

# Penn State Outreach

Faculty Scholarship in the Community



PENNSTATE



**ON A MISSION**  
.....  
*Astronaut James Pawelczyk  
inspires others with his  
knowledge of spaceflight*

# RECOGNIZING CONTRIBUTIONS TO OUTREACH



**Dr. Craig D. Weidemann,**  
*Vice President for Outreach*

Spring is a time for renewal and celebration. And each spring we celebrate and recognize a faculty member who has made significant contributions to Outreach, with the Faculty Outreach Award. This year's recipient is astronaut Dr. Jim Pawelczyk, a scholar whose extensive outreach activities have grown directly from his

involvement with the National Aeronautics and Space Administration. Following his 1998 space mission, he has been sharing the experience both in and out of the University, visiting schools and community groups across Pennsylvania and in surrounding states to educate children about spaceflight and offering expert commentary to numerous international news organizations. You can read more about his activities on page 2.

While Dr. Pawelczyk is a stellar example of how Penn State extends its scholarly work to community audiences, the fact is that there are more than 1,800 faculty and staff who make an impact while contributing to communities across the Commonwealth. This issue highlights just some of these innovative efforts.

For example, the feature story on page 9 describes a Penn State Abington professor's work exploring how survivors overcome trauma. While focusing on Holocaust survivors, Dr. Hannah Kliger's research with the Philadelphia-based Council for Relationships' Transcending Trauma Project has reached survivors of trauma, including those from 9/11 events, as well as torture victims from Africa.

Spring is also an ideal time to recognize the many programs at Penn State with a botanical theme. "How Does Your Garden Grow?" details the University's leadership in teaching, extension, and basic and applied research that informs garden enthusiasts and plant-based businesses alike.

On page 12, read about a new initiative that aims to celebrate the creative achievements of Black Pennsylvanians and use their artistic contributions as a way to promote racial and cultural diversity.

In this issue we also put a spotlight on the sciences, with an interview of a National Science Foundation

**"As Penn State celebrates its sesquicentennial, we highlight the many ways our dedicated faculty carry on our heritage."**

expert about that organization's views on outreach.

Finally, in our news sections of the magazine, find interesting facts and information about a broad range of outreach programs—summer camps for youth (Children, Youth & Families), research and workshops to fight obesity (Health), career exploration initiatives (K–12) and efforts to help the mining industry (Workforce, Community & Economic Development), to name just a few.

Penn State's outreach and engagement activities are an important part of the University's land-grant mission, bringing Penn State teaching, research and service to the people of the Commonwealth and beyond. As President Spanier noted, "Penn State's heritage as a 'people's university' has set us apart from other institutions. Our University has always been about educating people; about discoveries that advance knowledge; about service that is shared for the benefit of people and their communities." As Penn State celebrates its sesquicentennial, this issue highlights the many ways our dedicated faculty carry on this heritage.

We encourage you to provide feedback to our editorial team by e-mail: [outreachnews@outreach.psu.edu](mailto:outreachnews@outreach.psu.edu).

*Craig D. Weidemann*

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Faculty Scholarship in the Community

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## Miles Above Earth

### This year's Outreach award recipient takes science to new heights with his knowledge of spaceflight

By *DEBORAH A. BENEDETTI*



Dick Ackley — Campus Photography

**Dr. James A. Pawelczyk,**  
Penn State's faculty astronaut

**B**ats do it. Astronauts do it, too—sleep upside down, that is. When the telephone booth-size sleep stations are occupied on the space shuttle, astronauts attach themselves to the ceiling to get some shut-eye.

That's what Dr. James A. Pawelczyk, Penn State's faculty astronaut, did a few times during the Space Shuttle Columbia STS-90 Neurolab mission—the 1998 flight devoted to researching the neurological system. “Waking up quickly was interesting,” the associate professor of physiology and kinesiology recalls. “I had to take a couple of minutes to do some mental gymnastics to convince myself I was upside down, so I could make sense of what I was seeing. Without gravity, we have only vision to orient ourselves; our other senses don't work.”

Since returning to Earth, his thoughts have focused on sharing his experience in space—not only by working on making spaceflight safer for humans but helping children to see how science impacts their daily lives.

Pawelczyk is this year's recipient of the University's Faculty Outreach Award. His extensive outreach activities have grown directly from his involvement with the National Aeronautics and Space Administration (NASA). Following his space mission, Pawelczyk has applied his expertise both in and out of the University, visiting schools and community groups across Pennsylvania and in surrounding states to educate children about spaceflight, offering expert commentary to numerous international news organizations, and researching the challenges of spaceflight.

#### **Given a Privilege**

Pawelczyk's interest in space travel started when he was 6 years old—he and his classmates watched early U.S. space program milestones, including the 1961 flight of the first American in space, Commander Alan B. Shepard Jr., on television in their classrooms. “I was excited by spaceflight, and I loved

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“Jim [Pawelczyk] fully recognizes the public’s fascination with spaceflight, and he draws on that interest to motivate young students to find their own passions.”

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—DR. LISA L. BROWN, SPACE GRANT CONSORTIUM DIRECTOR

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science,” Pawelczyk said.

While a collegiate swimmer at the University of Rochester, he became interested in physiology. His interest led him to pursue a master of science degree in physiology at Penn State, where unique facilities, including Noll Lab, made the University ideal for conducting research in that field.

He later earned his doctorate in biology at the University of North Texas and, with support from a NASA Young Investigator Award, began research on one of the challenges of human adaptation to spaceflight: blood pressure regulation, particularly low blood pressure, or orthostatic intolerance, which is an inability to maintain adequate blood flow to the brain. The condition affects more than 500,000 Americans and is observed in many astronauts following spaceflight.

He continued his NASA-funded research when he came to Penn State in 1995, so it was only natural he would apply when NASA needed a payload specialist to conduct the planned 26 life sciences experiments on the Neurolab mission. It meant putting his academic career on hold for two years. Of 40 applicants, he was one of four chosen to complete

astronaut training at Johnson Space Center and one of the two payload specialists selected to fly on the shuttle.

“During the mission, you’re conscious that you’ve been given a privilege,” he said.

The Neurolab mission’s life sciences research included experiments exploring the brain, nervous system and behavior. Aquatic experiments focused on the mechanisms at work in various forms of motion sickness, a common affliction back on Earth that affects some astronauts. Sleep experiments on this mission were

designed to increase understanding of the physiological effects of the hormone melatonin on sleep, as well as to record respiration during sleep. Results of this research are helping to improve sleep, not just for astronauts but for the general public, too.

### **Programs Earn Regional Emmy**

The seven crewmembers wanted to make their mission memorable for schoolchildren, so before their flight, they created experiments children could do on Earth that illustrated some of the principles that would be tested in space. Pawelczyk partnered with Penn State Public Broadcasting’s WPSX-TV to produce a series of educational modules. WPSX also created 1,000 kits explaining the science behind the experiments, sending them to teachers nationwide before the shuttle

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James Pawelczyk suits up.



National Aeronautics and Space Administration

was launched.

One experiment involved a centrifuge, or off-axis rotator (on Earth, children used swivel chairs), to explore how the balance organs in the inner ear adapt to spaceflight. As the astronauts and children were spun around and then abruptly stopped, observers watched eye movements for clues to how the body orients itself in both microgravity and gravity environments.

“Experiential learning is very important. We wanted to engage children in activities to excite them about science. As a result, more than 40,000 schoolchildren had direct, active knowledge of how gravity and neuroscience interact,” Pawelczyk said.

The programs, which are still used in middle school classrooms, earned several awards, including a Regional Emmy.

In addition to conducting experiments, Pawelczyk taught a course to Penn State undergraduate and graduate students, taking

distance learning to new heights—168 miles above Earth, to be exact. “This was an example of the kinds of things we can do at Penn State that can change a life course. It was a fun day in space for me,” he said. The wake-up music that day was fittingly “Fight on State.”

### **Outreach Campaign Continues**

After the shuttle mission, Pawelczyk began a public outreach campaign that continues today. He has talked with thousands of people of all ages and participated in numerous space-related events. One of his favorite activities is the Pennsylvania Space Grant Consortium’s annual Space Day at Penn State.

“The best part of Space Day is the way our Penn State students work with the kids,” Pawelczyk said. “The undergraduates do a fabulous job of relating to the kids and getting them involved in learning about science.” At this year’s Space Day on April 2, organizers scheduled a

### **Dr. James Pawelczyk signs autographs after his presentation at Space Day.**



visit from a four-tenths replica of the space shuttle, known as Space Shuttle Blake.

Robert Boehmer, project coordinator for Space Shuttle Blake in the Parkland School District in Allentown, Pa., has teamed up with Pawelczyk for several programs that aim to integrate space science into

## **Blood Pressure Check**

On Earth, low blood pressure affects almost exclusively women. But when astronauts return from missions in space, not only nearly all women but also 30 to 50 percent of men experience low blood pressure, which can cause them to faint.

“Understanding why this happens is critical to the future of human spaceflight,” said Dr. James A. Pawelczyk, the principal investigator for a \$1.2 million NASA-funded study of the problem.

He and his team of undergraduate and graduate students, plus technicians in the College of Health and Human Development, are looking at blood flow to the gut region (liver and intestines) and trying different techniques to see how blood pressure is affected. The findings have the potential to benefit astronauts and the general public. “We have real human challenges to solve before we can take the next steps in space exploration—returning to the Moon and then on to Mars,” said Pawelczyk.



**Dr. James Pawelczyk (left) and John Florian, physiology graduate student, prepare Jenifer Hoffman for a blood pressure test.**

school science curricula.

“Dr. Pawelczyk has the unique capacity to relate seemingly arcane educational or complex science concepts to practical hands-on applications in the ‘real world’ that everyone finds interesting,” Boehmer said.

