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That fancy footwork

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Becoming a character

BY KATHLEEN McDONNELL

Most people journey to the theater to escape from reality. What if, however, the play that you attend includes a representation of you?

Acclaimed New York actress-playwright Anna Deavere Smith has written a portion of her latest play about one of Notre Dame's own faculty members—Susan Youens, Van Gorkom Professor of Music.

"Let Me Down Easy" is a one-woman show by Smith, a Pulitzer Prize nominee and two-time Tony Award nominee. Despite appearing in popular television series such as "The West Wing" and "The Practice," and films like "The American President," "Philadelphia" and "Rent," Smith is best known for her "documentary theater" style featured in her latest play, which premiered at the American Repertory Theatre in Cambridge, Mass., on Sept. 12 and ran until Oct. 11.

"Let Me Down Easy" is different

from Smith's other documentary theater plays, Youens said, because it seeks to "go on a quest that is more lyrical and personal on the theme of grace."

In the "Author's Notes" section of the play's program, Smith writes of her several-year journey around the world interviewing both marginalized and idolized members of society and exploring the resilience and vulnerability of the human body. She cites Harvard professor Michael Sandel's assertion that "the gifts and burdens human beings have are handed out randomly" and notes that she came to ask, "Where's the grace in it all?" That is the question "Let Me Down Easy" seeks to answer.

Smith interviews a variety of people for her plays and then impersonates them on stage, changing personas throughout the evening. "Let Me Down Easy" features Smith as Ann Richards, former governor of Texas; Samantha Power, writer, Harvard professor and human rights activist; the imam of the al-Farah Mosque in New York City; Peter Gomes, the Pusey Minister at Harvard



Susan Youens

University; the rabbi of the Sinai Temple in Los Angeles; the director of an orphanage in Johannesburg; and two musicians: the opera singer Jessye Norman and Notre Dame professor Susan Youens.

"To say that I'm stunned at finding myself in such company," Youens said, "is an understatement."

Youens' journey as a character began in late August when she



In her latest one-woman show, Anna Deavere Smith portrays music professor and historian Susan Youens, one of the foremost authorities on 19th-century German music.

consented to an interview about the music of Franz Schubert, her area of scholarly expertise. She had not heard of Smith's theater work prior to her interview but had a "thoroughly pleasant two-hour conversation" with the playwright. When she found out that the material Smith collected was meant to form a character in one of her acclaimed plays, Youens said she was "very surprised, but quite honored."

While Youens herself has not attended a performance, she has been told the part about her is "downright seraphic."

"Evidently," Youens remarked, "I have a bit more of a Texas accent in the drama than I do in real life (my students might disagree), but that is a small price to pay for such an unexpected and happy privilege."

Development director's 'pipe dream' wins Emmy

BY SHANNON CHAPLA

George Keegan, who joined the University in February as director of foundation relations, may achieve untold success in his new position. But it's doubtful his accomplishments will win him another Emmy Award, the highest honor of the Academy of Television Arts and Sciences.

The Mid-Atlantic Emmy Award for Children/Youth/Team Program or Special was recently awarded to "The Adventures of the Young Thomas Edison," a show Keegan helped co-create to encourage creativity and innovation through the scientific method.

Keegan's involvement with the project relates to his previous position as the executive director of the Edison Innovation Foundation in Newark,

N.J. The foundation is committed to educating the next generation of great innovators through Edison and his Invention Factory. Keegan also drew inspiration for the show idea from many sources, including entrepreneurship studies. He earned a background in education as a graduate of the Alliance of Catholic Education (ACE) program.

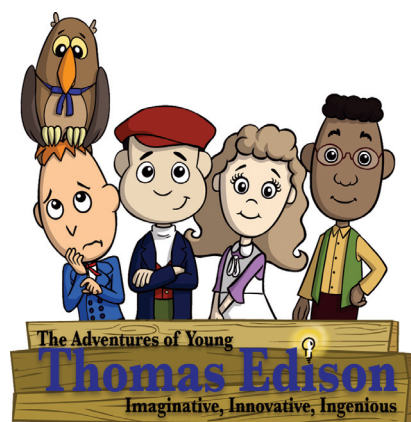
"I kept hearing about how science and math standards had been dropping," Keegan says. "And then I read a report that said if you don't capture students' interest in math and science by fifth grade, you've lost them for life. I wanted to make an impact by inspiring kids to ask questions and think differently. The series is something that parents have been looking for because it's completely different."

A 1995 Notre Dame graduate, Keegan completed the ACE program and an MBA from the University of Florida.

"When I was in business school, I had a concentration in entrepreneurship and innovation, and that's when I really started talking to my father (also associated with the Edison Foundation) about Edison and what he did," Keegan said. "Besides wanting to combine my two master's degrees in education and business, that's when the light bulb really went on for me."

To develop the concept, Keegan worked with Randall Rossilli Jr., producer and founder of Nightstand Creations. In 2006, his idea blossomed into a pilot. The pilot was produced in only nine months, which is unheard of in children's animation, and as Keegan admits, "especially for two guys who have never had any producing experience."

Eight months after a "great



Nightstand Creations

opportunity presented itself" at Notre Dame, Keegan remains protective of "Young Thomas Edison." He still reviews all creative content for the show, which will air next fall on participating PBS stations. DVDs of each show, story books and animated music videos also have been created.

"It's surreal," Keegan said. "Everyone is kind of shocked that a pipe dream of one of their employees could be Emmy-worthy. It's a nice recognition, but, to me, what really needs to be done is to reintroduce



Thomas Edison was aided by enthusiastic young "Muckers." Their story is told for young people in an Emmy-award winning television show coproduced by George Keegan, above, who recently joined the development department.

Edison to the next generation of kids to allow them to think the way he thought."

"The Emmy is simply a validation of a concept that I thought would work," he said. "I'm not planning to be the next Walt Disney. My skill set is more conducive to helping raise monies for Notre Dame."

Teaching guitar in a classic way

BY CAROL C. BRADLEY

A guitar is an instrument with a split personality, says Stephen J. Miller, guitar instructor for the Department of Music for the past 22 years.

It's easy to learn to play, but hard to learn to play well.

Miller, a classically trained guitarist, teaches beginners' classes of 40 to 60 students (the classes always get larger after football season is over, he notes,) as well as intermediate and advanced classes and private lessons.

Miller started playing the guitar at 11, inspired by the Beatles and taught by his brother. He still remembers the moment he was struck by the beauty of classical guitar.

"I saw an old gentleman on early morning television," he says. "It turned out to be (Spanish classical guitarist) Andrés Segovia. That memory of how Segovia played the guitar like an orchestra stuck with me."

A trained musician himself—he

holds a Bachelors of Music in Composition from Indiana University and a Masters in Music Composition and Guitar Performance from the University of Redlands, Calif.—Miller believes in the importance of a strong musical foundation for his guitar students, at every level of skill.

"I want to make sure the students have the fundamentals and are literate in music, just as an English professor might expect students to be literate in the written language," he says. "The fundamentals of musicianship are important—like reading music, knowing the notes and the names of the notes, and where they are on the staff. It's unglamorous, but it's important."

While emphasizing such fundamentals, Miller gives students the opportunity to make music—both solo and playing together in ensembles—as they're learning. "We really take advantage of the social aspects of guitar. Our goal is for students to enjoy it at every step," he says.

The most important thing is to strengthen the individual's musicianship, Miller says.

It's like a football player who works out at the gym or runs to strengthen his game, he notes. "If students are perceptive, they see that this gives them the chops (i.e., expertise, musical facility) to do the things they want to do musically. When they walk out the door, they'll know what they're doing. They'll have the basis for playing any musical instrument."

It's also important for aspiring musicians to listen to music, he adds. "Be open-minded. Be open to those things that require a little bit of exploration. Go deeper. Get outside your comfort zone. Listen to concerts—things you might not think you'd like, or you're afraid will be too hard for you to understand."

So if you wanted to learn to play the guitar—really play it—how long would it take?

To become a serious classical guitarist, Miller says, takes about 10 years. The program Miller teaches does not take people that far. A determined student "can learn to play music that is reasonably gratifying in anywhere from a year to two or three years."

