and Letters

**Jeffrey D. Griffin**, human resources

**Jay Rizzi**, development

**Brandon Greenawalt**, information technologies

**Kambiz Azarian Yazdi**, **Ricardo A. Carmona Galan** and **Tom Zimmerman**, electrical engineering

**Susan M. Holt**, women's golf

**Bradley Aldrich**, hockey

**John L. Slonkosky**, Institute for Church Life

**Aziz T. Saliba**, **Joan B. Kroc**, Institute for International Peace Studies

**Nasser Elahi**, marketing

**Andrea A. Robiglio**, Medieval Institute

**Efrain Navarrete**, Morris Inn

**Susan M. Pawlicki**, Multicultural Student Programs and Services

**January Zell**, arts and letters

**Timothy J. Lyden**, Office of the President

**Luigi Cuccia**, **Dongwook Jang**, **Akaki Liparteliani**, **Mary A. Mostofi**, physics

**Angela Yugo**, pre-college programs

**Ruth Edge**, **Luis Lemus** and **Jeremy J. Webb**, radiation laboratory

**Michael R. Bertsch**, sports information

**Julie Baclene**, sports medicine

**Ronnie Goldstein**, theology

**Edward P. DelleDonne**, Walther Cancer Institute

Joining the University in October were:

**Chad D. Faber**, Academic Services for Student-Athletes

**Jonah Smith**, **Mariha N. Wadsworth**, **Yi Xue** and **Lynn L. Anderson**, biological sciences

**Enid N. Gatimu** and **Guoguang Qian**, chemical and biomolecular engineering

**Tracey I. Dibble**, human resources

**Anthony J. Suber** and **Andrew Yocum**, development

**Meredith H. Nelson**, Erasmus Institute

**Rachel R. Curtis**, Huddle

**Paul L. Wehner**, operations and engineering

**Jenny E. Goelz**, performing arts

**HsingChi von Bergmann**, philosophy

**Neil D. Greiner** and **Leslie R. Purdy**, power plant and utilities

**Christine Bradford**, radiation laboratory

**Brian L. Farmer**, research and sponsored programs accounting

**Anne Marquez**, sports medicine

**Margaret Kotoske**, University Health Services

## FROM THE ARCHIVES



Rev. Ludwig "Louis" Putz, C.S.C., pictured here in 1971, founded the local Forever Learning Institute, which remains viable today. *Photo provided by Elizabeth Hogan, University Archives.*

## A life lived loud: Biography published on Rev. Ludwig "Louis" Putz, C.S.C.

By Michael O. Garvey

His English was eloquent, spoken in a thick German accent and a formidable bass voice, perfect for quick salutations and abrupt orders, but always suffused with paradoxical warmth. He was a Bavarian peasant, short and stoutly built, and from behind his Coke-bottle lenses he never seemed to miss much—even when he appeared to be dozing.

In 1998, deep in the winter of the year he died at 89, he was seen shoveling his own car out of a snowdrift in the Corby Hall parking lot. Even the most solicitous passersby feared to intervene. Like the blizzards of that year, Ludwig "Louis" Josef Putz was difficult to ignore, a force of nature and an arguably alarming sign of God's attention to an all-too-inattentive people.

This Holy Cross priest, whose every utterance seemed to end with an exclamation point, is memorialized in a biography entitled "You Are Church! The Life and Times of Louis J. Putz, C.S.C., Prophet, Servant and Visionary," (Goal/QPC, Salem, N.H.) by 1959 alumnus Bob Ghelardi. For six decades Father "Louis" Putz was all of those things.

Here is how his friend, colleague and brother, Rev. Theodore M. Hesburgh, C.S.C., president emeritus, summarizes Father Putz's curriculum vitae in a foreword to the book: "He lived a life filled with fresh initiatives, starting with creative work with students of Notre Dame and across North America, later with publishing ventures which announced (largely through translations) the transformations of the Second Vatican Council for an American public, then ... (implementing) the council as rector of Moreau Seminary at Notre Dame, after which he brought the message of lay

involvement in the Kingdom of God to retired folks."

