

## Adapting and living with climate change

Database collects research data from experts around the world

BY RENEE HOCHSTETLER, OFFICE OF RESEARCH

The average global temperature at the earth's surface could increase as much as 6 degrees Celsius by 2100, according to a 2007 report by the Intergovernmental Panel on Climate Change. If that happens, the impact would reach far beyond hot summers and rising sea levels to affect society in complicated ways.

The question is not only how to slow or stop climate change, but how to adapt and live with the consequences of climate change—and that requires getting as complete a picture as possible by collecting research findings from experts around the world and allowing researchers to work together to solve climate change problems.

A Cyber-Enabled Discovery and Innovation (CDI) grant from the National Science Foundation's Office of Cyberinfrastructure enables a new interdisciplinary project, the Collaboratory for Adaptation to Climate Change, to do just that.

The project's initial function is to collect survey data on expert opinion about adaptation to climate change, climate data, ecological data, legal and regulatory data, and to develop novel computational tools that help

researchers and managers understand the effects of climate change.

The collaboratory will make the data and tools available and make research results searchable. The collaboratory will also provide a database of regulations and laws that pertain to climate change adaptation. These tools will enable anyone interested in climate change—most likely scientists and field practitioners such as conservationists—to make decisions about climate change adaptation.

In fact, the pervasive interest in climate change is evidenced by the range of academic disciplines represented by the project's principal investigators: Nitesh Chawla in computer science and engineering, Debra Javeline in political science, Jessica Hellmann and Jason McLachlan in biological sciences, Jaroslaw Nabrzyski in the Center for Research Computing and Omar



Hellmann

Lizardo in sociology.

According to Javeline, an expert in survey research methodology, studies typically look at how to slow climate change—but considering how and why to adapt is also crucial. That's the collaboratory's niche, she says, and it allows access to research in real time—getting and distributing data as it is gathered instead of waiting years before action is possible.

Accessing experts' research and their adaptation conclusions means that people can make decisions based on comprehensive, scientifically significant information. "For the first time we can say what thousands of scientists are thinking because their data will be available in the collaboratory," says Javeline.

Data and computational tools will be publicly available, and likely applied to make decisions in many fields. In biology, for example, scientists might run simulations about whether and where to introduce non-native species of trees. In government, policymakers might use it to develop regulations for animal relocation. City planners might use the collaboratory to decide how to deed and allocate land.

Hellmann says the project, in later phases, may include more disciplines. "The dream is beyond an initial focus on the adaptation of ecosystems to

climate change so that the collaboratory can help inform policy about all aspects of climate change adaptation."

The collaboratory, says Chawla, is like a public sandbox—anyone can contribute, and everyone involved can see the simulations that others are running. Having so much data requires sizeable computing power, and the university's Center for Research Computing oversees that aspect of the project.

As for what comes next, Chawla, an expert in data mining and network science, is also considering the impact the collaboratory itself will have. "We plan to study how people incorporate the database information into



Anise swallowtail caterpillar

decision making," he says, "and examine the impact of information and evidence on people."

## Holy Cross Week observed Jan. 20 through 26

Celebrating the saints of the Congregation of Holy Cross

BY MICHAEL O. GARVEY, PUBLIC INFORMATION AND COMMUNICATIONS

The University's fourth annual celebration of the feast of **Blessed Basil Anthony Moreau, C.S.C.**, the 19th-century French churchman who founded the Congregation of Holy Cross, will be observed this month with several events, collectively titled "Holy Cross: Faith in Our Future."

The events also will celebrate the

witness of **Saint André Bessette**, the humble doorkeeper at Notre Dame College in Montreal and the first member of the Congregation of Holy Cross to be proclaimed a saint. Canonization ceremonies for Saint André were held in Rome last October.

The series of events will begin with Mass for the feast of Blessed Basil Moreau, which will be celebrated at 5:15 p.m. Thursday, Jan. 20, in the Basilica of the Sacred Heart. **Rev. David Tyson, C.S.C.**, provincial superior of the Congregation of Holy Cross, will preside and give the homily.

The liturgy of Vespers will be celebrated at 7:15 p.m. Sunday, Jan. 23, in the Lady Chapel of the Basilica of the Sacred Heart. The liturgy will include prayers reflecting the spirituality of Blessed Basil Moreau as well as prayers for vocations to Holy Cross.

**Cyril O'Regan**, Notre Dame's Catherine Huisiking Professor of Catholic Theology, will give the third annual Blessed Basil Moreau Lecture at 7:30 p.m. Monday, Jan. 24, in the Andrews Auditorium of Geddes Hall. O'Regan's lecture, "John Henry Newman: The Validity of Holiness in the Modern World,"

will be introduced by **Rev. Daniel Groody, C.S.C.**, associate professor of theology at Notre Dame.

A documentary film, "God's Doorkeeper: Saint Andre of Montreal," the story of Brother André Bessette, C.S.C., will be screened at 7:30 p.m. Tuesday, Jan. 25, in the Andrews Auditorium of Geddes Hall. The screening will include a question and answer session with **Rev. Thomas Rosica, C.S.B.**, executive producer of the film and chief executive officer of Salt and Light Television, Canada's first national Catholic television network.



MATT CASHORE

An opening reception for an exhibition of photographs by **Steven Scardina** concerning the life and witness of Saint André will be held at 5:30 p.m. Wednesday, Jan. 26, in the Rotunda of the Main Building. Scardina will introduce the exhibition with remarks on his work.

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## NEWS BRIEFS

### REGISTRAR'S OFFICE RELOCATED TO GRACE HALL

The **Office of the Registrar** relocated from the Main Building to the third floor of Grace Hall at the end of December. The office reopened at 300 Grace Hall on Monday, Jan. 3. All phone numbers and fax numbers will remain the same. Please do not hesitate to contact the Registrar's office with questions about the move.

### ND BUSINESS PROGRAMS DISCOUNTED FOR EMPLOYEES AND SPOUSES

Executive Education in the **Mendoza College of Business** offers two non-degree business programs that are open to the public. Notre Dame employees and spouses receive a 20 percent discount on program fees.

The **Certificate in Executive Management** (begins March 7) is for managers, department heads and directors, or those aspiring to move up to management, who seek a foundation or refresher in core business management topics. Sessions are on Monday evenings for 10 weeks in the spring and 10 weeks in the fall.

The **Supervisory Development** program (May 3 and 4 or October 4 and 5) is a two-day program for supervisors, managers, and team leaders looking for practical skills in dealing with day-to-day supervising challenges.

For more information, visit [executive.nd.edu](http://executive.nd.edu) or contact Chris Cushman, 631-5285 or [ccushman@nd.edu](mailto:ccushman@nd.edu).

### VALERIE RICHARD ASSUMES OVERSIGHT OF ST. MICHAEL'S LAUNDRY

Valerie M. RiChard, director of facility operations, has assumed oversight responsibility for St. Michael's Laundry.

RiChard was named director of facility operations in May 2008, coming to Notre Dame from the University of Iowa, where she served as associate director of maintenance and custodial services. She has more than 21 years of experience in operations, maintenance and custodial service programs.

In addition to St. Michael's Laundry, RiChard supervises Building Services, Landscape Services, Facility Services and the Sign Shop.



RiChard

### MILEAGE REIMBURSEMENT RATE INCREASES FOR 2011

Effective Jan. 1, the new **business standard mileage** rate for employees who use their own vehicle for business purposes will be 51 cents per mile. Mileage incurred on or after Jan. 1 will be reimbursed at the new rate. The mileage rate for reimbursing moving expenses has increased to 19 cents per mile. If you have questions about the changes, please contact Jackie Fuzey, 631-3936.

