

A major public research university, serving the public good

Dr. Lester A. Lefton, President



Kent State President Lester A. Lefton

t major research universities, academic discovery is encoded into the institutional DNA. At a major public research university, such as Kent State, it's all about getting the research out of the lab and into the public domain.

This issue of *Kent State Magazine* is the first ever to have an all-research focus, and we plan for the winter edition each year to be our university research issue.

As you will note, not all research is found in the lab. It can involve scientific inquiry, cultural and economic discovery

or artistic creativity. Yet the goal of all our research efforts is the same — to make lives better. Some of the work results in immediate benefits; other projects lay groundwork for future discoveries and commercial applications.

Kent State researchers are particularly adept at tackling real-world challenges. This issue features research that addresses two of the world's most visible problems: terrorism and cancer.

Dr. Stevan Hobfoll, distinguished professor of psychology and director of the Summa-Kent State Center for the Treatment and Study of Traumatic Stress, teamed with colleagues at the University of Haifa to study the psychological impact of terrorism on Arabs and Israelis, research that has worldwide implications.

A second article explores further biomedical applications of Kent State's liquid crystal research, this time combining liquid crystals and pharmaceuticals to produce novel cancer treatments.

We want to do even more. In the fiscal year that concluded last June 30, Kent State faculty and staff produced a 22 percent increase over the previous year in external funding for sponsored research. We also launched the Kent State Centennial Research Park, anchored by the FLEXMatters Accelerator, a broad public-private high-technology partnership that will accelerate development of

a new generation of advanced materials and spark regional economic development.

My target is for the university to significantly increase the number of research grant applications this year and double the amount of grant money received in five years.

This emphasis on academic excellence closely parallels our other priority at Kent State — student success. As we began fall semester, we received two indications of our progress: For the sixth straight year, the Princeton Review recognized Kent State as one of the best universities in the Midwest. And the university moved up into the third tier college listings of *U.S. News & World Report*, a designation shared by only one other public university in northern Ohio — Bowling Green State University.

Research is worthy of special emphasis because it is key to all of our education and service efforts. Research also is an important part of faculty duties. It's what makes great universities great.

We will continue to celebrate those efforts on the pages of this magazine.

Robert B. "Yank" Heisler Jr., MBA '74, retired chairman of KeyBank National Association and retired chief executive officer of McDonald Financial Group, has been named special assistant to the president for community and business strategies at Kent State University. For more information, visit www.kent.edu/magazine. Photo by Gary Harwood, '83



On the cover:
Dr. Stevan Hobfoll, Kent
State Distinguished Professor
of psychology.

Photo by Gary Harwood, '83
Photo Illustration by Nick Moore, '90

KENT STATE

C O N T E N T S

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Photo by Bob Christy, '95

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oisterous 25year-old interior design student and former drill sergeant *Rita Gochberg* describes her home country with great affection.

The streets are full of life, day and night. In the morning, people rush to work, crowding onto the many buses that make up Israel's efficient transportation system. In the evening, young people prepare to hit the streets in droves, whiling away the hours at cafes, bars, discos and restaurants.

Travel to Old Jerusalem and you will witness a scene reminiscent of the famed Marrakesh Market — the carpets, the aroma of the spices, the works of artisans. It is beautiful and it is small, and people are bustling about, yelling and buying. Or, stroll through Tel Aviv, otherwise known as Little America, with its beaches, palm trees and shopping malls.

"Everyone who visits Israel is shocked — they say 'how are you not afraid, how are you not that?" Gochberg says. "People think I 'escaped' to America. I did not escape — I miss Israel like crazy."

Zaki Hazou, '06, shares the sentiment. Hazou, who grew up in East Jerusalem, an area annexed by Israel in 1967, left his family in 2001 to pursue his bachelor's degree in criminal justice at Kent State. He now works in the security office for the Department of Residence Services.

WHEN HOME BECOMES

THE

occupation of the Palestinian territories, the social, cultural and economic ties connecting Arabs and Israelis remain.

Gochberg and Hazou share a collective, complex experience as inhabitants of Israel including the ongoing threat of terrorism.



"Israel is a small country with three religions and three different cultures," Hazou says. "If you drive 10 minutes north from Jerusalem, you'll be in a completely different culture. It can change within a minute."

A country roughly the size of New Jersey, Israel and the Palestinian territories within and around its borders are home to more than five million Jews and nearly 1.5 million Arabs. Though conflict continues over the

Terrorism and PTSD

Dr. Stevan Hobfoll, Distinguished Professor of psychology and director of the Summa-Kent State Center for the Treatment and Study of Traumatic Stress, says there are psychological differences among populations facing ongoing terrorism, such as Israelis and Arabs, versus populations that experience isolated attacks.

People [facing ongoing terrorism] have it in their minds that terrorism can strike any time," he says.

The atmosphere contributes to substantial increases in post-traumatic stress disorder (PTSD).

"In Israel there are generally high levels of PTSD and depression because of the ongoing turmoil. But, if they're epidemic in Israel, they're pandemic in the Palestinian areas. Over a third of the Palestinian population has PTSD, and it gets worse every day. And rates of depression are very high," Hobfoll says.

By comparison, in any given population at peace, rates of PTSD hold at around 1.5 percent.

Links between PTSD and health problems are well

> Rita Gochberg Photo by Gary Harwood, '83

......By Lisa Lambert, M.A. '05

BATTLEFIED

established, but can PTSD contribute directly to the cycle of violence in war torn areas such as Iraq, Israel and the Palestinian territories? Hobfoll says it can, and does — individuals in the aforementioned conflict zones who suffer with the disorder tend to hold retaliatory views and support counter violence.

Hobfoll and colleagues from the University of Haifa's Center for National Security Studies are conducting the largest prospective examination to date of how people are impacted by ongoing terrorism. They expect that the results will have important implications for the mental health of civilians and soldiers around the world.

Studies completed in the aftermath of the Sept. 11, 2001, terrorist attacks on the United States have yielded results, but Hobfoll says these studies are not informative about the psychological impact of ongoing terrorism.

"Maybe it's simple to say that lots of people get severe depression after an attack, but why doesn't everyone? Why do most people recover in a matter of days, weeks or months, and what do those recovery trajectories look like? We need to learn more about these questions," Hobfoll adds. "We also want to know how people adjust and what contributes to resiliency."

obfoll's study is one of the first to investigate terrorism's impact based on a comprehensive theoretical model, as well as the first to include examination of "resource gain," or the benefits of traumatic growth, as a consequence of ongoing terrorism.

The same personal resources threatened by terrorism — such as one's sense of self-efficacy, safety of loved ones and economic resources — are the ones needed to resist the negative psychological impact of stress, he adds.

Imagine a series of concentric circles, with the inner circles being your most direct losses (death or injury of a loved one, injury to self,

death of a family member or friend, loss of property or employment). The more direct a person's loss, the more likely he or she is to experience long-lasting PTSD, depression or other health problems that result.

"It turns out that PTSD really feeds on economic loss," Hobfoll says. "We often call our work our livelihood, which is what sustains us, and if we lose that, it has great psychological impact."

In the wake of events such as terrorist attacks, people often strive to make sense of the chaos that surrounds them. But contrary to what one might expect, resource gains (such as the increased intimacy people feel as they draw closer to friends and family in the wake of a difficult situation), actually have a negative impact, according to research findings.



Dr. Stevan Hobfoll

"The negative impact of finding benefits in trauma is poorly understood, but may be related to the negative consequences of certain styles of coping that interfere with active coping," Hobfoll says. Active coping strategies are either behavioral or psychological responses

designed to change the nature of the stressor itself or how one thinks about it; avoidant coping strategies lead people into activities (such as alcohol use) or mental states (such as withdrawal) that keep them from directly addressing stressful events.

Through interviews with Arabs and Jews, researchers also are trying to determine the factors that increase an individual's vulnerability to PTSD.

"We know people with less education are more vulnerable and those with less income are more vulnerable, but, for example, we find that the religious are more vulnerable," Hobfoll says. "In other words, the more you look to God to give you answers for terrorism, the worse off you are, so that's quite a paradoxical, counterintuitive finding."

Zaki Hazou



Life goes on

Don't ask an Israeli to turn off his cell phone; he will refuse, Hobfoll says. In the aftermath of a terrorist attack, the minutes available to check on the safety of loved ones are few, as the phone lines quickly become overloaded and crash.

There's a routine you go through following a terrorist attack, Gochberg says. "It's like going through the motions — you hear something happens, you check the list of names to see if you know anyone [who was injured or killed], you see if people you know know anyone, and you feel bad for the families."

"It makes you grow up really fast," she says. "You bury friends, stuff happens while you're serving in the army, and when you're in uniform you're basically a moving target. It's horrible to say, but you get used to it. Life goes on."

Hazou recalls the first time the blast of a suicide bomber intruded upon his daily life, and after a while became commonplace. "We'd be in basketball practice and you'd hear a big blast, a very loud blast, and then a minute later you'd hear all of the sirens. It was like, 'oh well, that was a suicide bomber."

"I remember the first time I saw a bus after it got blown up, and I remember seeing Palestinians killed left and right. I remember seeing Apache helicopters flying above my house going to Gaza or the West Bank. So, you know — I saw it. Everybody sees it. It's a very small country. There's no way you can avoid seeing and hearing things," he says.

Hazou and Gochberg have developed what might appear to others as callousness, at first glance. But life in a conflict zone requires a different set of coping skills entirely.

"My biggest fear is when my dad calls and says he has some bad news — someone you know has passed away. I will be sad, but I've come to the realization that we live in a country of conflict," Hazou says. "I have to prepare myself; if I let death devastate me, then by the time I turn 30 and have lost 20 people, I'm just going to want to commit suicide."

Hobfoll, who served in the Israeli military, says the stress of experiencing terrorism can accumulate with each new incident.

"There's no one who doesn't have a friend who was killed, or a family member who had at least a close shave, or a good friend whose kids were in a shopping mall where they were hit with shattered glass," he says.

Hazou likens the conflict to Newton's Third Law of Motion
— for every action there is an equal and opposite reaction.

"The Israelis bomb a place, the Palestinians are going to send a suicide bomber, and as a result of that the Israelis are going to bomb again. It just keeps going on and on and on and on," he says.

Both Gochberg and Hazou emphasize that they do not blame the majority for the actions of a minority, and both hope for an end to the conflict through dialogue, not violence, although they understand well that peace may remain elusive in their lifetimes.

"The Psalm that says 'pray for peace in Jerusalem'— whoever wrote the Psalm knew, or at least had a gut feeling, that there will never be peace in Jerusalem. So keep praying. At least that's how I see it," Hazou says.

For more information, visit www.kent.edu/magazine.

ONLINE EXCLUSIVES

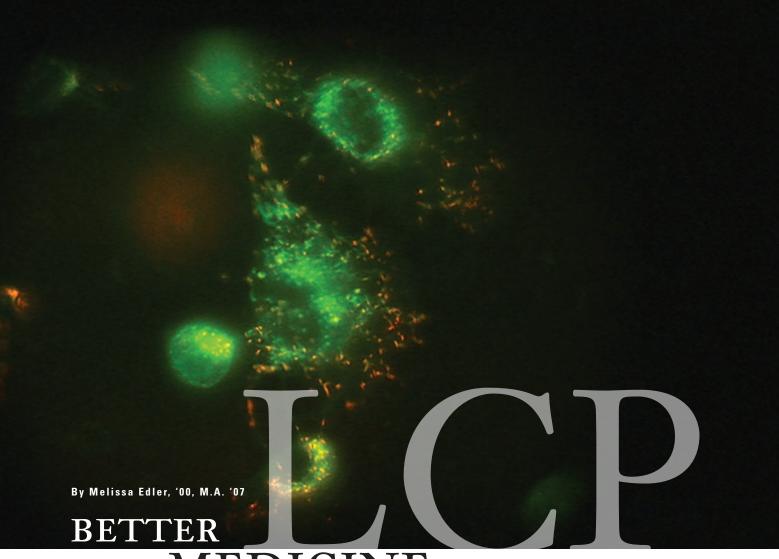
Counter-Terrorism Focus of New Partnership



Visit www.kent.edu/magazine to learn more about a partnership between Kent State University and the Israel-based Institute of Terrorism Research and Response.