Ghelardi's account details a life and career deeply entangled in the dramas of the last century: A rustic childhood in a defeated Germany, a precarious emigration to New York, transatlantic seminary studies perilously interrupted by World War II, a ministry in Notre Dame's seminary and campus residence halls which anticipated the Second Vatican Council, and a "retirement" as the chaplain for a nationwide community of fellow senior citizens, or "Third Ager," as he called them.

Father Putz launched the occasionally controversial Young Christian Students group, modeled on more radical initiatives of European Catholic labor organizations. A member of the theology faculty, he also served as rector of Cavanaugh Hall and later of what is now Moreau Seminary. He founded Fides Publishers, a company which made previously untranslated works of European theologians available to literate Catholic laypeople.

When many of his priest-contemporaries were dozing on the Corby Hall porch, Father Louie became a "Third Ager" and established South Bend's Harvest House, a center devoted to the physical, spiritual, and cultural needs of older adults; and the Forever Learning Institute, an inexpensive continuing-education program in which he remained active until days before his death.

"To be an apostle," he once said in a homily for Pentecost Sunday, "you need not necessarily become a social worker, or a foreign missionary; you need not be a dynamic orator. You need merely to be keenly alive to the needs of your neighbor, the neighbor of your immediate environment. 'Proximus,' the Latin word for neighbor, is the one next to you ... Timely reminders, kind advice, a kind word, or sympathetic concern might save a broken spirit or otherwise lost soul. Real, effective, personal charity ... is the master key that will open every heart, acquired by a constant doing of little acts and services, a readiness to serve others and sacrifice oneself."

Father Putz practiced what he preached.

## Like your mother said, wash your hands

By Carol C. Bradley

Want to avoid colds, flu and gastrointestinal illness this winter? Wash your hands.

Jocie Antonelli, registered dietician and manager of nutrition and safety for food services, is responsible for food safety training for employees. Hand washing, she says, is key. "It's critical that people wash their hands properly, and often enough," she says. "Unless you like having pink eye, strep throat, colds and the flu you should wash your hands."

Antonelli recently teamed up with Charles F. Kulpa, professor and chair of biology, to graphically illustrate the problem. Kulpa supplied Antonelli with Petri dishes, and she swabbed various surfaces around campus and cultured the results.

"I did stair railings, restroom doors, elevator buttons, a computer mouse in the library, and the keypad on the ATM by Reckers," she says. "A picture is worth a thousand words. People will see the kinds of things that can grow on a surface that looks clean."

The worst culprit? The ATM. The culture revealed a variety of bacteria and fungi, Kulpa says.

"It's clear that viruses that cause colds are transmitted hand to hand," says Kulpa. "Viruses and bacteria can also linger on objects such as common use telephones and door handles."

When it comes to hand washing, running water over your hands isn't enough, either, Kulpa says. "You need to wash thoroughly. Use soap and suds up well."

And using soap means really using the soap, he says. His grandchildren will claim they've washed their hands, he says, but the soap remains suspiciously dry.

The Centers for Disease Control (CDC) notes that washing your hands often—at least four times a day—is the simplest, most effective way to reduce the spread of germs, including colds, flu, and the Norwalk virus known to cause outbreaks of gastrointestinal illness among cruise ship passengers.

Studies have shown that 91 percent of adults claim that they wash their hands after using the bathroom, but observation shows that only 83 percent actually do so. Women have a better track record than men—90 percent versus 64 percent. Only 32 percent of Americans wash their hands after coughing or sneezing, and even fewer—21 percent—after handling

money.

**When should you wash your hands?** Before you prepare or eat food; after going to the bathroom; after blowing your nose, coughing or sneezing; after handling an animal or animal waste, and after handling garbage. You should wash your hands both before and after treating a cut or wound on yourself or another person.

