The Future of Nursing Initiative

The University of Pennsylvania School of Nursing will host the Pennsylvania launching of the Future of Nursing report, from 3-6 p.m., October 14, at Claire M. Fagin Hall.

The Future of Nursing Initiative, co-sponsored by the Robert Wood Johnson Foundation and the Institute of Medicine, was launched in 2008 with the goal of examining the nursing workforce and its capacity for meeting the demands of a reformed health care system. The initiative is being carried out by the Robert Wood Johnson Foundation and the Institute of Medicine, and was launched in 2008 with the goal of examining the nursing workforce and its capacity for meeting the demands of a reformed health care system.

“This initiative comes at a critical time during the health care reform debate,” said Dr. Afaf Meleis, dean of nursing. “It will provide a blueprint for the nursing profession to proactively meet the demands of a reformed health care system that will offer greater access, higher quality, and more cost-effective care to the American public.”

Nurses, physicians, and other health professionals, state and local officials, insurers, health profession educators and other groups all have a stake in how the recommendations are implemented, Dean Meleis said. She added that the nursing profession will have to work with various stakeholders at the national, regional and local levels to set in motion some of the changes that will be needed in health policy, public and private funding, education programs, practice environments and payment mechanisms.

“Part of the purpose of our symposium will be to bring together Philadelphia-area stakeholders to learn first-hand about the specific report recommendations and its implications, as well as to begin a dialogue about how we might work together to move them forward to implementation,” Dean Meleis said. “We see this symposium as the beginning of a process to maximize our collective efforts to improve health care for the citizens of our region. As members of this community, we all must play a part in and take responsibility for successful health care reform and the findings of this initiative will be a critical component as we move forward.”

Drug-Free Work Week; Retirees & LTD Selection

6 HR: Work and Family Month; Retirement Week;  
7 Update; CrimeStats; Penn Safety Fair  
8 Talk About Teaching and Learning
The following is published in accordance with the Faculty Senate Rules. Among other purposes, the publication of SEC actions is intended to stimulate discussion among the constituencies and their representatives. Please communicate your comments to Sue White, executive assistant to the Senate Office, either by telephone at (215) 898-6943, or by e-mail at senate@pobox.upenn.edu.

Faculty Senate Executive Committee Actions  
Wednesday, October 6, 2010

Chair’s Report: Faculty Senate Chair Bob Hornik reported that the Tri-Chairs have been discussing ways to address the agenda items that SEC members suggested at the September meeting. He asked SEC members to forward faculty names from the Schools of Nursing and Wharton to fill vacancies on the Senate Committee on Faculty and the Academic Mission (SCOF) since that committee will be looking at data from those schools. SEC member Barbara Wall volunteered to join SCOF and another representative from the Wharton School offered to forward their suggestions to the Faculty Senate Office.

Past Chair’s Report: Faculty Senate Past-Chair Harvey Rubin explained that the Academic Planning and Budget Committee discussed a proposed new Masters program in the School of Design.

Ballots for the 2010-2011 Nominating Committee: SEC members voted for the 2010-2011 Nominating Committee.

Update on Faculty Affairs: Vice Provost Lynn Lees outlined the functions of the Faculty Affairs office including: responsibility for the overall management of the academic personnel process, including recruitment, retention, and retirement; appointments and promotions; enhancement of faculty diversity; and resolution of individual faculty issues, including grievances. Dr. Lees reported that the Minority Equity Report is in draft form and will come to the Senate for their review. She explained that a faculty climate survey pilot will go out this fall to a few select schools and, after review, is expected to roll out next fall to all faculty. She updated SEC on the progress of the new Faculty Information System (FIS) that will produce a link for faculty to get useful information about their academic career at Penn, including sabbatical credits. She outlined information provided by her office for training sessions for new department chairs. Dr. Lees circulated a brochure on Family Friendly Policies and encouraged SEC members to let faculty know these programs are available. SEC members inquired about sabbatical use, grievances, the faculty climate survey, faculty search committee practices, resources available for recruiting, switching faculty tracks in the School of Medicine and the specifics of the adoption benefit.

Update from the Office of the Provost. Provost Vincent Price reported he is currently working with all schools to discuss how they are managing the challenges they are facing as they develop their budget plans. He reported that Dr. Lees has launched training programs for department chairs and developed the Penn Fellows Program, a leadership-development program that recognizes faculty in mid-career. Provost Price reported that Vice Provost for Education Andy Binn’s portfolio focuses on education at all levels including the following recent initiatives: improving access to undergraduate students for research opportunities, conversations with schools concerning master’s program evaluation and oversight, and discussions about quality of life for graduate students. He noted that the Academic Theme Year intends to unite all students to focus on a common intellectual project and urged SEC members to forward faculty names from the Schools of Nursing and Wharton to fill vacancies on the Senate Committee on Faculty and the Academic Mission (SCOF) since that committee will be looking at data from those schools. SEC member Barbara Wall volunteered to join SCOF and another representative from the Wharton School offered to forward their suggestions to the Faculty Senate Office.

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Penn Humanities Forum—Call For Topics: November 5

SAS standing faculty members in the humanities and related disciplines are invited to submit proposals for the Penn Humanities Forum’s 2012-2013 topic. All the Forum’s programming for that year will address the theme, which must therefore appeal to postdoctoral, faculty, and student researchers within the public. The topic should be broad, interdisciplinary, historically balanced, and yet of contemporary intellectual salience. Deadline for proposals: Friday, November 5, 2010.

The theme for the current year is Virtuality (topic director: James English), and in 2011-2012 will be Adaptations (topic director: Warren Breckman). Information on earlier topics and Forum programs is available online at www.phf.upenn.edu/topics.shtml.