### RIGHT TO LIFE MARCH IN WASHINGTON D.C.

**Right to Life** invites members of the Notre Dame community to travel to Washington, D.C. to take part in the 37th annual March for Life on Monday, Jan. 24. An online sign-up sheet is available at <http://www.nd.edu/~prolife/march/>. The Notre Dame Fund to Protect Human Life will provide up to 40 grants of \$250 each to faculty and staff to offset travel expenses, on a first-come/first-served basis. Please send a request to Angela Pfister, [pfister.5@nd.edu](mailto:pfister.5@nd.edu).

### NEW DESIGN FOR INDIANA'S ND LICENSE PLATE

The State of Indiana is introducing a new **Notre Dame license plate design** in 2011. The plates are available to any Indiana resident through the Bureau of Motor Vehicles. Those who already have a Notre Dame plate will keep the current design for 2011. The license plate program helps support Alumni Association service, academic and other programming. For more information, visit [myNotreDame.nd.edu/Indianaplate](http://myNotreDame.nd.edu/Indianaplate).

# Construction projects include enhancements to the Irish Green

## Updates include signage and a stone seating wall

BY CAROL C. BRADLEY, NDWORKS

New construction at the southeast corner of the Irish Green, south of the DeBartolo Performing Arts Center, will create more visible and distinctive sense of entrance to the space, as well as a stronger sense of connection to Eddy Street Commons, says Doug Marsh, University Architect.

The new entrance plaza will include a stone seating wall and a stone monument that says Irish Green.

North of the plaza, sycamore trees have been planted to form a bosque (Spanish for garden). It will create a shaded area in the midst of the Irish Green, a place for people to gather and relax, Marsh says. Trees have already been planted, and walkways with benches are being installed.

In addition, more trees have been planted to strengthen the promenade along the east-west sidewalk south of the performing arts center.

Immediately west of the performing arts center terrace is a new campus Christmas tree. The live



A new entry plaza at the southeast corner of the Irish Green includes a stone seating wall and new signage.

25-foot spruce was transplanted from Illinois, and is decorated with energy-saving LED Christmas lights.

"We're continuing to look at ways to enhance and develop the Irish Green as both a destination, and as a connection to Eddy Street," says Marsh.

In other campus construction news, the **Compton Family Center**, located directly south of the Purcell Pavilion, will house ice facilities including a new hockey arena. Construction is on schedule for the

facility to host the first home game of hockey season in October. View the progress of construction via webcam at [hockeycam.campus.nd.edu/view/viewer\\_index.shtml?id=125](http://hockeycam.campus.nd.edu/view/viewer_index.shtml?id=125).

Immediately northwest of the Main Building, **Carole Sandner Hall**, the new home for the Alliance for Catholic Education, will be completed and occupied in May. View the construction at [accam.campus.nd.edu/view/viewer\\_index.shtml?id=823](http://accam.campus.nd.edu/view/viewer_index.shtml?id=823).

## HOLY CROSS HARVEST SUPPORTS THE FOOD BANK

On Friday, Nov. 19, the University of Notre Dame, Saint Mary's College and Holy Cross College presented the Food Bank of Northern Indiana with 6,677 pounds of food and funds totaling \$2,654 collected through the first inaugural Holy Cross Harvest.

The initiative was the brainchild of Mike Goglio, senior technical analyst in the Office of Budget and Planning, and Bill Hedl, lieutenant of training and technical services for Notre Dame security. The two examined food drives as part of the human resources "Supervising with Impact" program, and saw the potential for a single combined food drive held over a three-week period before Thanksgiving.

Present at the ceremony were (from left) Saint Mary's senior Jennifer Kornexl; Carrie Call, director of SMC's Office of Civic and Social Engagement; Bill Hedl; SMC senior Olivia Critchlow; Mike Hancock, Food Bank director of operations; OIT's Anne Kolaczylk; Mike Goglio; SMC senior Jessica Robbins; and Jackie Rucker, ND's associate director of community relations.



# Sorin's at the Morris Inn expands lunch service

## Carryout lunches aid busy faculty and staff

BY COLLEEN O'CONNOR,  
FOR NDWORKS

Looking for quality dining on the run? You can find it right here on campus. "**Sorin's To Go**" was launched late last summer as a carryout lunch program. "It all started with phone calls from a few

people asking to pick up something for a working lunch," said Carol McFarlane, manager of Sorin's.

After conducting test runs and local research on what ideas worked and what did not, a menu was put together that features both hot and cold food items, such as seasonal soups, chicken noodle soup, salads, deli sandwiches and dessert choices. "It is the same food you would get if seated in the restaurant, the same

quality," according to Executive Chef, Ross Olling.

The service is available all year, Monday through Friday only. Pick up is during regular lunch hours of 11:30 a.m. to 2 p.m. Special packaging is used to ensure freshness and quality. Boxes are labeled as to contents and the customer's name is added, if known. It is recommended that orders be placed between 8 a.m. and 11 a.m. by calling 631-2050.

Cash and departmental FOAPAL numbers are accepted.

Right now, the carryout service is available for lunch only. But according to Olling, it could eventually expand to include a dinner menu and perhaps evolve into a party tray/business lunch service.

For information regarding "Sorin's To Go", contact Carol McFarlane at 631-2029 or [mcfarlane.1@nd.edu](mailto:mcfarlane.1@nd.edu).



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Submit story ideas, questions and comments to [internalcomm@nd.edu](mailto:internalcomm@nd.edu) or contact Carol C. Bradley, 631-0445 or [bradley.7@nd.edu](mailto:bradley.7@nd.edu).

## ND, IUSM-SB nominees sought for 1st Source Commercialization Award

Nominations have opened for the first inaugural \$20,000 **1st Source Commercialization Award** for faculty whose promising research discoveries have successfully moved from the lab to the marketplace.

Researchers from Notre Dame and the Indiana University School of Medicine-South Bend (IUSM-SB) who have successfully commercialized ND or IUSM-SB technologies are eligible for the award. The winner will be announced March 29.

1st Source established the award to encourage researchers to engage the market, share their discoveries and ultimately help attract others to the area through successful businesses built on intellectual capital. The award is also intended to encourage the development of local and regional businesses that will employ members of the local community.

Nominations will be accepted by the Notre Dame Office of Technology Transfer through Monday, Feb. 28. Nominees may be self-nominated but must:

- Be faculty of Notre Dame or IUSM-SB
- Be, or have been, directly engaged in the successful commercialization of their technology.

Applicants should outline the extent to which the successful commercialization activities have advanced the overall mission of the University and made an economic and cultural contribution.

There is no formal application form, but nominations should include:

- An executive summary
- A layman's description of the technology
- A review of the market opportunities, particularly in light of societal benefits provided or societal problems addressed by the technology
- An overview of the path to commercialization such as the business model adopted, partners engaged, local/regional resources employed
- Evidence of commercial success
- Projections of future (short-, mid-, long-term) business success.

The winner will be selected by a committee that includes a representative of 1st Source Bank, the Notre Dame vice president for research, the faculty, and the business community experienced with new technology commercialization.

For further information about the 1st Source Commercialization Award, interested parties should contact Richard Cox at the Notre Dame Office of Technology Transfer at [ott@nd.edu](mailto:ott@nd.edu) or by phone 631-4551.

## Attention gardeners!

Plots in the campus community garden, located in White Field north of Ave Maria Press, are available by lottery. Join the Grow Irish! group on your home tab in insideND, and fill out the registration form. Submit electronically or through campus mail by Feb. 4th. Email Jessica at [jvelazqu@nd.edu](mailto:jvelazqu@nd.edu) if you have questions.



## Remodeled Greenfields offers unique dining experience

### Café features menu built around seasonal and local ingredients

BY COLLEEN O'CONNOR, FOR NDWORKS

Located in the Hesburgh Center for International Studies, **Greenfields** has long been a comfortable and convenient place to meet with colleagues and enjoy a hot breakfast or lunch.