Of Heart and Home

Kent State alumnus Zaki Hazou and student Rita Gochberg discuss life in a conflict zone. Read about it at www.kent.edu/magazine.



MEDICINE

Chemistry and liquid crystal technology create a formula for hope and healing

ike a dark, sometimes deadly spider, cancer has spread its web throughout the world. Whether it's through a family member, friend, coworker or even ourselves, very few of us remain untouched by its venomous grasp. In fact, the American Cancer Society estimates that nearly 1.5 million new cases of cancer will occur this year alone. This crisis has led the National Cancer Institute to establish a goal of eliminating suffering and death due to cancer by the year 2015.

While that goal may seem like a stretch, the collaborative efforts of three men and the extraordinary potential of liquid crystal technology have brought it closer to our reach than ever before.

Dr. Chun-Che Tsai, Kent State professor of chemistry; Dr. Jim Jamison, manager of Urology, Obstetrics and Gynecology Core Basic Research Laboratory for Summa Health System and Kent State alumnus (B.S. '73, M.S. '81, Ph.D. '86); and Tom Miller, president of IC-MedTech Inc., a Californiabased biotechnology company, have collaborated to develop a new paradigm in drug discovery based on the pharmacologic properties of liquid crystals called Liquid Crystal Pharmaceuticals[™], or LCPs.

This past summer, the group gathered at Kent State to file applications for two

innovative patents through the university's Office of Technology Transfer: one for a new LCP-based anti-tumor drug called Tolecine^{\mathbb{T}} and another for a formulation that combines Tolecine^{\mathbb{T}} and another LCP, Apatone^{\mathbb{T}}.

Though best known for their use in laptops, televisions and cell phones, liquid crystals also include families of organic substances that are essential for all life. Called lyotropic liquid crystals, some examples include DNA, proteins and cholesterol. LCPs are a unique class of lyotropic liquid crystals that represent novel drug candidates for the treatment of a wide range of diseases.

The most recent research involving LCPs has yielded a

new investigational anti-tumor drug called Tolecine™, a compound that also has antiviral and antibacterial applications. Created by Tsai, who has been working on Tolecine™ for seven years, it has been shown to be even more effective than the current standard of care for herpes. In preclinical laboratory tests, Tolecine™ seems to work particularly well for skin cancers.

The team's second patent application involves a formulation that combines Tolecine™ and another LCP, Apatone® to offer improved efficacy. This approach attacks cancer cells via multiple pathways. While Tolecine™ is in the beginning stages of drug

development, Apatone® has been successfully tested in more than 30 human tumor cell lines and animals by *Deb Neal*, a research associate at Kent State and Summa, and *Karen McGuire*, a research assistant at Summa and graduate assistant in biomedical sciences at Kent State.

Apatone®, the first LCP which combines vitamins C and K₃, was patented last year by Jamison and Dr. Henryk Taper, Catholic University of Leuven in Brussels, Belgium, Dr. Jacques Gilloteaux, American University of the Caribbean, St. Martin, and Dr. Jack Summers, Summa Health System.

rom 2005 to 2007, IC-MedTech and the Beaumont Foundation supported the first FDAapproved, human clinical trial of Apatone® conducted at Summa in Akron, Ohio, and William Beaumont Hospital in Royal Oak, Mich. This Phase I/IIa clinical trial successfully demonstrated the safety and efficacy of orally administered Apatone® in humans for the treatment of prostate cancer. The drug demonstrated a delaying effect in the progression of end-stage cancer patients.

"Ultimately, though, Apatone® is intended to be administered intravenously just prior to chemotherapy and then given orally in low doses to stop cancer re-growth between chemotherapy cycles," says Jamison.

Cancer is uncontrolled cell growth during its beginning stages. Most chemotherapy drugs do not recognize the difference between healthy cells and cancerous cells. The drugs are designed to target cells that are quickly dividing, which in addition to tumor cells also can be healthy cells in a person's stomach or intestinal lining and bone marrow.

Apatone®, unlike other chemotherapy drugs, has low toxicity and does not target dividing cells; thus, it spares fast-growing, healthy cells.



Dr. Jim Jamison

"We want to kill cancer cells specifically without killing surrounding tissues," says Jamison.

"Apatone® targets cancer cells and exploits some of their emergent properties in a way that allows you to turn them on themselves," says Miller.

Normally, cells use either sugars or fats for energy. However, cancer cells rely primarily on glucose to meet their energy requirements. Specifically, these cells expand special pores on their surface to allow sugars to enter. Vitamin C in Apatone® resembles glucose, so it preferentially accumulates in tumor cells. "But it is a Trojan horse to the tumor cell," says Jamison, because along with vitamin C, the cancer cell also is taking in vitamin

K₃, and the combination reacts to produce hydrogen peroxide within the cell.

The idea is similar to when you get a cut or scrape. After you've cleaned it with soap and water, you swab it with hydrogen peroxide, which kills the bacteria. In similar fashion, "when Apatone® is broken down, it produces hydrogen peroxide, which damages the tumor



Dr. Chun-Che Tsai

cell," says Jamison.

In addition, when the cell is stressed by Apatone®, it needs three to four hours to recover. This provides a window of opportunity where the cancer cell cannot protect itself. "The key is to take out the defense system and then go for saturation bombing with chemotherapy before it can recover," Jamison explains. Therefore, Apatone® has broad-spectrum applications for treating almost any type of cancer and even leukemia, he says.

Although the FDA has not yet approved chemotherapy in conjunction with Apatone® in humans, says Miller; that is the next step. In humans, clinical trials in which only vitamin C or only vitamin K, is given intravenously

have been conducted, but the combination, such as that found in Apatone®, has not been tested. Recently, though, the FDA granted Apatone® orphan-drug status for the treatment of metastatic, or locally advanced, inoperable bladder cancer.

Innovative, low-toxicity drugs such as Tolecine™ and Apatone® provide new hope



Tom Miller

in the battle against cancer and other diseases in the next few years. "Research on LCPs provides an important, solid scientific foundation for generations of new drugs," says Miller. Adds Tsai: "LCPs are an untapped frontier from which many new, exciting treatments are now emerging."

"At the end of the day, treating diseases such as cancer more effectively is what it's all about," adds Miller.

For more information, visit www.kent.edu/magazine.

Composer's research spans the globe, bridges cultures

THE SCIENCE OF

In a shourced the arrival of the eminent professor and the preparations have begun some the should be some the song for the honored guest

vertical instruments built from bamboo stalks topped by ram's horns. The instruments' buzz cuts through the air, resounding like trumpets.

Halim El-Dabh, University Professor from Kent State University, joins the village festivities, relishing the sights and sounds of the welcome.

"Everyone — the whole town — was coming in from all directions. The flutes were playing, and they fit the notes together like a bell choir, each member playing its own special note, staggered and interlocking," says El-Dabh, reminiscing. "It said something about how they worked together to create the music."

On a warm day in August 2007, El-Dabh is transported back in time to that day more than 50 years ago in Ethiopia, via digital music recordings and photos.

Another rare recording from the trip revitalizes the song of a Dorze village girl, performed especially for him. The richness of her voice penetrates the air as if she were standing and singing for him today.

Sitting in suit and tie, legs crossed, hands folded, El-Dabh grins, accompanying the recording with a soft hum. Boxes brimming with large yellow envelopes — manuscripts and correspondence detailing the

past 60 years — surround him in an office in the Lincoln Building at Kent State, the new (temporary) home of the Department of Pan-African Studies. While the smell of fresh paint permeates portions of the building, two rooms are secured and organized for El-Dabh's treasures: instruments including a piano and a derabucca (a ceramic drum), photos of El-Dabh's children and filing cabinets full of music and memories, accumulated over years of research and travel.

Music for a lifetime and beyond

The new space serves as a working archive for



El-Dabh, emeritus professor, composer, performer, ethnomusicologist, forefather of electronic music, Egypt's foremost living composer of classical music and one of the major composers of the 20th century. Thanks to four of El-Dabh's students and admirers over the past almost 20 years — including, currently, David Badagnani, a doctoral student who is writing his dissertation about El-Dabh's music and who has worked an estimated 5,000 hours since 2003 to organize and assemble his works — the archive to honor his accomplishments is slowly coming to fruition.

The opportunity to work and learn more about El-Dabh was too good an offer to refuse, says Badagnani.

"I was always very interested in contemporary composers like John Cage and Igor Stravinsky, but when I came to Kent State everyone told me that there was someone here who is right up there with these guys, and who knew all of them, and whose music was just as good as theirs," Badagnani says. "Since I didn't get the opportunity to work with any of them, I couldn't pass up the opportunity to work with El-Dabh."

Like every composer of his stature, El-Dabh needs an archive of his work so any scholar or musician wanting to study or play his music can do so.

Badagnani's systematic organization of the manuscripts, research and related information will allow El-Dabh to "experience through others my experiences," says El-Dabh.

While the New York



Halim El-Dabh, 1970

Public Library for the Performing Arts and the Library of Congress are among the interested parties vying for El-Dabh's archive, he wants to ensure that wherever his collection ends up, it isn't simply "housed."

"I don't want things to be buried like in a library. I want to revitalize it, to make it alive," he says.

El-Dabh, 86, yearns to disseminate his knowledge, and the archive, which he considers the "nucleus" for a projected institute of his work, will allow him the pleasure of vicariously reliving musical experiences via the recordings and other artifacts from his research trips, while savoring the culture and people behind the instruments and sounds.

The Egyptian-born composer has spent his life capturing the sound of

culture, conducting musical field research and recording in 20 of the 53 countries in Africa, including Egypt, Ethiopia, Ereitrea, Senegal, Mali and Niger, as well as in Brazil, Mexico and Jamaica. As an ethnomusicologist, he is interested in music that is part of the social tradition of different cultural groups in their pristine rural settings.

"Ethnomusicology is the anthropology of music," he says. "As an ethnomusicologist you can't really work in a lab; you have to live with the people."

El-Dabh says that researchers can gather information by studying tapes, inviting people from the areas being studied into a lab situation or going into the field and really "living it."

"I chose to plunge myself into the middle of things and said, 'Here I am. I am not going to presume anything.' I never recorded anything unless the local people asked me to record. Having the tape recorder automatically changes the culture's perception. You are perceived more as a person from an outside society looking in on them as they are looking at you," he says.

Conducting research independently is key, El-Dabh says, because it made him depend on his environment.

"When I traveled to the middle of a village, I had no one to back me. I always preferred to travel alone rather than with a group. As an individual you are vulnerable, but this vulnerability can be a great asset in that the local people don't view you as a threat; in my experience they nearly always embraced me as an

individual showing interest in their culture," El-Dabh says.

He said he found that the way he related to the people in these countries was very important because often the dichotomy between one's perceived social concept and the realities of life in the field "will hit you in the face" during the research experience, he says with a laugh.