In proposing a theme, you will be understood to be volunteering to be its Topic Director, collaborating with the Forum Director to select speakers and run the year’s events. The Topic Director receives a stipend.

Proposals should be brief: a description of the topic, an outline of problems and disciplines it encompasses, and a list of potential speakers. Submissions will be reviewed by the PHF Faculty Advisory Board, who have been known to select more than one topic from a given call to the faculty. Accordingly, topics may be submitted for years after 2012-2013, if you so desire.

Please send proposals or questions to the Director of the Forum, James English, jenglish@eng. upenn.edu, or to Jennifer Conway, conwayj@sas.upenn.edu (215) 898-8220, associate director.

Alan Lerner, Law

At press time, Almanac learned of the death of Alan M. Lerner, professor of law. He died on October 7 of complications arising from cancer; he was 68. An obit will appear in Almanac next week.

Contributions in his memory may be made to the University of Pennsylvania Law Clinic, 3400 Chestnut Street, Philadelphia, PA 19104.

Penn’s Way Raffle Prizes Week Two

(October 11-15, drawing October 18)

Philadelphia KIXX: Two Tickets

Helium Comedy Club: Admission for Six Wilma Theater: Two tickets for any 2010-2011 show

Office of Government & Community Affairs: Commemorative US Flag

Bon Appetit at Penn Dining: Lunch for two

Business Services/Penn Publication Services: Penn Photography Book

Business Services/Penn Bookstore: S25 Barnes & Noble Gift Card

Business Services/Penn Ice Rink: 10 Admission Coupons

Business Services/University Club: One Year Membership for 2010-2011

Winners from Week One will be published in next week’s issue.

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The following Q&A is from the FAQ page on the Penn’s Way website. See www.upenn.edu/pennsway for more questions and answers.

Raffles

Q: Do I have to contribute in order to be eligible for the raffle?

A: No. Employees who contribute elsewhere and/or those wishing to participate without giving may do so by checking the appropriate box on the online pledge form or by indicating a $0 gift amount on the paper pledge form. All employees who participate will be eligible for the weekly employee prize and grand prize drawing.

Q: Once I am entered into the weekly raffle, am I only eligible for that week’s raffle or am I eligible for all subsequent weekly raffles?

A: Once you successfully complete your online or paper pledge you are eligible for all subsequent weekly raffles as well as the grand prize drawing.

Q: What are the raffle prizes awarded?

A: Raffle winners will be randomly selected on the Monday following the raffle deadline.

Q: How are winners notified?

A: Winners will be notified by e-mail within one week of the raffle drawing. Additionally, all winners will be published on the Penn’s Way website, in Almanac, and in other University and Health System publications. Winners have until January 31, 2010 to make arrangements to claim their prize.

Senate From the Senate Office

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Deaths

Dr. Atherton, Political Science

Dr. Alexine Atherton, former professor of political science, died August 15 in West Grove, PA. She was 80 years old.

Born in Philadelphia in 1930, Dr. Atherton received her BA in German literature in 1952 from Bryn Mawr College, and went on to earn a PhD in political science from Penn in 1962.

After her graduation, she became one of the first women hired by Penn’s department of political science. She served on the faculty for seven years before taking a position at Lincoln University in 1969. She taught at Lincoln for 31 years, until her retirement in 2001.

Dr. Atherton was a member of many boards and community organizations. She was president of Neighborhood Services in Oxford, served on the board of Chester County Cares and developed programs for the Chester County YMCA. She served as President of the Pennsylvania Prison Society and editor of the Prison Society Journal. As an advocate for prisoners’ rights, she dedicated many hours to visiting female inmates at the Chester County Prison. In the 1950s, she worked for the American Friends Service Committee, which established schools for displaced children in post-WWII Germany. She also led study trips for students through India and Africa for the Experiment in International Living.

Dr. Atherton is survived by a brother, Charles; a niece, a nephew and five cousins.

Donations in her memory may be made to the Neighborhood Services Center, 35 North Third Street, Oxford, PA 19363.

Dr. Cava, Chemistry

Dr. Michael P. Cava, former professor of chemistry, died September 29, in Brookline, MA. He was 84 years old.

Born in Brooklyn, Dr. Cava earned a BS in chemistry from Harvard University in 1946, and a PhD in 1951 from the University of Michigan.

From 1951 to 1953 he was a post-doctoral fellow at Harvard, where he collaborated with Professor Robert B. Woodward on a publication describing the total synthesis of strychnine.

He moved on to Ohio State University (1953-1963), where he rose through the ranks of assistant, associate, then full professor. He then taught at Wayne State University from 1965-69.

He came to Penn in 1965 and remained here until 1985, when he accepted the Ramsay Chair of Chemistry at the University of Alabama, Tuscaloosa. He held that position until his retirement in 2004.

At Penn, he was known for his encyclopedic knowledge of organic chemistry ranging from natural products to organic metals and conducting polymers. “He was an amazing individual who had a prodigious memory and an encyclopedic knowledge of organic chemistry,” said Dr. Madeleine M. Joullié, professor of chemistry. He extracted and characterized many rare natural products from marine and terrestrial sources worldwide. Many of these originated from Central America and Brazil, where he traveled extensively. He visited India, Switzerland, Brazil, and France during research leaves and as a Guggenheim Fellow (1984-1985). He was fluent in French, German and Portuguese.

Dr. Cava published almost 500 papers, and a popular organic chemistry textbook with his colleagues from Wayne State University. He supervised over 80 PhD dissertations and mentored more than 100 post-doctoral research associates from many countries.

He is survived by his wife, Armelle Guinard, his son, John, and granddaughter, Sophie Rose.