"What it gets down to is you can never do for someone what they need to do for themselves. I do my part. It's up to them to take it from there."



The guitar is easy to play, but hard to play well, says Stephen J. Miller, music department guitar instructor.

Carol C. Bradley

Want to discover your inner musician?

The Department of Music offers private classes to faculty, staff, spouses and their children. Lessons in voice and most musical instruments are offered. Information on private lessons is available at music.nd.edu.



Race and politics: A classic American story

BY SHANNON CHAPLA

Mark Noll, McAnaney Professor of History, traces the explosive political effects when religion and race intermingle in a new book, "God and Race in American Politics: A Short History," released by Princeton University Press.

Noll's research demonstrates how supporters and opponents of slavery and segregation drew equally on the Bible to justify the morality of their positions. He shows how a common evangelical heritage supported Jim Crow discrimination and contributed powerfully to the black theology of liberation preached by Martin Luther King Jr. In probing such connections, Noll takes readers from the 1830 slave revolt of Nat Turner through Reconstruction and the long Jim Crow era, from the civil rights movement of

the 1950s and 1960s to "values" voting in recent presidential elections.

Noll argues that the greatest transformations in American political history, from the Civil War through the civil rights revolution and beyond, constitute an interconnected narrative in which opposing appeals to biblical truth gave rise to often contradictory religious and moral complexities. And he shows how this heritage remains alive today in controversies surrounding stem-cell research and abortion, as well as civil rights reform.

Religious historian Paul Harvey, reviewing the book in Christianity Today, predicts "Thoughtful Christian readers will find this work indispensable in understanding the big picture of race, religion, and politics in American history."

Appointed to the Notre Dame faculty in 2006, Noll is one of the nation's foremost scholars of religious and cultural history and is a prominent participant in dialogues between evangelical and Catholic scholars.

SHORT TAKES

Updated faculty handbook launched online

The faculty handbook, a kind of operator's manual for all things related to academic and administrative life and governance, has been updated and is available at facultyhandbook.nd.edu. The handbook is now a completely online publication; the print version has been discontinued to conserve paper and fiscal resources. An online version also can incorporate changes more easily.

The updated edition carries a revision of the Academic Articles recently approved by the Board of Trustees upon recommendation of the Academic Council. The Academic Articles define the structure of academic governance and address issues such as the classification and appointment of faculty and administrators and the composition and function of academic committees.

The revised Articles, the result of a required review process occurring at least every 10 years, will go into effect at the start of spring semester on Jan. 13.

New Web address for job seekers

An Internet-based employment opportunity site makes looking for a Notre Dame job easy: if you can find the site.

A new, easy-to-remember Web address should make that process easier: It's nd.jobs. HR and the Office of Information Technologies purchased the new name, which became possible with the recent introduction of a dot-jobs domain.

"People have had trouble finding the job site off the nd.edu Web site," explains Erin Putt, senior recruiting consultant, who has worked with the Office of Information Technologies to secure the new URL.

For those who had searched for the job site, they might have started at the employment link at the bottom of nd.edu, or they might have gone to the HR homepage, hr.nd.edu. From there, they would click past "employment opportunities" to "view current employment opportunities."

You can still take those paths to the employment site. But with nd.jobs "It's easier, because there is no long link to remember," Putt says.

Join the carbon footprint challenge

The University needs more than a win-hungry football team Nov. 22 when the Fighting Irish take on Syracuse. Notre Dame needs your participation in a contest being sponsored by NBC that will pit the Notre Dame community against Syracuse. The school that makes the greatest commitment to greener lifestyles wins \$10,000.

The challenge calls for a commitment during November to some easy-to-understand behavior changes: shorten your shower from 10 minutes to two; pack your lunch using recyclable storage materials; fill your car's tires to appropriate levels; pass on your old cell phones; give up soda in cans and water in bottles. Each of these challenges has been translated to a per-pound reduction in greenhouse gas emissions.

NBC is partnering with the Web site carbonrally.com to sign up participants and to measure and tally emission savings. The Web site green.nd.edu links directly to the challenge site. The prize will go to the University that signs up the most members, takes on the most challenges and commits to reducing the greatest amount of carbon.

Duncan Hall wins construction award

BY KATHLEEN McDONNELL

Duncan Hall, Notre Dame's first new residence hall in 10 years, has been selected as a recipient of Midwest Construction's Best of 2008 competition.

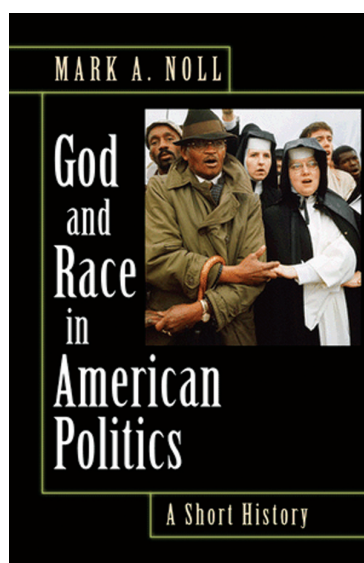
The contest recognizes commercial construction and design in Illinois, Indiana, Wisconsin and Eastern Missouri. Thirty-six of the 128 projects entered in the annual competition were selected for the Best of 2008 award, which includes a feature in the December issue of Midwest Construction magazine and recognition at an awards luncheon in Chicago.

The award acknowledges quality, project management, teamwork and service. Duncan Hall was honored with an award of merit in the residentiality and hospital construction.

The three-story, 68,489 square-foot residence hall is home to 232 men. It features six sections, each with a variety of bedroom styles, a study space and social lounge with a kitchen and vending area. It is named for benefactor Raymond T. Duncan, a 1952 graduate.



Bryce Richter



From the Civil War to the civil rights movement, Mark Noll finds interrelationships between race and religion. The book is published by Princeton University Press

The search for intelligent life in the universe

BY CAROL C. BRADLEY

A student in Michael Crowe's University Seminar course, "The Extraterrestrial Life Debate: A Historical Perspective," once confronted him: How could Crowe possibly be qualified to teach the course if he's never watched an episode of "The X-Files?"

Crowe notes that his first book on the subject was published by Cambridge University Press. "I have done some homework," he says.

In fact, Crowe is generally acknowledged to be one of the world's leading authorities on the historical debate over the existence of extraterrestrial life—a question, he notes, that has preoccupied humans since the beginning of recorded history.

His second book on the subject, "The Extraterrestrial Life Debate: Antiquity to 1915: A Sourcebook," has just been published by the University of Notre Dame Press. Rather than talking about "E.T." or Agent Scully, students in the course will find themselves doing some serious reading by great thinkers, including Aristotle, Copernicus, Aquinas, Galileo, Darwin and Dostoevsky.

Crowe, Cavanaugh Professor Emeritus in Humanities in the Program of Liberal Studies, has never watched "The X-Files" or a flying saucer movie, or read science fiction. So how—and why—did he come to be one of the leading experts in the extraterrestrial life debate?

One of his previous books—it's been in print for 40 years, he notes—was a history of vector analysis. "Someone, in all seriousness, asked me who this guy 'Vector' was," Crowe recalls. "That let me know that the world was not waiting for the book. I decided the next book would have more of an audience."

And a book on the history of the extraterrestrial life debate was something that hadn't been done, he realized. Such a book would be a contribution. It would have an audience. "And it's one of the great unanswered questions humankind faces," he says, "Whether we're alone in the universe."

Crowe graduated from Notre Dame in 1958 with B.A. and B.S. degrees, and then earned a doctorate at the University of Wisconsin in the history of science, at the time a nascent field. He returned to Notre Dame to teach in 1961, founding and teaching in the University's graduate program in the history and philosophy of science. Retired for six years, he continues to teach one course a year.

Crowe worries that his students will come to class having memorized all the "Star Wars" movies, or that they'll be disappointed that the course doesn't focus on extraterrestrials in popular culture. But the majority of students take the course very seriously, he adds. "The readings are demanding. One day they're doing science, the next day, poetry or philosophy."

Most students enter the course believing that intelligent life exists in the universe. By the time the class ends, most have changed their minds—and come to the realization that there is no final answer.

