PI Program

AE launches an innovative and already successful endowment building campaign to bring the best of the best to AE classrooms.

Details on page 8
Larry Beam, P.E. ’78, has been promoted to head of the electrical engineering department at Girard Engineering. Beam has been promoted to president...

Harlan Byers ’65, I am currently the acting vice president and Airport Manager at Ronald Reagan Washington National Airport. I have held this position for a little over a year now. I have been at the airport for 36 years, and plan on retiring on June 16th. For most of the time at the airport I have been in charge of the facilities engineering department. It has been a good place to work. When I retire, I will be selling my house in Springfield, VA, and will be moving to Huntingdon, PA, this summer or early fall. Congratulations on your retirement Harlan!...Chuck Tomasco, Jr. ’98, The Tomasco family now has four members with the birth of our daughter Sophia Mary in May 2005. Sophie's big brother Jackson Charles, 3, loves her to death. Both kids keep Amy and me on our toes. Work's been great here in the DC area, and I'm currently working on a new service and inspection shop for the local transit authority, WMATA. The building is like a huge Jiffy Lube for train cars. Just passed the Architectural Engineering P.E. exam in the state of Virginia earlier this year proving that CM's can do it too!...Brian Brinkley ’02, was named Gausman & Moore's 2005 Most Valuable Player. Congratulations!...Jim California ’81, 25 years after graduation, I'm returning to live and work in Happy Valley. My wife Mary, daughter Molly, and I are moving to State College this week. As of July 28, our address will be 2357 Setter Run Lane, State College, PA 16801. I have transferred to Buchart Horn's State College office to work as a structural engineer and project manager. Molly just graduated high school and will be leaving the nest in the fall, but she won’t be attending Penn State. She's off to the University of Cincinnati to major in interior design. We’d love to see our old friends. Stop in and visit whenever you return to Dear Old State. My email address is jcalifornia@bh-ba.com...Alfred R. Mangus ’76 is active in the local Penn State club and alumni advisor to accepted high school students in the Sacramento, CA area. Current work assignments at Caltrans [California Department of Transportation] include new Devils Slide and Caldecott Tunnels. Actively writing professional papers on orthotropic steel bridges. Visited with David Holtzapple ’76 at his Columbus, OH house in December 2005 for Dave’s home cooking. Correspond with John Bollinger ’76 in Boulder [jbollinger@louisvillefire.com] and
Rolland E. Rien '68, '70g, 61, of State College, died Sunday, May 14, 2006, at the Mount Nittany Medical Center. Born Aug. 9, 1944, in Bellingham, MN, he was a son of Dellas Kottke Rien, of Minneapolis, and the late LaVerne R. Rien. He graduated from William Tennent High School in Warminster. He graduated from Penn State with a bachelor's in architectural engineering and a master's in computer science. He was a software designer and computer programmer for Optical Image Technology, Inc., of State College. He enjoyed computers, architecture, classical music, stamp collecting and reading. In addition to his mother, he is survived by two sisters, Virginia J. Rien and her husband, Ed Broneske, of Minneapolis, and Rachel R. Tripp and her husband, David, of Parkersburg, WV, and four nieces, Renee Howard, Barbara Widmyer, Cindy Ware and Karen Keller.

Mike Quiggle '76 of Metairie, LA Mike's roof was blown away by Katrina, but Mike's family is still residing in this house...Terry Triest, EIT, '01, I had an employment change in July 2005, in which I was hired by Keller Engineers in Hollidaysburg, PA. My primary duty is structural designer. My secondary duty as CAD manager is to transition the architectural division onto Architectural Desktop 2006....Melissa (Weaverling) Toth '98, my husband, Jim, and I are expecting our second son in November. I am due just two days before Thanksgiving, so we may be eating turkey in the hospital! On that note, this will also bring about my official retirement from engineering. No complaints though, I love being a stay at home mom. I'm sure two little ornery boys are going to keep me quite busy. One already does! If I'm not too huge and miserable by then, we may go to the Penn State - Purdue football game this October. It's been so long since I've seen the Nittany Lions in action live...John W Bollinger '76, I am active in the Colorado Penn State Alumni club. My primary job is working as a facility engineer for Boulder Valley School District, Boulder, CO. In this position I serve as a project manager overseeing the construction, remodeling and maintenance of our 56 schools encompassing 4.2 million square feet. We just finished a district-wide facility assessment looking at physical condition, program compatibility and multi-use outdoor facilities. The district is looking at taking a bond measure of nearly $300 million to the voters this fall. I also work as a lieutenant for the Louis-

Professor Howard Kingsbury first came to Penn State as an M.S. student majoring in Ceramic Technology. He graduated in 1947, but returned in 1964 to join the architectural engineering faculty.