A newly updated Greenfields reopens Monday, Jan. 17, with menu changes; aesthetic improvements; service upgrades; the adoption of new, sustainable operating procedures; and an updated marketing message—all culled from customer satisfaction surveys, focus groups, questionnaires and industry analyses.

The unique menu will offer items built around fresh seasonal and local ingredients, including those from the campus Community Garden. Sustainable seafood is a key component, with the café featuring fish certified by the Marine Stewardship Council—the world's leading certification and eco-labeling program for sustainable seafood.

There will be dining options to suit each individual's nutritional needs, designated by "H" (healthy) and "L" (lower fat, lower calorie and lower sodium) menu icons. Many of the healthy new salads will be prepared in the Food Service Support Facility, broadening the choices available at meals.

Breakfast will feature a hot cereal bar with toppings and condiments, eggs and omelets made to order, fresh fruits and freshly squeezed juices, and a selection of coffees and teas. Menu items will include shirred eggs and tomatoes Florentine; organic pancakes, plain

or with fruit; and hot porridges of steel-cut oats or hearts of wheat.

Lunch will feature a soup bar with toppings and condiments, salads, sandwiches and plated entrees such as chickpea salad with horseradish-yogurt dressing; quinoa and couscous tossed with fresh salsa; Mediterranean zucchini casserole; Alaskan pollock with sweet potato and cabbage; and char-grilled skewers of pork, pineapple and jalapeno.

Of these lunch offerings, four out of five salads will fit the "L" criteria, as well as four of the sandwiches and all of the entree plates.

One special sandwich will be the tall-grass grilled hamburger, made from grass-fed beef. It is naturally low in fat, high in omega-3 fatty acids, and antibiotic and hormone-free.

A great new daily feature is specialty beverages utilizing fresh squeezed juices. These high-nutrition offerings include the "Energetic Cocktail," a secret blend of carrots, oranges, apples, celery and lemon; "AppleBerry Delight," made of freshly juiced apples with a strawberry kick; and "Greenfields Punch," with freshly juiced pineapple, orange, strawberries and grapes.

To better meet the needs of the University community, diners will see grab-n-go items as well as prepared-to-order choices. Order tickets and pick-up will be utilized to streamline the process.

In keeping with sustainability practices, china and glassware service will be utilized in the restaurant and

all carryout containers will be recyclable. New dining room chairs are made from 110 recycled pop bottles each. The new cabinetry is made of Kirei board, a highly sustainable substitute for wood that's made of reclaimed sorghum straw and no-formaldehyde-added adhesive.

The new decor marks the facility as aesthetically different from any other food service location on campus. The color scheme features greens and browns, with glass tile, black granite and bamboo.

Beyond the preparation and



presentation of healthy, nutritious meals, the newly revamped Greenfields seeks to educate the campus community on nutrition and optimal food choices.

Its registered dietitian and executive chef will present brief educational sessions based on menu items or important health topics. Some upcoming lectures include: the significance of lowering sodium in your diet, why grass-fed beef is important, and cooking methods to improve overall health.

Information about these and other sessions can be found at Greenfields and on the Greenfields website, [www.nd.edu/~food/dining/greenfields.html](http://www.nd.edu/~food/dining/greenfields.html).

# ROBINSON CENTER



Students in two innovative educational programs initiated at the Robinson Community Learning Center took top honors in regional and state competitions in December.

**ABOVE**, the RCLC Lego Robotics Team, coached by G. David Moss (at far left), assistant vice president for student affairs, won first place for project presentation in the 2010 Indiana First Lego League Competition in Indianapolis Dec. 12.

**RIGHT**: Charell Luckey, an Adams High School junior and Robinson Shakespeare Company member, was the winner of the third annual Shakespeare at Notre Dame Regional Shakespeare Monologues competition. Members of the Robinson Shakespeare Company, directed by Christy Burgess, took five of the six top awards in the competition.

This is the second straight win for Luckey, who now advances to the English-Speaking Union of the United States' State Shakespeare Competition, which will be held in Indianapolis in February. There she will compete for cash prizes and the opportunity to represent the State of Indiana at the ESU National Competition in New York City.





## RecSports resources help you get fit in 2011

RecSports offers recreation and fitness classes for every interest—from cardio, indoor cycling and interval training to swimming, yoga, martial arts and scuba.

During “Try It, You’ll Like It” week, Monday, Jan. 17, through Sunday, Jan. 23, try any fitness, instructional or FAST (Faculty and Staff Training) class for free (space is limited).

For more information on RecSports programs, visit [recsports.nd.edu](http://recsports.nd.edu) or email [recsport@nd.edu](mailto:recsport@nd.edu).

### SPRING 2011 SWIM LESSONS

#### Session 1

Assessment 5:30-6:30 p.m.  
Friday, Jan. 14  
Registration opens at 9 a.m. Tuesday, Jan. 11, and closes at 5 p.m. Jan. 21  
Classes run Jan. 22-Feb. 17  
Rolling assessments two days a week for 1 hour

#### Session 2

No assessment  
Registration opens at 9 a.m. Tuesday, Feb. 15, and closes at 5 p.m. Friday, Feb. 25  
Classes run Feb. 26-March 10 and March 19-March 31 (spring break in the middle)  
Rolling assessment two days a week for 1 hour

#### Session 3

No Assessment  
Registration opens at 9 a.m. Tuesday, March 22, and closes at 5 p.m. Friday, April 1  
Classes run April 2-May 1  
Saturdays-2nd, 9th, 16th, 30th  
Sundays-3rd, 10th, 17th, 1st  
Weekdays 4th-28th no breaks

### CLUB SPORTS

#### BENGAL BOUTS

More than 200 boxers participate annually in the Bengal Bouts, raising money for the Holy Cross Missions in Bangladesh.

Feb. 13: Preliminaries, Joyce Center Field House 5 p.m.  
Feb. 22: Quarterfinals, Joyce Center Field House 6 p.m.  
March 1: Semifinals, Joyce Center Field House 6 p.m.  
March 4: Finals, Joyce Arena 7 p.m.

### INTRAMURALS

Want to engage in some friendly competition? Consider joining an Intramural league, all entries begin on Jan. 20 and end on Jan. 27.

League	Cost
Campus Racquetball	\$10/team
CoRec Volleyball	\$20
CoRec Indoor Soccer	\$50

### FAMILY PROGRAMS

#### EVEN FRIDAYS

Even Fridays are recreational family activities held on the **second and fourth Fridays** of every month from 5:30 – 7:30 p.m. Our activities are designed to reach a wide range of family ages and abilities with traditional family recreation opportunities such as bowling, swimming, game nights and bike rides.

#### Jan. 28

Family Bowling Night – And More!  
5:30 – 7:30 p.m.  
at Strikes and Spares Entertainment Center  
5419 Grape Road, Mishawaka  
Bowling, go-karts and black-light miniature golf. \$7.50 per person.

#### Feb. 11

Dive-In Movie  
5:30 – 7:30 p.m.  
Come watch a family-friendly movie in one of Notre Dame’s swimming facilities.  
This event is FREE!

#### FAMILY FIRST

Family FIRST (*Fitness Instruction, Recreation & Sports Training*) classes focus specifically on the fitness needs of families and are designed for parents to participate with their children. Typical classes are yoga, martial arts, cardio, indoor cycling and rock climbing. Family FIRST classes are on weekend afternoons in either the Rockne Memorial Building or Rolfs Sports Recreation Center.

#### CLIMBING

Registration: Jan. 10 – Jan. 21  
Class Dates: Jan. 23 – Feb. 27  
Class Time: Sundays, 1 – 2 p.m.  
Cost: FREE!

#### YOGA

Registration: Jan. 10 – Jan. 21  
Class Dates: Jan. 22 – Feb. 26  
Class Time: Saturdays, 11 a.m. - noon  
Cost: FREE!