Their conclusion is the same one Crowe himself has arrived at—that it's possible there may be life elsewhere in the universe, "But it's mighty hard to get intelligent life. The earth had many advantages—water, oxygen, an energy supply—and Jupiter, the great protector, keeping us from being hit by all sorts of stray objects."

So is it possible that intelligent life exists out there somewhere? Crowe admits that he doesn't know. But he is convinced we've already been invaded by extraterrestrials, at least in the metaphorical sense—just look at the way extraterrestrials have put money into the pockets of moviemakers, television scriptwriters and publishers of sensational books.



Carol C. Bradley

Michael Crowe's academic career has roughly spanned the period between the release of the first film version of "The Day the Earth Stood Still" and the forthcoming one. Crowe's research does not confirm the existence of intelligent alien life, but it certainly confirms our fascination with that possibility.

"I'm not making any claims that extraterrestrials built the pyramids," he says. "But I believe they've already had major effects on our society and culture."

His students, he adds wryly, think that's a cop-out.

Honoring a deep cove Colleagues remember Phil Quinn

BY MICHAEL GARVEY

He lived alone in a nondescript apartment complex within walking distance of the Notre Dame campus. He also ate most of his meals alone, and gravely, in the Decio Hall cafeteria, after which he would sit companionless at one of the outdoor tables, smoking and thinking. He was, as one bemused colleague recalls, "a deep cove."

But when he died five years ago at the age of 64, Phillip J. Quinn, O'Brien Professor of Philosophy, also was eulogized as "a jewel ... rare and valuable, a treasure whose loss we mourn."

The eulogist was one of Quinn's colleagues, Paul J. Weithman, professor of philosophy at Notre Dame, who has edited "Liberal Faith," an anthology of philosophical essays in Quinn's honor published this month by the University of Notre Dame Press.

An internationally respected specialist in the philosophy of religion and the philosophy of science, Quinn was the author of innumerable articles and reviews in various philosophical journals and anthologies. He also was the author of such authoritative works as "Divine Commands and Moral Requirements" and "The Philosophical Challenges of Religious Diversity" and the co-editor of "A Companion to Philosophy of Religion."

David Solomon, White Director of Notre Dame's Center for Ethics and Culture, says Quinn "was especially insightful in all of those areas where moral philosophy encountered religion and they both encountered politics."

Quinn doubtless would approve the "Liberal Faith" essays whose authors, as Weithman says, "honor Phil by putting their talents to work advancing discussion of a representative sample of questions he cared about."

In addition to Weithman, the essayists in the book include Robert Audi, professor of philosophy at Notre Dame; Richard Foley, professor of philosophy at New York University; Paul Griffiths, chair of Catholic Thought at the divinity school of Duke University; Eleonore Stump, professor of philosophy at St. Louis University; Sumner B. Twiss, professor of human rights, ethics and religion at Florida State University; and Linda Zagzebski, professor of philosophy at the University of Oklahoma. Their concerns are as daunting as they are wide ranging—from the exclusivity of religious belief to what happens when we die to the imperative of an absolute prohibition of torture.

If anything unites the multiplicity of worldviews and chosen topics in "Liberal Faith," it is recognition of what Weithman calls "the inevitability of religious and cultural pluralism in the modern world."

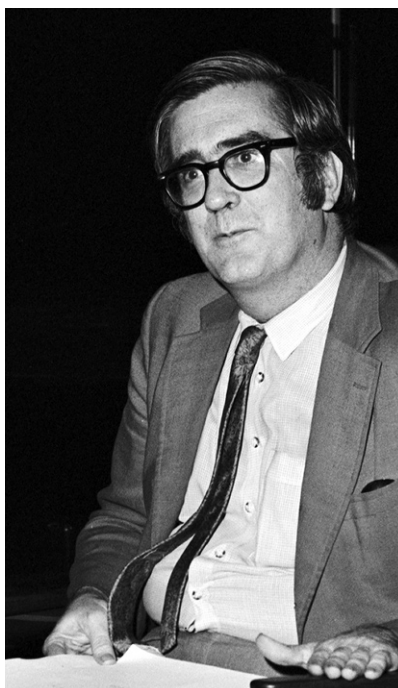
Quinn was likewise opposed to all forms of parochialism. "Phil's religion was also that of a liberal," as Weithman says of the Catholic philosopher, adding "the rituals of his childhood faith had a vestigial hold on him that became apparent to his friends at the end of his life."

Solomon, one of those friends, has described Quinn as "exquisitely sensitive to the fact that, for Christians, God demands perfect justice as well as perfect mercy. He was always at pains to remind his readers that while God

issued categorical commandments and expected obedience, he also exhibited mercy to those whose obedience was less than perfect."

Solomon's wife, Mary Lou, and Weithman glimpsed a bit of that mercy at Quinn's hospital bedside a few hours before he died. "When we were ready to go, we each gave him a hug," Weithman remembered. "As we left Phil's room, he gave us a grin. It was not a cloying little smile. It was the kind of big, open-mouthed, toothy grin that lights up a face and makes you feel like a million dollars."

That face, the face "of somebody who couldn't be happier," is Weithman's last memory of the man memorialized in "Liberal Faith." A priest anointed Quinn a few hours later, and a few days later his funeral Mass was celebrated in Notre Dame's Basilica of the Sacred Heart.



The late philosopher Phil Quinn remains much on the minds of his fellow philosophers. University Archives, Elizabeth Hogan

Online reserves on the upswing

BY GAIL HINCHION MANCINI

The staff of the Hesburgh Libraries Course Reserve Services has found a successful way to keep students out of the library. And they couldn't be happier.

Online use of reserved materials has increased fourfold since fall 2005. The number of faculty who are requesting their reserved materials be offered online, as opposed to on paper and stored on a reserve room shelf, has increased since 2005 from about 95 to 250, according to statistics compiled by Collette Mak, who oversees the Course Reserves Department. "Our e-reserve service is reaching about 25 percent of the teaching faculty. We'd like to double or triple that number."

Online availability of materials is revolutionizing the concept of the reference room, a physical holding pen for articles, book chapters or other items that course instructors want students to read, but not necessarily to buy. To ensure that every student has access to reserve material, reference room hardcopies can be checked out for only two hours at a time.

But reserve materials in cyberspace can be accessed at any time and from anywhere. "Our feeling is, we'd rather the student use the time in productive study, not in transit," says Mak. Whereas, "a hardcopy can be used by only one person at a time," Mak adds, online materials can be used by every member of the class at the same time."

Those are among reasons why Sandra Gufstafson, an associate professor of English, became one of the early adaptors to the process. "I can save students time and money, and it's very easy to use." The cost to students, she notes, is only what they might pay if they decide to print the reserve items.

At its peak as a repository of hard copy, the first-floor reserve room in the Hesburgh Library

dedicated 12 bookshelves to store a semester's special readings. Today, the number of shelves has shrunk to two. The photocopy machine still plays an important role, but a few well-functioning scanners are key to creating this online learning world, says Mark Dehmow, library IT specialist. Once an item is scanned, the electronic copy is available for years to come, and is digitized should other professors care to use it.

So far, the majority of online reference materials arrive in paper, then are scanned by the reserve services staff. Almost 4,800 scanned items are in use this semester alone. Increasingly, Mak says, faculty and library staff members are identifying reserved readings from among the library's vast collection of electronic journals. Using existing articles eliminates the need to scan, and all copyright permission for use is implicit.

How faculty members get their reserve materials online, as opposed to on the reference room shelf, is simple, say Mak and Dehmow. They just ask. The library staff does the necessary scanning, while library IT specialists create a password-protected electronic class space that helps meet copyright law fair use requirements. "We'll do the worrying about the intellectual property issues," says Mak. "If there are royalties, the library will cover that cost."

The shifting need for a physical reserve room benefits the library, according to Denise Shorey, associate director for user services. The library is poised to begin renovation of the first floor.

"The fact that so much material is delivered electronically means we don't have to think about where to keep it," she says. "We can accommodate the needs of people who choose to come to the library, who use it as a social work environment, or who want to focus on their work in a comfortable, safe environment."