Mr. Macky, Engineering

Walter Brooks Macky, former business manager of the Towne Engineering School, now known as the School of Engineering and Applied Science, died September 25 in Lewisburg, PA. He was 103 years old.

Born in Media, PA and a 1926 graduate of Media High School, Mr. Macky went on to earn an associates degree in accounting from Wharton in 1932.

He joined the Army Air Corps and attained the rank of captain during WWII. He returned home in 1946 and worked as an accountant for American Viscose Co. until the 1950s.

In 1963, he became the business manager at the Towne School and stayed at Penn until his retirement in 1978.

He is survived by a daughter, Patricia Fish-er; son, Peter; five grandchildren and two great-grandchildren.

Dr. Rhodes, Veterinary Medicine

Dr. William Harker Rhodes, professor emeritus of radiology, died September 29 at the Coatesville VA Medical Center at the age of 85.

Dr. Rhodes was born in Trenton, NJ. Following high school, he served as a radiology technician in the US Navy from 1943-1946, after which he graduated from New York University in 1951 with a BA degree. In 1955 he graduated with a VMD from the University of Pennsylvania, followed by three years of radiology training and earned a master of medical science in radiology from the University of Pennsylvania Graduate School of Medicine.

From 1955 until his retirement in 1985, as professor emeritus of radiology, he was a faculty member in the School of Veterinary Medicine with a joint appointment in radiology at the School of Medicine.

He received a Lindback Award for Teaching in 1965 and was a frequent lecturer at numerous state and national veterinary meetings.

Dr. Rhodes played a major role in the development of veterinary radiology. He organized a founding member and past president of the Educators in Veterinary Radiologic Science (the first veterinary radiology organization in US) and then the American Veterinary Radiologic Society, a member of numerous AVMA and AHA advisory committees and the New York Academy of Science. He was a charter member and chair of the Organizing Committee for the American Board of Veterinary Radiology (the first clinical specialty approved by the AVMA), now the American College of Veterinary Radiology. He was also a founding member of the International Veterinary Radiology Society.

He received national and international recognition. The American College of Radiology bestowed its highest honor, the Distinguished Service Award, to him in 1999, and the best oral and poster awards of the International Veterinary Radiology Association are named in his honor.

He served as the first editor of Veterinary Radiology and Ultrasound, from 1963-1979, a journal that was initially named the Journal of the American Veterinary Radiology Society and in 1979 renamed again as Veterinary Radiology.

He is survived by his former wife, Augus-tine Janeway Rhodes; son, Gus and wife, Cindi; son, Sandy and wife, Paula Coble; daugh-ter, Anne and husband, Robert Amos; son, Chris and wife, Lisa; and grandchildren, Nathan Amos, Sarah Amos, Mariah Rhodes, Elizabeth Rhodes, and Christina Rhodes.

Memorial gifts may be sent to the University of Pennsylvania School of Veterinary Medicine.

Checks should be made payable to the Trustees of the University of Pennsylvania with the notation in the memo line “In Memory of Dr. Wm. Harker Rhodes,” and mailed to the Penn Vet Medicine Office of Development and Alumni Relations, 3800 Spruce Street, Suite 172 E, Philadelphia, PA 19104.

Dr. Rutman, Veterinary Medicine

Robert Rutman, professor emeritus of biochemistry in the School of Veterinary Medicine, died Monday, September 20 in Phoenix, AZ. He was 91.

Born in New York City, he received a BA from Penn State in 1940 and a PhD in biochemistry from the University of California, Berkeley in 1950.

Dr. Rutman was a captain in the army during WWII and returned to the Manchuria project. He began his teaching career as an assistant professor at Thomas Jefferson University until he was fired in 1953 for alleged communist affiliations.

Dr. Rutman told his family he was not a commu-nist, but attended party meetings because of his interest in social issues.

An advocate for equality, Dr. Rutman organized “Teach-Ins” in opposition to the Vietnam War at Penn, Temple, and Swarthmore College. He was a regular contributor to Almanac’s Speaking Out column, offering opinions on topics such as racism, intellectual property and mentoring.

Dr. Rutman was a research associate in the department of zoology at Penn from 1954-56, and then was a senior research associate in the department of chemistry until 1961. That year, he was appointed associate professor in chem-istry, with a joint appointment in the School of Arts and Sciences as a member of graduate groups in biochemistry, chemistry and molecular biology. He was appointed associate professor of biochemistry in the School of Veterinary Medicine in 1968, and full professor in 1969.

In 1973, he traveled to Africa, where he spent one year as a visiting professor at the Univers-ity of Ibadan, Nigeria.

Dr. Rutman is survived by two daughters, Randy Cullen and Rose Rutman; stepchildren Stephen, Brian and David Johnson; and Ellen Kafalas and six grandchildren.
Exploring African-American Family Foundations and Philanthropic-Giving Strategies

Marybeth Gasman, associate professor in the Graduate School of Education at Penn, has completed the first exploratory study into understanding the world of African-American family foundations. The study was published in the Journal of Non-Profit Management and Leadership on October 1.

In “A Growing Tradition? Examining the African-American Family Foundation,” Dr. Gasman reports that most foundations focus their resources in one of three key areas: public need, education and health. African-Americans give nearly 25% of their charitable donations to organizations that serve the public need, like after-school programs; 15% to scholarships and educational institutions, including historically black colleges and universities; and 13% to health-related causes, such as treating sickle cell anemia and social-service programs related to HIV/AIDS and breast cancer, the study found.

After tracing their development, Dr. Gasman reported that these organizations have a long history rooted in cultural traditions of community support.

“African-Americans are more inclined to start their own foundations rather than setting up donor-advised funds with community foundations. They’d much rather control their own assets,” Dr. Gasman said. “This desire to control their own assets comes from their own experience with banks, insurance companies and other institutions in the past.”