"I had that experience once with someone who was traveling with me in Niger, who became increasingly uncomfortable with the realities of village life. In the midst of this situation, all of your training and your entire concept of social relationships collapses; you are in a sea of unknowing, in a completely different culture. You start asking yourself 'Will I sit down to eat?' 'Will I sleep on the ground?' 'Will I stay in a house?' 'Is the water clean and safe?' 'Can I do this now?' All of that. You discover yourself, in a way, when you realize that you aren't only studying someone else; you begin to learn about yourself."

"Through this, I learned that I am. That I am you. That the world is interconnected. That is reality. I am everybody. I am the experience of everybody because we are connected. It's really amazing when you think about it."

African treasures, greater than gold

As a consultant for the Smithsonian Institution from 1973 to 1981, El-Dabh collected music from Africa to bring back to Washington, D.C.

The traditions of African music are so advanced, but

are unfortunately clouded by the notion that the continent is backward, El-Dabh says.

"In reality, they are much more advanced in understanding the depth of music than we are," he says.

In his view, the treasures of African traditional music are unlimited. They combine sounds, instruments and voices as part of their daily life.

As part of his consulting, El-Dabh brought 15 Ekonda women from a forested region of western Zaire to Washington, D.C. to sing in their unique chorus style at the 1976 Festival of American Folklife, which was held to celebrate the nation's bicentennial and sponsored by the Smithsonian Institution.

"It puzzled everybody. The harmonies they used are very different; they create harmonies and sound relationships that we don't even think about.

"Usually, we know a little bit about Africa here, so we calcify it, freeze it and generalize it. It's a huge continent, three times the size of the United States, and we generalize and say 'well, this is African dance' or 'this is African music,' but each region has great depth."

When El-Dabh traveled to Egypt to record, he took in a new expression of music every 20 miles.

"Our relationship with Africa is in diamonds and gold, in resources and oil, and we have a blindfold to our development. We are still infants. We have high technology but we are distracted by it; it is not really taking us to our own depths.

"We need to look at music in a multifaceted way. Break away from convention," he says. "We are stuck with the idea that 'this is it.' My research involves the creative transformation of the dynamics that come out of this continent and the sound it creates."

The magic of sound

El-Dabh credits two life experiences with sound as having a significant impact on his life and musical work.

Born Halim Abdul Messieh El Dabh in 1921 in Egypt, El-Dabh recalls hearing sounds at just seven days old.

Many years later, in 1955, while living in a summer home in Newton, Mass., waiting for his pregnant wife to give birth to their child, El-Dabh was struck by a bolt of lightning while gathering metal chairs on the patio. According to his former wife, the sound that emanated from El-Dabh when he was hit "was so huge," he says.

"Half of my body was constantly numb for a month. The buzzing sensation I felt within my body during that period was like another form of sound." he adds.

Like many of El-Dabh's other experiences, facing death became inspiration for a composition, "The Miraculous Tale," which included saxophone and drum (derabucca) and was performed in Boston by the Boston Modern Orchestra Project on his 86th birthday. The first movement, for saxophone, told of his face-off with lightening.

El-Dabh's fascination with sound formed the basis of a presentation called "Waveforms and the Magic of Ethnodynamics," which he delivered at Columbia University in January 2006. The address was based on his belief that the musical cultures of Africa are magical, and that the people there have an advanced sense of sound aesthetics.

"In the United States, we're already conditioned because of the technology of hearing. We have telephones, cell phones and televisions, but all of these transmissions constrict our listening ability and our output of sound," he says.

"The word is very powerful. I am sure the sound I made when I was struck by lightening was not a voice of fear, but maybe a voice of action or anguish. Fear has an entirely different vibration that drains the vitality of a person or a nation."

There is an enormity of things to consider when discussing sound, he says.

"Everything is sound. That is why music is so important. To me music is everything: It's joy, it's entertainment, it's sociological relationships, it's economics and social dynamics," he explains.

If he could simply record what a majority of people hear every day, El-Dabh said that he would be able to forecast what kind of economic condition the person will be living with in the next year.

"You can forecast conflict, violence, international relations and people's states of mind. It is all connected. Sound goes around the universe," he says.

For more information about El-Dabh, his research and music, visit www.kent. edu/magazine.

Economics professor
examines social
mobility in the United States

By Melissa Edler, '00, M.A. '07 Illustration By Jeff Florentine, Kent State Graphic Design Student

MOVING ON UP

A substitute teacher, parole officer, history professor, economics professor and NASA engineer. What do these people have in common? They are siblings whose mother is a high school graduate and whose father is a certified public accountant with a master's degree.

"Each of my siblings likely belongs in a different income quintile," says Dr. **Kathryn Wilson**, associate professor of economics at Kent State. "But my family is an exception to the trend."

In a recent study funded by the Russell Sage Foundation, Wilson and colleagues Timothy Smeeding at Syracuse University and Robert Haveman at University of Wisconsin-Madison examined social mobility, or the ability to move up or down the economic ladder, in the United States.

"People like to think of America as the land of opportunities," says Wilson. "The irony is that our country actually has less social mobility and more inequality than most developed countries."

According to numerous studies, the United States has the highest level of income inequality among all rich nations. For example, low-income households, or those at the 10th percentile of the income distribution, spend approximately \$8,900 per year per child, while high-income families, or those at the 90th percentile, spend \$50,000 per child.

"Within any society, the extent to which family background predicts the economic outcomes of children is an indicator of the degree of equality in life chances, or the extent of 'equality of opportunity,'" says Wilson.

She, Smeeding and Haveman investigated the relationship between parental socioeconomic status and offspring socioeconomic status by examining three variables: family income, education and occupation class. In September 2006, they presented the results of their study at EqualSoc in Barcelona, Spain, a conference supported by the European Union.

Their research found that parental income seems to have a large effect on offspring income. Offspring whose family income was in the lowest quartile during childhood had as adults an average household income of \$40,984, compared to \$95,314 for those in the top childhood income quartile. Those who grow up in families in the bottom quartile of income as children also have lower educational attainment and work in lower status occupations as adults. Half of those from families with childhood income in the upper quartile go on to work in high-status occupations, while only 21.9 percent of those from the lowest





income quartile work in high-status occupations.

"The best developed country in which to be born rich is the United States, because the likelihood is that you will remain rich," says Wilson. "However, if you're born poor, then the United States is the worst developed country in which to be born, because you're most likely to stay poor."

Fifty-eight percent of those in the bottom quartile of childhood family income also are in the bottom quartile of income at age 35; in contrast, 42.4 percent of those with childhood income in the top quartile remain in the top income quartile as adults, while only 13.3 percent fall to the bottom quartile. Those in the upper middle-income quartile as children have an equal probability of ending up in any quartile as an adult, while those in the lower middle quartile as children are more likely to stay in the same quartile (28.2 percent) or move to the bottom quartile (34.8 percent), rather than move up to a higher income quartile as adults.

Family income, however,

is not as strong a predictor of offspring educational attainment and occupational class as parental education and occupational class are. Wilson and her fellow researchers suggest that different educational aspirations, academic ability and lack of information about higher education may be as much of a barrier to mobility for youth as lack of income to pay for higher education.

"We think of education as a great equalizer, but in reality, those who attend college come from predominantly higherincome families, and those who do not attend college tend to come from lowerincome families," says Wilson.

However, she adds, "we found that it's not about the money it takes to go to college." Rather, higher socioeconomic parents give their children something additional, in terms of social connections; they instill in their children an understanding of the value of education and expectations for their future, all of which encourages them to attain higher educational levels. Lower socioeconomic families do not pass along those same values and expectations, Wilson says.

"There is no doubt that education is still a way for

an individual to move up the economic ladder, but the education system as a whole continues to reinforce the social classes," she says. Therefore, she suggests that government or educational policymakers should concentrate on giving lowincome children a better chance in terms of family expectations and education in order to improve intergenerational mobility in the United States.

"If it's about money, then we need more financial aid," says Wilson. "But if the difference in educational attainment is due to parental expectations, then we need to figure out how to address that in families where the expectation doesn't exist."

In the future, Wilson and her colleagues hope to better quantify how other channels besides education affect social mobility. Specifically, she would like to examine the role of an offspring's choice of occupation and assortative mating (marrying within a similar economic class), in social mobility.

Says Wilson: "As inequality in the United States increases, it's important to look at how mobile society is and what causes or impedes social mobility."

For more information, visit www.kent.edu/magazine.

ONLINE EXCLUSIVES



This past summer, Kent State economics student *Jera Oliver* was selected to attend the American Economic Association Summer Program and Minority Scholarship Program held at Duke University. She received a full scholarship from the American Economic Association and designation as a National Science Foundation Research Experiences for Undergraduates Scholar.

To read more about Oliver's

experience and research, visit

www.kent.edu/magazine.

Social Mobility by the Numbers

- More than 70 percent of those in the top income quartile as adults were in the top two income quartiles as children, with 44 percent of them having been in the very top quartile.
- Similarly, 45.9 percent of those in the bottom quartile as adults had been in the bottom quartile as children, and 70.9 percent of those in the bottom quartile as adults had been in the lower half of the income distribution as children.
- A child from the highest income quartile is almost five times as likely to graduate from college as a child from the lowest income quartile.
- On average, individuals whose parents worked in high-status occupations will earn \$85,719 and have 13.27 years of education, and 55.4 percent are working in high-status occupations themselves.
- Conversely, individuals from families where there was no parental worker will earn \$38,104 and have 11.98 years of education, and 23.8 percent are in high-status occupations. Individuals whose parents worked in low-status occupations have an income of \$50,386 and 12.19 years of education, and 23.7 percent are in high-status occupations.



media mindsets



By Rachel Wenger-Pelosi, '00

im Magaw, a junior news major in Kent State's School of Journalism and Mass Communication, considers himself technologically savvy. As editor of the summer 2007 Daily Kent Stater, he assisted with the newspaper's Web site. He regularly perused various other media sites to gather information he needed to do his job, and, of course, for fun.

Those uses of technology for work and recreation are just some of the ways he takes advantage of the Internet. A few experiences in the last year have left Magaw, a journalist-intraining, reflecting on just how much technology has infiltrated his college experience.

"I remember at one point, walking on campus, looking around me to find that every single person had white ear buds in their ears," he says. "And in our residence halls everyone has their iTunes playing and is sharing music with one another."

In the classroom, Magaw says that sometimes students think that if they cannot find information online, it must not exist. Students take their laptops wherever there is wireless access on campus, are on their cell phones all the time, and are iPodcrazy and addicted to the Internet.

"In my dorm sometimes all I can hear is the annoying beep of

the instant messenger bubbles popping up," he says.

Technology is creating a much less than traditional residence hall experience.

"I didn't know anyone in my dorm last year. I did meet people from the Honors College because people in the group had the idea of starting an Honors College Live Journal community, so I met a bunch of people through that," he says. "The first week of class, we went to a barbeque to meet each other, and a group of kids sat together because they had already met online. They had friends the first weekend they were at school."

For today's college students

who grew up with Internet access, using technology to consume and gather information becomes second nature. Students expect a buffet of options when deciding how they want to satisfy their curiosity or need for news.

Believe it or not, Magaw says, students on campus do read the paper version of the *Daily Kent Stater* because "it is lying around classrooms and is available on campus."

"But I read 70 percent of my news online, including the *Washington Post*, CNN and the *New York Times*. At home, I might have CNN on my television in the background, but I like reading news more than watching it. If there is a story that looks appealing, but it is only available in video form, I won't watch it. I don't have the time to sit and watch it load," he says.

The future of news

"Age plays a factor with the use of technology, but it certainly doesn't explain all of it," says Dr. **Stan Wearden**, director of the School of Communication Studies. "There are people my age walking around with iPods, and there are young people who are still into buying turntables."

Wearden and several colleagues within the College of Communication and Information have created Media Mindsets, a think tank of sorts, as an interdisciplinary research group focusing on questions of future directions of media and the mindsets of users.