Pawelczyk also serves on the Space Grant Consortium’s advisory board. “Jim fully recognizes the public’s fascination with spaceflight, and he draws on that interest to motivate young students to find their own passions and to dedicate themselves to hard work and service to their communities,” consortium Director Dr. Lisa L. Brown added.

## Space Shuttle Tragedy

In 2003, Pawelczyk helped the public understand the accident that claimed the lives of the crew on the Space Shuttle Columbia, spending many hours over several days in the WPSX-TV studio providing commentary for National Public Radio and other national and international news media.

As it is common with tragic events, Pawelczyk recalls exactly what he was doing when he heard the news. “I remember that day very distinctly,” he said. “I was in the lab, and I was thinking about the shuttle. I had a lot of friends on that crew. I got a call from my brother telling me to turn on the TV. I was shocked. Each shuttle mission seems regular and routine, but it never is. It was a time when our thoughts needed to be with the crew and the families.”

Pawelczyk’s contribution during

## In Space the Grass is Greener

Before leaving on the Space Shuttle Columbia STS-90 Neurolab mission, Penn State faculty astronaut Dr. James A. Pawelczyk invited Penn State students to suggest items he could take with him in his Official Flight Kit. Four Penn State New Kensington students suggested Penn State grass seed, because of the University’s leadership in turfgrass education, research and development. Pawelczyk carried 53 grams of seed, selected by Dr. David R. Huff, associate professor of turfgrass breeding and genetics. The resulting “space grass” was planted in the greenhouse facility of the Department of Crop and Soil Sciences, and Pawelczyk, who calls himself “the Johnny Appleseed of turfgrass,” presented one-square-foot plots of the turf to each campus. The seed continues to grow.



such a horrible moment was, he said, all part of “my personal mission to share my knowledge about spaceflight and science with the public, because being an astronaut and researcher has enriched my life.

## Land-grant Mission

“It’s great that we interpret our land-grant mission for the 21st century to serve the Commonwealth, nation and world. I believe it’s our responsibility as academicians to extend our knowledge to others to inspire the next generation. I view teaching, research and service as a continuum. Outreach will continue to be an integral part of what I do.”

National Aeronautics and Space Administration



A ball helps test the ability of the central nervous system to accept and interpret new stimuli in space.

# How Does Your Garden Grow?

By KAREN WING

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## Across the state, the landscape is coming up blue and white

According to a Chinese proverb, “He who plants a garden plants happiness. If you want to be happy for a lifetime, plant a garden.” Let’s hope the ancient wisdom holds true, because our nation has become a community of gardeners.

A 2003 National Gardening Association study states that eight in 10 U.S. households (84 million) participated in one or more types of indoor or outdoor lawn and garden activities. It’s big business, too. In 2003, consumers spent a total of \$38.4 billion on their lawns and gardens, with an average of \$457 per household.

In Pennsylvania, Penn State is the premier provider of horticulture education, with a strong tradition of leadership in teaching, extension, and basic and applied research that informs garden enthusiasts and plant-based businesses alike.

### **The Philadelphia Flower Show**

The strength of Penn State’s commitment to all things green is evident at the Philadelphia Flower Show. This weeklong annual event, held in early March, attracts nearly 300,000 visitors.

Penn State is always one of the major exhibitors, with a 30-foot-by-30-foot space set up like a remote Cooperative Extension office, complete with computers and more than 100 volunteers, faculty and staff.

“This year the focus was on wildlife, with the theme ‘If you plant it, they will come,’” said Nancy Bosold, extension educator and co-chair of the Penn State exhibit. Penn State offered information on landscape enhancement, backyard habitats, meadow areas and natural gardens.

“We also were available to answer questions on just about anything else,” Bosold added. Show attendees often come to Penn State’s booth loaded down with bags of dead leaves, grass samples, plant material and insects. “We have a lot of return visitors, and they bring us their questions and their plants,” said Bosold. “It’s a great opportunity for us to really make an impact in the area.”

### **The Master Gardener Program**

Many of the volunteers at the Philadelphia Flower Show, as well as the Harrisburg Farm Show, Ag Progress Days and other horticulture outreach activities, come from the Master Gardener Program at Penn State. Adopted by Penn State Cooperative Extension in 1982,



the Master Gardener Program provides interested individuals with extensive training in many phases of gardening. In return, participants dedicate volunteer time to teaching other home gardeners. The program currently has nearly 3,000 active volunteers in 58 Pennsylvania counties.

“There are a tremendous number of volunteer hours delivered through the Master Gardener Program,” said Dr. Rich Marini, department head and professor of horticulture. “These volunteers take a lot of pressure off the county agents and state specialists. They’re a tremendous help, because they’re able to answer many commonly asked questions, and that frees up the educators to tackle more challenging issues.”

In addition to helping average citizens tend their yards, the program has provided a good opportunity for those same individuals to learn more about protecting the environment. “People don’t often realize that most agricultural chemicals are used by homeowners. Through the Master Gardener Program, we’re helping educate the average citizen about the dangers of pesticides, nitrogen and phosphorous, so we can have a positive impact on the environment.”

### **The Trial Gardens**

Penn State is making an impact on plants before they even get to gardening centers. At the Penn State Horticulture Trial Gardens at the Landisville Research Center in Lancaster County, every year between 700 and 800 annual plants are grown in pots and evaluated. The gardens, planned by Alan H. Michael, Penn State floriculture extension educator, are living laboratories



**Growers can view different varieties of plants at the “Southeast Pennsylvania Poinsettia and Pansy Trials With Seminars” in Doylestown, Pa.**

and garden classrooms for students, faculty, researchers and professionals in horticulture, plant pathology and entomology.

Commercial visitors use the gardens to develop plant lists, knowing that varieties have been fully tested in the local climate and under standard cultural conditions. Armed with this knowledge, commercial growers can more confidently choose the plants best suited to their customers’ needs and preferences.

Another research opportunity for commercial growers is the “Southeast Pennsylvania Poinsettia and Pansy Trials With Seminars” in Doylestown, Pa. Now in its eighth year, the event provides growers “with the opportunity to view all the plants that are available,” said Warren Goll, multicounty greenhouse extension educator. “This year we had 117 varieties. By seeing all the plants side by side, the growers can select the ones that are right for their production schedules.”

Karl Lederer—a 1961 graduate of Penn State in horticulture and founder of Parker Ford, Pa.-based Lederer Greenhouses Inc., one of the state’s premier growers of geraniums, poinsettias and violets—says that

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**Penn State plays a big part in the Philadelphia Flower Show.**

he has never missed the Poinsettia Trials. “We also go to the Landisville Research Center to view the geraniums,” he said. “Penn State’s trial sites are really important to growers, because there are regional differences. For instance, what grows in California or Florida won’t necessarily work here with our low light conditions. The trials let us see how the plants will perform in our area and plan our orders for the next season.”

### **Garden Mosaics**

While Penn State tends to the needs of professional growers, efforts also reach those who garden on a much smaller scale. Take the example of Curtis Lockhart. In a garden carved out of a bushy, overgrown lot in downtown Easton, Pa., Lockhart was having some difficulty. His collards were overcrowded, and although it was a dry, hot day, he needed to transplant them immediately. An avid gardener since he was a young boy growing up in the South and now, one of the local church elders who tend the garden, Lockhart put his expertise to work.

Under Lockhart’s guidance, a group of youth in a program called Garden Mosaics provided the necessary team for the delicate task of transplanting the seedlings. Knowledge like Lockhart’s isn’t found in books; it’s meant to be shared, and a garden is the ideal common ground. Through working with Lockhart, the youth learned about the essential elements for healthy plants.

Penn State Cooperative Extension Educator Emelie Swackhamer is helping to make those connections

## **Where to Go on the Web:**

Horticulture initiatives at Penn State:  
<http://hortweb.cas.psu.edu>

Poinsettia and Pansy Trials:  
<http://trialgardens.cas.psu.edu>

Garden Mosaics:  
<http://www.gardenmosaics.cornell.edu/>

between elders and youth, ages 10–18, through the Garden Mosaics program. Developed by a national team of educators, including Swackhamer and Doris Stahl, director of the Philadelphia County extension office’s Urban Gardening Program, Garden Mosaics is a multistate education initiative that combines intergenerational learning, community action and cultural awareness. Other Garden Mosaics projects include work in the Casa Guadalupe community garden in Allentown, as well as a senior citizens’ garden and the Cobbs Creek garden located in Philadelphia. “Garden Mosaics was designed to help teach kids science in a real, interactive way and to help instill a sense of community in the youth who are participating,” said Swackhamer.

At the program’s conclusion, Lockhart’s collards produced a meal—a happy ending for the youth who participated. And, if there is any truth to the ancient Chinese proverb, it was a gardening experience that will spawn a lifetime of happiness. ▀



**The Garden Mosaics program uses the great outdoors to teach science and encourage community building.**

# Life Lessons

A Penn State professor explores how survivors overcome trauma

By MELISSA W. KAYE

When Max W., a concentration camp survivor, did the endless, hard labor in the quarry, he managed through great focus to temporarily shut out the present and recall happier events in his life.

“I would work on musical passages, actually using the fingers of my left hand; and I would play ... sounds audible only to me. I developed a feeling of victory over my captors. I could even manage to smile to myself inwardly,” he said.

For someone who has never experienced an extreme trauma like Max W.’s, it can be difficult to imagine how those who have been traumatized can go on with their lives. All over the world, there are victims of war, terror and oppression. How do they cope? What is their outlook on the future?

“During the Holocaust, and in its aftermath, people maintained a life-affirming attitude,” points out Dr. Hannah Kliger, associate dean for academic affairs and professor of communication and Jewish studies at Penn State Abington, adding, “The experience of the concentration camps did not deter people from having children and building families after the war.”

Perhaps there is no greater affirmation of life than having children. That positive outlook can be seen today in war zones, with reports of weddings being held in the middle of Baghdad. “People heal their psychic wounds with resilience tools. Trauma is a wound that can heal,” said Kliger.