### GROUP FITNESS

Registration for all classes opens at 7:30 a.m., Thursday, Jan. 20, via RecRegister. *Registration continues throughout the semester if space permits. All schedules and instructors are subject to change.*

#### FAST (Faculty And Staff Training) CLASS SCHEDULE

FAST classes are reserved for faculty and staff. Classes meet Jan. 17 – May 13.

#### MONDAY

**Morning Cycle**  
Time: 6:15 – 7 a.m.  
Cost: \$45  
Instructor: Indiana  
Location: Rockne B026

#### Cycle Express

Time: 12:15 – 12:45 p.m.  
Cost: \$45  
Instructor: Indiana  
Location: Rockne B026

#### TUESDAY

**Cardio Sculpt**  
Time: 9:15 – 10:15 a.m.  
Cost: \$20  
Instructor: Indiana  
Location: RSRC AR 2

#### Yoga

Time: noon – 1 p.m.  
Cost: \$64  
Instructor: Linda  
Location: RSRC AR 1

#### WEDNESDAY

**Yoga**  
Time: 9:15 – 10:15 a.m.  
Cost: \$64  
Instructor: Steve  
Location: RSRC AR 1

#### Cycle Express

Time: 12:15 – 12:45 p.m.  
Cost: \$45  
Instructor: Indiana  
Location: Rockne B026

#### THURSDAY

**Power Yoga**  
Time: 6:05 – 7:20 a.m.  
Cost: \$66  
Instructor: Colleen  
Location: RSRC AR 1

#### Cardio Sculpt

Time: 9:15 – 10:15 a.m.  
Cost: \$20  
Instructor: Indiana  
Location: RSRC AR 2

#### FRIDAY

**Morning Cycle**  
Time: 6:15 – 7 a.m.  
Cost: \$39  
Instructor: Indiana  
Location: Rockne B026

#### Fitness in a Flash

Time: 12:15 – 12:45 p.m.  
Cost: \$14  
Instructor: Indiana  
Location: RSRC AR 2

#### OPEN FITNESS CLASSES

Open fitness classes are open to faculty, staff, students, spouses and retirees.

#### MONDAY

**Pilates Express**  
Time: 12:15 – 12:45 p.m.  
Cost: \$48  
Instructor: Shellie  
Location: RSRC AR 2

#### Zumba Express (ends May 9)

Time: 12:15 – 12:45 p.m.  
Cost: \$16  
Instructor: Tinia  
Location: RSRC AR 1

#### Rock Bottom

Time: 5 – 5:30 p.m.  
Cost: \$13  
Instructor: Kara  
Location: RSRC AR 1

#### Cycle Express

Time: 5:15 – 5:45 p.m.  
Cost: \$36  
Instructor: Kelly  
Location: Rockne B026

#### Aquacise

Time: 5:30 – 6:15 p.m.  
Cost: \$16  
Instructor: Patty  
Location: Rockne Pool

#### Step N Sculpt

Time: 5:30 – 6:30 p.m.  
Cost: \$16  
Instructor: Indiana  
Location: RSRC AR 2

#### Yoga

Time: 5:30 – 6:30 p.m.  
Cost: \$51  
Instructor: Steve  
Location: Rockne 205

#### Guns N Guts

Time: 5:45 – 6:15 p.m.  
Cost: \$13  
Instructor: Bethany  
Location: RSRC AR 1

#### Cardiac Cycle

Time: 6 – 7 p.m.  
Cost: \$42  
Instructor: Angela  
Location: Rockne B026

#### Fitness Revolution

Time: 6:30 – 7:15 p.m.  
Cost: \$16  
Instructor: Claire  
Location: RSRC AR 1

#### Boot Camp

Time: 6:45 – 7:45 p.m.  
Cost: \$16  
Instructor: Olga  
Location: RSRC AR 2

#### Crunch Time

Time: 8 – 8:30 p.m.  
Cost: \$13  
Instructor: Olga  
Location: RSRC AR 2

#### TUESDAY

**Power Yoga**  
Time: 6:05 – 7:20 a.m.  
Cost: \$66  
Instructor: Frances  
Location: RSRC AR 1

#### Flex N Tone (ends May 10)

Time: 12:15 – 12:45 p.m.  
Cost: \$16  
Instructor: Indiana  
Location: RSRC AR 2

#### Yoga

Time: 4:15 – 5:15 p.m.  
Cost: \$59  
Instructor: Kim  
Location: Rockne 205

#### Cycle Express

Time: 4:45 – 5:15 p.m.  
Cost: \$59  
Instructor: TBA  
Location: Rockne B026

#### Zumba

Time: 5:15 – 6 p.m.  
Cost: \$18  
Instructor: Patty  
Location: RSRC AR 1

#### Crunch Time

Time: 5:30 – 6 p.m.  
Cost: \$15  
Instructor: TBA  
Location: RSRC AR 2

#### Pilates Mat

Time: 5:30 – 6:15 p.m.  
Cost: \$56  
Instructor: Jenny  
Location: Rockne 205

#### Cycle N Sculpt

Time: 5:30 – 6:30 p.m.  
Cost: \$49  
Instructor: Indiana  
Location: Rockne B026

#### Body Sculpt

Time: 6:15 – 7 p.m.  
Cost: \$18  
Instructor: Kara  
Location: RSRC AR 1

#### Step N Sculpt

Time: 6:15 – 7:15 p.m.  
Cost: \$18  
Instructor: TBA  
Location: RSRC AR 2



### PERSONAL TRAINING

**Group Personal Training** allows you and up to three others to learn and exercise together. It's fun, challenging and cost effective!

Register Jan. 17 – Feb. 11 and receive a FREE post-training assessment or a FREE lesson.



**Yoga**  
Time: 6:30 – 7:30 p.m.  
Cost: \$59  
Instructor: TBA  
Location: Rockne 205

**Cycle Express**  
Time: 6:45 – 7:15 p.m.  
Cost: \$42  
Instructor: Indiana  
Location: Rockne B026

**WEDNESDAY**  
**Zumba**  
Time: 6:15 – 7 a.m.  
Cost: \$18  
Instructor: Patty  
Location: RSRC AR 1

**Yoga**  
Time: noon – 1 p.m.  
Cost: \$59  
Instructor: Steve  
Location: RSRC AR 1

**Fitness in a Flash (ends May 11)**  
Time: 12:15 – 12:45 p.m.  
Cost: \$16  
Instructor: Allysia  
Location: RSRC AR 2

**Cycle Express**  
Time: 5 – 5:30 p.m.  
Cost: \$42  
Instructor: TBA  
Location: Rockne B026

**Cardio Box**  
Time: 5:15 – 6:15 p.m.  
Cost: \$18  
Instructor: Indiana  
Location: RSRC AR 1

**Cardio Funk**  
Time: 6:15 – 7:15 p.m.  
Cost: \$18  
Instructor: Kari  
Location: RSRC AR 2

**Body Sculpt**  
Time: 6:30 – 7:15 p.m.  
Cost: \$18  
Instructor: Indiana  
Location: RSRC AR 1

**Piloga**  
Time: 6:30 – 7:30 p.m.  
Cost: \$59  
Instructor: Patty  
Location: Rockne 205

**THURSDAY**  
**Flex N Tone (ends May 12)**  
Time: 12:15 – 12:45 p.m.  
Cost: \$15  
Instructor: Indiana  
Location: RSRC AR 1