This comprehensive research study determined that most African-American family foundations were established by one of five groups—professional athletes, musicians, actors and actresses, doctors or business owners—and that these foundations are located in areas with large black populations, including California, New York, Georgia, Illinois, Florida and Texas.

“A Growing Tradition” highlights three main reasons for creating these foundations: a desire to give back, the longing to have significant impact and an obligation to help disadvantaged children, particularly in the areas of education, health, personal development and life-skills training.

“African-Americans who establish family foundations are not unlike their counterparts in the majority population,” Dr. Gasman said. “What sets them apart is the desire to give back and ‘uplift’ those in their communities, to ‘reach back and pull up’ those around them.”

Anticancer Activity in Additives of Ancient Alcoholic Drinks

New biomolecular archaeological evidence backed up by increasingly sophisticated scientific testing techniques are uncovering medicinal remedies discovered, tested, and sometimes lost, throughout millennia of human history—herbs, tree resins, and other organic materials dispensed by ancient fermented beverages like wine and beer. Did those ancient “remedies” work—and if so, is there something we can learn—or re-learn—from our ancestors to help sick people today?

The answer is now a definitive yes, thanks to early positive results from laboratory testing conducted by researchers at Penn Medicine’s Abramson Cancer Center, working in collaboration with the University of Pennsylvania Museum’s Biomolecular Archaeology Laboratory run by archaeochemist and ancient alcohol expert Dr. Patrick E. McGovern.

Over the past two years, researchers working on a unique joint project, “Archaeological Oncology: Digger for Drug Discovery,” have been testing compounds found in ancient fermented beverages from China and Egypt for their anticancer properties. Several compounds—specifically leucom from sage and ursolic acid from thyme and other herbs—have been found to promote the growth of cancer cells in the laboratory.

Several compounds have also been found to be effective against leukemia cells in a similar manner, and have been found to be active against a number of other types of cancer.

The next stage, testing these compounds against lung cancer in animal models, is being planned for the future. A review of the research undertaken, and early results obtained, is available in the July 2010 issue of the International Journal of Oncology. “The anticancer activity of botanical compounds in ancient fermented beverages” authored by Dr. McGovern, with M. Christofidou-Solomidou, W. Wang, F. Dukes, T. Davidson, and W.S. El-Deiry, the abstract of which is online at www.spandidos-publications.com/jiol.

Dr. McGovern is the scientific director of the Biomolecular Archaeology Laboratory for Cuisine, Fermented Beverages, and Health at the University of Pennsylvania Museum and an adjunct professor of anthropology.

How Old Is Too Old for Colic Surgery?

Veterinarians from Penn Vet’s New Bolton Center have made some surprising discoveries concerning older horses and colic surgery.

Just like their human counterparts, horses are living longer. Advances in equine health care and nutrition mean that they are also able to have active, useful lives well into their advanced years. With the increase in longevity comes an increase in the opportunity for colic. Veterinarians at the New Bolton Center at the University of Pennsylvania School of Veterinary Medicine studied the responses of mature and aged patients presented at the hospital with symptoms of colic and treated surgically for the condition. The goal of the research study was to gain an understanding of how old is too old for colic surgery.

老年人的医疗保健和营养使得他们能够有活跃、有用的生活，一直到他们的晚年。随着年龄的增长，马匹的治疗机会也越来越多。在宾夕法尼亚大学医学院兽医学院的研究人员研究了医院中呈递的成熟和老龄患者，这些门诊患者呈现了马匹的消化道症状，并接受了剖腹手术。研究的目标是了解多大年龄可以接受马匹的剖腹手术。

For the purposes of the project, survival rates and post-operative complications of colic patients were studied retrospectively. The sample included 300 geriatric horses, defined as 16-20 years of age, and 300 mature horses, four-15 years old, admitted to New Bolton Center’s George D. Widener Hospital for Large Animals in Kennett Square, PA.

“Gastrointestinal tract problems and signs of colic are among the most common reasons for admission of geriatric horses to referral hospitals,” said Dr. Louise Southwood, assistant professor of emergency medicine and critical care at New Bolton Center. Dr. Southwood, who is board certified in the care of mature horses, led the study. “Owners are often concerned that performing surgery on their geriatric horses might not be in the best interest of the horse. We wanted to be able to give them the information with which to make an informed decision.”

While the geriatric horses seemed no more critically ill than their mature counterparts, the odds that their colic was caused by a strangulating small intestinal lesion, a condition which requires surgery, were twice that of the mature horses. What surprised the research team was that the difference in the survival rates between geriatric and mature horses that underwent such surgery was negligible, 86% to 83%. Similarly, the short-term survival rates for geriatric and mature horses with large intestinal strangulating lesions such as a twisted colon was 78% and 70%, and large intestinal simple obstruction, such as an impaction or displacement, was 80% and 97% respectively. These figures reflect pre-discharge data only.

The numbers didn’t change significantly if the horses classified as geriatric were 16 years or 20 years of age. Researchers did note, however, that the geriatric horses were more likely to have a short period of loss of appetite following surgery.

The results of this study are important for horse owners,” said Dr. Southwood, “because they can help owners make a decision regarding whether or not to undergo surgery.” The same team of researchers plans to look at the long-term survival of horses in the 20-25 year old category in the future. The research study has just been published online by the Equine Veterinary Journal.

Catastrophic Flooding May Be More Predictable After Penn Researchers Build a Mini River Delta

An interdisciplinary team of physicists and geologists led by the University of Pennsylvania has made a major step toward predicting where and how large floods occur on river deltas and alluvial fans.

In a laboratory, researchers created a miniature river delta that replicates flooding patterns seen in natural rivers, resulting in a mathematical model capable of aiding in the prediction of the next catastrophic flood.