Kliger is a member of the Philadelphia-based Council for Relationships’ Transcending Trauma Project, a research team studying how Holocaust survivors communicate the legacy of resilience and hope to their families as well as in their public lives. To date, the group has interviewed more than 300 Holocaust survivors, their spouses, children and grandchildren—helping the researchers explore how people adapt and rebuild after traumatic life experiences.

Project members have shared their results with clinicians and researchers in both the trauma and Holocaust fields, with the ultimate goal of publishing two works—one for professionals and



**Dr. Hannah Kliger brings to the project her expertise in communication.**

another narrative-style book for laypeople.

The interviews themselves will eventually be deposited at the United States Holocaust Memorial Museum in Washington, D.C.

## **Team Delves Into the Human Experience**

The project grew out of a talk presented by a group at a conference in the late '80s. Council for Relationships Psychologist Dr. Bea Hollander-Goldfein organized the group presentation, which Kliger joined. The group was committed to studying trauma,

*continued*

recovery and resilience in a broad way, said Hollander-Goldfein. “We were disappointed about how the trauma field was limited, especially in Holocaust studies. We felt the field was lacking a comprehensive understanding of the human experience of trauma,” she said.

To fill that gap, the group decided to embark on the interview project. Most of the team is comprised of mental health professionals, with Kliger bringing her expertise in the field of communication. It includes both Jews and non-Jews.

### **Connecting Stories**

The interviews are unique because of the depth and scope of the questions that are asked. “The life histories explore not only the events of a lifetime, but also the thoughts, feelings and beliefs that underlie responses to these events,” said Hollander-Goldfein.

The researchers typically visit survivors or family members in

their homes, limiting travel to mostly the northeastern United States. The interviews usually take two or three visits to complete.

“As the interviewer, you are living through the trauma vicariously, bearing witness. Basically you’ve said to them, ‘I will listen, I will share this pain,’” said Kliger.

The resulting body of information is enormous—strings of interviews where stories of rebuilding, lessons learned and coping can be tracked from generation to generation. The data show that early nurture, the impact of family dynamics and the nature of the trauma all have an impact on the trauma victim and contribute to post-trauma adaptation, said Kliger.

One survivor’s interview shows clearly the atmosphere of tolerance in his upbringing, which has helped him cope with what has happened to him. “I harbor no hate against anyone,” he said. “I realize that people have behaved very cruelly

toward the Jews, but I realize that it’s not because each and every one of them is a cruel individual, it’s because they were taught from childhood to hate Jews, and these are the effects of teaching hatred. ... That’s why I always try to emphasize [people] have to stop, even in their own families.”

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“People heal their  
psychic wounds  
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a wound that can  
heal.”

—DR. HANNAH KLIGER

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In the past, professionals in both the trauma and Holocaust fields have been trying to make sense of Holocaust survivors. “We are trying to bridge the two fields,” said Kliger, presenting findings of the interviews at workshops and conferences for each of the fields. The team has worked to train others how to conduct interviews with Holocaust survivors, including staff members from Steven Spielberg’s Survivors of the Shoah Visual History Foundation. The project’s colleagues have also shared what they’ve learned with clinicians working with survivors of 9/11, in addition to providing therapy to those survivors themselves.



**The Transcending Trauma Project research team has conducted hundreds of interviews with Holocaust survivors and their families.**



**Participants in the project include Dr. Hannah Kliger's parents, who are Holocaust survivors. Here they are pictured on their wedding day in the Bergen-Belsen Displaced Persons' Camp, Dec. 18, 1945.**

"Clinicians are responsive and impressed with the scope of what we have," said Hollander-Goldfein. "They are enlightened by ways in which we've taken experiences and made connections."

Margaret Shapiro, the assistant director at the Council for Relationships who also counsels torture survivors from Africa through the Philadelphia-based Liberty Center, welcomes the findings in her work. "I try to help people see that the trauma is [only] part of the whole person, that the core of who they are has not changed. The trauma has happened to them, but they are not that trauma," she said.

Kliger's own parents, who are Holocaust survivors, were interviewed for the project. "[Their experience] is

a piece of who I am," she said. "I have benefited from the resilience tools [they gave me]. Survivors and their children often have a sense that despite all the horrors of the past, they feel an obligation to try to make the world a better place. I'm grateful for the chance to try to make a difference each day." ▀

## Experiences That Transform

Many times a story told by a Holocaust survivor becomes a significant thread in an interview with a son, daughter, or even a grandchild of that survivor, explained Dr. Hannah Kliger, associate dean for academic affairs and professor of communication and Jewish studies at Penn State Abington. Kliger is a researcher with The Transcending Trauma Project, dedicated to the exploration of Holocaust survivor coping and adaptation.

These key, pivotal memories have been relayed within the family setting, the story itself becoming a way for an adult child of survivors to make meaning of his or her parent's experience as well as his or her own life choices. Take this story told by a child (also a grandchild) of Holocaust survivors, as an example:

"She takes her shawl and puts it over her head and walks away from the hundreds, perhaps, [of] women, that are being marched at gunpoint. And she took an out, she took the choice, she took control of her destiny, and as I interpret it, very calmly decided how she's going to determine the rest of her life, whatever it is. And she has said and has written that ... she consciously made this very logical decision. If she turns around and walks away, she'll get shot in the back, and it will be over. And if she makes it, she'll get to be with her kids. And there is some courage in that ...

"That incident evokes for me courage, control, solitude, the self-reliance that I think informs a lot of what I do in my life. ... There's a defiance in general about rules and especially in crowds. But it sort of filters in all parts of my life. That following what everyone is supposed to be doing somewhere in my consciousness means sure and certain death. ... if I want to survive, I have to be on my own as a solo player, away from the crowd. I think that plays out a lot in my life."

# DIVERSITY in the

By KAREN WING

## Spotlight

The University celebrates  
Pennsylvania's African American artists

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Not since Arthur Miller has there been a playwright who so lyrically captures the collective experiences of the working class as does August Wilson. Born and raised in Pittsburgh, Wilson survived pervasive racism and menial jobs to become one of the greatest living playwrights and one of the most important African American artists. He has won numerous prizes, including two Pulitzers, as well as Tony Awards for "Fences" in 1987 and "The Piano Lesson" in 1990.

Penn State and the surrounding communities will have an opportunity to experience Wilson's work firsthand during the August Wilson Play Festival, which will be held at Penn State from April 27 to April 30. An extraordinary experience in itself, the festival is also the fourth event in the ongoing initiative "In Pursuit of Social Justice: Recognizing Pennsylvania Black Artists."

A joint initiative of Penn State's Africana Research Center and the Institute for the Arts and Humanities, it intends to celebrate the creative achievements of Black Pennsylvanians and use



Apisak Sindhuphakh

The legendary McCoy Tyner Trio performed at Penn State as part of the initiative "In Pursuit of Social Justice: Recognizing Pennsylvania Black Artists."

their artistic contributions as a way to promote racial and cultural diversity. The multifaceted and multiyear project includes support for scholarship regarding Pennsylvania Black artists, the acquisition of targeted collections, regularly sponsored events and outreach to public schools.

### Art Soothes the Soul

"Often diversity is discussed through factual information, teaching and scholarly work," said Dr. Beverly Vandiver, director of

the Africana Research Center and associate professor of education. However, "art has the ability to soothe the soul, resonate with the spirit and touch the heart. We're hoping that this initiative will help create a better culture of comfort and increased understanding of people who are different."

The inaugural event in the series was held last spring, with the legendary McCoy Tyner Trio performing at Schwab Auditorium. A standing-room-only crowd of 900 attended "An Evening of Jazz."

The impact of that event still resonates with those who participated. “I’ve never seen such a diverse audience,” said Dr. Laura Knoppers, director of the Institute for the Arts and Humanities and professor of English. “Not only was the audience racially diverse, but there were people of all ages from the community, along with graduate and undergraduate students, faculty and staff. There was enthusiastic recognition of a cultural heritage that’s often not included in a traditional curriculum.”

Last fall Penn State welcomed bestselling author and journalist Bebe Moore Campbell as part of the series. The author of New York Times bestsellers “Brothers and Sisters” and “Your Blues Ain’t Like Mine,” she has been called “one of the most important African American writers of this century” by

The Washington Post. Those who attended her lecture in the HUB called her mesmerizing.

The series has also celebrated the work of visual artists, including Dane Tilghman. Tilghman has established himself as one of the premier painters of African American life, with images of golf and Negro League Baseball. “I emphasize Black Americana, but my work crosses over to a broad audience,” said Tilghman. “I think everyone can relate to the old times and traditions and that all people can connect with the work.”

### Getting the Message Out

Outreach is also a major component of the initiative, said Dr. Marica Tacconi, associate director of the Institute for the Arts and Humanities and associate professor of musicology in the School of Music. “The more we can get the



Second from right is artist Dane Tilghman, with Penn State faculty (from left to right) Charles Dumas, Dr. Beverly Vandiver and Dr. Laura Knoppers.

message out, the better for all of us,” she said.

Charles Dumas, associate professor in the School of Theatre, is currently teaching a course on the life and work of August Wilson. This spring, Dumas and his students will visit area high schools (State College, Bald Eagle, Bellefonte and others) to perform scenes from Wilson’s plays.

“One of the things we’re trying to do is increase the depth of experience of high school students in central Pennsylvania about the experience of African Americans,” said Dumas. “Pittsburgh is more than the Steelers, and Wilson brings a different view of what’s happening within the African American community there.

“The most important part of August Wilson is that he’s on the world stage yet still draws on his Pittsburgh experiences to create new works. Through his plays we are known around the world. It’s important for us to honor him, because in honoring him we’re also honoring ourselves and our heritage.”

## August Wilson Festival

A tribute to August Wilson’s work this spring includes three theatrical productions, staged readings and discussions of Wilson’s 10 epic plays—each depicting the African American experience in a different decade of the 20th century.