Faculty research projects have and are focused on inventing a better electric car. In the meantime, faculty and staff are adapting an impressive variety of gas-saving transportation options.

Behind the electric car hype, baby steps with an economic twist

BY GAIL HINCHION MANCINI

The day may come when we pull into our garages in easily rechargeable electric cars. But the hype surrounding the release of GM's electric "Volt" notwithstanding, Paul McGinn's current project list is proof that the road to that point has many intriguing twists, and more turns than just the ride home from the dealer showroom.

McGinn is one of 20 U.S. researchers invited by the National Science Foundation (NSF) to a brainstorming session this fall on just one approach to creating a truly efficient battery for electric cars. (Right now, car battery technology is too inefficient to support a fully electric car.)

Meeting in early September, the group explored the potential for drug discovery techniques as a means for identifying this new, efficient approach. Researchers looking for pharmaceutical solutions to disease have developed sophisticated ways to identify possible new drugs by using theoretical modeling. The question among the scientists and engineers who met last month is whether theoretical modeling can help rapidly predict viable formulas for new battery production as well.

Underscoring the discussion was an enthusiasm for developing a new battery technology that also would be produced in this country. The latter achievement would make real the notion that new energy solutions will lead to new jobs.

McGinn's work relates to the step taken after the theoretical modeling. His team has created processing tools and screening instrumentation to combine new chemical compounds and develop performance information to suggest what kinds of problems they might solve. He likens this concept of combinatorial work to the way the three ink colors in a color printer combine to make a seemingly endless array of new colors.

He applies his research to energy and environmental issues well beyond car batteries, in settings including several in Indiana in which the search for solutions also relates to rebuilding the state's manufacturing base. In McGinn's circles, be they at the federal or state level, this work has definitive economic implications.

One instance of another application is a partnership with Cummins, Inc. of Columbus, Ind. to eliminate sooty discharges from diesel buses and cars. Cummins was seeking an inexpensive exhaust catalyst so that filters to trap soot from diesel buses and cars can be easily regenerated by combusting the soot. Determining that an inexpensive catalyst could be fashioned from glass, McGinn and his team created a glass composition that "sweats" potassium,



Although Paul McGinn's research to develop more efficient battery technology is advancing, he expects to own a hybrid car or one that uses diesel fuel before he owns a truly battery-operated car.

which readily combusts soot. (In this case, the compound was more of a revival: the kind of glass that works on this problem was prominent in medieval stained glass windows, he says.)

More relevant to the advent of a truly efficient electric car is McGinn's longtime work on fuel cells, a promising technology that employs an electrochemical process—as opposed to combustion—to create energy in a manner that is clean, quiet and more efficient than burning fuel.

This solution could be applied to personal cars, but an early partner in this research is the U.S. Army. Working with the Army Communications and Electronics Command, his team has been developing hydrogen fuel cell technology that also could provide portable power to soldiers and other military personnel on the battlefield.

The project has also attracted the attention of economic development organizations in Indiana that are hoping to harness original research on energy to enhance the state's strong tradition of battery manufacturing.

In the state arena, McGinn has been involved in discussions about plug-in electric vehicles whose stored energy might be able to power some household needs. The question meshes nicely with a state focus on developing a "black box" to accelerate the commercialization of vehicle-to-grid technologies. The box would handle the transfer and conversion of all forms of energy and information between devices, such as the vehicle and the grid, and be able to control things such as the best time for vehicle charging based on grid power availability.

All which is to say that from where McGinn sits, a great deal of energy (pun intended) is being dedicated to developing alternate fuel sources, and many of the concepts have the capacity to transform energy usage as we know it today.

But the developmental process, he cautions, requires the patience

that discovery often takes. Put another way, for the time being, there are no electric cars in the McGinn garage, and he expects it will remain that way for a while.

Battery-charged zoom

ND WORKS STAFF WRITER

Now in the hands of the Studebaker Museum, this electrically-powered race car, called Formula Lightning, was part of a multi-college competition designed to provide hands-on student research opportunities to advance the electric car technology.

The single-seat, open wheel racer used 28 AC Delco 12-volt batteries to power a Delco-Remy AC motor. Students created the battery technology; the chassis was designed by a professional firm and the driver was a veteran racer. The Formula Lightning could reach speeds of 160 miles per hour.

From 1994 through the early 2000s, graduate and undergraduate members of the Irish Racing Team prepared the vehicle for competition



Powered by 12-volt batteries, this open wheel race car hit speeds of 160 miles per hour.

against such schools as Brigham Young, Ohio State, Purdue and Arizona State Universities. It was regularly seen on ESPN2 in events such as the Cleveland Electric Formula Classic and the Indy Electric Classic.

General Motors, soon to premier the electric car called the Volt, had a half-dozen electric or hybrid technologies and one, the EV1, was similar to the drive system used in Formula Lightning, says William Berry, retired professor of electrical engineering and faculty sponsor of the Irish Racing Team.

A different kind of two-wheeler

BY GAIL HINCHION MANCINI

Most days, Don Pope-Davis motors between his nearby Notre Dame Avenue home and his Provost's Office headquarters without ever burning an ounce of fossil fuel. Even a hybrid car couldn't help him do that.

Pope-Davis, vice president and associate provost, may be the first at the University to turn to the two-wheeled, battery-powered Segway personal transporter to meet his "green" agenda. The Segway allows Pope-Davis to hit speeds of 12-miles-an-hour from home to Dome. He attests that the verb "zip" fairly describes the experience of crisscrossing campus in somewhere between five and 10 minutes.

Living only a few blocks from campus as one of the early occupants

of the University-supported Notre Dame Avenue houses, Pope-Davis reviewed several options that allowed him to keep his car in the garage.

"I could walk, and I have. I could ride a bicycle," he says. But what many busy administrators have learned on this growing campus is that time sometimes is of the essence, hence the proliferation of golf carts. The Segway may not help Pope-Davis sneak in the exercise benefits of walking or biking the campus, but it allows him to arrive as crisply suited as when he left the Main Building.

Since first riding the Segway to campus at the beginning of summer, Pope-Davis has logged only 42 miles. In the geography of his story, it's the number of times he has not fired up his car that helps the environment.

He has never driven the Segway so long that the battery has run down. When he's not using it, he parks it in his garage and plugs it in, "just like a lamp." It's always ready to go when he is.



Although its top speed is 12 miles an hour, Don Pope-Davis says his Segway has zip.



Frank Inc. hybrid car

An eye on energy matters, a light foot on the gas pedal

BY GAIL HINCHION MANCINI

The Toyota Prius Hybrid is getting to be a fairly common sight in Notre Dame parking lots—the University’s motor pool itself owns two and is awaiting delivery of two more.

But there are Prius owners, and then there are Prius drivers like Frank Incropera, Brosey Professor of Mechanical Engineering, who wrings higher and higher mile-per-gallon ratings by adopting a number of gas-saving practices.

“Toyota advertises that the Prius gets 45 miles per gallon,” says Incropera, whose concern about energy efficiency has been expressed in his research, his work as co-chair of the recent Notre Dame Forum on Sustainability, and the course he teaches called Energy, Technology and Policy. “I’m getting 55 miles per gallon by milking every drop for as much mileage as I can.”



The tricks he uses will help any vehicle achieve better mileage, and they are simple. “If you avoid quick starts and stops, if you coast as often as possible, if you keep your tires properly inflated and use the air conditioning sparingly, you can improve your fuel efficiency by 20 percent,” says Incropera. He aspires to reach 60 mpg by fine tuning his driving habits.

After more than 30 years as a researcher on energy-related issues, and having witnessed the gas crises of the 1970s and today, Incropera sees energy production and utilization issues as involving more than technology. Economic, environmental, behavioral and geopolitical matters are also important and are treated in his course.

Energy issues can also be personal, as his Prius mileage ratings attest.