**How should you wash your hands?** The CDC recommends that you wet your hands with clean, running water and apply soap. Rub hands together to make a lather and soap all surfaces, including the backs of your hands and between fingers. Then rub for about 20 seconds. Dry your hands with a paper towel or air dryer. If you're being extra cautious, turn off the faucet with the paper towel, to avoid re-contaminating your hand. Use hand lotion as needed to keep the skin from becoming dry.

Alcohol-based hand sanitizers

are no better than soap and water, Kulpa notes, but can be substituted if there is no soap and water available. Apply the product to the palm of one hand and rub hands together. Rub the product over all surfaces of the hands and fingers until hands are dry.

Other tips to avoid catching colds: Since germs linger on surfaces, avoid touching your nose, eyes and mouth. Cough into the crook of your elbow rather than into your hand. It's also

important to keep your immune system strong, Antonelli notes. "Wash hands, exercise, eat a healthy diet and get enough sleep."

Hand washing is not something you need to be neurotic about, she says. "Germs are everywhere. But it's important to do what you can reasonably do to protect yourself and your family."



Jocie Antonelli, food services nutrition and safety manager, swabs a computer mouse in the library to demonstrate the importance of hand washing in disease prevention. The culture at left, which shows colonies of bacteria and fungus, was taken from the keypad of an ATM outside Reckers. **Photos by Carol C. Bradley.**

## FYI

### Poetry, prose readings

The Creative Writing Program will sponsor three upcoming literary events to be held in the Hospitality Room of Reckers, South Dining Hall. Poets **Adam Clay** and **Alex Lemon** will read from their works from 7:30 to 10 p.m. on Thursday, Nov. 30. Poet **Peter Robinson** will read excerpts from "The Selected Poetry and Prose of Vittorio Sereni" from 4:30 to 6 p.m. on Friday, Dec. 1. **Kelly Kerney**, 2005 Sparks Prize Winner, will return to campus to read from her book "Born Again" on Wednesday, Dec. 6 from 7:30 to 9:30 p.m. All events are free and open to the public. For more information on this and other upcoming C.W.P. events, visit <http://www.nd.edu/~alcwp/activities.html>.

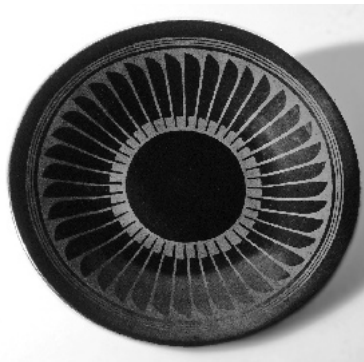
[www.nd.edu/~alcwp/activities.html](http://www.nd.edu/~alcwp/activities.html)

### New exhibitions open at the Snite Museum

"Hyperflux: CalArts Silkscreen Poster Show 1999-2005" will open on Friday, Dec. 1 in the Entrance Atrium Gallery of the Snite Museum of Art. The colorful silkscreen posters on display in this exhibition were all created at the California Institute of Arts between 1999 and 2004. The exhibition will be on view until Feb. 7.

**Selections from the Native North American Art Collection** will open Sunday, Dec. 3 in the Snite's Milly and Fritz Kaeser Mestrovic Studio

Gallery. The exhibition, which will be open through March 2, will illustrate the diversity of art traditions produced by Native North American peoples.



Native North American pottery

### Student chamber music in the Annenberg Auditorium

A concert of **Student Chamber Music** by performance music majors will be held at 2 p.m. on Saturday, Dec. 2 in the Annenberg Auditorium, Snite Museum of Art. The event is free, and no tickets are required. Call 631-6211 for more information.

### University Bands, Glee Club at performing arts center

The **University Bands Fall Concert** will be held at 3 p.m. on Sunday, Dec. 3 in the Leighton Concert Hall, DeBartolo Center for the Performing Arts. The performance will include marches, overtures, pop medleys and traditional Notre Dame favorites. The event is free but ticketed. Call the box office at 631-2800 for reservations.

**Collegium Musicum** will perform in the Reyes Organ and Choral Hall in the performing arts center at 7 p.m. and 8:30 p.m. on Wednesday, Dec. 6. Collegium Musicum is a small vocal ensemble specializing in a *capella* sacred and secular music from the Medieval, Renaissance and Baroque eras. All tickets for the event are \$3.