The models appear in an issue of Geophysical Research Letters. Slow deposition of sediment within rivers eventually fills channels, forcing water to spill into surrounding areas and find a new, steeper path. The process is called avulsion. The result, with the proper conditions, is catastrophic flooding and permanent relocation of the river channel.

The goal of the Penn research was to improve prediction of why and where such flooding will occur and to determine how this avulsion process builds deltas and fans over geologic time.

Research was motivated by the August 18, 2008, flooding of the Kosi River in Kenya. The northern path of the Kosi had been breached and the resulting floodwaters displaced more than a million people. Looking at satellite pictures, scientists from Penn and the University of Minnesota, Duluth, noticed that floodwaters principally filled abandoned channel paths.

Meredith Reitz, lead author of the study and a graduate student in the department of physics and astronomy in Penn’s School of Arts and Sciences, (continued on page 5)
A Rapid Blood Test to Quickly Rule Out Appendicitis?

A novel test to quickly rule out appendicitis, currently being evaluated by researchers at the Hospital of the University of Pennsylvania, could help emergency rooms avoid crowded emergency rooms. Patients who test positive may require more testing to be certain of a diagnosis, since those with inflammatory bowel disease or other inflammatory conditions appear to be prone to “false positive” results even when they do not have appendicitis.

At a time when the country is focused on reducing health care spending, tests that can increase efficiency and eliminate unnecessary tests are a welcome addition to the tools we use to care for patients in our increasingly crowded emergency rooms,” Dr. Mills says. "A negative test result could help us reassure our patients about what might be wrong with them, and help us open space for other sick patients.”

**Nanotechnologists Collaborate to Form Near-Frictionless Diamond Material**

Researchers at the University of Pennsylvania, the University of Wisconsin-Madison and IBM Research-Zürich have fabricated an ultra sharp, diamond-like carbon tip possessing such high strength that it is 3,000 times more wear-resistant than the nanoscale. The end result is a diamond-like carbons mass-produced at the nanoscale that doesn’t wear. The new nano-sized tip, researchers say, wears away at the rate of one atom per micrometer of sliding on a substrate of silicon dioxide, much lower than that for a silicon oxide tip which represents the current state-of-the-art. Consisting of carbon, hydrogen, silicon and oxygen molded into the shape of a nano-sized tip and integrated on the end of a silicon microcantilever for use in atomic force microscopy, the material has technological implications for atomic imaging, probe-based data storage and as emerging applications such as nanolithography, nanometrology and nanomanufacturing.

The importance of the discovery lies not just in its size and resistance to wear but also in the hard substrate against which it was shown to perform well when in sliding contact: silicon dioxide. Because silicon—used in almost all integrated circuit devices—oxidizes in atmosphere forming a thin layer of its oxide, this system is the most relevant for nanolithography, nanometrology and nanomanufacturing applications.

Probe-based technologies are expected to play a dominant role in many such technologies; however, poor wear performance of many materials when slid against silicon oxide, including silicon oxide itself, has severely limited usefulness to the laboratory.

Researchers built the material from the ground up, rather than coating a nanoscale tip with wear-resistant materials. The collaboration used a molding technique to fabricate monolithic tips on standard silicon microcantilevers. A bulk processing technique that has the potential to scale up to commercial manufacturing is available.

Robert Carpick, professor in the department of mechanical engineering and Applied Mechanics at Penn, and his research group had previously shown that carbon-based thin films, including diamond-like carbon, had low friction and wear at the nanoscale; however, it has been difficult to fabricate nanoscale structures made out of diamond-like carbon until now.

Understanding friction and wear at the nanoscale is important for many applications that involve nanoscale components sliding on a surface.

“It is not clear that materials that are wear-resistant at the macroscale exhibit the same property at the nanoscale,” lead author Harish Bhaskaran, who was a postdoctoral researcher at IBM during the study, said.

Defects, cracks and other phenomena that influence material strength and wear at macroscopic scales are less important at the nanoscale, which is why nanowires can, for example, show higher strengths than bulk samples.

The study, published in the current edition of the journal *Nature Nanotechnology*, was conducted collaboratively by Dr. Carpick and postdoctoral researcher Papot Jaroenapibal of the department of mechanical engineering and applied mechanics in Penn’s School of Engineering and Applied Science; Mr. Bhaskaran, Bernd Gottmann, Abu Sebastian, Ute Drechsler, Mark A. Lantz and Michel Despont of IBM Research-Zürich; and Yun Chen and Kumar Sririharan of the University of Wisconsin. Mr. Jaroenapibal currently works at Khon Kaen University in Thailand, and Mr. Bhaskaran currently works at Yale University.

Research was funded by a European Commission grant and the Nano/Bio Interface Center of the University of Pennsylvania through the National Science Foundation.
Meeting Your Work and Family Needs When the Unexpected Occurs

(This is the second in a series of articles this October that honors National Work and Family Month—a campaign to raise awareness of the importance of worklife benefits.)

It’s not easy to be a caregiver in today’s fast-moving world, especially when work and family needs collide. Unexpected circumstances can occur at a moment’s notice, leaving you overwhelmed and struggling to meet your personal and professional needs. That’s why we provide a safety net for your dependent care needs. When your regular caregiver provider isn’t available, Penn’s backup care program is.

Through a partnership with Parents in a Pinch, Inc., a company that provides expert in-home backup child and adult care, Penn faculty and staff have access to temporary in-home backup care services—seven days a week, day or night—to help you meet your family’s needs while you work. Child care is available for children up to age 12, age 18 and older in your immediate or extended family, regardless of whether they live with you.