Better mileage translates to

fewer dollars spent at the pump, and more discretionary income. But for Incropera, holding on to his hard-earned dollars is just one motivator. Patriotism is another. Every gallon of gas saved reduces global demand for oil, puts downward pressure on the price of oil and decreases the amount of money transferred to nations that don’t share U.S. values or are hostile to the United States. Think of Iran, Venezuela or other oil-producing nations that “are working actively against the interests of the United States.” Our reliance on foreign oil also depletes U.S. wealth by \$840 million a day, and that’s when gas is only \$70 a barrel, he notes.

Having worn many hats at Notre Dame—he is former dean of the College of Engineering—Incropera has a bird’s eye view of the contribution Notre Dame faculty are making in the larger world of energy efficiency in transportation. Ten years from now, advances in battery technology should allow plug-in electric cars that will be able to go 100 miles or further on a single charge.

He also believes that ethanol, not made from corn—a technically inefficient process, he says—but from the cellulose associated with natural plant life, will put a large dent in the nation’s oil dependence.

In the meantime, in ways large and small, “Each one of us can take action.” Buy a hybrid or, as he has done with his, just lighten up that foot on the gas pedal.

Don’t laugh: Her ‘cartoon’ car gets 40 miles a gallon

BY CAROL C. BRADLEY

Chantelle Snyder and her husband Richard first saw the Smart cars four years ago, on a trip to France.

“We saw the cars everywhere. We joked that it was so small, we could check it with our luggage,” says Snyder, a graphic designer for the College of Arts and Letters. “We fell in love with the car in France for its design. Richard has always had a thing for small cars—our car when we were first married was a restored Triumph Spitfire.”

The Smart car, part of Daimler AG’s Mercedes group, has been available around the world for more than a



Chantelle Snyder traded her Land Rover for a Smart car for her daily commute.

decade—but not in the United States. As the Snyders found out when they got back home, the cars at that point were only available in Canada.

And they were warned not to buy one and try to sneak it over the border—the only way the car could be legally acquired would be if a Canadian citizen who owned one moved to the United States and then sold it.

Eventually the news came that the Smart car would be available in the United States. The Snyders went to the company Web site and ordered one, putting down a \$99 deposit.

Then they waited for two years.

Just after the first of the year, they got a call saying it was time to customize their car—choose paint colors and options. Richard wanted a better stereo, she says, and she wanted heated leather seats. They picked up their new yellow Smart car in Chicago in late May. By that time, gas prices had begun to soar. Suddenly, in their Smart car, the Snyders were getting 40 miles per gallon (mpg) in town, 50 mpg on the highway.

Although the car is small by

American-car standards, she feels safe driving it, Snyder says. While the Smart cars are only 8 feet, 2.5 inches long, and around five feet wide and tall, they’re built with a steel safety cage—similar to a racecar, she notes. The vehicles have received the highest ratings from the Insurance Institute for Highway Safety for front and side crashworthiness.

The vehicle represents a dramatic shift in driving habits for Snyder, whose previous vehicle was the Land Rover she bought in 2002. At that point, she recalls, gas cost about \$1.30 a gallon.

The couple lives west of South Bend, near New Carlisle. Her husband farms—corn, beans, wheat and potatoes—and they have two dogs. Snyder teaches obedience classes, and takes the dogs to obedience trials. For safety’s sake, they have to be crated while traveling, and only one can fit in the Smart car at a time, she says.

Still, she says, it didn’t make sense for her to be driving a Land Rover to campus every day, especially once gas prices started to go up. The Smart car is more environmentally responsible for daily use. “I leave a smaller footprint,” Snyder says. The Land Rover was replaced with a smaller Mazda Tribute SUV for times when they need the extra cargo space.

The Smart car, although considerably smaller than an SUV, is roomier than you’d think, she says—her 6-foot-6-inch brother-in-law is comfortable riding in it.

Of her Smart car, Snyder says, “I love it. It’s fun to drive. People smile at it, and wave and point. It looks like a cartoon car, like 12 clowns should be climbing out. But it’s the perfect car for the daily driver.”

A colorful conversion that didn’t sacrifice fun

BY GAIL HINCHION MANCINI

Since high school, Greg Sterling has been in love with the Corvette, and he has owned three, including the cobalt blue model he began parking in the Main Building parking lot when he became director of graduate studies in July. He had previously parked it in the far reaches of the lot across from the library.

The Corvette, says Sterling, is “an engineering marvel” whose joys include “the feel of the car with the road: the breaking, the accelerating, the cornering, the entire way you interact with the car.” Mind you, this is a theologian speaking, not an engineer. “Who says theologians can’t have an interest in engineering marvels?” he protests.

Sterling and his wife, DeeDee, of the Office of Human Resources, also own a Chevy Suburban, which has been a lifesaver during their weekly jaunts to a second home near Warsaw. An ordained minister, Sterling is pastor of a church in the area, so Sunday presence more than 60 miles southeast of South Bend is a regular practice.

The Corvette, Sterling says, is maligned as a gas guzzler. With

its aluminum engine and fiberglass body, its low weight helps conserve fuel. The Suburban, in contrast, is an easy \$100 fill-up at the pump. The Sterlings began to think about owning a car that had truly good gas mileage; one they could carpool to work in.

But this green machine had to live up to the expectations of a Corvette lover. The answer: a lipstick red Mini Cooper. “I care about whether a car is fun to drive. It handles like a go cart. It turns and corners exceptionally well. It has exceptional breaking and acceleration.” Deceptively large with great leg, head and shoulder room, the vehicle accommodates weekend gear for the Warsaw trip.

When the Sterlings need two cars for the day, the Corvette reappears on campus while DeeDee drives the Mini. In inclement weather, or when towing is called for, the Suburban will take them to Warsaw. Otherwise, it’s the Mini’s day in the sun.

“A car should make a difference in life. This is our way to be kinder to the environment and have fun.”



Although over six feet tall, Greg Sterling is comfortable in this car, aptly called a Mini.

‘SUV’ has a new meaning

BY MARISSA RUNKLE

The term SUV doesn’t generally suggest an energy-efficient vehicle. But a Solar Utility Vehicle (SUV) donated to the University by BP America, Inc. may change that.

College of Science Dean Greg Crawford received the SUV in mid-August, and put it to immediate use. To recharge it, generally once a week, Crawford parks the vehicle in a sun-soaked venue.

The vehicle holds seating for three others and can take on far more rugged territory than campus.

It is expected to handle snow with no problem. With 30 horsepower and over 170 pounds of torque, it is almost seven times more powerful than the average electric golf cart. BP Solar’s 185 watt photovoltaic solar panel augments the vehicle’s battery charging system, giving it more operational range.

The company has donated vehicles to a small number of universities, but also to zoos and nature parks and preserves. Retired cardiologist Dr. Vince Friedewald, a member of the college’s professional advising program, heard of the BP project and helped arrange a donation to Notre Dame.

BP launched BP Alternative



Greg Crawford’s early days as new dean of the College of Science were made all the more fun with the arrival of a solar-powered, all-terrain golf cart donated by BP America

Energy in 2005 to investigate wind, solar, hydrogen power with carbon capture and storage, natural gas-fired power generation, biofuels for low carbon transport and distributed energy for emerging markets.

All the leaves are brown . . .

ND WORKS STAFF WRITER

When the weather works in favor of members of Landscaping Services, as it did during Fall Break, they literally gather leaves by the ton by using a man-and-



Gail Hinchion Mancini

machine choreography that is eye-catching.

Landscaping Services Assistant Superintendent Pat McCauslin explains that a team of eight descends on a grassy quadrant with backpack and riding mower leaf blowers and even old-fashioned rakes. They work the leaves into a pronounced and snakey-looking line that is then captured by a giant vacuum and mulching machine mounted on a one-ton truck.

The mulched leaves are transported to a holding area on the west end of White Field where they are left to decompose. It takes a few years, McCauslin says, but eventually the mulch transforms to a form of topsoil the crews then use in other campus landscaping projects.

"Typically we do this five to six times a year," says McCauslin, who estimates the team clears 30 tons of leaves in a season. During this same period, other landscape crew members plant tulip bulbs, put up Christmas lights (officially turned on the evening of Thanksgiving), drain the in-ground sprinkler systems and brace themselves for snow-removal season.

Perfect fall weather allows an eight-member leaf removal crew to clear the area near Bond Hall and Old College.