The festival will showcase the many different aspects of Wilson’s output as a playwright and will examine the plays as literary and theatrical works. The project as a whole will be interdisciplinary in nature, involving theatre and literary criticism.

Wilson’s plays will be staged and performed by the Penn State School of Theatre’s professional arm, the Pennsylvania Centre Stage; by Pittsburgh’s oldest African American troupe, the Kuntu Repertory Theatre; and by Temple University Theatre. For more information, visit [www.outreach.psu.edu/C&I/WilsonFesp](http://www.outreach.psu.edu/C&I/WilsonFesp) C U

# Support for the Sciences

Dr. Nigel Sharp of the National Science Foundation discusses priorities with Outreach



The National Science Foundation (NSF) gave more than \$234 million to Pennsylvania academic institutions last year; Penn State's share was nearly \$48 million. The funds support a huge range of research and outreach endeavors at the University—from the Materials Research Science and Engineering Center's museum education program on nanotechnology, to an effort that helps blind and visually impaired high school students participate in chemistry labs. Examples of other projects include a study of the federal criminal justice system, as well as programs in different disciplines that aim to excite young people about math and science. In an interview with Penn State Outreach magazine, Dr. Nigel Sharp, who reviews research proposals within NSF's Division of Astronomical Sciences, addresses how the organization makes funding decisions.

A grant proposal must demonstrate a project's impact, says Dr. Nigel Sharp.

**Q. Why does NSF fund such a broad range of research programs?**

**Sharp:** We support inquiry-based quality research for its own sake. We want projects to advance knowledge and understanding, and we also want to encourage and train the next generation of researchers.

**Q. What's the value in funding outreach programs in particular?**

**Sharp:** It's important to share research results, so more people can use the results. That's why we support workshops, conferences and summer schools, where researchers can learn something new they can use in their research. Jogesh

Babu [professor of statistics in the Eberly College of Science] and his colleagues are really good at that. The Center for Astrostatistics is one of the first in the country to take this approach—developing workshops and conferences to train astronomers in the latest statistical methods (see box).

**Q. NSF requires grant proposals to include information about the broader impacts of the research. Why?**

**Sharp:** We've always asked researchers to discuss how their work affects the public, K-12 education, teaching and other sciences. Two years ago, the National Science Board

decided to emphasize this by requiring that proposal summaries should also include this information, and proposals that miss this are not even considered for funding. We have always encouraged researchers to disseminate their results to the public to increase understanding and foster interest in science. We need the public's support for research, especially in astronomy and other fields that have no perceived strong economic benefit.

**Q. Why is it important that faculty engage in outreach?**

**Sharp:** The public is interested in learning new things

—especially children, who are natural scientists. I have a talk on explosions that I give to school children. It's fun to talk to them about different kinds of explosions—in the Saturday morning cartoon shows and in the “Star Wars” movie, where a planet is blown up. Then, I tell them astronomers study how entire stars and galaxies explode. We have a built-in hook in astronomy. People have a natural interest in the sky, and they've seen exciting images from ground-based telescopes and, spectacularly, from space-based facilities. It's also quite important for astronomers and other scientists to be able to explain to the public what they do.

**Q. How does involvement in outreach benefit the research institution?**

**Sharp:** Most institutions have financial concerns. Institutions benefit financially and in many other ways when people know what faculty are doing and approve of their outreach and research activities.

**Q. Do you plan to change funding requirements for the astronomical sciences?**

**Sharp:** Our rules change regularly, but I don't think there is any trend or movement to reduce our commitment to asking researchers to focus on the broader impacts of their research. If anything, we may get more specific about requiring outreach in the future. ▀

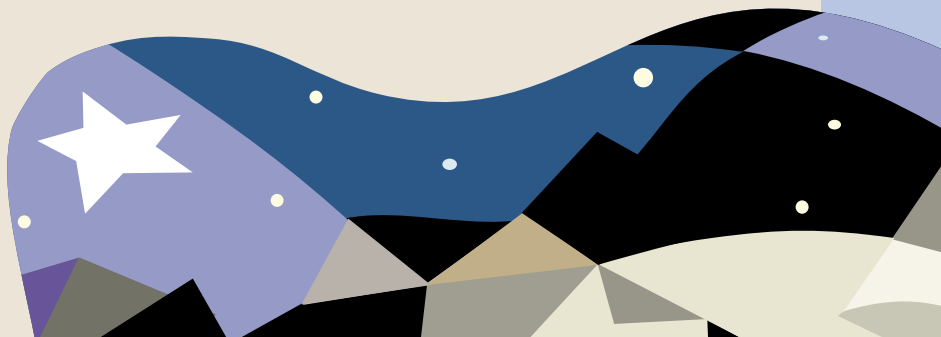
## Cosmic Challenges

Searching the sky for clues to the age of the universe, understanding our place in the skies, learning more about our cosmic neighbors. Such astronomical questions generate enormous quantities of data among researchers. Thanks to Penn State's new Center for Astrostatistics, analyzing the data is getting easier. The center brings together statisticians and astronomers to help develop statistical expertise within the field of astronomy and other observational sciences.

“As the nature of observational astronomy has changed, going from single astronomers watching a handful of objects to teams of astronomers locating millions of objects as part of large digital sky surveys, the necessity for statistical analysis has increased,” said Dr. G. Jogesh Babu, director of the center and professor of statistics. “Statistical problems now involve many more issues than can be addressed by any single statistical method, field or statistician.” That's why Babu and Dr. Eric D. Feigelson, professor of astronomy and astrophysics, created the center in 2003.

The center, which receives funding from the National Science Foundation, conducts a wide range of activities, including:

- hosting international researchers, who collaborate with faculty and students, participate in workshops and summer schools, share common interests, conduct their own research, and help prepare the next generation of researchers
- holding summer programs for astronomers on statistical methods, spatial processes and image analysis
- collaborating with other partner institutions, including the Statistical and Applied Mathematical Sciences Institute in North Carolina, to develop workshops and other research and training programs
- organizing international conferences, including the fourth meeting on Statistical Challenges in Modern Astronomy, scheduled for June 2006, with Conferences and Institutes





Corey Wilson

Celene Elm, 45, is geographic information systems (GIS) indigenous planning director for the Reservation of the Oneida Nation, a Native American tribal community in Wisconsin.

“We are a sovereign nation that’s in the process of buying back our land,” she said. “My department’s job is to analyze and present geographic data to a committee that makes decisions that will impact our community for generations.”

She was pleased to discover that Penn State’s World Campus offers a certificate program in GIS that would allow her to develop cutting-edge skills, completely online. The practical courses provided Elm with an immediate return on her investment.

“While taking these courses, I was accomplishing things that used to take four hours in just five minutes,” she explained. “It was fantastic!”

Elm, a grandmother, added that an online education fit perfectly into her busy life. “I wear many hats,” she said. ▀

## Tech Assistance Pays Off

Water, electricity and natural gas consumption cost Creekside Mushrooms Ltd. big money until Roger Price of Penn State’s Pennsylvania Technical Assistance Program (PENNTAP), along with specialists from the Electrotechnology Applications Center at Northampton Community College, conducted a pollution-prevention and energy-efficiency site assessment for the company. Their recommendations are saving the company, one of the world’s largest underground mushroom-growing facilities, about \$47,000 a year, plus a one-time initial savings of \$600,000. The project earned an Outstanding Project of the Year Award in the partnering category from the University Economic Development Association (UEDA).

PENNTAP garnered recognition from UEDA for other work. For example, PENNTAP senior technical specialist Bill Paletski designed multimedia computer-based instruction modules to train Fairchild Semiconductor employees in Occupational Safety and Health Administration standards, eliminating the need to hire a full-time company trainer that would cost more than \$56,000 annually. The project won UEDA’s Outstanding Project of the Year Award in the technology transfer category.

In addition, PENNTAP senior e-business consultants Brian Goss and Greg Snyder helped Quehanna Boot Camp train its inmates for future careers installing and repairing copper- and fiber-optic-based cabling systems. UEDA recognized this project with an Outstanding Project of the Year Award in the special assistance category. ▀

**PENNTAP helped save Creekside Mushrooms about \$47,000 a year.**

# WPSX Programming

Where's Charlie? He could be anywhere in the WPSX-TV coverage area. In a popular segment in the new "Pennsylvania Inside Out" program, which airs weeknights at 7 p.m., viewers get to decide where to send producer/director Charlie Gudeman.

"Our viewers enjoy the segment because they get to see Charlie in their communities," Penn State Public Broadcasting Station Manager Tracy Vosburgh said.

In addition to spotlights on Pennsylvania communities, the half-hour public affairs program opens with Weather World and features interviews with Penn State faculty and other experts, tours

of Pennsylvania sites and weekly current issues discussions. On Tuesdays, the program expands to one hour for a rotating series of live call-in shows, simulcast on WPSU-FM, that include "To the Best of My Knowledge with Graham Spanier," which also is carried statewide on Pennsylvania Cable Network.

Upcoming "Your Health" call-in programs in May will include information on gastric bypass surgery to treat obesity, with Penn State Milton S. Hershey Medical Center surgeon Dr. Timothy Shope.

"Our goal is to inspire, inform and intrigue and to engage with our communities in new ways," Vosburgh said. ▀



Dr. Kristine Clark fields a question from a caller to WPSX-TV's "Your Health."

## On Target

Preparing children to learn, increasing the number of health-care workers, educating the workforce: These are important issues for Pennsylvania and also areas where Penn State has significant expertise, according to a recent strategic analysis.

Outreach teams analyzed the University's scholarly resources and identified three areas where Penn State's expertise matches state priorities, as outlined in Gov. Ed Rendell's budget. Vice President for Outreach Craig D. Weidemann explained, "We can maximize our outreach contributions to the Commonwealth by marshaling Penn State's faculty expertise in health, preK-12 education, and workforce and economic development."