The **Notre Dame Glee Club Christmas Concerts** will be held on Friday, Dec. 8 at 6:30 p.m. and at 9 p.m. in the Leighton Concert Hall. All proceeds from the concert benefit the South Bend Center for the Homeless. Tickets are \$6 for faculty and staff, \$5 for senior citizens and \$3 for students.

Tickets for these events are available from the box office, 631-2800 or by visiting <http://performingarts.nd.edu>.

### Family skating, with a visit from Santa

RecSports will offer **Family Skate Night** from 5 p.m. to 7 p.m. on Friday, Dec. 15 at the Joyce Center Ice Rink. Free skate rentals are available while they last, and refreshments and a visit from Santa will be included. There is no pre-registration or fee, but you must present a valid Notre Dame I.D. card.

### On building cities

How should a city be organized? What makes an urban area work? How can civic buildings contribute to traditional towns and neighborhoods?

Urban planner Maricé Chael will cover this territory during a presentation "Urban Infill: The Making of a Community," at 4:30 p.m. Monday, Nov. 27 in 104 Bond Hall. The lecture is sponsored by the School of Architecture.

Chael of Chael, Cooper & Associates, has overseen civic, mixed-use and residential design and construction projects for clients including Winter Park, Fort Myers Beach and Fort Pierce, Fla., as well as for private developers and non-profit agencies. She is a member of the Congress for the New Urbanism and serves on its council.

### President's Party

The President's Staff Christmas Reception for faculty, staff and administrators will take place from 2:30 to 5 p.m. Dec. 7 in the Main Building. Performances by The Handbell Choir and Glee Club are planned.

## WHAT THEY WERE DOING



### Flu shot update

Pat Brubaker, health services' assistant director of clinical services, administers a flu shot to Sushma Lakkaraju, from the investment office. Health services personnel administered 4,800 doses of flu vaccine to faculty, staff and students in early November. Around

100 doses of vaccine are still available, Brubaker says, and flu shots will be given until the supply is exhausted.

Those interested should request a shot at health services, which is open 24/7. If you missed the opportunity to get a shot on campus, Brubaker says, there are still adequate vaccine supplies available in the community.



For day-to-day listings of events, visit [agenda.nd.edu](http://agenda.nd.edu).

## The *art* of football

By Arlette Saenz

Since it is home to one of the nation's most revered college football programs, it is only fitting that Notre Dame holds an extensive college football collection. In addition to an array of sports-related books and magazines, the University Libraries' Department of Special Collections houses close to 18,000 football programs, most dating from the first half of the 20th century.

Nearly 60 football program covers are featured in the exhibit "Representing College Football: Game Program Cover Art Between the Wars," on display in the Rare Books Room, 102 Hesburgh Library, at the west end of the first-floor concourse.

The exhibit, which runs through Dec. 21, highlights what George Rugg, curator for special collections, calls the "golden age" of cover design.

"The '20s and '30s witnessed a flowering of sophisticated program cover art," Rugg says. The design field in those years developed from the use of plain, black and white photographs to syndicated, highly stylized covers. Agencies such as Spencer Marketing in New York would sell mass-produced generic covers to schools, which would then tailor them with game and school information. Wealthier schools hired private illustrators to design their covers. For instance, Yale commissioned John Held Jr., one of the most celebrated illustrators of the time, to design the 1929 Yale-Army cover. It is featured in the exhibit.

The exhibit organizes the covers according to seven themes, opening avenues for discussion about the social implications of the game of football. "The exhibit echoes not only the culture broadly, but the higher education and, more specifically, the game of football," Rugg says. "It offers contemporary statements of how the game was perceived and how institutions represented it to the public."

Two themes touch upon the way the game of football was played during the '20s and '30s. Prior to the debut of the forward pass, which Knute Rockne embraced, cover art tended to portray the "crystallizing encounter between runner and tackler," Rugg says. Many programs also feature the "archetypal image" of players of the era—the punter—rather than the deified quarterback favored today.