Gail Hinchion Mancini

Members of the College of Arts and Letters celebrate the end of a month of fundraising. From left are Laurie Echterling, Mo Marnocha, Don Stelluto, Teena Sexton, T.D. Ball, Dan Myers, Cindy Swonger, JoAnn Norris, Rob Becht, Linda Brady and Kathy Fischer.

Fundraiser clears \$10,000 mark

Some will attest that when Dan Myers pledged to wear pink during October as a means of raising money for breast cancer screenings, the eighth annual College of Arts and Letters fundraiser ignited.

Myers alone raised more than \$2,800 by promising to wear pink each day and, on the final day of October, to dress, head to toe to water bottle, in pink.

Pledge ideas cropped up right and left. Associate Dean Stuart Greene rode his bike to work for pledge money. A sociology graduate student quit smoking for pledges. Staff from the Institute for Scholarship in the Liberal Arts (ISLA) painted pink shamrocks on cheeks before a

football game. Dean John McGreevy auctioned a position called "Dean for a Day." Items from gift baskets to stained glass to a pink bicycle drew funds through raffles.

The funds support mammograms and breast cancer screenings for area women who cannot afford the procedures. As of Nov. 3, the college had raised almost \$11,000, and money still was arriving. In addition, Arts and Letters donated proceeds of sales such as college T-shirts to the cause. From Jan. 1 to Sept. 30, the University raised \$5,710, says Mo Marnocha, supervisor of office services. But as for the October efforts, "this is the most creative, and colorful, year we've ever had," Marnocha says.

A new option for Christmas cards

If your division or department has not selected your office Christmas card, consider one that displays the striking beauty of campus in winter, captured by University photographer Matt Cashore.

Cards can be ordered through a new online Christmas card shop that allows you to pick a photographic scene and message font, and to create a holiday greeting. Several inspirational messages are provided for those who prefer not to craft their own.

The online card shop is available at mediagroup.nd.edu/cards. Orders will be taken through Friday, Dec. 5;

delivery to your office or the mail house of your choice follows five to seven days later.

Members of Agency ND, the Web and print design agency of the Office of Public Affairs and Communication, annually create custom card designs for numerous clients. The online shop makes the most of Cashore's popular art in a manner that will be less expensive than customized designs or many retail box sets.

Orders are limited to departments and divisions. Based on the success of the project, individuals may be invited to use the site in future years.

DISTINCTIONS

The University congratulates the following employees who celebrate significant anniversaries in November, including 30-year employees **Sandra J. Hairston**, custodial services, and **Dianne Patnaude**, physical education.

25 years

- An T. Dang** and **Jacqueline Dillard**, food services
- Charles J. Smiecinski**, vending

20 years

- Pauline Alvarez** and **Deborah K. Osborn**, custodial services
- Kimberly A. Baum**, English
- Gloria J. Dover**, food services
- Kim L. Haugee**, St. Michael's Laundry
- Debra J. Patterson**, Decio Commons
- Stephen P. Winquist**, security

15 years

- Tracy A. Biggs**, Office of Budget and Planning
- Michelle G. Birkla**, operations and engineering
- Jeanne M. Checkley**, athletics
- Karen A. Sauer**, health services
- David J. Teske**, food services

10 years

- David P. Appleton**, Corby Hall
- Melissa A. Farmer**, building services
- Jennifer A. Finneran**, and **Thao T. Le**, custodial services
- Theresa M. Hall**, Office of Research
- Philip J. Iapalucci**, audit and advisory services
- Mark C. Krcmaric**, investment office



Carol C. Bradley

Hairston



Patnaude

- Gary M. Nijak**, and **Teodoro M. Palemerin**, food services
- Diane K. Orlowski**, library
- Gina V. Shropshire**, Mendoza College of Business
- Cindy Swonger**, College of Arts and Letters
- Barbara A. Wadley**, First Year of Studies

* * *

The University welcomes the following employees, who joined the faculty and staff during September.

- Scott W. Ball**, registrar
- Jacqueline Barnes**, health services
- Barbara Bertschy**, special events and protocol
- Kimberly D. Clark**, **Eric C. Evans**, **Richard Laurean** and **Stacy A. Montague**, custodial services
- Kathryn E. Coneys**, **Julia M. Scaringe**, **Nicholas E. Siergie** and **Stephen O. Springfield**, athletics
- Luke R. Conway**, annual fund
- Kimberly K. Deprey** and **Liz S.**

- Rulli**, Office of Research
- Joel M. Dosmann**, enterprise systems
- Guillermina L. Estiu**, chemistry and biochemistry
- Kim M. Furlong**, Irish Café
- Marc A. Hardy**, MNA program
- Ann E. Hastings**, Innovation Park
- Javier A. Hernandez**, procurement services
- Libai Huang**, radiation laboratory
- Mark J. Kimmet**, Mendoza information technology
- Andrea M. Langhurst** and **Phuongkhanh Nguyen**, library
- Alison K. Levey**, Mendoza College of Business
- Dawn A. McGrath**, development
- Michele M. Rhoutsong** and **Allison Sheets**, Catering by Design
- Andrew P. Sheehan**, biological sciences
- Zhenyu Sheng**, Center for Transgene Research
- Tracy L. Zielke**, Office of Graduate Studies



Upgrade team members pictured above, from left in the back row, Jerry Wray, Jeff Freymuth, Bob Guthrie, Steve Todman. At left, in the foreground, are Larry Gay, Dave Brant, Steve Ellis, Al Cramer, Ric Mauch, Mike Fitzpatrick. Tom Klimek and the late Frank "Tom" Laughner are not pictured.

A winning cable team

The members of the Network Cable Plant Upgrade Team install miles of fiber optic, Cat-6 and Coax cable through residence halls, offices, classrooms and laboratories. Because of their hard work, buildings and quads have high-speed wireless access, residence halls have in-room cable television, and researchers enjoy state-of-the-art communication exchanges with colleagues around the world. No wonder Notre Dame is considered one of the most wired campuses in the country.

Moreover, the cutting-edge technology made possible by this team has played an essential role in

allowing researchers and students to explore and address society's most complex problems, and to build global partnerships to help solve those issues.

For their exemplary service, the team is being honored at the upcoming home football game as recipients of the Presidential Team Irish Award. The award program has been designed to provide a special and unique opportunity to publicly recognize staff teams that exemplify the University's core values on behalf of their department and the University.

FYI

ART

"Timelines"

Nov. 17 through Jan. 16, Crossroads Gallery, ND Downtown, 217 S. Michigan St. Michael Beatty, featured artist Opening reception 5 to 7 p.m. Thursday, Nov. 20 Free admission Monday through Friday, 9 a.m. to 4 p.m.; public parking is available



Beatty's paintings

PERFORMANCE

Unless otherwise noted, all events take place in the Marie P. DeBartolo Center for the Performing Arts. For more information or to purchase tickets, visit performingarts.nd.edu or call 631-2800. Ticket prices are for faculty and staff, senior citizens and students.

The Dispute

7:30 p.m. Tuesday, Nov. 11 through Saturday, Nov. 15; 2:30 p.m. Sunday, Nov. 16, Decio Mainstage Theatre Are men or women more inherently unfaithful? That's the question at the heart of Pierre Marivaux's Enlightenment-era comedy of human nature. Presented by the Department of Film, Television, and Theatre. \$12/\$12/\$10

Bach's Lunch: A Noontime Concert

12:10 p.m. Friday, Nov. 14, Penote Performers' Hall A free, short classical concert featuring advanced students from the Department of Music. Attendees are welcome to bring their lunch.