In its beginning stages, the scholars took an interest in young people's use of the media, but then their pursuit broadened, says Wearden.

"We wanted to explore questions like 'Can we pair up media user personality and lifestyle traits with media selections?' 'What needs drive people to make their media selections?'" he says.

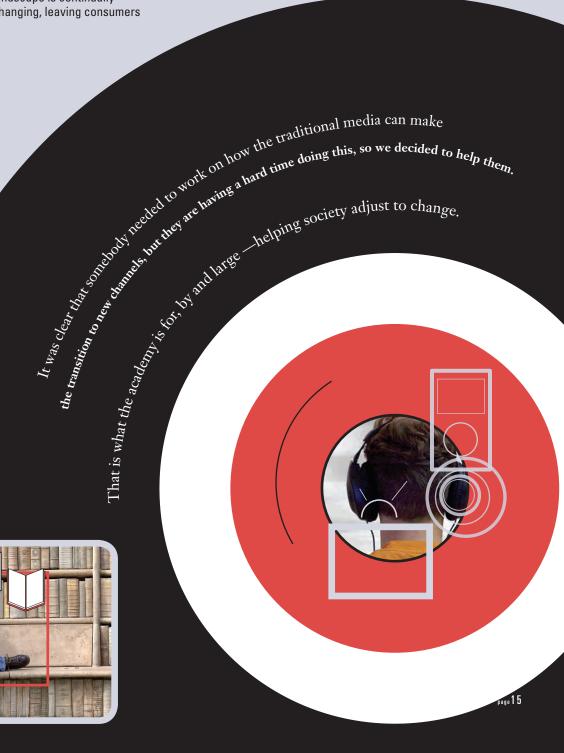
While the term "media" encompasses the traditional venues — radio, print and television — the current landscape is continually changing, leaving consumers

and media outlets alike wondering what will develop in the next year, or even in the next month.

Today, media consumers have a bevy of choices when it comes to receiving their daily doses of news or entertainment. They can read the newspaper, browse the Internet, download and listen to a podcast or watch a video online. Different from any previous time in history, though, is the consumers' ability and interest in having their own voices heard — whether by posting personal videos to YouTube or by blogging about a hot news topic.

Now more than ever, consumers have the power to capture and respond to news in a manner that has owners of media outlets scratching their heads, wondering how to satisfy their audience.

Statistics show that newspaper readership, advertising rates and evening news watching are declining, but use of the online





environment is increasing, which leaves media with the task of serving audiences with a Web presence, says Dr. James L. Gaudino, dean of the College of Communication and Information.

"It was clear that somebody needed to work on how the traditional media can make the transition to new channels, but they are having a hard time doing this, so we decided to help them. That is what the academy is for, by and large — helping society adjust to change," says Gaudino.

The College of Communication and Information (CCI) has a unique vantage point for this sort of undertaking: It houses the

School of Journalism and Mass Communication. the School of Communication Studies and the School of Visual Communication and Design. Together, the schools take an audience perspective as mass communicators, in one form or another, while the School of Library and Information Science, also housed in CCI, has always taken a user perspective, as aggregators of knowledge.

"It's not every day that mass communicators and information-seeking experts have the opportunity to work shoulder-to-shoulder," says Gaudino.

When it comes to information science and the various studies of communication, we tend to Dr. Stan Wearden think of them as very different fields, he explains. Within the college, however, we see the studies as being within the same field, but with different perspectives.

"Mass communication has always looked at communication's effect on society and its effect on audiences, while information science has looked at information-seeking behaviors. Trying to merge these two perspectives is what Media Mindsets really comes down to," says Gaudino.

The modern media model

After several Media Mindsets gatherings, the group decided it needed a model from which to base its research.

Previous models and ways of thinking about relationships between message "senders" and "receivers," which dominated past research, posed some problems, says Wearden. The models were linear, looking solely at the relationship from media to consumer and consumer to media, which fails to account for any interactivity or simultaneity.

"In terms of today's media, consumers are more simultaneously interactive," he says. "People text-message, use their laptops and watch television, all at the same time. People multitask media in a way that they didn't do as much before, and they especially multitask at their computer. They can read news on the CNN Web site, check their e-mail and work on a project, all while NPR is playing through their speakers."

The Information Exchange Model, developed by Wearden and Dr. Paul Haridakis, professor of communication studies and Media Mindsets member, places emphasis on the consumer or the audience, and looks at consumer needs and motivations, social and psychological dispositions, and, overall, increased choice and

greater relative power for the "user."

In terms of users, another group objective was to look at who does what with media and why.

"Now it is so much easier to produce messages for the media that you see it all the time. Every time there is a story, the media ask consumers to send their videos and photos of the event. We're not just consuming information anymore; we're also producing and disseminating information," Wearden says.

Consumers are also producing their own information by blogging and using social networking sites like MySpace or Facebook.

> Still, some media users aren't creating as much information as their counterparts, says Wearden, "Media Mindsets wants to know what the difference is between people who use the media both for receiving and producing information and those who are more passive users — people who receive information online but who don't produce information."

Currently, Media Mindsets is working to generate some sort of metric for tying in personality, like psychological traits, to consumers' media selection decisions. The group hopes to trademark and then market the model to the media, Wearden says.

"We could tell the media who their users are and how to reach the users they are not currently reaching, because we will know why people use different forms of media based on our research," he says.

The findings will allow Kent State to provide traditional media with specific information about their audience via a profile that describes whether the consumer is utilizing newspaper and television, looking online for information or viewing multiple channels simultaneously.

"We can then tell traditional media which kind of person fits this kind of profile, has likely already switched, that this kind of person is switching, or that this person is going to look at two different channels simultaneously," says Gaudino. "This gives media a better sense of where their audience is, from a psychological perspective, and how to reach new media users."

For more information, visit www.kent.edu/magazine.



ONLINE EXCLUSIVES

Communication studies professor Paul M. Haridakis, J.D., Ph.D. '00, conducts research in media uses and effects, law, public policy, new communication technologies and media ethics. Read about his latest project at www.kent.edu/magazine.



the eight scientists with rankings of first or second; Kopytine is the only physi-

Dr. Carrie Schweitzer, associate professor of geology at Kent State Stark, shows one of the fossilized crab specimens she is studying. Photo by Bob Christy, '95

cist from a United States institution listed in the top two slots. The Science Watch ranking relies entirely on cita-

tions, making it completely objective. To determine the rankings, Science Watch tracks the number of citations received by scientists in fields ranging from immunology to biostatistics in papers published in peerreviewed journals.

Kopytine works in collaboration with other physicists at Kent State's Center for Nuclear Research, which is part of a large international collaboration (deemed STAR) that studies nuclear collisions at Brookhaven National Lab. The Kent State group was among the 13 groups that founded STAR, which has grown to include 52 institutions representing 12 countries.

Kopytine earned a doctorate in physics from the State University of New York-Stony Brook, and has been a Kent State research associate since 2001.

Fossil crabs are focus of Kent State Stark researcher

Dr. Carrie Schweitzer, associate professor of geology at Kent State Stark, recently traveled to the Natural History Museum in Vienna, Austria, to study thousands of fossilized crab specimens.

Previously unexamined, these ancient crabs from the Prosopidae and Galatheidae families existed more than 150 million years ago during the Jurassic period.

"Studying crabs helps determine various aspects of biodiversity and patterns of evolution, such as when arthropods diversified," says Schweitzer. Arthropods, which include crabs, insects, lobsters, spiders, millipedes and ticks, are a large part of the earth's ecosystem. As a source of food, crabs also are important economically.

For the full story, visit www.kent.edu/magazine.

New provost to lead academics, research

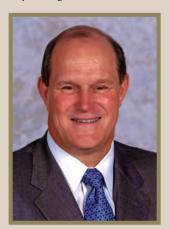
his past July, Dr. Robert **G.** Frank became senior vice president for academic affairs and provost, the chief academic office for the university's eight-campus network.

Frank has a long history in administration, academic service and professional practice. A board-certified clinical psychologist, Frank previously was dean and professor of clinical and health psychology for the College of Public Health and Health Professions, University of Florida, Gainesville.

"I was pleased with the positive feedback from our academic community about Dr. Frank's potential to lead expanded university research efforts, as well as the all-important initiatives for student success," says Kent State President Lester A. Lefton.

Frank, who became dean at Florida in 1995, also directed the Florida Center for Medicaid and the Uninsured. Prior administrative and academic posts include service at the University of Missouri, Columbia, the National Academy of Sciences, the National Institute of Disability and Rehabilitation Research and the Missouri Department

of Health. He holds undergraduate and graduate degrees from the University of New Mexico and is a fellow of the American Psychological Association.



Kent State University Provost, Dr. Robert G. Frank. Photo by Bob Christy, '95

Scientist honored for "Hottest

Research Worldwide"

Kent State Department of Physics research associate Dr. Mikhail Kopytine was ranked as the second most cited scientist worldwide for 2006 by the periodical Science Watch.

Kopytine shares the second-place ranking with six other scientists. Three physicists are listed among



University.

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Taking a CLOSER!

Undergraduate research myths debunked

By Anya R. Cottage, '05, MBA, '07

excessive coursework, long hours, meticulous details, scarce guidance and, of course, unrelenting stress. These are just a few of the mythical afflictions unknowing individuals commonly associate with undergraduate research.

However, Angela D'Orazio, '07 and Doug Antibus, '07 describe their undergraduate research experiences in a strikingly different manner.

"Undergraduate research is so much more than an intellectual pursuit," says D'Orazio, who recently received a degree in sociology and psychology from Kent State's College of Arts and Sciences. "It is a personal and emotional experience that teaches you about your capacity to work independently and your ability to persevere."

Antibus, who recently received his bachelor of science in biology, agrees with D'Orazio. "Simply put, performing undergraduate research greatly broadens your horizons," says Antibus. "It not only allows you to study a specific topic of interest intensively, but it also teaches you invaluable problem-solving skills."

At Kent State, undergraduate research is a term used to describe academic investigations or creative activities that are collaboratively pursued by undergraduate students and their respective faculty mentors. Such pursuits most

commonly take place in the sciences, arts, humanities and social sciences.

Both Antibus and D'Orazio were Honors College students who pursued research as part of their senior honors theses. The Honors College, which will celebrate its 75th anniversary in 2008, is a place where students are encouraged to explore specific topics in depth, conducting research or creating artistic work with the guidance of a faculty member.

But honors students are not the only ones who can take advantage of research opportunities. A number of research programs at the university, including Students Achieving and Reaching for Success (S.T.A.R.S.), the McNair Scholars Program and Undergraduate Mentoring in Environmental Biology (UMEB), as well as individual investigation courses, provide undergraduates with ample opportunities to pursue research projects.

D'Orazio's academic investigation, under the direction of Dr. Susan Roxburgh, associate professor of sociology, focused on the psychological

disorder of dissociation and, specifically, on its propensity to occur among children reared in poverty.

Due to the challenging nature of D'Orazio's project, she had the opportunity to learn various high-level statistical techniques, many of which undergraduate students rarely encounter. Nevertheless, D'Orazio believes that the most important lessons learned from research are universal, rather than specific to any one field of study.

"You never forget the underlying lessons research teaches you," says D'Orazio. "You learn to ask questions and to thoroughly review all outcomes. Most importantly, though, you learn to think critically."

Roxburgh agrees. "Research gives undergraduate students the opportunity to more fully develop their analytical abilities," she says. "It also demystifies the concept of research and builds both communication and teamwork skills."