**Pilates Mat**  
Time: 12:15 – 1 p.m.  
Cost: \$52  
Instructor: Patty  
Location: RSRC AR 2

**Piloga**  
Time: 4:15 – 5:15 p.m.  
Cost: \$51  
Instructor: Patty  
Location: Rockne 205

**Cycle Express**  
Time: 4:45 – 5:15 p.m.  
Cost: \$36  
Instructor: Keisha  
Location: Rockne B026

**Guns N Guts**  
Time: 6:30 – 7 p.m.  
Cost: \$13  
Instructor: Claire  
Location: RSRC AR 1

**FRIDAY**  
**Flex N Tone**  
Time: 12:15 – 12:45 p.m.  
Cost: \$13  
Instructor: Lisa  
Location: RSRC AR 1

**Cycle Express**  
Time: 4:45 – 5:15 p.m.  
Cost: \$33  
Instructor: Kelly  
Location: RSRC AR 1

**Cardio Funk**  
Time: 5:30 – 6:30 p.m.  
Cost: \$14  
Instructor: Megan  
Location: RSRC AR 1

**SUNDAY**  
**Body Sculpt**  
Time: 12:15 – 1 p.m.  
Cost: \$14  
Instructor: Brittany  
Location: RSRC AR 1

**Beginner Yoga**  
Time: 12:45 – 1:45 p.m.  
Cost: \$47  
Instructor: TBA  
Location: Rockne 205

**Aqua Zumba**  
Time: 1 – 1:45 p.m.  
Cost: \$14  
Instructor: Patty  
Location: RAC Pool

**Boot Camp**  
Time: 1:15 – 2:15 p.m.  
Cost: \$14  
Instructor: Nicola  
Location: RSRC AR 1

**Beginner Pilates**  
Time: 2 – 3 p.m.  
Cost: \$47  
Instructor: Patty  
Location: RSRC AR 2

**Zumba**  
Time: 2:30 – 3:15 p.m.  
Cost: \$14  
Instructor: Treasa  
Location: RSRC AR 1

**Indoor Cycle**  
Time: 2:45 – 3:45 p.m.  
Cost: \$38  
Instructor: Indiana  
Location: Rockne B026

**Crunch Time**  
Time: 3:30 – 4 p.m.  
Cost: \$12  
Instructor: TBA  
Location: RSRC AR 1

**Cardio Box**  
Time: 4:15 – 5:15 p.m.  
Cost: \$14  
Instructor: Indiana  
Location: RSRC AR 1

## INSTRUCTIONAL CLASSES

Classes meet Jan. 31 – April 15  
unless otherwise noted on our website.

Registration begins Jan. 27 at 7:30 a.m. via RecRegister.  
Registration continues throughout the semester  
if space is available in the class.

**INSTRUCTOR TRAINING**  
**Train to be a Personal Trainer**  
Wednesdays 5:30 – 7:30 p.m.  
Fee: \$50  
Instructor: Shellie  
Location: Rockne 110  
*FREE info session 5:30 p.m.,  
Tuesday, Jan. 25, Rockne 110*

**Water Safety Instructor**  
Tuesdays 6 – 9 p.m.  
Fee: \$200  
Instructor: TBD  
Location: Rockne Pool

**MARTIAL ARTS INSTRUCTION**  
*FREE Martial Arts Instruction ses-  
sion 5:30 p.m., Monday, Jan. 24,  
Rockne 109*

**Tai Chi**  
Mondays 5:30 – 6:30 p.m.  
Fee: \$40  
Instructor: Br. Ray  
Location: Rockne 109

**Tae Kwando Ju Jitsu**  
Tuesdays and Thursdays  
5:30 – 7:30 p.m.  
Fee: \$50  
Instructor: Ben  
Location: Rockne 109

**Aikido**  
Wednesdays and Sundays  
6 – 7:30 p.m.  
Fee: \$50  
Instructor: Michele  
Location: Rockne 109

**DANCE INSTRUCTION**  
*FREE Dance Class Kick Off  
demonstration Jan. 26 at 6:45 p.m.  
in RSRC AR 2*

**Partner Latin Dance**  
Mondays 6:45 – 7:45 p.m.  
Fee: \$25  
Instructor: Claudia  
Location: Rockne 205

**Modern Dance**  
Tuesdays and Thursdays  
7:15 – 8:15 p.m.  
Fee: \$45  
Instructor: Emily  
Location: RSRC AR 1

**Jazz/Hip-Hop Fusion**  
Mondays and Wednesdays  
7:30 – 8:30 p.m.  
Fee: \$45  
Instructor: Brienne  
Location: RSRC AR 1

**Beginner Ballet**  
Wednesdays 7:30 – 8:30 p.m. and  
Sundays 6:30 – 7:30 p.m.  
Fee: \$45  
Instructor: JoAnn  
Location: RSRC AR 2

**Intermediate Ballet**  
Wednesdays 8:35 – 9:35 p.m. and  
Sundays 7:35 – 8:35 p.m.  
Fee: \$45  
Instructor: JoAnn  
Location: RSRC AR 2

**International Dance Series**  
Thursdays 6 – 7 p.m.  
Fee: \$25  
Instructor: Various  
Location: RSRC AR 2

**WATER INSTRUCTION**  
**Lifeguarding**  
Thursdays 6 – 9 p.m.  
Fee: \$150  
Instructor: TBD  
Location: Rockne Pool

**Scuba**  
Sundays 3:30 – 7:30 p.m.  
Fee: \$205  
Instructor: Diane  
Location: Rockne 110 and  
Rockne Pool  
*FREE Scuba Info Session 6 p.m.  
Tuesday, Jan. 25, Rockne 110*

**SPORT INSTRUCTION**  
**Beginner Tennis**  
Tuesdays 7 – 8 p.m.  
Fee: \$45  
Instructor: Jennie  
Location: Eck Tennis Center

**Intermediate Tennis**  
Tuesdays 8 – 9 p.m.  
Fee: \$45  
Instructor: Jennie  
Location: Eck Tennis Center

**Squash**  
Tuesdays and Thursdays  
6:30 – 7:45 p.m.  
Fee: \$45  
Instructor: Geoff  
Location: Rockne Squash

**Fencing**  
Tuesdays and Wednesdays 7 – 9 p.m.  
Fee: \$120  
Instructor: Marek  
Location: Joyce Center fencing gym  
(enter Gate 4)  
*FREE Fencing Info Session 7 to 8 p.m.  
Wednesday, Jan. 26, Joyce Center  
fencing gym*

### GET RECSPOURTS UPDATES IN YOUR EMAIL!

Want to keep up with programs and special offers through RecSports? Go to our website and sign up to receive email updates. We'll send you a weekly email highlighting programming, special events and offers, facility hours and more!

The first 200 people to sign up will be entered into a drawing for a free fitness assessment (three will be awarded).

For more information on RecSports programs, visit [recsports.nd.edu](http://recsports.nd.edu) or email [recsport@nd.edu](mailto:recsport@nd.edu).

**Crunch Time**  
Time: 5:30 – 6 p.m.  
Cost: \$15  
Instructor: Kari  
Location: RSRC AR 2

**Pilates Mat**  
Time: 5:30 – 6:15 p.m.  
Cost: \$56  
Instructor: Judith  
Location: Rockne 205

**Aquacise**  
Time: 5:30 – 6:15 p.m.  
Cost: \$18  
Instructor: Patty  
Location: Rockne Pool

**Indoor Cycle**  
Time: 5:45 – 6:45 p.m.  
Cost: \$49  
Instructor: Bethany  
Location: Rockne B026

**Rock Bottom**  
Time: 5:15 – 5:45 p.m.  
Cost: \$13  
Instructor: Nicola  
Location: RSRC AR 2

**Zumba**  
Time: 5:30 – 6:15 p.m.  
Cost: \$16  
Instructor: Tinia  
Location: RSRC AR 1

**Pilates Mat**  
Time: 5:30 – 6:15 p.m.  
Cost: \$48  
Instructor: Patty  
Location: Rockne 205

**Cardiac Cycle**  
Time: 5:30 – 6:30 p.m.  
Cost: \$42  
Instructor: Indiana  
Location: Rockne B026



PHOTOS: MATT CASHORE

# Landscape Services handles the challenges of winter

Enormous responsibility rests on the shoulders of few

BY COLLEEN O'CONNOR, FOR NDWORKS

Late at night—when the rest of us are sleeping—campus is likely to be buzzing with activity as a crew of 31 employees brave freezing temperatures and blowing snow to clear the roadways, lots and sidewalks for our safety and convenience.