God, Country, Notre Dame

8 p.m. Friday, Nov. 14, Leighton Concert Hall The Notre Dame Chorale and Chamber Orchestra perform works by Beethoven, Brahms, Wagner and Stravinsky. Presented by the Department of Music \$8/\$6/\$3

Miami String Quartet

7:30 p.m. Saturday, Nov. 15, Leighton Concert Hall The acclaimed quartet performs works by Mozart, Tower and Debussy Visiting Artist Series \$30/\$29/\$15

Paul Tegels Organ Recital

2:30 and 5 p.m. Sunday, Nov. 16, Reyes Organ and Choral Hall Performance by the assistant professor of music and university organist at Pacific Lutheran University 2008–2009 Organ Recital Series \$10/\$8/5

Symphonic Band and Symphonic Winds Fall Concert

3 p.m. Sunday, Nov. 16, Leighton Concert Hall Presenting "a day at the movies" with music from "Robin Hood: Prince of Thieves," "Silverado," "Star Wars" and others Sponsored by the Department of Music Free but ticketed

Tango Fire

7 p.m. Wednesday, Thursday and Friday, Nov. 19 to 21, Decio Mainstage Theatre A fresh, new look at tango, combining live music and alluring dancing Visiting Artist Series \$38/\$36/\$15

Symphonic Band and Symphonic Winds Fall Concert

8 p.m. Friday, Nov. 21, Leighton Concert Hall Combines the Nov. 16 program with an energetic performance of the Notre Dame Victory March Presented by the Department of Music \$8/\$5/\$5

Football weekend Marching Band events

4:05 to 4:15 p.m. Friday, Nov. 21, Marching Band Assembly inside the Main Building; 4:30 p.m. Marchout to Joyce Center 1 p.m. Saturday, Nov. 22, Marching Band performs on the steps of Bond Hall; 1:40 p.m., inspection and Marchout from the Main Building to the stadium.



Anonymous 4

Anonymous 4 "Long Time Traveling"

2 p.m. Sunday, Nov. 23, Leighton Concert Hall The angelic harmonies of Anonymous 4, with special guests Darol Anger and Scott Nygaard Visiting Artist Series \$30/\$29/\$15

FILM

Unless otherwise noted, films are screened in the performing art center's Browning Cinema; tickets are \$5 for faculty, \$4 for seniors and \$3 for students. Visit performingarts.nd.edu or call the box office, 631-2800.

Maquilapolis" (City of Factories) (2006)

4:30 p.m. Tuesday, Nov. 12, Hesburgh Auditorium, Kroc Center for Peace Studies An intimate look at the lives of families struggling to survive on poverty wages in communities polluted by their employers Facilitated by Jackie Smith, associate



Tango Fire

professor of sociology and peace studies Higgins Center Labor Film Series No admission fee

Downtown Lunch and Learn Eco Film Series: "The Human Footprint"

12:05 p.m. Thursday, Nov. 13, Crossroads Gallery, Notre Dame Downtown, 217 S. Michigan Street A clever look at how

much one life affects the planet Free

"Alice" (1988)

6:30 and 9:30 p.m. Thursday, Nov. 13 Czech filmmaker Jan Svankmajer's strikingly original interpretation of Lewis Carroll's classic tale Nanovic Institute Film Series

"The Sari Soldiers" (2008)

6:30 and 9:30 p.m. Friday, Nov. 14 Six women's courageous efforts to shape Nepal's future in the midst of escalating civil war Director Julie Bridgman is scheduled to be present WORLDVIEW Film Series

"King Kong" (1933)

3 p.m. Saturday, Nov. 15 Fortune hunters travel to Skull Island in search of the fabled giant ape PAC Classic 100

"Vicky Cristina Barcelona" (2008)

6:30 and 9:30 p.m. Saturday, Nov. 15 Barcelona is the setting of Woody Allen's film about the romantic adventures of two young Americans

"Boy A" (2008)

6:30 and 9:30 p.m. Thursday, Nov. 20 Jack has a secret—he is Boy A, who committed a terrible crime as a child. Recently released from juvenile prison, he enters a world he's never been a part of.

"Spirit of Notre Dame" (1931)

6:30 and 9:30 p.m. Friday, Nov. 21 This drama set at Notre Dame follows the exploits of a great football coach—patterned after Knute Rockne—in conflict with a promising but arrogant freshman running back.

"Goodfellas" (1990)

3 p.m. Sunday, Nov. 23 Martin Scorsese explores the life of organized crime in his gritty adaptation of Nicolas Pileggi's "Wiseguy," the true story of mobster and FBI informant Henry Hill. PAC Classic 100

CELEBRATIONS AND GATHERINGS

Kimberly Blaeser reading

7:30 to 9 p.m. Tuesday, Nov. 11, Hammes Bookstore The Native American poet reads from her latest work, "Apprenticed to Justice" Sponsored by the Creative Writing Program

Committee for Women

Noon to 1 p.m. Wednesday, Nov. 12, Room 200 Main Building Tour of the Main Building, showcasing its art and architecture Cookies and punch reception following the tour; canned goods will be collected for the food bank. RSVP to Maureen Lakin by Friday, Nov. 7

Educational Benefits for Children of Eligible Employees

7 to 9 p.m. Thursday, Nov. 13, Carey Auditorium, Hesburgh Library For more information, contact askHR at 631-5900 or askhr@nd.edu.

G.F. Michaelson reading

7:30 to 9 p.m. Tuesday, Nov. 18, Hammes Bookstore Michaelson reads from his latest novel,

"Mettle."

Sponsored by the Creative Writing Program

Saturday Scholar Series: "Before and Beyond Modernism: Icons as Art"

11 a.m. Saturday, Nov. 22, Annenberg Auditorium, Snite Museum of Art Charles Barber, professor and chair of art, art history, and design, discusses the icon in light of modernist aesthetics and postmodern theology. Presented by the College of Arts and Letters

Financial advising

Discuss investment strategies with representatives of Notre Dame's retirement fund vendors.

Nov. 19 and 20, TIAA-CREF

Nov. 19 and 20, Fidelity Visit the HR Benefits Web site link to Individual Counseling for information on how to schedule an appointment.

WELLNESS OPPORTUNITIES

Shamrock Shape Up

Nov. 3 through Dec. 12, RecSports presents Shamrock Shape Up, a six-week program that offers a variety of fitness opportunities, learning opportunities, giveaways and a healthy meal from Notre Dame food services to take back to work. Three sessions are available, noon to 1 p.m. Mondays (\$45), 3 to 4 p.m. Tuesdays (\$45) and noon to 1 p.m. Thursdays (\$40). Visit recsports.nd.edu for more information or to register.

Family Swim Night

7 to 9 p.m. Sunday, Nov. 9, Rockne Memorial Pool Open to faculty and staff families. Parents must accompany their children. There will be organized games, free play and refreshments. No advance registration; free with valid Notre Dame ID

Tennis Clinic

5:30 to 7 p.m. Tuesday, Nov. 11, Eck Tennis Pavilion Open to faculty, staff and families No advance registration; free with valid Notre Dame ID