Arranging backup care is easy—just contact Parents in a Pinch during their call center hours to request services, preferably at least 24 hours in advance. While Penn provides a subsidy, you are still responsible for a portion of the cost when you use backup care services.

For more information, including cost structures, eligible dependents, types of services provided, how to make arrangements for backup care and more, visit the Human Resources website at www.hr.upenn.edu/quality/worklife/back-upcare.aspx.

National Save for Retirement Week: October 17–23

We know how difficult it can be to plan for the future. But having now can make a big difference later—and Penn makes it easy for you. We have numerous vehicles to help you meet your retirement goals and build a nest egg that’s right for you. In honor of National Save for Retirement Week, read on to learn about important features of the University’s retirement plans that can help you save for a secure future.

TDR Retirement Plan

The Tax-Deferred Retirement Plan (TDR) provides you with a variety of investment options offered by our retirement vendors—TIAA-CREF and Vanguard. Once eligible, you’ll receive basic contributions from Penn based upon your age. You can also make contributions to your account, which Penn will match dollar for dollar up to 5% of your salary. All contributions are made on a pre-tax basis, which means you’re not being taxed on the money you contribute to your retirement savings.

Supplemental Retirement Annuity Plan

Most faculty and staff are eligible to participate in the Supplemental Retirement Annuity Plan (SRA). If you’re already contributing the full 5% through the TDR Plan, you can use the SRA Plan to invest additional funds for retirement. While there are no matching contributions from the University under the SRA Plan, you still have a variety of investment options from which to choose.

Roth 403(b) Option

Roth contributions allow you to save on an after-tax basis. Money set aside in a Roth 403(b) is taxed as it is deposited, while distributions taken during retirement are generally tax-free. For more information about the advantages of the Roth option or to participate, visit the Human Resources website at www.hr.upenn.edu/benefits/retirement/roth.aspx.

Annual Selection Period for Retirees and Long-Term Disability (LTD) Recipients: November 1–12

The Annual Selection Period for retirees and LTD recipients will run from Monday, November 1–Friday, November 12, 2010. This annual two-week event allows participants to review their current benefits and make changes for the upcoming calendar year. All changes will be effective as of January 1, 2011.

Personalized enrollment packets will be mailed to each participant’s home shortly. The mailing includes an insert detailing important dates, what’s new for 2011, and instructions on how to make changes; a personalized benefit election statement; medical plan comparison charts; premium charts; and enrollment forms. To contribute to the University’s efforts of reducing the amount of paper we generate and distribute, enrollment packets will not include a copy of the 2011 Annual Selection Guide. Detailed information, including the 2011 Annual Selection Guide, is available on the Human Resources website at www.hr.upenn.edu/benefits/retiring. Here, you’ll also find a complete list of what’s changing as of January 1, 2011, including:

- New medical plans for Medicare-eligible participants
- IBC 65 Special Plan no longer available to new enrollees
- Aetna Indemnity Plan no longer available
- New prescription drug plan for Medicare-eligible participants
- Higher copays and coinsurance amounts for some services
- MetLife Dental Plan enrollment
- New administrator for retiree and long-term disability benefit plans

Retirees and LTD recipients are invited to attend the benefit information sessions on November 2 and 3 in Bodek Lounge, Houston Hall. Two sessions will be held each day: from 10:30 a.m.–1 p.m. and 1–2:30 p.m. These sessions will include presentations by several providers such as Independence Blue Cross, Aetna and SilverScript. Representatives will be available to answer your questions after the presentations.

Those who wish to make changes to their benefits must complete and return a health enrollment form by Friday, November 12, 2010. If you have questions about this year’s Annual Selection Period, please contact Retiree Assist (Penn’s retiree and LTD benefits administrator) at (866) 789-7366, Monday–Friday, from 9 a.m.–5 p.m. EST.

How Much Can I Contribute?

For calendar year 2010, your combined pre-tax and Roth after-tax contributions generally cannot exceed $16,500 per year. However, you’re eligible for additional catch-up contributions beginning January 1 of the year in which you turn age 50 and/or when you have at least 15 years of service with the University.

For more information on Penn’s retirement plan options, visit the Human Resources website at www.hr.upenn.edu/benefits/retirement.

National Drug-Free Work Week: October 18–24

This year’s National Drug-Free Work Week will take place October 18–24. The University of Pennsylvania values the health and safety of the entire Penn community and is committed to maintaining a drug-free workplace year-round. Drug and alcohol abuse can harm not only the person with the substance abuse problem, but also his or her family, friends and co-workers. Penn prohibits the unlawful manufacture, distribution, dispensation, sale, possession or use of any drug by its employees in its workplace. Please take the time to review the University’s drug and alcohol policies which are available online:

- Drug-Free Workplace Policy: www.hr.upenn.edu/policies/705.aspx
- Alcohol and Drug Policy: www.upul.upenn.edu/alcohol/policy.html

If you or a family member have a substance abuse problem, we encourage you to seek help. Penn provides free, confidential counseling services for you and your immediate family members through the Employee Assistance Program (EAP). The EAP is designed to provide assistance with issues and challenges that may interfere with your personal or professional life, including serious issues such as substance abuse.

For more information about the EAP, visit the Division of Human Resources website at www.hr.upenn.edu/quality/wellness/eap.aspx or contact Penn Behavioral Health 24-hours a day, 7 days a week at (888) 321-4433.

—Division of Human Resources

National Cyber Security Awareness Month (NCSAM)

In support of National Cyber Security Awareness Month (NCSAM), Penn’s Office of Information Security will be providing security awareness resources and hosting events throughout the month. Events and resources include:

- Free information security-themed posters
- Links to resources like short (60 seconds or less) information security videos and educational games that you can share with faculty, staff and students
- Information Security will be broadcasting a University of Michigan security symposium throughout the day on October 19 (8:30 a.m.–3 p.m.) in the Class of ’55 Conference Room in the Van Pelt-Dietrich Library.