Initiatives are already under way. Here are some examples:

- A new community-university engagement model under development will embed outreach into the university to enhance service to communities. Penn State received \$1.8 million from the W.K. Kellogg Foundation for this national effort.
- In partnership with Pennsylvania's Department of Labor and Industry, Penn State is creating a statewide training curriculum and credentialing program for CareerLink staff.
- Penn State's new Office of Economic and Workforce Development is collaborating with the U.S. Department of Commerce's Economic Development Administration to plan a symposium to bring together business leaders to discuss approaches for economic growth, including university-led initiatives. ▀

## Prestigious Awards

Vice President for Outreach Dr. Craig D. Weidemann is the 2005 recipient of the Julius M. Nolte Award for Extraordinary Leadership, an esteemed University Continuing Education Association (UCEA) honor. First established in 1965, the award—named after a pioneer in the field of continuing higher education—is given to an individual in recognition of "extraordinary contributions to the cause of continuing education on the regional, national and/or international level."

UCEA also recognized Senior Director of Penn State Conferences and Institutes Dr. Michael E. Ostroski with its Stanley C. Robinson Distinguished Service Award, which recognizes outstanding long-term leaders in continuing education for commitment and contributions to the field of conferences and professional programs. ▀



UNIVERSITY CONTINUING  
EDUCATION ASSOCIATION

# On the Watershed

A new consortium will increase collaboration among scientists conducting research in the Presque Isle area

With no lab to go to, many scientists conducting research at Lake Erie and the upper Ohio River Basin have resorted to conducting experiments out of their cars.

That will no longer be the case, thanks to the newly created Regional Science Consortium, a group that aims to coordinate and conduct research in state-of-the-art facilities at a new 65,000-square-foot visitor education and research center right by the entrance to Presque Isle State Park in Erie.

Penn State Erie, The Behrend College's Pennsylvania Sea Grant—an outreach program that aims to increase public awareness of environmental and economic coastal issues—created the consortium, which includes representatives from 14 area colleges and universities, a number of federal and state agencies, and private environmental organizations. The consortium facilities will be housed in the Tom Ridge Center, to be completed this summer.

Scientists, including botanists, geologists and ornithologists, will conduct research at the center, studying issues ranging from the history of shipwrecks

to community development, according to Eric Obert, Cooperative Extension director of the Pennsylvania Sea Grant and vice president of the consortium.

Increased collaboration among scientists and agency personnel is expected with the new consortium. Much of their research will focus on the Presque Isle area, the city's impact on the watershed and the watershed's unique geological formations.

## Environmental and Economic Questions

For instance, Obert expects that scientists will examine the contaminated sediments along the Presque Isle shoreline to gauge pollution's effects on the environmental health of the immediate area and the larger Great Lakes region. Researchers will also consider economic questions, such as whether a large-scale environmental clean up will result in more tourism for the area.

In addition to creating academic courses for undergraduate and graduate students, consortium members and the Pennsylvania Department of Conservation and Natural Resources education staff are in the process of developing an environmental education curriculum and programs for K-12 students and their teachers.

The new facilities will include a 6,000-square-foot research area with aquatics lab, botany lab, a microscopy teaching lab with audiovisual equipment, a cultures lab, a general chemical wet lab and a prep lab for preparing samples. In addition, it will house two archival rooms, one for plants and one for nonplant specimens. The consortium will also develop a 1,000-square-foot wet lab at the Presque Isle Marina that will allow scientists to conduct research on specimens in lake water. ▾



Consortium Vice President Eric Obert (kneeling) conducts an experiment.

When is new technology not a good thing? That's the question that Dr. Jeffrey Hyde, assistant professor of agricultural economics, asked when he considered the economic impact that the purchase of new and expensive robotic milkers would have on small-scale dairy farms.

Working with graduate student Phoebe Engle, Hyde developed a tool to help dairy farmers determine if the efficiency gained from the new technology would offset the monetary investment in the equipment.

Using two scenarios—replacing current functioning equipment with robots or replacing outdated or failing equipment with robots—Hyde created a spreadsheet that farmers can use to calculate whether the robotic milker is worth it for them. The main consideration is if farmers can recoup their initial investment within the normal, expected life of the robot.

Many testers found the investment worthwhile: "The results ... indicate that [the system] may well be profitable for many dairy farmers," said Hyde.

Hyde sees global implications for the tool. "Our assumptions closely reflect small-scale dairy farms (60 to 180 cows), which are prevalent in Pennsylvania. However, these farms exist throughout the traditional dairy-producing states and Europe." ▀

## CULTURAL EXCHANGE



The search for ways to help preserve the natural environment in Westmoreland County led Gary Sheppard, that county's Cooperative Extension director, to explore sustainable energy sources. The result: a hybrid solar and wind power generating system at the Westmoreland County Cooperative Extension office, with the help of the West Penn Power Sustainable Energy Fund and the Pennsylvania Department of Environmental Protection.

The system will power the extension office and serve as a demonstration of renewable power sources for visitors to the Donohoe Center, where the Cooperative Extension office is located. "We estimate that we will produce about 10 percent of the annual electric needs of the Donohoe Center here in Greensburg," said Sheppard.

The system, which includes a 10-kilowatt wind turbine engine along with a 2-kilowatt solar panel, will demonstrate to center visitors alternative energy sources, such as wind and solar power. The project also features an interactive educational kiosk.

Sheppard is also in early discussions with Allegheny Power regarding the opportunity to sell "green credits" from the center's system back to the company. The price-per-kilowatt plan would reward the extension office for making an investment in renewable energy technologies. ▀



## Interpreter of Dreams

Had character Willy Loman attended a seminar at the Institute on the American Dream at Penn State Erie, perhaps his life would have been less tragic. The “Death of a Salesman” protagonist committed suicide when he failed to attain the success he believed was crucial to the Dream. “He forgot that the Dream has other components—freedom and equality,” noted Charles Brock, director of the institute. “Had he been willing to grasp that concept, things would have been easier.”

The institute is a venue that strives to examine both the bright and dark sides of the Dream. In a public forum, a mix of speakers address such questions as where the Dream originated, how it works today and its international implications. Past lecture series have grappled with such topics as fundamentalism, 9/11 and the “Axis of Evil” and how they relate to the American Dream.

“These are large concepts,” said John Vanco, director of the Erie Art Museum and member of the institute’s advisory committee. “The institute is a means of engaging those outside the academic community on such issues.”

This fall Brock plans to focus on “Pennsylvania Dreamers.”

Mona Lisa Madonna Ellis Island, from the Ellis Island series, c. 1905, silver gelatin print, by Lewis Hine (American, 1874-1940). Gift of Mayzette Stover. Collection of the Palmer Museum of Art, The Pennsylvania State University.



Is the Dream alive and well?

## Accessible Architecture

Sometimes the most expensive part of remodeling is just accessing a system, be it mechanical, electrical or plumbing. Then there’s the pollution: 92 percent of waste in the building industry comes from demolition and renovations, according to the Environmental Protection Agency (EPA).

Enter Design for Disassembly (DfD), a building technique that allows for easy access, repair and dismantling—and also prevents waste. Brad Guy of the Penn State Hamer Center for Community Design Assistance is a champion of DfD, partnering with different groups to explore and implement the principle.

In one project, Guy and a team from the Hamer Center are working with the Community Housing Resource Center in Atlanta, Ga., to apply DfD to low-income housing.

“[DfD] makes the parts of a building more easily understood,” explained Guy, allowing occupants to remain in their homes affordably with do-it-yourself repairs and adaptations. For example, DfD suggests that building connections be simple and that fasteners permit disassembly.

“Typically those in the lower-income brackets are not as able to move,” added Scott Ball of the Community Housing Resource Center. “They may have grandparents coming to live with them or have

more children. They should be able to reconfigure and remodel their homes easily.”

The Hamer Center conducted a workshop on DfD with the Atlanta organization, providing details and a generic concept for the housing.

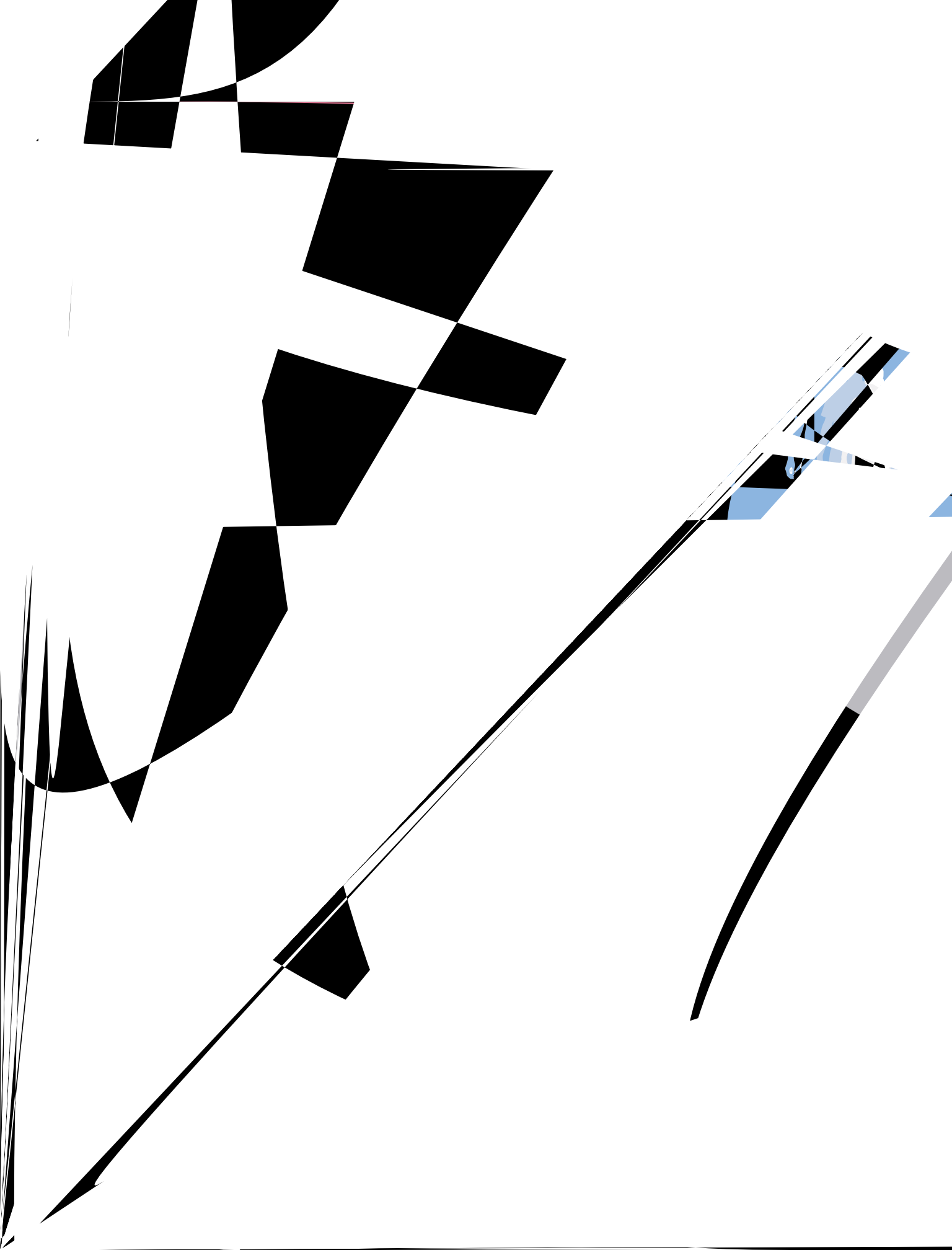
Guy is also working with architects in northern California to apply DfD to a school. “Schools constantly need renovations and additions, with technology a big issue. If you plan ahead you can be cost-effective,” he said.