Antibus, under the direction of Dr. Robert Heath, professor of biological sciences and director of the Water Resources Research Institute, focused on biogeochemistry



(Large circle) Doug Antibus, '07 (Small circle) Angela D'Orazio, '07 Photos by Bob Christy, '95

and, specifically, on the chemical processes occurring within the environment that are carried out by micro-

organisms.

Antibus, much like D'Orazio, was regularly challenged during his research experience. Nevertheless, he remained committed, gaining motivation from his advisor and, ultimately, learning valuable lessons.

"Dr. Heath was my biggest inspiration. He challenged me to come up with independent experimental designs to test my ideas," says Antibus. "Sometimes it was very frustrating because he refused to just hand me an answer. But, in the long run, it taught me a lot about conducting research and even more about myself."

Recently, Antibus was

the three win-Portz Scholars competition, best undergraduate scholarly

Both D'Orazio and Antibus, research is one of Kent State's

is absolutely a good thing," says D'Orazio. "It strengthens Kent State's reputation among academically strong students, and it also enhances the professionalism of its graduates."

Additionally, Roxburgh believes undergraduate research improves the university's ability to retain undergraduate students and the overall quality of its research.

"There is a clear relationship between student-faculty interaction and retention levels," says Roxburgh. "Beyond this, an undergraduate brings a fresh perspective to a research project, enhancing its value."

As a result of their experiences, both D'Orazio and Antibus would highly recommend undergraduate research to others.

"Getting involved in undergraduate research gives you the opportunity to learn far more than a typical class can

teach," says Antibus. "And, if nothing else, it improves your résumé or it translates into stronger letters of recommendation for graduate school."

In the future, D'Orazio's undergraduate research experience will serve her primarily as supplemental knowledge. As an employee at a nonprofit organization that strives to understand and reduce poverty, D'Orazio's thorough understanding of dissociation and its possible consequences are beneficial to her as well as others.

Antibus' undergraduate research experience, however, will more readily serve him on a day-to-day basis as he pursues a master's degree in ecology and evolutionary biology at Kent State.

Despite pursuing very different paths both during and after college, D'Orazio and Antibus found the advantages of conducting undergraduate research surprisingly similar.

Both had the opportunity to make unique contributions to their respective fields of study. Both learned invaluable critical thinking and problemsolving skills. And, perhaps most importantly, both discovered the importance of passion and perseverance.

With the help of university-sponsored initiatives, Dr. Joseph D. Ortiz, associate professor of geology and co-chair of the university's Undergraduate Research Action Committee, hopes that one day all undergraduate students at Kent State will take advantage of the opportunity

to perform research.

"Problem-solving skills are highly transferable. They prepare you for whatever direction life may take you," says Ortiz. "As such, it is essential for all undergraduate students to acquire and hone these skills before they leave Kent State."

Interesting research, valuable skills, unforgettable experiences, individual attention and, of course, unprecedented opportunity. These are just a few of the genuine characteristics seasoned under-graduate researchers and their respective faculty mentors commonly associated with undergraduate research.

For more information about undergraduate research, visit www.kent.edu/magazine.

ONLINE EXCLUSIVES



Kent State's Division of Research and Graduate Studies is exploring ways to facilitate interactions among various undergraduate research programs and streamline the process for initiating new efforts. The centralization also may permit the full implementation aProgram, designed to give student researchers and their respective faculty mentors the opportunity to compete for modest research grants. Read more at www.kent.edu/magazine.

Research on Arctic melting yields clues

Climate of the Earth like

A vast expanse of ice sits atop the northernmost region of the Earth like a dense, skewed hat. And similar to a hat, one side of the ice traps heat below its surface, while the other side reflects the rays of the sun back into the atmosphere.

While this process may seem elementary, it represents a delicate natural balance that has evolved over millennia, and one that has allowed wildlife to flourish in an unforgiving environment.

It is in these places of extreme beauty and harsh climates that we first see evidence of change in the natural world, says Dr. **Joseph Ortiz**, Kent State associate professor of geology and co-director of the Water Resources Research Institute.

"As sunlight shines down onto the surface of the Arctic, much of it gets bounced back up to space and is lost from the climate system," Ortiz says. "As you start to melt that ice, you replace it with darker surfaces. The darker surfaces tend to absorb heat more readily than the snow and ice."

Scientists agree the effects of climate change appear in the Arctic before becoming apparent in other regions, but without an understanding of how the Arctic climate system functions, it is difficult to predict how it might change.

"This year, there have been some reports that the sea ice in the Arctic is melting much faster than climatologists had predicted. By going to the Arctic, we are hopeful we can understand what's driving these changes," Ortiz says.

Arctic odyssey

This question prompted Ortiz and other scientists to embark on a journey

to the Arctic as part of the Healy-Oden Trans-Arctic Expedition (HOTRAX). The collaborative project, funded by the National Science Foundation, involves several international and U.S. institutions, including Kent State University, Ohio State University, Old Dominion University (Norfolk, Va.) and Montclair State University (Montclair, N.J.).

Through field research, HOTRAX scientists are exploring how the Arctic Ocean basin was formed, the nature and physical characteristics of the ocean itself and the Arctic's role in climate change.

Ortiz describes his first trip to the region via the Healy-Oden, a displacement icebreaker vessel, as "otherworldly."

"As far as the eye could see was just flat white. Picking out the horizon was very difficult at times and of course the sun didn't set because we were there in the summertime. It [the sun] just came down slightly toward the edge of the horizon," Ortiz says. "It was one of the most starkly beautiful places I've ever been."





After moving through sheaths of ice, protecting calm waters below, researchers collected "cores," or 10- to 15-meter-long samples of sediment, from the Alaskan Shelf during the first HOTRAX expedition and from the central Arctic Ocean during the second expedition. On both cruises, they set about mapping the sea floor to learn more about how the climate system works over long time intervals.

Their tasks took them to largely uncharted territory; after all, scientists know more about the surface of the moon than the Arctic sea floor.

As a paleoclimatologist,
Ortiz studies the physical,
chemical and biological
properties of sediment and
uses his findings as a means
to understand how climate
changed in the past. Not
unlike a detective, he gathers
evidence using scientific
instruments and old-fashioned
observation, constructing a
history of the material at hand.

The primary objective of the first HOTRAX mission was to establish paleoclimate records for the Holocene, a time period encompassing the last 10,000 years, using cores taken from the continental shelf margin north of Alaska.

Ortiz explains that the cores provide a map of the ocean's history. Similar to tree rings, the core samples offer scientists detailed information on the past.

The team, while continuing to analyze data and evaluate results from the cores, presented their preliminary findings at a meeting of the American Geophysical Union.

The human factor

For Ortiz and the many other scientists who study the Arctic and grapple with issues of climate change, the question is not, "Is there or isn't there climate change?" but rather, "What role do people play in climate variability?"

"It's certainly true that over many different kinds of scales the earth goes through natural cycles. And on very long time scales, it's gone through tremendously dramatic changes," Ortiz says. "What's different about modern history [the last 200 years], is the rate at which carbon dioxide is increasing in orders of magnitude higher than what we've seen during most of geologic history."

From the last glacial maximum to the beginning of the Holocene, atmospheric carbon dioxide increased by about 80 parts per million. In contrast, from the start of the Industrial Revolution to today we have seen a similar increase in atmospheric carbon dioxide levels. In short, what took nature 20,000 years to complete has happened in approximately 200 years.

For skeptics of climate change, Ortiz says that in addition to the geologic record, evidence includes an accelerated rising of sea levels, displacement of polar species by subpolar species and rapidly decreasing amounts of sea ice.

While it is true that humans have been adapting to their environments for thousands of years, the success with which humans adapt to climate change in the modern world will depend largely on their economic status and access to resources, Ortiz says; in other words, the less developed nations will more directly suffer the consequences of a changing climate.

The process has already begun to affect some organisms and plant life. As nonnative species of plants and animals encroach upon the habitats of native species, or habitats suddenly shrink or disappear, we get a glimpse of a future world that looks very different from the one we were born into, Ortiz says.

The power to halt climate change lies with the developed world, where 25 percent of the world's population currently uses about 75 percent of the world's resources, he says.

"Going to an economy that's more hydrogen-[based] or less carbon-based doesn't necessarily mean decreasing your standard of living; in Western Europe, where the standard of living is similar to that of the United States, carbon dioxide emissions are much lower," he says. "There are things we could do now that would have a big impact."

For more information, including a podcast interview with Ortiz, visit www.kent.edu/magazine.

ONLINE Exclusives



Visit www.kent.edu/magazine for these exclusive stories.

Arctic trip provides invaluable experience for Honors undergrad

When it came to writing an honors thesis, senior geology major *Lyanne Yurco* already had a strong base from which to work. In June 2005, she accompanied Dr. **Joseph Ortiz**, associate professor, and one other student on a trip to the Arctic to study climate change.

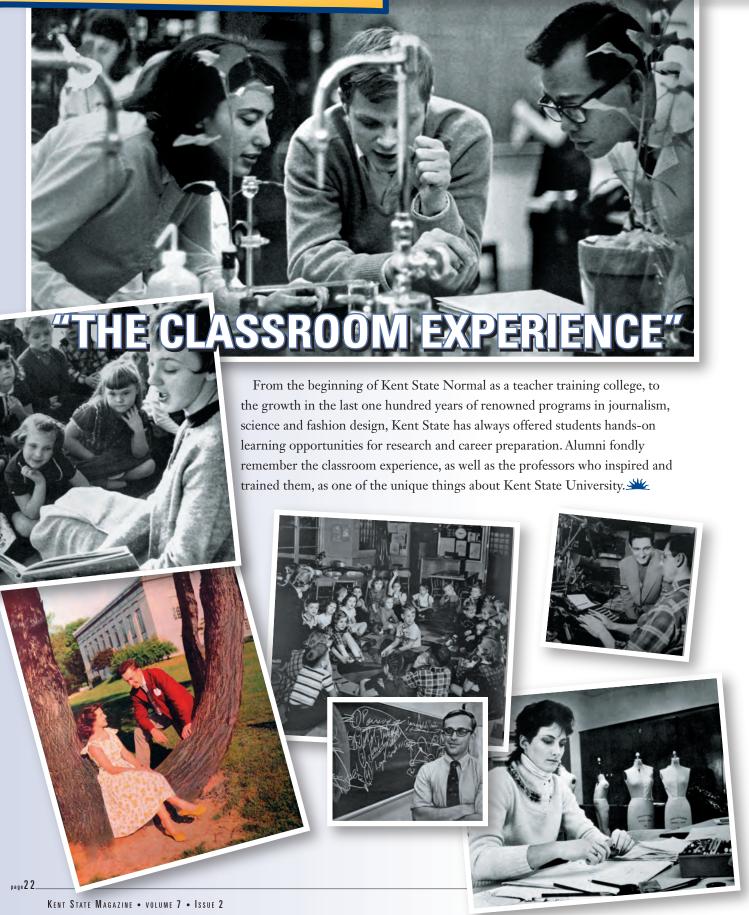
Tiny Country Makes Big Impression on Kent State Contingent

Twenty-six Kent State faculty, students, GK-12 (Graduate Teaching Fellows in K-12 Education) graduate student fellows and K-12 science teachers recently took a research trip to Iceland.

Simple Things You Can Do for the Environment

Energy conservation efforts impact both your pocketbook and the natural world. Read about some simple things you can do to conserve energy.