UNITED WAY

Bowling fundraiser

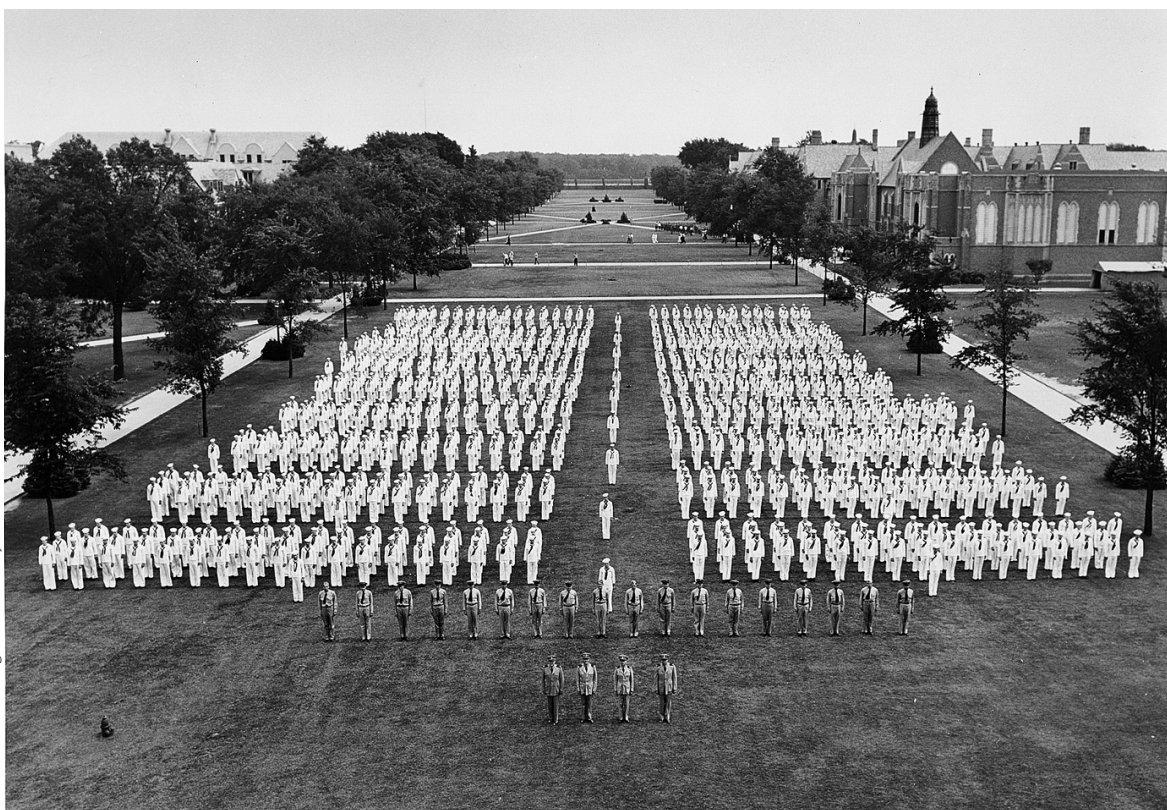
Strikes and Spares Entertainment Center, 5419 Grape Rd., Mishawaka Purchase a \$10 voucher at the Office of Business Operations, 415 Main Building, and receive three games of bowling, one shoe rental and one round of black light mini-golf. A generous portion of the proceeds benefits the United Way and the Notre Dame Employee Compassion fund. The vouchers, which are good anytime, may be used through June 30.

United Way "People Gotta Eat" initiative

This special United Way initiative, spearheaded by Judy Fox in Notre Dame's Legal Aid Clinic, encourages staffers to consider making a donation—separate from their United Way pledge—to a special fund that will provide financial support to the Food Bank of Northern Indiana and other area food pantries in a time of increasing community need.

Checks should be made out to the United Way of St. Joseph County with the designation "People Gotta Eat" and sent via campus mail to Judy Fox, Notre Dame Legal Aid Clinic, 724 Howard Street. Donations to the fund may also be mailed directly to the United Way of St. Joseph County, 3517 E. Jefferson Blvd., South Bend, IN 46615, or made by credit card through the United Way Web site, uwsjc.org. The United Way has pledged one hundred percent of the donations to hunger, with no administrative fees assessed.

ARCHIVES



Sailors in Notre Dame's Midshipmen Navy Training School assemble on the South Quad circa 1943. The ROTC Air Force, Army, Navy and Marine units will conduct a 24-hour vigil at Clark Memorial from 5 p.m. Monday, Nov. 10 to 5 p.m. Tuesday, Nov. 11 in honor of Veteran's Day. Rev. Theodore M. Hesburgh will speak at 5 p.m. Tuesday, Nov. 11.



Carol C. Bradley

Band director Kenneth W. Dye, above, listens as band members rehearse. Below, a chart pinpoints the location of each band member in a formation designed to celebrate the 100th anniversary of the "Victory March." At right, the "Bon Jovi" marching formation and song "It's My Life" at the Setp. 13 Michigan game were aimed at a generation of "rock-and-roll" parents. Below, a design of a formation by Sam Sanchez helps marchers figure out which way to go.



Photo supplied

MARCHING BAND: How do they DO that, anyway?

BY CAROL C. BRADLEY

Editor's note: As the *Marching Band celebrates the 100th birthday of the Notre Dame "Victory March," we also acknowledge its lengthy history of choreographed on-field formations.*

The Band of the Fighting Irish takes the field at halftime, high-stepping precisely into position in time to the music. The formation might be the interlocking "ND" monogram, an outline map of the United States, or—for a 2006 performance—stick figures on surfboards.

When they're out on the field, it looks easy. But even before rehearsals begin in August, band staffers have already put in nearly a year's hard work on the program.

Designing a halftime performance begins with the music—some 30 new arrangements a year, says band director Kenneth W. Dye.

To identify fresh music, Dye researches music trends on Amazon, iTunes and Billboard Magazine and searches for pieces that transcends generations, like Frank Sinatra's "Mac the Knife" and "I've Got You Under My Skin." Audiences have changed, he says. "This season we did Bon Jovi for the parents—we have rock-and-

roll parents now, not Glenn Miller parents."

For every song selected, Dye arranges 24 parts, one for each instrument in the band. The 40-plus hours he spends per song are made easier by the computer. But, "A computer doesn't write this for us. And it can't give us ideas."

Once the music is written, assistant band director Sam Sanchez writes the marching drills. Sanchez graduated from Notre Dame in 1998 with a degree in music performance and went on to receive a master's in musicology; he's been a full-time staffer since 2000.

Notre Dame's band is unusual among college bands, he notes—most bands don't use picture formations, which along with the band's energetic, high-stepping marching style have been a tradition at Notre Dame since the 1950s.

So how do you get 380 people moved around the field into a formation that spells out "IRISH," say, or forms a picture of Pac-Man for a videogame-themed show?

The music—and the difficulty of the music—dictates what the band can learn in the amount of time they have to rehearse. That may be a week, or two to three weeks, depending on the football schedule.

Sanchez considers the visual associations the music brings to mind. For "Top Gun" he pictured a military

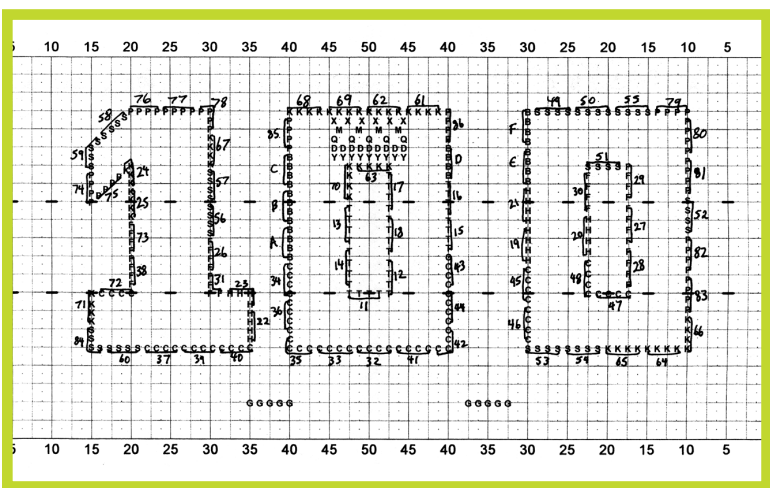
aircraft. For a song by the band OK Go, he visualized stick figures on treadmills (for the uninitiated, the band's "treadmill dance" to the song "Here It Goes Again" became a viral video sensation in 2006.)

With a special computer program, Sanchez draws the picture on a gridded chart of the field, with numbered dots representing the 380 band members. The results look a lot like a needlepoint or cross-stitch pattern.

Once the spacing is down to form the picture, each formation must be connected to the next, so they flow smoothly from one design to another—and the instruments all end up in the right places.

"It's not as difficult as it looks," Sanchez says. Hash marks and numbers on the field are used as guideposts. Band members have a count of steps to get from point A to point B on the chart. "You don't go far from where you were—you go to your spot on the next chart, which might be 15 feet away. And we do have certain moves we use consistently, the way a (football) team runs the same play."

As complicated as it sounds, it's also a lot of fun, Sanchez says. "You get to see the end result of your work, when they perform it. When we spelled 'Bon Jovi' at the Michigan game, we could hear the crowd roar. And I thought, 'OK, I did something right.'"



Carol C. Bradley

Above, Sam Sanchez practices with the band. Below left, Sanchez designed a military aircraft for a show featuring music from the movie "Top Gun." Lower right, for the song "Here It Goes Again" by band OK Go, Sam Sanchez created a design with stick figures on treadmills.



Photo supplied