The buildings, which are both funded by the EPA, will be completed this spring.



With help from Penn State experts, a school in California is designed to prevent waste.

Courtesy of EHDD Architecture





Chess helps children develop higher-order thinking skills.

## The Brains of Summer

Challenge a chess master, think like an archeologist or even solve a murder—children can learn from experts at Penn State. This summer, youth ages 5 to 18 will be flexing their minds through an expanded selection of summer camps, offered through Conferences and Institutes, with an emphasis on the academic. Here are some of the latest additions:

- Castle Chess Camp, the oldest chess camp in the United States, will be held at Penn State for the first time ever. The camp brings together some of the best teachers and scholastic players from across the country, including three-time U.S. champion and grandmaster Joel Benjamin. Chess is a powerful tool for developing higher-order thinking skills, creativity, numerical and verbal aptitudes, and memory.
- In the new Materials in Art and Archeology Camp, children will investigate ancient pottery, learn about the origins of color and study copper smelting.
- The Eberly College of Science's Action Potential Science Experience—which features the popular Harry Potter- and CSI-themed summer camps—now welcomes the very young, with half-day programs for children entering grades K–3. That's in addition to its resident and day programs for fourth- through eighth-graders and junior mentoring program for students in grades 10 through 12. The popular Weather Camp has also expanded its offerings—it now includes programs for both younger and older kids. Visit <http://pennstateyouth.org> for more information. ▀

## Tried-and-True Remedies

The adage “prevention is the best medicine” is being put into practice through PROSPER (PROmoting School-community-university Partnerships to Enhance Resilience), a joint project of Penn State, Iowa State University and the community.

The project aims to build networks with schools, extension educators, universities and community members to provide life-skills-enhancing training for youth and families—employing programs that have been shown to reduce teen problem behaviors like smoking, drinking and drug use.

“PROSPER is an innovative model defining specific community needs and delivering scientifically tested programs to make the community better,” said Christine A. Tomascik, PROSPER prevention coordinator and Penn State Cooperative Extension educator.

For example, the research-based “Strengthening Families” program is designed to help ease the transition from childhood to adolescence—targeting the critical time when children begin to make either good or bad choices. The program teaches youth how to handle peer pressure and provides parents with specific skills to guide children toward making healthy decisions. It is currently being piloted in seven Pennsylvania school districts, along with the drug and alcohol prevention program “Project Alert” for seventh- and eighth-graders.

“[PROSPER] can make a real difference in preventing problems with our youth if we all work together to support it,” said Gregory A. Skrepenak, commissioner in participating Luzerne County.

Added Penn State's Dr. Janet A. Welsh, PROSPER project field director, “Because of its land-grant status and ties to communities through the Cooperative Extension system, Penn State is uniquely positioned to facilitate community-based initiatives such as PROSPER.” ▀



# Caring for the Elderly

With this population growing each year, providers need help managing the challenges

One in five people in the Commonwealth is over the age of 60, making the state second in the nation with the oldest population. That means Pennsylvania and its citizens play a big part in coping with many of the geriatric health challenges facing the country. These challenges will only increase as the elderly population continues to rise; by the year 2020, it is expected to double.



**Professionals need to continually update their skills.**

“Many of these elderly have health problems that make it impossible to care for themselves,” noted Nancy Grotevant, Penn State Cooperative Extension director in Pike County. The care is left to professionals in nursing homes or to family members, at home.

To ensure that professionals are equipped with the latest knowledge, Grotevant for the past few years in the Monroe County area has been leading a workshop called

Enhancing Skills for Eldercare; this spring, she and colleagues are expanding the workshop into Carbon County.

“It’s important that health-care professionals continually update their skills of examining the basic needs of the elderly, the changes the elderly experience and how these changes affect their functioning,” she said.

Participants listen to experts talk about various issues facing the elderly—from sleep disorders to Alzheimer’s to depression. “The workshops are very worthwhile, with germane subject matter,” said Duane Valence, regional licensing administrator for personal care home directors in the state. “It’s what providers need.”

## In the Family

It’s not only professionals that need training—family members are often caregivers and need support. A new effort to help those providers is Family Caregivers, a program organized by the Pennsylvania Geriatric Education Center (GEC/PA), a consortium including the University of Pittsburgh, Penn State and Temple University whose mission is to maintain and improve the well-being of Pennsylvania’s elderly population.

The GEC/PA last spring launched the program, which is designed to introduce professional and lay audiences to a range of family

caregiving issues, help people connect with available resources and promote efforts to meet the needs of family caregivers in rural areas. The GEC/PA delivered half-day workshops in three different regions of the state through a partnership with Penn State Cooperative Extension and the Caring Community Coalition. The program emphasizes the importance of collaborative planning among multiple organizations and the entire community.

The partners aim to eventually expand the program within Pennsylvania and into surrounding states. “Many states face the same types of challenges as Pennsylvania,” explained Extension Specialist and Associate Professor of Intergenerational Programs and Aging Dr. Matthew Kaplan. “Family caregivers, particularly those in rural areas, need better access to a wide range of information, resources and support.”



## KINDER CAFE



### Children learn about good nutrition from Chef Harv, left.

The kindergarten students may not be ready for the squash or cabbage-apple salad, but the fruit dip sauce is popular.

Such gourmet snacks are the result of linking Pennsylvania farmers with Philadelphia schools—part of an ongoing effort of the College of Agricultural Sciences' Keystone Agricultural Innovation Center (KAIC) and the Pennsylvania Department of Agriculture to help farmers find new markets for their products.

The partners teamed up with Philadelphia-based The Food Trust to do the Kindergarten Initiative, hiring caterer Harv Christie to turn farmers' produce into nutritious snacks for youngsters in four schools in Philadelphia.

While the kindergartners may shy away from trying new things like squash, they are excited to have the fresh snacks and are learning to make better food choices, reports Bonnie Hallam of The Food Trust. "It's been a fabulous partnership for us," she added. "The logistics were a challenge, and KAIC had the contacts and put a system into place."

The Food Trust is planning to expand the program into more schools in the Philadelphia area in the fall. ♥

## UPDATE: Action on Obesity

The latest Penn State efforts to fight the childhood obesity epidemic come in many forms—from academic research to practical workshops in the community. Below are some examples:

- **The Center for Childhood Obesity Research** in the College of Health and Human Development. Directed by Dr. Leann Birch, the center allows faculty to explore the epidemic collaboratively from basic, clinical, environmental, physiological, social and behavioral perspectives. "Our hope is that through the center, there will be increased research on childhood obesity by our college faculty in collaboration and partnership with faculty from across the University, including the colleges of Agricultural Sciences, Arts and Architecture, Liberal Arts, and Medicine," said the college's associate dean Dr. Fred Vondracek.
- **"Family Fitness,"** a pilot childhood overweight prevention program. Led by Food, Nutrition and Health Extension Educator Lynn James, along with a team of extension family living educators, the program helps parents and children improve communication and behaviors to make healthy food choices and be active as a family. The pilot sites are in Snyder, Mercer, Cumberland, Clinton and Philadelphia counties.
- **Workshops for teachers, health professionals and child-care providers.** For example, several Cooperative Extension educators organized a workshop featuring Dr. Ronald Williams, an expert on childhood obesity from the Penn State Milton S. Hershey Medical Center, offering strategies to reduce an overweight child's body weight. Based on evaluations of that workshop, others will be held.
- **Keystone Healthy Zone Schools.** Cooperative Extension has partnered with Pennsylvania Advocates for Nutrition and Activity—a statewide coalition working to promote policies and environments that support healthy eating and activity—to provide resources, materials, support and even mini grants to help schools with their nutrition and physical activity programs. The work of Fayette County Cooperative Extension's office even inspired a local community member to start her own cable TV talk show titled "Healthy Awareness." ♥



Kids learn to eat smart and play hard through the "Power Panther" song at a Keystone Healthy Zone school in Fayette County.