For a description of the month’s events, see the Information Security NCSAM web page: www.upenn.edu/computing/security/nksam or the NCSAM site: www.staySAFEonline.org/nksam.
13  Are Catastrophes Virtual?: Slavoj Žižek, University of Ljubljana; 5 p.m.; moved from Rainey Auditorium to Harrison Auditorium, Penn Museum; RSVP: http://humanities.sas.upenn.edu/index.shtml (PHF).

18  Hilltribe Healing Ceremonies of Thailand; noon; rm. 209, Fagin Hall (Nursing).

16  The Gatherings: multi-instrumentalist Erik Wollo; 8 p.m.; St. Mary’s Hamilton Village; $20/$10 students w/ID (The Gatherings).

MUSIC

SPECIAL EVENT

18  UBS Asia/Japan Recruitment Info Session; 8-10 p.m.; Bodek Lounge, Houston Hall (Career Services).

TALKS

13  The Gulf Oil Spill: What Next?: Yvette Bordeaux, earth and environmental science; 5:30 p.m.; Ben Franklin Room, Houston Hall (LPS; Master of Environmental Studies Program).

18  Should I Publish My Dissertation Online?: Shawn Martin, scholarly communication librarian; 9 a.m.; rm. 223, Van Pelt-Dietrich Library Center. Also October 19 at 4 p.m. (Penn Libraries).

20  Brown bag lunch workshop: The Many Faces of Domestic Violence; noon-1:30 p.m.; Brachfeld Room, Houston Hall; for more info and to RSVP, contact Nina at rinah@upenn.edu. (Penn Violence Prevention; PPSA; WPPSA). SPEC Connaissance Fall Speaker: Bill Cosby; 8 p.m.; Irvine Auditorium; $5 via lottery: http://specenevents.net (SPEC).

At Kelly Writers House’s Gallery
Above: “self-guided Sunday excursion,” 2009, 40” x 36” acrylic on canvas, is one of the paintings from the current exhibition, My Own Private West at the Brodsky Gallery at Kelly Writers House. Of his work, artist Hiroyuki Nakamura said, “The cowboys in my paintings are, like myself, outsiders without any definite home, co-existing with the old and the new like the east and west bends of the Mississippi River.” The exhibit is on display until November 5.

AT PENN Deadlines
The October AT PENN calendar is online, at www.upenn.edu/almanac.

The deadline for the November AT PENN is today. The deadline for the weekly Update is each Monday for the following week’s issue. The weekly Update normally lists events happening Wednesday through Tuesday. Events are subject to change. Information can be found on the sponsoring department’s website. Sponsors are listed in parentheses. For locations, call (215) 898-5000 or see www.facilities.upenn.edu.

Update Your Department’s Almanac Mailing Label
Help Almanac keep its mailing list up-to-date. Please provide us with any updates to your department’s mailing label including changes in the number of issues your department/center receives and/or changes to the mailing address and contact person. Changes can be submitted by fax, (215) 898-9137, e-mail, almanac@upenn.edu, or through intramural mail, 3910 Chestnut St., 2nd fl./3111.

Please consider the environment and our free online alternatives, such as E-Almanac, and ask your colleagues if they would still like to receive a hard copy. To start getting Almanac delivered by e-mail with teasers linked to the newly posted material, see www.upenn.edu/almanac/express.html. —Ed.

The University of Pennsylvania’s journal of record, opinion and news is published Tuesdays during the academic year, and as needed during summer and holiday breaks. Its electronic editions on the Internet are accessible through the Web (accessible through the Web) HTML and Acrobat versions of the print edition, and interim information may be posted in electronic-only form. Guidelines for readers and contributors are available on request and online.

Pen Safety Fair: October 20
Public Safety and the Office of Environmental Health and Radiation Safety (EHRS) invite faculty and staff to attend a Safety Fair on Wednesday, October 20 in the lobby of BRB II-III from 11 a.m.–2 p.m.

Representatives from Public Safety, Allied Barton Security, EHRS, ULAR, IACUC, and the Penn Computer Connection will be present to answer your safety questions and concerns.

Several vendors will display their safety products. Information will be available on office equipment, computers, computer security, personal protective equipment, laboratory waste, rDNA registrations, training compliance, dangerous goods shipments, and much more.

There will be raffle prizes and snacks provided. For further information, contact EHRS at (215) 898-4453.

13th District Report
3 incidents with no arrests (all 3 robberies) were reported between September 27-October 3, 2010 by the 13th District covering the Schuylkill River to 49th Street & Market Street to Woodland Avenue.

10/27/10 8:39 AM 3740 Hamilton Walk Male in area without authorization/Arrest
10/28/10 7:08 PM 100 S 40th St Driver on cell phone/Citation issued
10/29/10 8:28 PM 4000 Walnut St Driver on cell phone/Citation issued
10/29/10 9:12 PM 4000 Walnut St Driver on cell phone/Citation issued
10/29/10 8:35 PM 200 S 40th St Operator observed on cell phone while driving/Citation
10/29/10 8:36 PM 200 S 40th St Operator observed on cell phone while driving/Citation
10/30/10 2:51 AM 3700 Spruce St Male acting disorderly/Arrest
10/02/10 12:52 AM 4200 Market St Driver on cell phone/Citation
10/10/10 12:40 AM 3900 Walnut St Male wanted on warrant/Arrest
10/02/10 11:33 PM 4000 Locust St Male cited for public urination
10/03/10 12:19 AM 200 S 42nd St Male cited for public urination

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Putting Students on the Hot Seat

Nicolaj Siggelkow

Professor: “What should the managers at Omnimax do to raise profitability?”