From the Monday after Thanksgiving through the middle of March, Landscape Services adopts a three-shift winter schedule instead of the normal day and evening shifts.

Three people start work at 2 a.m. The bulk of the crew starts at 7 a.m. and works until 3:30 p.m. Five crewmembers work from 3:30 p.m. until 11:30 p.m. This leaves only two and one-half hours uncovered, 11:30 p.m. to 2 a.m., out of 24 hours. These eight-hour shifts expand to 12-hour shifts—2 a.m. to 2 p.m.—when snowfall demands around-the-clock coverage.

According to Patrick McCauslin, superintendent of Landscape Services, the threshold for snow removal is an inch of snow. At 1 inch of snow, everything is cleared; sidewalks, lots and roadways.

Interestingly, one of the factors taken into consideration is the diversity of the Notre Dame campus. With students and faculty from all over the world, many are not used to snow at all.

The fleet consists of five pickup trucks, which plow the parking circles and small lots; four one-ton trucks—one equipped with a salt spreader—that plow the intermediate lots such as the one at the bookstore; two 2.5-ton trucks, which plow all large lots such as the library's and the Joyce Center's; and a 2.5-ton salt truck that plows and salts all roadways, and salts the large parking lots. Additionally, one pickup truck is designated to drop liquid ice melter on campus roads and all lots. Finally, there are two front-end loaders, one that assists with large parking lots, and the other in areas that are difficult for a truck to navigate.

Everyone in the department has an assigned route. Two people shovel stairs and ramps. Sidewalks are taken care of by eight broom operators. Seven of them operate so-called

“Toolcats,” which are outfitted with a hydraulic broom, a blade and a front-loading bucket, all three of which the operator can use at his discretion.

The bed of the Toolcat carries a tank filled with liquid ice melter as well as a salt spreader, which drops salt behind. The operator can use the liquid ice melter, salt or a combination of both. The eighth broom operator uses a Toro broom to clear the sidewalks at Fischer Townhouses and other places that are too narrow for the Toolcats. There is also one mechanic on staff to keep the equipment running.

“It is important to point out that the salt is an environmentally safe product, unlike road salt. It will not damage grass or plant life,” says McCauslin.

McCauslin can't say enough about the 31 people who make up his staff. “They are dedicated and loyal employees, skilled, trained and



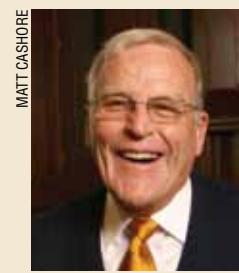
Landscape Services staffers begin clearing snow at 2 a.m.

professional. Often, their jobs take them away from their own families, even on Christmas and New Year's Day. They are always here when needed. They amaze me.”

If McCauslin has one request of the University community, it is to “give us enough room to do our work.” People complain about their

cars being plowed in, but abandoned cars, or “snowbirds” as they are referred to, often become trapped due to circumstances beyond the crew's control. “Pushing snow is like waves created by a boat on a lake,” says McCauslin. Once the wave starts, it can take on a life of its own.

## SERVICE ANNIVERSARIES



Lennon



Coleman



Ditsch



Palus

The University congratulates the following employees who celebrate significant service anniversaries in December and January, including 40-year employee **Gwendolyn Y. Scott**, Hesburgh Libraries; Alumni Association employees **Chuck Lennon**, 35 years, and **Catherine A. Dale**, 30 years; Myrtie **M. Coleman**, TRiO Programs, 30 years, and **Harold E. Ditsch** and **Rosalyn E. Palus**, Custodial Services, 30 years.

### 25 years

**Jacek K. Furdyna**, physics  
**Robert C. Johansen**, political science  
**Dwight B. King**, law library  
**David T. Leighton**, chemical and biomolecular engineering  
**Stephen E. Silliman**, civil engineering and geological sciences  
**Anthony R. Yelovich**, athletics

### 20 years

**Debra L. Brown**, volleyball  
**David A. Mannen**, custodial services  
**Mary C. McKeown**, Hesburgh Libraries  
**Kong Oeum**, Food Services  
**R. Michael Schafer and Michael D. Thomas**, electrical engineering  
**Valerie A. Schroeder**, Freimann Animal Care Facility  
**Edward L. Schrupp**, General Services  
**Carol L. Taylor**, student activities  
**Barry J. Van Dyck**, Mendoza College of Business

### 15 years

**Kathleen A. Barber**, foundation relations  
**Gary C. Clark**, custodial services  
**Henry J. Durand**, preventive maintenance  
**Richard M. Economakis**, architecture  
**Nerminka Hankic**, Food Services  
**Gordon P. Martinczak**, fire protection  
**Sarah J. Misener**, human resources  
**Deborah K. Murray**, maintenance  
**Terri A. O'Bryan**, University Writing Program

**Joseph T. Ross**, Hesburgh Libraries  
**Mark A. Stadtherr**, chemical and biomolecular engineering  
**Melissa M. Ware**, Hammes Notre Dame Bookstore

### 10 years

**Marian L. Appleton**, Alumni Association  
**Jolene R. Bilinski**, American studies  
**William E. Bosler**, development  
**Michael A. Brueseke and Dominic T. Chaloner**, biological sciences  
**Robert B. Clark**, men's soccer  
**Alan R. Cramer**, integrated communication services  
**Robert A. Dowd**, political science  
**William G. Gilroy**, public relations  
**Daniel A. Graff** and **Thomas F. Noble**, history  
**Martin Haenggi**, electrical engineering  
**Pamela J. Hutchings**, psychology  
**Shobha P. Kamat**, enterprise systems  
**Diana L. Kennedy**, procurement services  
**Ann M. Knoll**, Snite Museum  
**Kelly Lawrence**, alcohol and drug education  
**Cynthia K. Mahmood**, anthropology  
**Denise McEwen and Jasmina Penic**, Custodial Services  
**Sherri L. Jones, Laurie K. McGowan and Tracey Morton**, Hesburgh Libraries  
**Maria P. Leonard**, accounts payable  
**Robert L. Mincey**, Huddle  
**Beverly A. Murphy**, Snite Museum security  
**Glen L. Niebur**, aerospace and mechanical engineering

**James S. Panagiotis**, preventive maintenance  
**Marguerite A. Taylor**, Robinson Center  
**Beth R. VerVelde**, mathematics  
**Shelly R. Way**, Sorin Society  
**Warren L. Williams**, Office of Budget and Planning

## NEW EMPLOYEES

The University welcomes the following new employees who began work in November:

**Peter T. Annin**, ND Environmental Change Initiative  
**Kristin D. Freer**, Catering By Design  
**David E. Hipskind**, aerospace and mechanical engineering  
**Mary Ellen McCaslin**, University Health Services  
**Paolo Minero**, electrical engineering  
**Ann M. Moran**, Career Center  
**Diane M. Querciagrossa**, Basilica of the Sacred Heart  
**Elizabeth A. Sain**, University Press  
**Jiangning Tan**, Center for Transgene Research  
**Jill Wack**, Freimann Animal Care Facility  
**Jared M. Zenk**, enterprise systems

## NEWS BRIEFS

### MOZART MARATHON, SHAKESPEARE SONNETS

The Department of Music celebrates Mozart's 255th birthday with a **Mozart Marathon** from noon to 4 p.m. Thursday, Jan., 27 in the O'Shaughnessy Great Hall. Bring a sack lunch and enjoy complimentary cookies and coffee as faculty, staff and students perform and read from Mozart's works.

Between 11 a.m. and 3 p.m. on Valentine's Day, Feb. 14, all of William Shakespeare's 154 sonnets will be read aloud in the Great Hall by University administrators, faculty and students during **Sonnet Fest 2011**. The annual event is sponsored by Shakespeare at Notre Dame and the Department of English.