# JOB EXPLORATION

## Pennsylvania youth get a glimpse of career choices

Watching blood being drawn, reading an EKG and spending time in a brain anatomy lab are not your typical high school activities. But for 15 seniors from the Allentown School District's Health Science Academy, such sessions are the norm.

For the past two years, a select group of high schoolers have participated in the Capstone Program, an effort by Penn State Lehigh Valley Continuing Education to introduce youth to careers in health care. The program takes the youth after school through rotations at the nearby St. Luke's Hospital-Allentown. As attendees of the Health Science Academy, "they have already decided that they want to go into health care. The program allows them to take their curriculum and put it into use," said program Director Kristy Weidner-Gonzalez.

The culmination of the program is a four-day, three-night residential experience in June at the Penn State Milton S. Hershey Medical Center, where faculty and staff share time and expertise.

Corey Cowen, a Health Science Academy teacher, said, "The program has galvanized many to take seriously their academics and hunt down what schools they want to go to."

### Hands-on Approach

Another program that offers a hands-on look at careers is the Community Partners program, offered by the Penn State College of Medicine at the Hershey Medical Center and Penn State Harrisburg. The program introduces students to medical, science, technology and business environments. Youth from magnet programs within Harrisburg High School can have a peek inside the Medical Center's bone lab, for example, as well as an opportunity to program robots at Penn State Harrisburg.

"The students actually get to try out equipment and meet scientists and other professionals," said Dr.



Melina Velazquez


A youth in Lehigh Valley examines a brain as part of the Capstone Program.

Josephine Carubia, chief academic liaison officer at the College of Medicine. "It's a way to increase motivation for their studies."

A nine-week program developed by Penn State Shenango Continuing Education presents middle schoolers in the Farrell Area School District with career options that might encourage them to learn math.

"Everyday Numbers is based on the premise that most middle school students who are scoring far below grade level in math are failing not because they can't do the work, but because they don't see the point in learning the subject," said Kathleen Paul, director of Continuing Education.

Experienced business people, as well as postsecondary educators from Penn State, talk to the youth about the wide range of careers that typically require math on a daily basis—including personal fitness trainers, farmers, nurses and construction contractors.

Paul said plans are in the works to package the program for distribution to other Penn State campuses. 



Dr. Mala Chirney

Dr. Josephine Carubia takes high schoolers through a lab at the Hershey Medical Center.

# Model Learning

It's been seven years since Penn State initiated a partnership with the State College Area School District on a Professional Development School (PDS) model—which its director, Dr. Jim Nolan, describes as a “teaching hospital.” Now the award-winning program has expanded to include every elementary school in the district, and Nolan, Hermanowicz Professor in the College of Education, is on the planning committee of an effort to develop a statewide PDS association.

“PDS is a national movement that started in the late '80s after reports came out saying we needed to rethink how we were preparing our teachers,” explained Nolan. “The reports said to create models that would renew basic and higher education through working together.”

In the model, a College of Education undergraduate spends a full year as an intern in an elementary classroom, learning to teach by working with an experienced mentor teacher and taking methods courses. During the year, the intern gradually assumes more and more teaching responsibility. The model also includes professional development for teachers through such vehicles as University workshops.

Another successful effort to improve elementary schools is a course for K-12 teachers called “Building Successful Classroom Communities,” developed by Nolan and a group of State College teachers. Offered this summer for the fifth time, the

course aims to provide teachers with tools to enhance student community and self-esteem and to encourage learning.

Mike Fitzgerald, a teacher at Mount Nittany Middle School for 31 years, said he was drawn to the course for ideas in community building. He has since incorporated in his classroom “morning meetings,” which include an announcement, greetings and different activities, such as a ball-toss game—all designed to create trust among students.

“You're right there as a teacher, helping to break down barriers,” said Fitzgerald. “I would recommend the course to any teacher.”



Dick Ackley—Campus Photography

**Dr. Jim Nolan describes the Professional Development School as a “teaching hospital.”**

## Statistics Savvy

Finding a child who can rattle off statistics is unlikely. But a new Web site created by the GeoVISTA Center in the Department of Geography is sure to ignite kids' interest in the art of collecting data. The portal, <http://www.fedstats.gov/kids/mapstats/index.html>, published on the federal government statistics Web site, features the characters “Stixie” and “Globie” offering interactive activities designed to teach concepts about statistics and maps. For example, “Market Manager” challenges the user to distribute ice cream evenly across a region; “Paint the Map” allows kids to color in states based on actual information (such as which states are above or below the national average in energy consumption). “It's part of a larger effort to make statistics and maps more accessible to children,” said Dr. Sven Fuhrmann, research associate in the Geography department.



**A Web site proves learning data can be fun.**

Who would expect that someone originally hired to be a mess hall dishwasher on an Army installation would end up applying to be that installation's lodging manager?

That's what's happening in the case of Heather Carpenter of Ft. Hunter Liggett, an Army lodging hotel in Monterey, Calif. Carpenter has attended five classes of Penn State's Army Lodging training, created and led collaboratively by Management Development Programs and Services and the School of Hospitality Management to address the Army Lodging brand's need for professionalism and education of their managers and high-potential employees.

"I'm so excited about what I've learned," said Carpenter. "I've been able to impact others with the information and tools that I've brought back."

The Army has just renewed its five-year contract with ihas aler



enlisted soldiers worldwide.

Restaurant owners are well aware of protocol they should follow to ensure ongoing food safety. But many nonprofit organizations sometimes lack the tools and knowledge to keep up a restaurant-like atmosphere when serving meals, even after receiving training.

Dr. John Byrnes, a Cooperative Extension educator in Philadelphia County, explained that in Philadelphia, where food safety training is required for nonprofit organizations like churches, observational tools such as follow-up visits were nonexistent. That prompted Byrnes and Extension Program Evaluation Specialist Nancy Ellen Kiernan to develop their own observation tool, which they have incorporated into food safety training in Philadelphia.

"We visit people six weeks after they pass the certification exam," said Byrnes. "It extends the teaching from the classroom."

Byrnes cites one large church in Philadelphia that offers a noontime hot meal, serving 200 people. "Our visit motivated them to change the way they were storing and serving their food—it helped them move in a more professional direction," said Byrnes. 🍷

# Winging It

“Retired” aerospace engineering professor still flies high



Dr. Barnes McCormick teaches a popular course for professionals on technology related to helicopters.

**D**r. Barnes McCormick isn't your typical retiree. Even though this former department head of Aerospace Engineering at Penn State officially left the University in 1991, he's been teaching here on a volunteer basis ever since. “They let me keep an office,” said the genial McCormick, “and I still enjoy teaching, so I just keep going.”

A globally recognized authority on helicopters, McCormick also for nearly 20 years each summer has taught a five-day course through Penn State Conferences and Institutes that brings together engineers from around the world to explore technology related to helicopters and similar aircraft. Titled “A Comprehensive Short Course in Rotary Wing Technology,” it covers a broad range of engineering issues for any vehicle that uses rotary blades to fly.

The student roster for the class—which Vertiflite magazine said is in “big demand”—is impressive. Last year Lockheed Martin in Owego, N.Y., sent 20 of its employees to The Nittany Lion Inn to take the course. Other participants have been engineers with Naval Air Systems Command and Boeing, as well as professionals from all over the globe, including England, Canada and South Korea.

## A Distinguished Career

McCormick's long career is full of high points. He has solved technical problems concerning torpedo propellers for the U.S. military; testified on the National Aeronautics and Space Administration's aeronautics budget before a U.S. congressional committee; and written the textbook “Aerodynamics, Aeronautics, and Flight Mechanics”—a work that has introduced countless students to the field at universities across the globe. He is also the author of the world's only definitive text on vertical/short takeoff and landing flight.

McCormick's course has proved to be a popular professional development experience not only for its participants, but for McCormick himself. “I've become acquainted with engineers from [all over the world]—some of whom have invited me to come and work with them,” he said. ▾



# Enhancing Curriculum



Middle-school students across the Commonwealth will soon get to see streaming video in their classrooms about the Swift Gamma Ray Observatory, teaching them about both the National Aeronautics and Space Administration satellite and the history and nature of science.

K–12 science teachers will have more ways to teach their students about sustainable energy production in Pennsylvania, with multimedia instructional materials and professional development.

The new Penn State Center for Science and the Schools (CSATS) is collaborating with Penn State Public Broadcasting to launch these programs as part of an initiative to enhance K–12 science curricula throughout Pennsylvania’s 501 school districts.

Dr. Bill Carlsen, professor of science education and the center’s interim director, explained that CSATS—which includes a mix of existing and new projects—aims to support scientists doing outreach. “The most exciting aspects of this initiative ... are the very widespread interest and engagement of Penn State scientists and engineers in K–12 outreach, and the opportunity that a University-wide approach has to address challenges that would expand beyond the reach of any single project,” he said.

The new center, located on the University Park campus, will also host visiting K–12 teachers as part of a

new sabbatical research program, starting in the fall.

“That should be a great resource for Pennsylvania teachers,” said Carlsen, “and it also provides an excellent mechanism for us to build a network of teachers statewide that can be tapped for future initiatives.”

The center was created last fall in response to Penn State President Graham Spanier’s call for the University to become a greater resource for improving K–12 education in the state. Other projects in the works include another related to space science, as well as efforts on nanotechnology and ocean sciences. For more information about CSATS facilities and projects, go to <http://csats.psu.edu>. ▀

## GIS PROFESSIONALS, TAKE NOTE

Penn State World Campus has recently expanded its geographic information systems (GIS) portfolio, replacing its popular noncredit certificate in GIS with a new for-credit postbaccalaureate certificate program. That’s in addition to an online master of GIS degree, launched just a year ago.