Student: “They should raise their prices.”

“Why would this raise their profitability?”

“Well, it would increase their margins.”

“Why would it increase their margins?”

“Well, profit margin is price minus cost; if price goes up, profit margin goes up.”

“Really? What did you just say?”

“Profit margin is price minus cost…ah, I see, that assumes that cost stays the same.”

“Right, so what else happens if they increase their price?”

“They might sell less.”

“And what happens to cost if they sell less?”

“Mmh, cost might increase, since they can’t spread the fixed cost.”

“Ok, so profit margin might actually go down and they sell fewer units; is that a way to increase profits?”

“Ok, ok, so maybe they should lower prices!”

“Why would that increase profits? Wouldn’t that reduce their profit margin? You charge less.”

“But wouldn’t they sell more units, which could reduce cost? Isn’t that what we just argued?”

“How do you know they will sell more? Wouldn’t Omnimax’s competitor simply drop prices as well? And then they just have to cut their margin without making any more sales. That doesn’t sound good. So maybe they should raise prices after all?”

“Ok, I give up!”

For the last 10 years, I have been teaching a second-year elective course on Competitive Strategy for MBA students at Wharton. The first challenge of teaching a class on strategy is that right or wrong answers rarely exist, as in, “the answer is 12.4.” This leads some students to assume that “anything goes” and that “every answer is equally good.” The second challenge is that many concepts in strategy are (on the surface) very easy. For instance, it doesn’t take long to teach someone the definition of “profit margin,” which equals price minus cost. As the introductory back-and-forth showed, however, applying these simple concepts in real situations might be much more subtle. My guess is a number of other courses face similar challenges.

My attempt to solve these challenges has been to do two things: make my course very interactive, despite having 60 students in the classroom, and to put students on the “hot” seat. Yes, there may not be right or wrong answers, but answers do differ in the degree to which they are defensible or thought-through. This more “Socratic” style can also fairly quickly reveal to students that all the “easy” concepts that they thought they had mastered, are perhaps not so easy after all. The question “Why?” can become a powerful tool in the classroom (and not just for five-year olds.) In addition, I rely fairly heavily on “cold-calling” students, i.e., calling on them even if they haven’t raised their hands. If students know that they might be called upon and asked to defend their views, they start to engage with the material in a much more thorough way.

From the professor’s side, the preparation for such a class differs from preparing a lecture, but maybe less so than one might expect. I try to structure my class around questions. I might start with a simple question that asks a student to summarize some key facts about the case or the article that was assigned. This allows me to call on some students who might be reluctant to speak otherwise. As the class progresses, the questions become more like brain teasers, sounding simple, but potentially entangling the students with complexities they didn’t foresee.

While ideally such a class is experienced by the students as very fluid, there is a lot of structure behind it. For each question, I have a list of key points that I would like to have raised, and I know which answer(s) can be used to naturally transition to the next question. The pitfall that I still occasionally fall into is to avoid having this process perceived as a “guess-what-the-professor-is-thinking” game. If students get four out of the five points that I wanted to have raised, I have to stop myself from fishing too long for the fifth one, and simply give it to the students.

To have an interactive class but also to make sure that the material that needs to be covered is actually covered, I have found it essential to be fairly draconian with students who want to stray away from the question that is currently discussed. If I asked, “What is the problem that company X is facing?” and the student answers, “I think they should increase their advertising and they should…” I will politely interrupt and remind the student that I asked for an analysis of the problem, not their suggestions for what to do, and that we’ll get there in half an hour. While students initially might find this annoying, eventually most of them will appreciate that the discussion is not bouncing around in a seemingly Brownian motion.

The other obvious challenge is how to cold-call and put students on the hot seat, and not make them angry at you. Here are some hints that I have gathered from colleagues and experimented with over time. First, it is helpful in the very first class to set expectations. Tell the students how you intend to run the class. Tell them you want to help them learn how to think, argue, and defend their views. And remind them that the classroom is a rather low-risk environment compared to their future work environments. Second, be consistent. I think the worst teaching experience I have ever witnessed was by a professor who started out being “very nice” where every comment was “great” and later in the semester, after students complained that “everything goes,” decided to become harsh and critical. That was quite the flame-out. Third, who you cold-call should feel fair. You intend to run the class. Tell them you want to help them learn how to think, argue, and defend their views. And remind them that the classroom is a rather low-risk environment compared to their future work environments. Second, be consistent. I think the worst teaching experience I have ever witnessed was by a professor who started out being “very nice” where every comment was “great” and later in the semester, after students complained that “everything goes,” decided to become harsh and critical. That was quite the flame-out. Third, who you cold-call should feel fairly random. No one should feel picked upon. For example, quite often I start with one student, and then move along the row. (There may be obvious exceptions to the randomness rule. For instance, cold-calling students who come to class late can send a powerful message.)

While there are potential educational benefits of an interactive style, a key reason for me. I have to admit, is because I enjoy it. Every class is a little bit different (which makes teaching the same case study for more than 30 times still enjoyable.) And curiously enough, at least the MBA students at the Wharton School, enjoy it too. Interestingly, a common complaint of our students is that we are not “challenging them hard enough” to defend their views in the classroom. Thus, perhaps there is a win-win here.

So what should Omnimax have done? Raised prices? Lowered prices? Maybe neither. Maybe they should have invested more in R&D and introduced a new product. Really? Why?

Nicolaj Siggelkow is the David M. Knott Professor of Management at Wharton.

This essay continues the series that began in the fall of 1994 as the joint creation of the College of Arts and Sciences and the Lindback Society for Distinguished Teaching.

See www.upenn.edu/almanac/teach/teachall.html for the previous essays.