The cover art not only illustrates changes made in the game of football, it exemplifies differences in social dynamics. At a time when their participation was limited to that of spectators, women are depicted in a voyeuristic manner. "They were designed to appeal to the male purchaser, who would look at women on covers, who, in turn, were watching the game," Rugg says.

Some programs highlight social barriers relating to ethnicity. Football players were represented by the "old stock" Anglo-Saxon American, while Native Americans and Hispanics were only shown in the form of mascots.

For football aficionados and historical buffs alike, the exhibit provides a penetrating look into an era when the image of college football was impacted not only by the way players played, but also by changes in design and illustration.

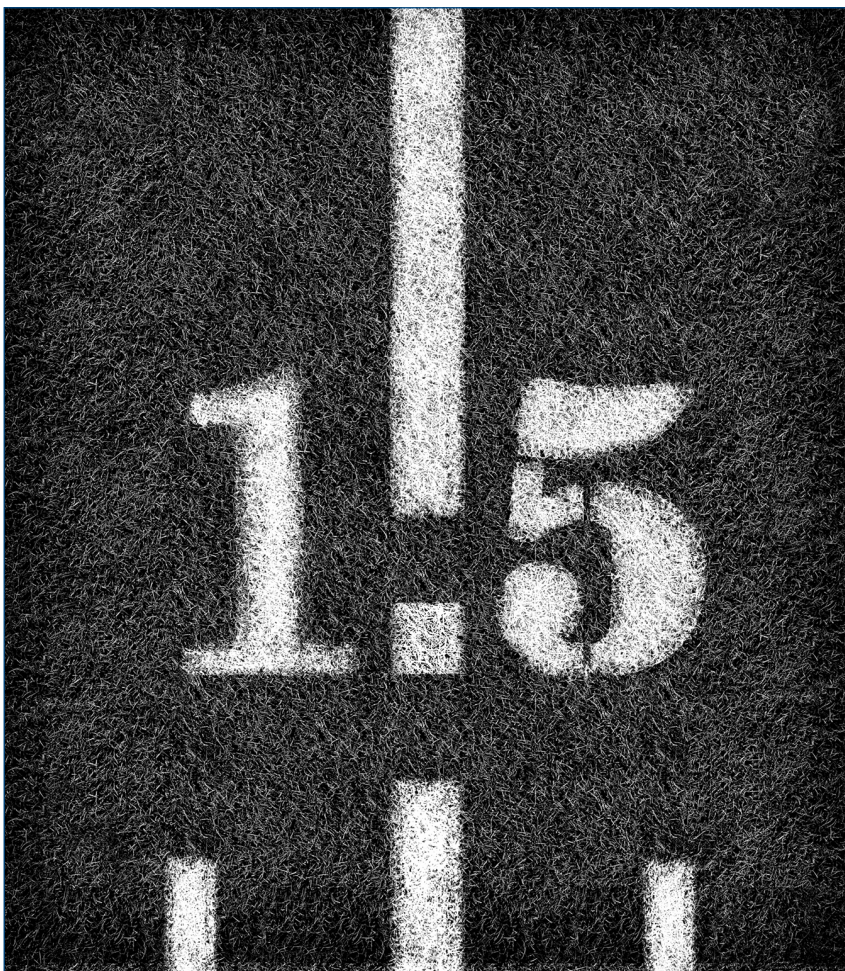


A player is depicted as an alpha male in this 1924 cover by Robert Foster for the University of Pennsylvania. *Image provided by George Rudd.*

### 2006 FIESTA BOWL FUND

Going the Extra Yard for Education

Thanks to the Notre Dame football team and their participation in the Fiesta Bowl, 1.5 million dollars of funding has been made available to the Hesburgh Library in order to help further academic excellence.



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Designs of bookmarks, posters and bookplates by undergraduate students James Rudy and Nina Pressly will commemorate library materials purchased with \$1.5 million in Fiesta Bowl funds. See full story on page one.