“There’s a push in the industry for GIS professionals to enter their careers with at least a bachelor’s degree,” said David DiBiase, the program’s faculty coordinator, from the College of Earth and Mineral Sciences. “With this new certificate they have an opportunity to earn valuable credits they can also apply toward a master of GIS degree.” ▀



# Miners Dig for Results

Penn State helps mining companies improve their business processes

**S**treamlining production, increasing productivity and cutting costs are important goals for any business, even mines, which are complex factories underground, according to Dr. Andrew P. Schissler, Penn State assistant professor of mining engineering.

Improving mining processes is important in Pennsylvania, a state that ranks fourth in the nation in coal production, with 64 million tons mined annually.

## Involving Employees

Schissler helps the mining industry use business process improvement (BPI) methods to analyze continually occurring processes and make changes for the better. BPI methods involve employees in finding those solutions, “because the people making the product are the best ones to improve it,” said Schissler, who spent 28 years in the industry before earning a Ph.D. and joining the University.

Mining contributes \$523 billion to the U.S. economy and employs nearly 500,000 individuals who extract such minerals as coal, diamonds, gold, iron ore and lead, as well as aggregates, like limestone.

Last summer, Schissler organized Penn State’s first Industry Summit on Mining Performance to spread the word about BPI’s benefits. The conference, which drew 65 mining executives and employees and industry suppliers and customers,

proved to be popular, and Schissler is currently at work helping to organize the second summit, to take place in Colorado.

Employees of Caterpillar Inc., a leading manufacturer of construction and mining equipment based in Peoria, Ill., have used a BPI approach called Six Sigma to improve problem solving and quicken response time for dealer inquiries, among other achievements, according to Glen A. Barton, retired chairman and chief executive officer of the company, who reported on Caterpillar’s results at the summit.

Peter Fordham, principal at Norbridge Inc., a management-consulting firm based in Concord, Mass., helps mining companies make improvements with its own BPI approach, called HOME TEAM (Home of Mining Excellence, Through Teamwork, Execution,

Achievement and Measurement).

Fordham, who also participated in Schissler’s summit, said, “Ten years ago, most mining companies were not utilizing process improvement techniques and did not recognize the benefits,” adding that now many companies have active programs and are generating significant gains.

The next BPI summit will be held this fall in Denver, Colo. Dr. Tibor G. Rozgonyi, head of mining engineering at Colorado School of Mines, said, “The summit will provide mining companies with a holistic system-oriented approach to BPI, which can help them maintain a good professional work atmosphere and employee satisfaction.”

Schissler added, “The challenge for companies is to make the improvement process continuous.”



Westpoint Mining Corporation

**Penn State’s Dr. Andrew P. Schissler (left), who does research at Westpoint Mining Corporation’s Harmony Mine, an anthracite coal mine in Mount Carmel, Pa., is with Westpoint President Edward Smock (center) and Dr. Maochen Ge, Penn State associate professor of mining engineering.**

# By the Numbers

Penn State is the largest contributor to the state's economy—an engine of 24 campuses generating \$6.14 billion annually in direct net economic impact to the Commonwealth, according to an economic impact study conducted by Tripp Umbach.

Tripp Umbach President Paul Umbach presented the findings to a Board of Trustees seminar in January. In the same meeting, Vice President for Outreach Dr. Craig D. Weidemann reported on current economic development efforts across the University (see presentation at <http://www.outreach.psu.edu/weidemann/speeches.asp>), including a new Outreach Office of Economic and Workforce Development, led by Jack Gido.

The presentations highlighted the three dimensions in which universities contribute to

economic development—economic impact, human capital development, and research and innovation—and how Penn State contributes within each dimension.

Highlights from the presentations include:

- Penn State has helped generate more than 400 new businesses in the Commonwealth.
- More than 15,000 Penn State alumni own businesses in the state, and these businesses employ more than 425,000 residents.
- Research conducted at Penn State supports more than 16,000 additional jobs throughout Pennsylvania. These jobs generate more than \$1.7 billion in additional economic impact and



**Penn State has helped generate more than 400 new businesses in Pennsylvania.**

more than \$52.8 million in additional revenue annually for the state.

- Every dollar invested in 2003 by the Commonwealth to support the operations of Penn State returned \$19.42 in total economic impact to the Commonwealth.
- In 2004, Penn State Continuing Education units at all campuses were responsible for working with over 400 Pennsylvania companies, upgrading worker skills to help these companies remain competitive. ▀

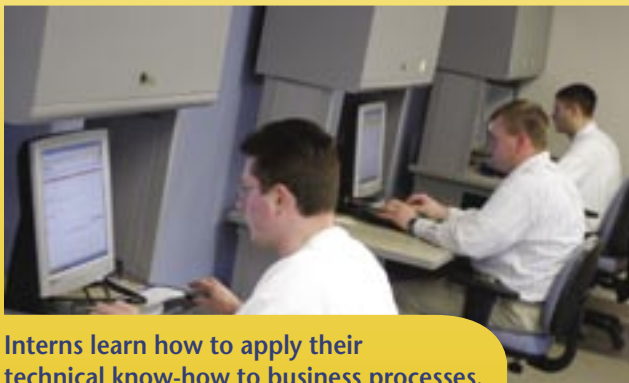
## TECHIES AT WORK

All 28 apprentices from the first year of a program at Penn State Erie's Center for eBusiness and Advanced Information Technology have been hired, thanks to hands-on experience they gained through the center providing technical know-how to local companies.

The new center aims to help college graduates in information technology (IT), management information systems (MIS) and computer science learn how to apply their technical knowledge to business processes by pairing them with local companies. "It's a win-win situation for everyone," said Ron May, manager of the apprentice program. "We are creating partnerships with IT providers to give our apprentices exposure to new skills that meet the needs" of those companies. The apprentices often get hired at the company where they trained.

Ken Harrison, 23, joined the program, which runs from three to 12 months, "to learn things that were not covered in school." A fall Penn State Erie MIS graduate, he is now working as a systems analyst with Distributed Network Software LLC in Erie. ▀

Ron May



**Interns learn how to apply their technical know-how to business processes.**

# Scholarship Goes Digital

A new office provides faculty with high-tech avenues to distribute their work

Penn State's new Office of Digital Scholarly Publishing is about to make the dissemination of research easier. Created by a partnership between the University's Libraries and Press, the office will use new media technologies to advance Penn State scholarly communication in the community and the world.

"Given the nature of the business climate for publishing scholarly works—the price is high and the distribution limited—we are now providing the capacity for faculty to make their work more broadly accessible," said Peter Potter, editor-in-chief of Penn State Press.

Akin to the highly publicized new search engine Google Scholar, which is making some academic publications available online, the office will make many of the University Press' backlist titles accessible electronically. (The Press is also participating in Google Scholar, but the Press-Libraries venture will allow for deeper online access to its publications.)

The office is also committed to making new research publications available online. One of the first projects of the office is to digitize new scholarship in the field of Romance languages and literatures. Penn State Romance Studies is being launched in collaboration with the departments of French and Italian, Spanish and Portuguese. The series, a successor to a print series published by the Press from 1991 to 2003, will make available monographs electronically and by print-on-demand technology.

The Libraries brings to the office its expertise in programming, digitization, Web site development and indexing, in addition to its knowledge of user behavior and demands. The Press brings its experience in matters such as peer review and editing, as well as a reputation for scholarly excellence.

"We will offer faculty a way to disseminate research other than through the typical channels," said Bonnie MacEwan, assistant dean for Collections and Scholarly Communication at the University Libraries. ▀



The office is digitizing new scholarship in the field of Romance languages and literatures.



The office hopes to make old slides and photographs accessible electronically.

Mira Lloyd Dock Collection, Mont Alto Campus Library, The Pennsylvania State University

# Outreach Advisory Board

An impressive group of business, industry and education leaders from around the nation comprises a new advisory board for Penn State Outreach. Outreach meets with the board twice a year to get advice and assistance on major outreach education issues, challenges and opportunities.

"The board's recommendations are critical in helping to advance Penn State's outreach mission, including identification of organizational partners, setting strategic direction and resource development," said Dr. Craig D. Weidemann, vice president for Outreach. The next meeting takes place at Penn State on May 19 and 20. Members are:

**Stephen W. Brinch**

VP, Human Resources, Lockheed Martin Technology Services, Cherry Hill, N.J.

**William C. Brock**

Executive Director, Central Pennsylvania Workforce Development Corporation Lewisburg, Pa.

**Charles Brosius**

Retired President, Marlboro Mushrooms Former Pa. Secretary of Agriculture West Grove, Pa.

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Executive Director, Pa. State Education Association, Harrisburg, Pa.

**Frank Epifano**

Vice President of Finance, Aventis Pasteur Swiftwater, Pa.

**Barbara W. Farmer**

Principal, Houserville/Lemont Elementary Schools, State College, Pa.

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Program Director, Homeland Security Simulations and Training Technology Harrisburg, Pa.

**David Hendricks**

Director, Economic Development Verizon Communications Harrisburg, Pa.

**Richard F. Jones**

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Senior Program Officer and Executive Director, Alfred P. Sloan Foundation New York, N.Y.

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Head Coach and Founder Restek Corporation, Bellefonte, Pa.

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President and CEO, Skinner Group LLC Bowie, Md.

**L. Dian Stoskopf**

Director, Army Continuing Education System, U.S. Total Army Personnel Command, Alexandria, Va.

**Robert Tunno**

CEO, Breeze Industrial Products Saltsburg, Pa.

**Cheryl Scott Williams**

Consultant, Bethesda, Md.

**Pamela A. Zerphy**

Director, Employee Services Hershey Foods Corporation, Hershey, Pa.

**Jane Williams Zimmerman**

Community Volunteer, Boalsburg, Pa.

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## CORRECTION:

In the story "Every Drop Counts" from the fall issue of Penn State Outreach magazine, the names of Dr. David DeWalle and Dr. Yuefeng Xie were misspelled. Also, Dr. Xie is an associate professor of environmental engineering at Penn State Harrisburg, Capital College.

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CLIENT: School of Information Sciences and Technology



### Extending [distance education]

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