### HOLY CROSS RELIGIOUS PRESENT STATIONS OF THE CROSS MEDITATIONS FOR 2011

“You Have Redeemed the World: Praying the Stations in the Holy Cross Tradition” is now available from Ave Maria Press, [avemariapress.com](http://avemariapress.com). The collection of Lenten meditations is also available in Spanish. The price is \$2.50, \$2 for Holy Cross members.

### UNIVERSITY PRESS BOOKS RECOGNIZED

Choice Magazine has named two University of Notre Dame Press books as Outstanding Academic Titles: Gregory Heyworth's “Desiring Bodies: Ovidian Romance and the Cult of Form” and Peter W. Travis' “Disseminal Chaucer: Rereading the Nun's Priest's Tale.”

# From Notre Dame to Chile—and back again

**Life is about opportunities, says new executive director of the Kellogg Institute**

BY CAROL C. BRADLEY, NDWORKS

Steve Reifenberg graduated from Notre Dame in 1981. Nearly 30 years later, he's back as the new executive director of the Kellogg Institute for International Studies, where he oversees strategic planning and international and public policy initiatives and teaches international development and Latin American studies.

What's exciting about the Kellogg Institute, he says, "is that it's an institution with a really serious academic profile, where the best people are studying issues related to democracy. It's also a place that aspires to make a real difference in the world."

The path that led him around the world and back to Notre Dame is not one he could have predicted when he left South Bend, philosophy degree in hand.

After graduation Reifenberg headed west and taught high school in Colorado for a year. In 1982—a pivotal year in his life—he planned to enroll in law school at Indiana University, a decision his parents applauded.

But his plans were dramatically altered when he ran into an old friend who had worked in Chile with the Holy Cross Associates—a volunteer program "like an ND-run Peace Corps," Reifenberg says.

Interestingly, Reifenberg had applied to the same program as a senior and had been rejected, on the grounds that he'd never traveled further south than Florida.

But fascinated by the notion



Steve Reifenberg, far right, in Haiti earlier this year with President Rev. John I. Jenkins, C.S.C., and Brenman Bollman '09.

of living and working in Chile, Reifenberg abandoned the idea of law school and traveled to Santiago, where he would spend the next two years teaching in a small orphanage. In 2008, he wrote a book about his experience, "Santiago's Children: What I Learned About Life at an Orphanage in Chile."

Kellogg Institute Director Scott Mainwaring and President Emeritus Rev. Edward A. (Monk) Malloy, C.S.C., have used "Santiago's Children" in their classes, where it's been enthusiastically received by students.

The early 1980s in Chile was a time of repressive military rule—and widespread disregard for civil and human rights—under General Augusto Pinochet. Reifenberg was present for the first stirring of public opposition by the unions and the mothers of the disappeared.

"It was a remarkable opportunity to live and work at the orphanage at a critical moment in Chile's history," he says. "It had a transformative effect on the rest of my life. It gave me an interest in international issues, and in vulnerable children in poverty."

Reifenberg later earned a master

in public policy at Harvard's Kennedy School of Government, then worked for Harvard for 20 years, most recently with the David Rockefeller Center for Latin American Studies. In a unique twist, he was the center's executive director before moving to Chile to develop Harvard's first-ever regional office outside the Boston area.

Now he's back in Indiana, along with his wife, Chris Cervenak, a lawyer specializing in international issues and human rights, and their three children, ages 15, 13 and 10, who are making the transition from Holy Cross-run schools in Santiago to English-speaking classrooms in South Bend.

The Kellogg Institute, Reifenberg notes, is in the midst of a strategic planning process, exploring ways to build bridges from the social sciences—anthropology and sociology, for example—to other units of the University such as law, business, engineering and science. The most pressing problems and challenges in human development are multidisciplinary, he notes.

His advice for today's Notre Dame students is to take fullest advantage of the opportunity to study languages, and to experience the world by studying abroad.

Students often imagine that there's one "right path," he says. "Life isn't like that. It's about taking advantage of opportunities. What are you passionate about? Where can you make a contribution? Learning goes on when they try things that don't work out."

## PROMOTING CROSS-CULTURAL DIALOGUE

**Kellogg Institute focuses on international themes, challenges**

BY CAROL C. BRADLEY, NDWORKS

The **Helen Kellogg Institute for International Studies** creates an interdisciplinary space where people can engage with one another and with big questions—such as democracy and development—that have a tremendous impact on societies around the globe.

"We provide faculty, students and visiting scholars with a supportive intellectual community, working to advance the University's goals in research, education and public outreach," says institute director Scott Mainwaring. "We also work with departments to recruit outstanding faculty members and graduate students."

Renowned for its expertise on democratization, particularly in Latin America, the institute is once again shining a spotlight on human development through its new **Ford Family Program in Human Development Studies and Solidarity**, which combines faculty and student research with on-site development work in Uganda.

More than 80 Kellogg faculty fellows—from departments across the University—are key members of the Kellogg community of scholars. They exchange ideas during institute events and ramp up their research and professional collaboration thanks to institute funding.

Faculty fellows serve as mentors to some of the University's brightest undergraduates in the **International**

**Scholars Program**, a unique multi-year research partnership. "ISP transforms students from consumers of knowledge to producers of knowledge," says Kellogg faculty fellow and professor of anthropology Susan Blum.

Kellogg brings the world to students in many ways, says institute assistant director Holly Rivers. "We offer undergraduates two minors—international development studies and Latin American studies—and scores of research and summer internships opportunities, across Africa, Asia, and Latin America."

Another signature program is the **Visiting Fellows Program**, which brings to campus prominent scholars and public intellectuals from around the world. The program hosts 12 to 15 visitors from a variety of disciplines every year, says program coordinator Denise Wright.

Visiting Fellow Ottón Solís, the co-founder and three-time presidential candidate of Costa Rica's Citizens Action Party, is spending his year at Kellogg investigating alternatives to current models of development. Here, he says, there is "space to exchange with outstanding academics—to put forward our views on development for our countries."

The institute's outreach in international affairs extends into the local community through programs for K-12 teachers.

# VectorBase pest project continues to expand

**Database makes available genomic resources of mosquitoes, ticks and lice**

BY RENEE HOCHSTETLER, OFFICE OF RESEARCH

Something as simple as whether a disease-carrying mosquito lives primarily inside or outside can affect whether it comes into contact with humans or is exposed to insecticides—and that has implications for disease transmission and control.

A particular species may develop resistance to insecticide over time, or may behave differently from one region to another. That behavioral difference has its basis in natural variation, and it's something the scientific community studies in genomics—the study of an organism's complete hereditary information.

In order to get a complete picture, biologists need access to a species' genome—its biological blueprint—and that's where the VectorBase Project comes in. Simply put, VectorBase is a website that makes available genomes and related information on five vectors—insects and ticks known to transmit diseases to humans or animals.

Frank Collins is a professor in the biological sciences department and one of the project's principal investigators. VectorBase, he says, goes beyond simply providing information. "The site involves the

maintenance of a lot of data, the analysis of the data, and the public presentation of those data to other scientists," he says.

The site is used primarily by biologists interested in genomes or in the species catalogued. Visitors use VectorBase to visualize genome annotations and to access and analyze data with various tools.

How biologists apply the data depends on their research interests. According to Nora Besansky, a principal investigator also in the biological sciences department, a scientist interested in how a mosquito finds its way to a host may search VectorBase to identify genes that are likely involved in that process.

Collins says scientists are often interested in the biology of behavior

because it potentially provides ways to control vectors. Biologists may study odor or taste detection to understand how a vector finds a place to lay eggs or feed, and that knowledge can be used to combat insects and ticks.