CLASS NOTES

'38

Frank P. Pamer, B.S. '38, J.D., Minneapolis, Minn., taught for 10 years, served as an officer during World War II and was an attorney for more than 20 years.*

'56

Richard J. Velzy, Midlothian, Va., directed Kent State's Trumbull Campus and Salem Campus in the early 1960s as executive dean. Velzy also has worked in higher education and has formed an executive search committee. Velzy is currently retired.**

64

Ann C. Greiner, M.A. '78,
Miamisburg, Ohio, is a retired
naval officer.* • Vivian H.
(Harper) Pemberton, M.A. '66,
Winter Haven, Fla., is professor emeriti at Kent State.
Pemberton was a guest speaker
at the Hiram College Hart Crane
Symposium in March 2007.*

'69

Ty Fleming, Shadyside, Ohio, is a teacher, athletic director and head football coach for Shadyside Local School District.

'70

Grace E. (Williamson) Eckley, Ph.D., Golden, Colo., recently published *Maiden Tribute: A Life* of W.T. Stead.

'71

Candy (Martelet)
Lautenschleger, Massillon,
Ohio, is a program director for the National Healing
Corporation at The Wound
Healing Center of Affinity
Medical Center.*

'7!

Betsy E. Glad, Bixby, Okla., recently received the Presidential Award for Excellence in Mathematics and Science Teaching.

'76

Albert E. Hanson, Mentor, Ohio, is retiring after 31 years in elementary education.*

'78

Brian J. Blazina, Naperville, Ill., founded an energy savings, investment and consulting business after retiring from the BP Group. Blazina also volunteers for the American Cancer Society for an annual fundraising event.* * Arthur W. Daniels, Avon Lake, Ohio, is a teacher and coach for Westlake City Schools.*

'79

James L. Raper, Birmingham, Ala., was recently promoted to research associate professor of medicine and clinical associate professor of nursing at the University of Alabama. He was also appointed as the director of the HIV/AIDS and Infectious Disease clinics. * Darlene A. (Maciejewski) Biese Schultz, Stevens Point, Wis., writes a monthly column about seniors for the Stevens Point Journal. Schultz also teaches a fiction writing class for seniors and is working on a novel.

'81

Jose A. Gonzalez-Taboada,
D.B.A., Caguas, will be a visiting professor in accounting at
Bowling Green State University
for the 2007-08 year.* * Jeff
S. Kurtz, M.A. '89, Ravenna,
Ohio, is the athletic director for
Hudson Middle School. Kurtz
was named the 2007 Middle
School Athletic Director of the
Year by the NEO Interscholastic
Athletic Administrators
Association.*

'82

Brenda L. (Stefanik) Bartock, Spencerport, N.Y., was recently promoted to director of program development at Visiting Nurse Service of Rochester and Monroe County Inc.

'84

Tim Martin, Uniontown, Ohio, is a licensed social worker with the Area Agency on Aging 10B Inc. Martin is also an adjunct faculty member in the School of Family and Consumer Studies at Kent State University.

'85

Dottie Marsh, M.S.N., Akron, Ohio, is retired and now serves as a volunteer nurse manager for a free clinic, Marsh recently received an award for excellence in service to the community from Summit County Medical Society.* * Joanna A. (Franko) McQuaid, Villanova, Pa., is an executive vice president of merchandising at MothersWork Inc. in Philadelphia, Pa. * Mary E. Strongoli-Ley, Cuyahoga Falls, Ohio, is a kindergarten teacher for Cleveland Public Schools.*

'87

Michael Beck, M.B.A.,
Cincinnati, Ohio, is the president
of MidwestLatino and received
the 2006 Spirit of Cincinnati
Diversity Award. * William
H. Powers, Export, Pa., is the
owner of PixController Inc. *
Chas Withers, Lakewood, Ohio,
is a senior managing director for Dix & Eaton and was
recently named to the executive
committee and board of directors for the firm.

'88

Brian D. Kelley, M.P.A. '90, Hartville, Ohio, was named the GMIS Professional of the Year for 2006.

'89

Aundrea G. Cormier, Billings, Mont., is a recreation therapist for St. Vincent Healthcare. Cormier is also a Montana state representative for the American Therapeutic Recreation Association Medicare Project.*

'90

Michelle Rankins, Maple
Heights, Ohio, recently received
a master's degree in English
from Cleveland State University.
Rankins was also invited to
speak about Langston Hughes
at an academic conference in
China.*

'91

Edna J. (Henderson) Bryner, B.A. '96, Newton Falls, Ohio, is a registered nurse with Forum Health in Cortland, Ohio. Bryner recently received the Individual Excellence Award from Ohio Arts Council for poetry.*

'92

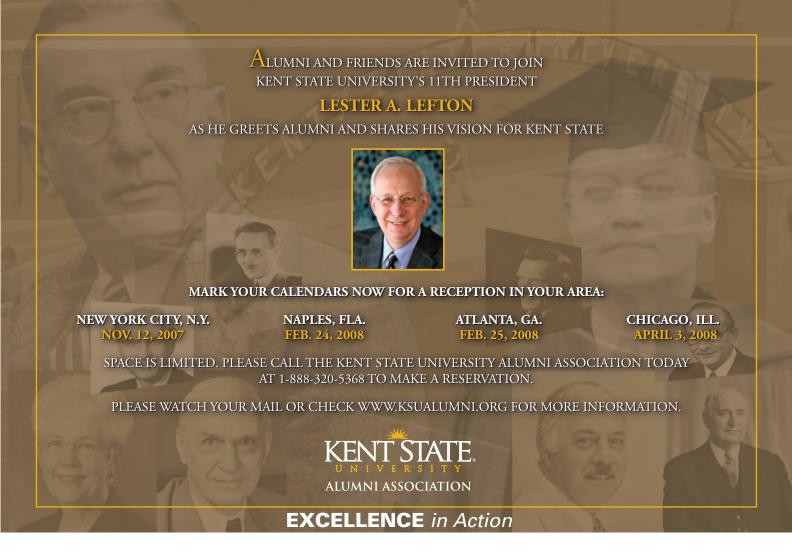
Leslie A. (Monaco) Page, Tampa, Fla., is a residence life coordinator for the University of South Florida.

'94

Deborah J. Boyce, Youngstown, Ohio, was recently promoted to project coordinator in the utility business unit at the Davey Resource Company. Boyce is also the president of the Ohio Utility Arborist Association. ❖
M. Catherine Jordan, Cleveland, Ohio, is an intervention specialist and special education teacher for South Euclid-Lyndhurst City
(Continued on page 25)



Richard D. Fender, '92, M.A. '98, recently succeeded in changing an Ohio law regarding the sale of state-owned canal lands. He spent more than three years campaigning and lobbying for the new law, which requires the Ohio Department of Natural Resources to consider the canal land's historical, ecological and recreational value before disposing of the land. Fender also is co-author of "Casting a Weak Net: Political Party Web Sites in 2000" in State of the Parties, 4th ed. (Rowman and Littlefield, 2003), and helped write "Fruitful Collaborations," a 2002 Hudson Institute/Bliss Institute survey of government-funded faith based programs in 15 states.



President Lefton Meets Kent State Alumni

Alumni and friends gathered at several receptions this fall to remember, reminisce and talk about the future of the university with Kent State's 11th president, Dr. Lester A. Lefton.

The regional events were scheduled in Washington D.C and Pittsburgh, Pa. Lefton greeted alumni and shared his vision and priorities for Kent State University. He outlined the university's defining characteristics as being academic excellence, a commitment to student success, access and affordability, and discovery and innovation. And, he emphasized, Kent State will continue to be a productive and proactive partner in the public good.

Additional regional alumni events will follow giving Lefton more opportunities to meet alumni and interact with the Kent State community. On Nov. 12, Lefton will visit New York, N.Y. In February, he will travel to Naples, Fla., on the 24th and later to Atlanta, Ga., on the

the 24th and later to Atlanta, Ga., on the 25th. A reception will be held in Chicago on April 3.

The events, sponsored by the Kent State Alumni Association, are open to all Kent State alumni. However, space is limited. Please call the Kent State Alumni Association at



 $\label{lem:continuous} \textbf{President Lester Lefton greets Kent State alumni.}$

1-888-320-5368 to make a reservation.

For more information about the alumni receptions being hosted by Lefton, please watch your mail or check www.ksualumni.org.

Amanda Yoho, '07

Undergraduate research offers invaluable experience

By Anya R. Cottage, '05, M.B.A. '07

Despite the additional workload and, at times, long hours, *Amanda Yoho*, '07, firmly believes her undergraduate research experiences have helped prepare her for graduate work and, more importantly, for her future career.

"Performing research as an undergraduate gave me an unparalleled sense of accomplishment," says Yoho. "It helped me narrow my scope of interest with respect to graduate research and also helped me form opinions about my future professional pursuits."

Yoho, an Honors student who received a physics degree from Kent State's College of Arts and Sciences in May 2007, began her undergraduate research as a junior. During the summer of 2006, Yoho participated in a 10-week internship with NEO Beam Alliance Limited in Middlefield, Ohio.

"At NEO Beam, I worked almost exclusively on experimental projects and had the opportunity to work very independently," says Yoho. "Nevertheless, I felt like an integral part of the team. My ideas and data analysis were taken very seriously and were often pursued."

During her senior year, Yoho further supplemented her first undergraduate research experience by pursuing a senior honors thesis under the direction of Dr. **Peter Tandy**, professor of physics.

"I greatly enjoy working with undergraduate researchers," says Tandy. "They bring unique curiosity and untarnished eagerness to a project, which often forces a seasoned researcher to reevaluate situations and rethink explanations."

Specifically, Yoho's Senior Honors Thesis focused on theoretical particle physics. As such, she was given the opportunity to further explore and utilize various physics theories and techniques, including quantum field theory, chiral perturbation theory and mathematical renormalization.

Due to the challenging nature of Yoho's undergraduate research, she spent a significant portion of her free time researching independently and familiarizing herself with relevant journal articles and textbooks.

Although the time required to conduct research was substantial, Yoho believes she acquired skills and abilities that



hoto by Bob Christy, '95

served her well as a student at Kent State, and will continue to benefit her in the future.

"Anything and everything that can go wrong will go wrong when performing an experiment," says Yoho. "So, trouble-shooting and problem-solving are two skills undergraduate researchers learn very quickly."

"Undergraduate research gives students a precise sense of their true interests and provides a deeper understanding of the subject-matter being taught," she adds. "Although it may seem like a chore to purse undergraduate research opportunities, it is ultimately a huge benefit academically."

Clearly, Yoho's undergraduate research experiences have served her well. She is currently enrolled in a Ph.D. program at Case Western Reserve University and, one day, hopes to perform theoretical research as a university researcher.

"When undergraduates are welcomed into research programs, they have the opportunity to actively participate in the creative pursuit of both new knowledge and its subsequent applications," says Tandy. "It puts a human element into the equation and provides a much fuller education."

(Continued from page 23)

schools. Jordan has been honored twice in Who's Who Among American Teachers.**
Gina M. (Vanpelt) Schuck,
Glenburn, Maine, is a perinatal sonographer for Maternal Fetal Medicine of Eastern Maine.
Schuck is also a coach for the field hockey team at John Baptist Memorial High School.*

* Mark P. Urycki, Tallmadge,

Ohio, is the new director of programming and operations for WKSU-FM.

'96

Brian C. Miller, Cincinnati, Ohio, is the head football coach and director of admissions at Purcell Marian High School.

'QQ

Lauren A. Borkowski, Ph.D., Naperville, III., recently defended her dissertation and was declared a Ph.D. in inorganic chemistry from George Washington University in Washington, D.C.

'99

Gina L. Chase, Eastlake, Ohio, is an account manager for Liggett Stashower. ◆ Brent Van Fossen, M.Ed. '02, Cuyahoga Falls, Ohio, was recently promoted to general sales manager

of Cox AutoMart.com for the Canton-Akron-Youngstown market.*

'00

Mark A. Palumbo, Hudson, Ohio, is a director of national sales for Gemco Medical.