VectorBase staff train international scientists how to use the database and tools at workshops and conferences, traveling to countries like Kenya and Mali—places where diseases like malaria are widespread.

VectorBase currently contains information on three species of mosquitoes—*Aedes aegypti*, *Anopheles gambiae*, *Culex quinquefasciatus*; one species of tick—*Ixodes scapularis*; and one species of louse—*Pediculus humanus*. These species are linked to malaria, dengue fever, typhus and Lyme disease, among other infections.

The data set continues to grow.

Besansky recently organized and is leading the sequencing of 13 new

anopheles (mosquito) genomes that will go into VectorBase. The data will enable researchers to compare genomes of related species and examine what enables one species to effectively transmit a disease when a closely related species does not. Scott Emrich will lead the computing aspect of this research.

Emrich and Greg Madey, both from the computer science and engineering department, are also principal investigators on the VectorBase project.

While much of the biological research and computing happens at Notre Dame, which also directs and houses the primary computer hardware, an international consortium of investigators contributes data, gene sequencing and analysis to the project. The consortium includes the European Bioinformatics Institute in Kingston, U.K., Imperial College in London, the Institute of Molecular Biology and Biotechnology in Crete, Harvard University and the University of New Mexico.



Collins



VectorBase has existed in some form since 2002, when biologists at Notre Dame first sequenced the *Anopheles gambiae*—the mosquito that carries malaria—and needed to make it available to the broader scientific community. Now funded by the National Institute of Allergy and Infectious Diseases, VectorBase is publicly available at [www.vectorbase.org](http://www.vectorbase.org).



Cave 4 in Qumran, where fragments of approximately 550 manuscripts were discovered.

## Translating the Book of Jubilees

VanderKam's work with the Dead Sea Scrolls continues the tradition of biblical scholarship

BY RENEE HOCHSTETLER, OFFICE OF RESEARCH

Among the 900 or so texts of the Dead Sea Scrolls is the Book of Jubilees, a second-century retelling of Genesis and the first part of Exodus.

Originally written in Hebrew, Jubilees continues to interest scholars for its commentary on the earlier texts.

James VanderKam is the John A. O'Brien Professor of Hebrew Scriptures and a scholar of the Dead Sea Scrolls, a collection of ancient religious texts found between 1947 and 1956 in caves in and around Qumran, along the northwest shore of the Dead Sea about 15 miles east of Jerusalem.

VanderKam is one of the scholars working on the original Hebrew text of the Book of Jubilees. He has edited the fragmentary remains of several manuscripts—describing them, noting their measurements and details like the writing itself and to what time they can be dated. He has also translated the book from the original texts.

Often written in Hebrew or Aramaic on treated leather parchment, some of the scrolls have holes that can present a problem for editors. VanderKam has worked with the scrolls first-hand, though he mostly works from high quality photographs. He says it is possible to mistake a small mark for part of a letter—which is why checking the original text is so important.

“Despite the fact I have literally worked with every word in the Book of Jubilees by editing the text and writing about it, I keep finding

new things,” says VanderKam. By returning to the original manuscripts, he has identified problems in previous translations.

Case in point: Jubilees' account of the story of Enoch. According to the story, God took Enoch—who lived before the flood and whose life ended without death—to the Garden of Eden to record the deeds of humanity.

A previous English translation of the Ethiopic text states in chapter 4 verse 24: “on account of it God brought the waters of the flood upon all the land of Eden.”

The problem, says VanderKam, is that the translation implies that God brought the flood on Eden because of Enoch's presence there. “That doesn't make any sense,” he says, “because Enoch continues to live—he doesn't drown in the flood.”

VanderKam's research revealed what the text actually says: “Because of him, God did not

bring the waters of the flood on Eden.”

Why the mistranslation? It turns out that the Ethiopic words for “he brought” and “it did not come” look almost exactly the same: The mistranslation was the result of a visual misinterpretation.

VanderKam is particularly interested in how the author of Jubilees worked with Genesis and Exodus, commenting on and solving problems in the original texts. “It's a very, very early stage in the process of commenting on the Bible, which goes on today,” he says. “It feels good to be part of that tradition.”

Although Jubilees' author is unknown, VanderKam says that its intention is clear: The author thought Genesis and Exodus were very important books, and wanted people to draw the correct conclusions. “He retold them in such a way as to get across the message he thought they had,” says VanderKam. There's reason to think that Jubilees was an authoritative text in its own right because it was cited in other ancient texts, VanderKam adds.

Between 70 and 80 scholars have worked on editing the scrolls, says VanderKam. It was an international effort, and one that involved scholars from Jewish, Christian and other traditions.

“It's been a real ecumenical experience in which I think everyone has appreciated the contributions of the others,” says VanderKam. “To get the chance to go back 2,000 years and see what the texts looked like is quite a privilege.”



The Dead Sea Scrolls, many written on parchment and in fragments, were discovered by Bedouins in caves in and around the ruins of the ancient settlement of Qumran, on the northwest shore of the Dead Sea. Courtesy Israeli Antiquities Authority.

## Building bridges through art

‘Vital Visionaries’ brings senior citizens and medical students together

BY NATALIE DAVIS MILLER, FOR NDWORKS

It happens to all of us—we grow old. But will there be a nice young doctor there to take care of us when we get there?

According to recent statistics, the answer is no. In a recent New York Times article, it was estimated that by 2030, there will be more than 70 million Americans older than 65—with the fastest growing cohort being those 85 and older. But the number of geriatricians—physicians who specialize in the medical issues of the elderly—is declining.

In an effort to encourage young doctors to go into geriatrics, art museums around the country, including the Snite Museum of Art, are matchmaking



Eleny Deamer, a student at the Forever Learning Institute, and Stephanie Slemp, a third-year medical student at the Indiana University School of Medicine, South Bend, performs a dramatized interview in front of a painting in the 17th-century gallery of the Snite Museum of Art.

future doctors with senior citizens in the hope that positive interactions between the groups will lead more medical students to enter the field.

The National Institute on Aging sponsored the original pilot program, in collaboration with the Johns Hopkins College of Medicine and the American Visionary Art Museum in Baltimore.

Here on campus, the Snite's “Vital Visionaries” class partners students from the Indiana University School of Medicine at South Bend with healthy older adults through the Forever Learning Institute.

“Medical students might feel more willing to learn about various aspects of aging if they've had friendly relations and pleasant memories of spending time with healthy older people,” says Diana Matthias, curator of education, academic programs, at the Snite.

The class paired six medical students with six seniors to work on projects together at the museum. In the first session, seniors chose a painting or a sculpture in the museum for inspiration, and then composed a story that contained some element of their own lives. The pair “performed” the story in an interview format, with the student interviewing the senior.

“This exercise is very much based on talking and listening to each other, because that is something that the medical students need to practice,” says Matthias. “They will be in an interview situation when they're diagnosing their patients.”

Other projects included making a medieval bestiary book page, reminiscent of the types of encyclopedia pages made by monks and priests in the Middle Ages. Pairs spent time looking at pictures and sculptures of animals and insects before making their own sample pages with artwork and a story built on fact, fiction and a moral.

With a nod to fall's favorite pastime—Fighting Irish football—the pairs made Pre-Columbian-style ritual ballgame figures in clay, using the museum's collection of Olmec figurines as inspiration. Finally, medical students were asked to write a paper reflecting on their feelings toward seniors after their experience.

Medical students weren't the only beneficiaries of the program. The seniors had an opportunity to have fun, build friendships and see how young people think and study, according to Matthias.

The Snite also benefited from the program. “It shows that the art museum can be used by people for all kinds of different purposes,” says Matthias. “Usually what people do when they go to art museums is look at what's there and talk about it, but they don't have the opportunity to make art themselves.”

The museum hopes to continue the program, Matthias adds. “It's an excellent way to get medical students who may not have much access to elderly people to do something fun with them on a sustained basis.”

### CONTACT US

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