'01

Mary McKenzie, M.S. '04, Medina, Ohio, is a geologist for (Continued on page 27)



Making a difference

Distinguished Teaching Award celebrates 40th anniversary

For 40 years, the Kent State Alumni Association has sponsored the Distinguished Teaching Awards to honor the university's most dedicated tenure-track educators. Below are profiles of four such celebrated individuals, one for each decade.

For a complete list of winners through the years, plus extended profiles of the faculty mentioned below and others, visit our Web site at www.ksualumni.org. We also invite you to share a memory of your favorite professor on the discussion board at www.ksualumni.org. Anna Riggenbach and Dana Rader contributed profiles to this story.

Dr. Carol Bersani (1977)

Dr. Carol Bersani, associate professor of early childhood education and 1977 Distinguished Teaching Award recipient, says with classroom dynamics constantly changing, the best approach to getting through to students is by communication.

"Every semester is a new beginning," she says. "Every group is different."

Getting to know her students, asking provocative questions and providing an avenue for students to make their thinking visible are just a few of the methods Bersani has found successful for getting through to students.

"Students are helped when they can relate theory to practice," she says. "(I try to) teach from an inquiry approach."

Giving students clear expectations and showing respect for them are also needed when teaching, but Bersani has found that students are not the only ones being taught.

"It is important for teachers to always be learning," she says. "I try to convey my passion for teaching and learning."

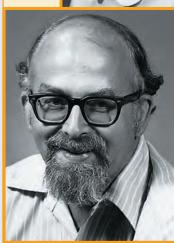
Dr. Jerry Lewis (1983)

Dr. Jerry M. Lewis says he thinks about teaching all the time. From television shows to the recent Monet

(Left) Dr. Carol Bersani was awarded the DTA in 1977. Bersani retired from the university. but she still works at the Kent State Child Development Center. (Below) Dr. Barb Hipsman has been teaching for 21 years, but her training is in journalism and politics. She received the DTA in 1994.







(Above) Although officially retired. Dr. Jerry M. Lewis, professor emeritus of sociology and 1983 **Distinguished Teacher Award** recipient, continues to share his enthusiasm for sociology and teaching in general. (Right) For the past 17 years, Dr. Murali Shanker has molded the academic careers of countless students. In recognition of his work, he was awarded one of the 2006 Distinguished **Teaching Awards.**

exhibit in Cleveland, he says he always looks for different ways to teach something.

Before lectures, Lewis sets objectives for what he wants students to learn and uses feedback from students to improve his lectures year after year.

"Good teachers have to know something and communicate it to students effectively," Lewis says. "I'm always depressed after a lecture, because what's in my brain never comes out of my mouth. I tell grad students, 'I should apologize to students from the first five years, because now I finally got it right."

According to Lewis, the moments that substantiate his teaching style are when students tell him they appreciate his teaching or they pursued a degree in sociology because of his class.

"The most effective teaching strategy by far is to have passion for the subject," Lewis says. "If you're not glad to be here, why should they be?"

Dr. Barb Hipsman (1994)

Dr. Barb Hipsman, associate professor of journalism and mass communication, says the benefits of teaching and receiving the Distinguished Teaching Award (DTA) are usually found in the long term.

"With teaching, it's never in the moment. That's when you're challenging them, so students look miserable. Nine times out of 10, payback comes later when something clicks and they tell me about it."

Hipsman was honored with the DTA in 1994, the first year she was eligible. She says receiving it early in her career has given her confidence in her teaching and has continued to motivate her to improve over the years.

"I'd come home in tears to my husband saying, 'I'm a failure.' The DTA showed me that teaching is for me and that teachers really do make a difference. Also, since I received it at the beginning of my career, I personally feel the need to strive to live up to what the honor means."

Dr. Murali Shanker (2006)

Dr. Murali Shanker, associate professor of management and information systems (MIS), never thought he'd become a teacher. Prior to his arrival in the United States, he worked for a few years as a systems analyst at Sarabhai Industries, a multinational company in Baroda, India. However, his thirst for greater knowledge soon led him to the classroom.

After being assigned teaching responsibilities during his doctoral work, Shanker fell in love with the profession. His passion for higher education has a simple root: the students.

"I am glad that I have the opportunity to contribute toward the learning of other students," says Shanker. "My goal is to find a way so that any student who wants to learn should be able to do it."

Kent State Trumbull to honor alumni

A new Distinguished Alumni Awards program has been initiated for Kent State University's Trumbull Campus. The program will kick off with an inaugural extravaganza on April 25, 2008.

Individuals who attended the Trumbull Campus for any length of time are eligible to be nominated as Distinguished Alumni. A large number of Trumbull attendees have completed bachelor's degrees at the Kent Campus, but they are still considered Trumbull Campus alumni if they attended classes there.

This new event will be a true "Trumbull Campus Family" affair, as announcements of the annual Trumbull Outstanding Faculty and Staff Awards also will take place. In addition, the

planning committee has established another much-needed tribute, the Founders Award, to honor individuals in the local community who have been instrumental in the life of the Trumbull Campus. It'll be a day of celebration and appreciation for Trumbull alumni, faculty, staff and friends. Make your plans to be there!

To obtain a copy of the Distinguished Alumni Award nomination form or an invitation, please contact Trumbull Development Officer Cheryl Lewis at 330-675-8807 or clewis19@kent.edu. The form can also be accessed on Kent State Trumbull's Web site at www.trumbull.kent.edu. Jan. 31, 2008, is the deadline for nominations.

(Continued from page 25)

ARCADIS in Cleveland, Ohio.

* Simone R. Richardson,
M.L.I.S., Akron, Ohio,
recently published The Zen of
Résumé Writing for Formerly
Incarcerated Persons. *
Bill Smelser, Smyrna, Ga.,
is the front desk manager
for Marriott International in
Atlanta, Ga.*

'02

Christina N. Cyrus, Wadsworth, Ohio, is an account manager in the account services department of Hitchcock Fleming & Associates Inc. * Stacey M. Yanetta, Cleveland, Ohio, is a stormwater consultant with Chagrin Valley Engineers. Previously, Yanetta was employed as a laboratory analyst.

'03

Christina M. (Bowman)
Hodgkinson, Uniontown, Ohio,
is employed by the Akron
Metropolitan Housing Agency
as a housing authority. &
Adam P. O'Brien, M.Arch. '04,
Portsmouth, N.H., was recently
hired as a draftsman at CBLH
Design in Cleveland, Ohio.

'Ω/Ι

Lauren A. (Davis) Batley,
M.Ed. '06, Akron, Ohio, is the
honors advisor at Cleveland
State University.* * Steven
R. Flaughers, Akron, Ohio, is
in outside sales for the Delta
Media Group. Flaughers is
also the assistant cheerleading coach and mascot coach
at Kent State University.* *
Nicole I. McCloskey, Mentor,
Ohio, was recently promoted

to senior account executive at Fahlgren Mortine Public Relations in Columbus, Ohio. * Kristy O'Hara, North Olmsted, Ohio, received the 2006 Smart Business Magazine Editorial MVP award for her writing and contributions to the department and company.*

'05

Bill Bartolini, Ph.D., Princeton, N.J., is a chief development officer for RFBD: Learning Through Listening.* Cynthia Lynn, Kent, Ohio, recently completed an exhibition design at the Kent State Fashion Museum for Lace: The Art of Needle and Bobbin.* Anne M. Sobota, Key West, Fla., is a business editor for The Citizen newspaper.

'06

Daniel P. Finley, Ravenna, Ohio, is an assistant media planner/buver in the media department of Hitchcock Fleming & Associates Inc. * Katie Greenwald, Akron, Ohio, is an account coordinator in the account services department at Hitchcock Fleming & Associates Inc.

◆ Ashley E. (Rodal) Joreski, Brunswick, Ohio, is a registered nurse for University Hospital Case Medical Center. * Mark K. Ridgill, Akron, Ohio, is a copywriter for Liggett Stashower. * Matt Scheip, Copley, Ohio, is an account coordinator in the account services department of Hitchcock Fleming & Associates Inc. * Eric R. Swary, Key West, Fla., is the assistant superintendent at the Key West Golf Course.



Faculty pioneers

Dedicated visionaries helped launch successful 'Normal College'

By Elizabeth Slanina, assistant director, Alumni Relations

When **Nina Humphrey**, longtime Kent State art professor, died in 1968, her *Record Courier* obituary noted that she was the last surviving member of the original 21 faculty members at Kent State Normal College, later named Kent State University. **John T. Johnson**, another of the original faculty, recalled in a WKSU-FM interview in the early 1950s that there were 25 instructors.

The true number lies somewhere around this figure.

Kent State Normal College's first president, John E. McGilvrey, had an incredible vision for the institution he took charge of in 1911. He dreamed of it becoming a four-year college, offering master's degrees and Ph.D.s, and he had an aggressive plan for growth. One can only assume that this man with such big dreams took equal care in selecting his first faculty members.

McGilvrey brought at least four faculty members with him from the Western Illinois Normal School in Macomb, Ill., where he had been employed as the head of the Department of Education and supervisor of the training school.

Two of those individuals were Johnson and May H. Prentice. Johnson began as director of science and agriculture and later became head of the photography department, based on his longtime hobby, when the agriculture department ceased to exist. He spent nearly 40 years teaching at Kent State before his death in 1957. Johnson Hall, now home to the Honors College, was named in his memory when it was originally constructed in 1957.

Prentice was the first female faculty member hired at Kent State Normal College in 1912. She originally served as director of the training school and later, director of elementary practice teaching and professor of education. She retired in 1930, and the Prentice Gate was dedicated in her honor. Funds for her gate were contributed by graduating classes.

George E. Marker was the first faculty member to arrive on Kent State's campus as it was being constructed in September 1912. As he recollected:

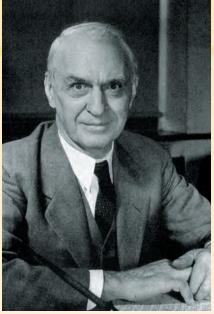
"There was no road where the paved driveway now extends across the college campus; no sidewalks of any kind; few outside lights; a very treacherous swamp existed between [the site of] Moulton Hall and the present [site of] Rockwell Library.

The brush and trees were so thick that one positively could not see from Merrill Hall down to Main Street" (From Phillip R. Shriver's *The Years of Youth*, page 38).

Marker had previously served as the dean of the school of education at Dakota Wesleyan University. He came to Kent State to be the head of the education department.

Even though buildings weren't fully constructed, McGilvrey saw to it that classes at Kent State Normal College began on May 19, 1913, two days after the end of the school term for Ohio's rural and village schools. He felt the urgency to respond to the tremendous need to educate teachers in Northeast Ohio and was determined to open his college as soon as possible. Ten more faculty members were hired in time for this important opening day: Dr. David Olson, Joseph and Lida Meredith Layton, Francis M. Dickey ("Miss Dickey"), Nina Humphrey, Margaret Dunbar, John Faught and Training Supervisors Gladys Fishleigh, Ruth Dowdell and Elsie Mabee.

Shortly after this group was hired, McGilvrey fell ill with typhoid fever, and Johnson continued the hiring process. He added **John W. Dinsmore** to head the Department of Rural Schools, **Harvey L. Eby** to be an extension teacher, **Clinton Van Deusen** to serve as the head of the Department of



John E. McGilvrey

Manual Training, **Lucy M. Tompkins** as instructor in public school reading, **Edith Olson** as training supervisor for seventh and eighth grades, and **Lemuel A. Pittenger** as head of the Department of English.

McGilvrey recovered from his illness and resumed responsibility for the hiring. He added **Ellis Seale**, a Latin professor at Berea College in Kentucky, in November 1913, to the faculty in field work and extension training when enrollment of Kent State Normal grew to 1.262 students.

In addition to the faculty, there were three other employees of Kent State Normal at its beginning: Adaline King, who served as school clerk; Helen Atkinson, assistant to the president; and of course, President McGilvrey.

Humphrey later recalled "the spirit of the students" as the most memorable thing about the early days of Kent Normal College. Many of the students, current teachers in local school systems, had no previous opportunity for instruction beyond high school and were extremely appreciative for any guidance and knowledge the faculty could provide.

These faculty members, from a variety of cities and backgrounds, came together in Kent to provide the college's first lessons. In 2010, Kent State University will celebrate its founding and the multitude of successes made possible by the original faculty and staff, as well as the many dedicated individuals who followed.

Original Kent State Faculty

	NAME	PREVIOUS POSITION	KENT STATE POSITION	EDUC*/ NOTES
1	Ruth Atkinson		Head, Department of Physical Education	
2	Margaret Blake		Training Supervisor	
3	Francis M. Dickey ("Miss Dickey")	Head of the Music Department at Iowa State Teacher's College	Head, Department of Public School Music	M.S., M.A.
4	John Wirt Dinsmore	Dean of Berea College, Kentucky	Head, Department of Rural Schools	A.M.
5	Ruth E. Dowdell		Training Supervisor, Kindergarten	
6	Margaret Dunbar	Western Illinois Normal School, Head Librarian	Head Librarian	B.L., B.L.S
7	Harvey L. Eby	Superintendent of Alliance Schools	Field Work and Extension Training	A.B.
8	John Faught	Head of the department of mathematics at Western State Normal School in Kalamazoo, Michigan	Head, Department of Mathematics	A.B., Ph.D.
9	Gladys Fishleigh	Western Illinois Normal School	Training Supervisor, 1st and 2nd grades	
10	Joseph B. Hanan	Auburn Schools Superintendent	Training Supervisor, Rural Schools	Ph.B., later became Kent State Trustee
11	Lewis Sylvester Hopkins		Head, Biology Department	B.A., M.A.
12	Nina Humphrey	Supervisor of Drawing in the Oak Park, III. schools	Head, Department of Public School Art	A.B., A.M.
13	John T. Johnson	Western Illinois Normal School, Head of the Department of Agriculture and Head of the Experiment Field	Director of Science and Agriculture, Dean	A.B.
14	Lida Meredith Layton		Head, Department of Household Sciences and Arts	
15	Joseph Layton	Assistant, History Department, Indiana University	Head of the Department of History and Government	A.B.
16	Elsie Mabee	Colorado Teachers' College	Training Supervisor, 3rd and 4th grades	A.B., Ph.M., Ph.B.
17	George Edward Marker	Dean of the School of Education at Dakota Wesleyan University	Head, Department of Education	A.B., A.M.
18	David Olson	Department of Geography, State Normal School, Steven's Point, Wis.	Head, Department of Geography	B.A., M.S., Ph.D.
19	Edith Olson		Training Supervisor, 7th and 8th grades	B.S. in Ed., A.M.
20	Lemuel A. Pittenger	Instructor in English, Indiana University	Head, English Department	A.B., A.M.
21	May H. Prentice	Western Illinois Normal School	Director of the Training School	
22	Ellis Seale	Latin Professor at Berea College in Kentucky	Field Work and Extension Training	A.B., A.M., B.S.
23	Lucy M. Tompkins		Instructor in Public School Reading	
24	Clinton Van Deusen	Assistant Professor of Manual Arts, Bradley Tech, III.	Head, Department of Manual Training	M.E.

^{*}All of these degrees may not have been completed when these individuals began teaching.

This degree information is what was recorded in the Kent State College Quarterly in July 1932.

ALUMNI ASSOCIATION

MEMBER PROFILE

Fay Biles, M.A. '56

Fay came to Kent State University in the 1950s as a master's student and stayed on as an instructor in health education until her retirement in 1985. As a vice president of communications and public relations from 1971-77, she was instrumental in restoring the image of Kent State University after the May 4, 1970, shootings.



Most significant life accomplishment

During a sabbatical from Kent State, I traveled to conferences and conducted interviews with major media in every state regarding the importance of health and physical fitness in schools. This eventually grew into the creation of the "Jump Rope for Heart" program in conjunction with the American Heart Association, which is still going strong today in elementary schools across the country. Also, serving on the International Olympic Committee for 16 years. Being able to influence the attitudes of young people toward exercise and health is an important part of my career and life.

What Kent State means to you

Opportunity. I loved my time as a student, and when I graduated with my master's degree, I was so pleased to be asked to stay on at the university as an instructor.

Kent State person who influenced me the most

Dr. Glenn Olds, whom I met in Houston, Texas, during one of my "Jump Rope for Heart" presentations, as he just happened to be at the same conference. When I returned to Ohio, he invited me to become the first female Vice President at Kent State, and, in turn, one of the first female VPs at a state school in Ohio. He took a risk in offering me the post, and the confidence he had in my abilities was an incredible compliment.

Favorite Kent State memory

The wonderful students I had the opportunity to teach, and being recognized as a Distinguished Teaching Award recipient as a result of my efforts.

Why I joined the Alumni Association

Because I am an alumna of Kent State University, and I will do everything I can to help the institution.



www.ksualumni.org





Aaron Rood, M.A., `00, (right) is working with Dr. Ellen Glickman. Kent State professor of exercise physiology, to develop a wearable sensor system for NASA. Below: Detail of a sensor.

Aaron Rood, M.A. '00

Alumnus finds opportunity in growing biotech industry

By Anna Riggenbach, Kent State magazine journalism student

A refreshable Braille display system, a fetal monitor to be worn during birth and an EKG sensor built into the average T-shirt are all devices that could be widely available in the near future. These three devices and many more are currently being developed at Orbital Research in Cleveland.

Aaron Rood, M.A. '00, the lead research physiologist at Orbital, plays a role in developing innovative technologies for commercial and military applications.

Rood is currently working on developing a wearable sensor system, funded by NASA, to monitor astronauts' vital signs in space. The sensor system is designed to record heart rate, EKG and skin temperature inside and outside of the space vehicle. Rood says the system can also read movements, such as sleeping and walking pace.

Rood is developing this device with his mentor, Dr. Ellen Glickman, a

professor of exercise physiology at Kent State University.

As development of the technology progresses, Orbital will use Kent State's lab facilities to test the sensor. The tests will focus on potential future commercial applications for the sensors. Additionally, Glickman will use the sensor to help establish the relationship between heart rate and memory.

Rood says the rigorous classes, student-initiated projects and human substance research he participated in as an exercise physiology major at Kent State helped prepare him for his current position with Orbital.

He enjoys working at Orbital because the employees have freedom to develop their projects, as well as to pursue projects that pique their interests.

The company's 25 full-time employees strive to write at least 12 patents per year — Rood has two patents pending for the physiological monitoring device and three patents in progress for medical sensor manufacturing techniques.

Rood recently was recognized for his contributions to medical device research in Bio-Ohio's Thirty in Their 30s, a publication profiling young bioscience professionals.

Rood says the growing biotechnology industry could potentially benefit Northeast Ohio in countless ways. Biotechnology innovations might lead to better and less expensive health care, while bringing jobs and other opportunities to the area. Rood says in order to ensure that the biotechnology field secures a place in Northeast Ohio's economy, local biotechnology companies should work closely with institutions, such as Kent State, to capture talent.

"The field is starved for momentum," Rood says. "We are working in highrisk, high-reward research."



LOSSES

IN THE KSU FAMILY

Thelma Porter, Parma, Ohio, May 2007.

Annabel G. Pilhorn, Longwood, Fla., November 2006.

Carol L. (Linder) King, Livermore, Calif., December 2006.

Richard F. Manning, Eden Prairie, Minn., May

John L. Koshar, Akron, Ohio, May 2007.* Bill Loughrey, Cincinnati, Ohio, April 2007.

Don Durr, Carlisle, Pa., April 2007.*

Clifford F. Beckwith, Rutledge, Tenn., April 2007.

Edward Terek, South Fork, Pa., April 2007.*

Cora Lee Mc Cormick, Kent, Ohio, April 2007.

Sara G. (Gaissert) Fletcher, Dunnsville, Va., April 2000.

Mary L. Costick, Casa Grande, Ariz., April 2007.

Susan K. Simons, Norton, Ohio, November 2006.*

Nancy A. (Barr) Fisher, Hudson, Ohio, April 2007.

* Annual Member * Life Member

Mickey Dover died in 2002. His wife, Dorothy, in 2003.

Today they are helping future journalists scoop the competition.

Clarence J. (Mickey) Dover, '48 Education, left his mark on the communications world

at the Daily Kent Stater, GE, and the Chrysler Corp. His success lives on through the Dovers' planned gift of scholarships in Kent State's School of Journalism and **Mass Communication.**

Find out how you can make a difference for Kent State students — today and tomorrow —by

including the university in your will or estate plan.

Contact Joe Macedo or Mindy Aleman at the Center for Gift and Estate Planning, 330-672-0421 or giftplan@kent.edu.

Life Members

of the Kent State University Alumni Association

he Kent State University Alumni Association strives to support the mission of Kent State University and provide its members with benefits and services. As space permits, Kent State Magazine will acknowledge new and current life members of the association. A partial list has appeared in each issue since spring 2004; additional names will appear in future issues. A complete list of life members can be found at www.ksualumni.org. For information on becoming a life member of the alumni association, call 330-672-KENT or toll free at 1-888-320-KENT.

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EXCELLENCE in Action Celebrating the Founders Scholars Program



Kent State University Student and Founders Scholar
Melissa Knestaut is using her passion for dance to make
a difference in the lives of others. Melissa taught free
dance classes to children and adults at Friends of
the Homeless, a Tuscarawas County organization,
measuring the participants' perceived emotions and
stress levels before and after the classes.

She recently presented her research, titled "Dance as a Social Service: Combating the Effects of Homelessness While Promoting the Art Form," at the National Dance Education Organization conference.

Your contribution to the Founders Scholars
Program allows students such as Melissa
to invest time in their academic pursuits,
contribute to their chosen fields through
meaningful research, and explore their full
potential without the constraints of financial concerns.

To learn more about how you can contribute to the Founders Scholars Program, visit www.kent.edu/development/WaysToGive/CurrentPriorities/Founders-Scholars.cfm

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Winter 2007

For a complete listing of concerts, lectures, performances, exhibits and other events at Kent State's eight campuses, visit www.kent.edu/ecalendar.

Nov. 6

Piano Concert: Jerry Wong Kent State Tuscarawas 330-339-3391

Nov. 8-17

Kent State Folk Festival Various locations www.kentstatefolkfestival.org

Nov. 13

World Music Concert Ludwig Recital Hall 330-672-3041

Nov. 13

Wick Poetry Reading Roxane Beth Johnson Kent Student Center 330-672-1769

Nov. 26-Dec. 22

Wood Craft Exhibition Kent State Stark 330-224-3356

Nov. 29-Dec. 1

Annual Old English Yuletide Feaste Kent Student Center Ballroom 330-672-2899

Nov. 30, Dec. 1-2

Dance 007: Live and Let Dance E. Turner Stump Theatre 330-672-2497

Dec. 7

Kent State Gospel Choir University Auditorium 330-672-2431

Through Jan. 27

Vionnet 2007 Kent State University Museum 330-672-3450



Join Jordan Mincy (#11) and the rest of the Golden Flashes as the men's basketball team shoots for its 10th season of 20 wins. www.kentstatesports.com

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