In the years between, he spent time in industrial research and product development focusing on daylighting research and acoustical research and development. He worked for the Owens-Illinois Glass Company, the Pittsburgh-Corning Corporation, and for Sylvania Electric Products, Inc.

While at Penn State, Kingsbury demonstrated outstanding performance as course coordinator for undergraduate architectural acoustics work. He educated approximately 60 students each year and served as a faculty consultant to all students in the senior thesis project.

Kingsbury also served on many committees including the College of Engineering Academic committee, the Student Conduct Standards Board, and the Academic Affirmative Action Review committee. He frequently was an outside lecturer and involved with several community groups including the Patton Township Planning Commission and the State College Rotary Club. He was elected as an ASHRAE Fellow in 1982.

Kingsbury still lives in State College with his wife Callie.

Thank you, for all that you've given AE. You are truly a pillar of our department!
Eleven top engineers were honored on Monday, April 10, at the 2006 Outstanding Engineering Alumni Awards at the University Park campus. In addition to receiving their honors, the award recipients met with faculty and spoke with students during their visits to campus. The annual Outstanding Engineering Alumni Award is the highest honor conferred by the College of Engineering and recognizes graduates who have reached exceptional levels of professional achievements.

The architectural engineering department is pleased to announce that the 2006 recipient for architectural engineering was Charles Matts, of Erie, PA, retired co-founder and president of Schick Matts Corp. Matts is a well-rounded professional who has demonstrated outstanding leadership ability throughout his career.

Matts attended Penn State and graduated from the architectural engineering department with a bachelor’s degree in 1956. Matts is very proud of his degree and says that he came to Penn State because of his strong desire to work in the architectural engineering discipline.

Following graduation, Matts served in the Army Civil Corps during the Korean War. Afterwards, he worked as an architect with H. Platt Company in Erie, PA. He also worked for several years with Hardner-Doyle Construction Company, also in Erie. In 1977, Matts, together with partner Dennis Schick, founded the

(Continued on page 13)

Marvin J. Kudroff Memorial Lectureship

Eugene Bard, president of Bard, Rao + Athanas Consulting Engineers, LLC, was the speaker for the 2006 Marvin J. Kudroff Memorial Lectureship. The event was held on April 19 in the Assembly Room at the Nittany Lion Inn. Bard presented "Engineering Entrepreneur – 35 Years Later – Challenges in Founding/Managing a Consulting Engineering Firm."

Founded in 1975, Bard, Rao + Athanas Consulting Engineers LLC provides state-of-the-art and integrated mechanical, electrical, plumbing and fire protection engineering and building commissioning services. The firm employs more than 250 people and has five offices nationwide.

A registered professional engineer in 32 states, Bard received his bachelor's degree in architectural engineering from Penn State in 1968. He has received the National First Place American Society of Heating, Refrigeration and Air Conditioning Engineers' (ASHRAE) Technology Award "Recognizing Outstanding Achievement in the Design and Operation of Energy-Efficient Buildings," as well as the National Award for Energy Efficiency and Renewable Energy from the U.S. Department of Energy.

He remains active at Penn State, serving on the College of Engineering's Leonhard Center Advisory Board and Advancement Committee. He was named a College of Engineering Outstanding Engineering Alumnus in 1990 and a Penn State Alumni Fellow in 1995. In 2000, he provided a leadership gift in establishing the Academic Excellence Endowment in Architectural Engineering to enhance the academic environment for AE faculty and students.

The Marvin J. Kudroff Memorial Lectureship in Engineering Management was established in 1981 to provide an annual seminar for faculty and students of the University by leaders in engineering management. Marvin Kudroff was a 1943 architectural engineering graduate. He spent his career in engineering management and was named an Outstanding Engineering Alumnus in 1975.
The 2006 Senior Awards and Recognition Banquet was held on April 28, 2006, at the Nittany Lion Inn. We were very pleased to present nearly $100,000 in scholarships and awards to outstanding AE undergraduate students. We are extremely grateful for the phenomenal generosity of our many alumni and friends who so faithfully support the AE Scholarship and Awards Program each year.

A panel of 32 industry professionals (see 2006 Jury box on page 6) met during the afternoon to judge the top eight fifth-year thesis presentations.

SCHOLARSHIPS
- ASHRAE Scholarship
- Gladys M. Baird Memorial Scholarship
- Baker Ingram Associates Scholarship
- Jack and Laraine Beiter Excellence Endowed Graduate Scholarship
- BR+A Consulting Engineers Scholarship in Memory of Professor Jack Everetts
- BR+A Consulting Engineers Scholarship in Memory of Professor Melvin Isenberg
- Borda and Fernsler Families Scholarship
- Bovis Lend Lease Scholarship
- Cagley and Associates Scholarship
- CH2M Hill Scholarship
- Clark Construction Group, Inc. Scholarship
- Clark Construction Group - Charles A. Merica Memorial Scholarship
- Class of 1975 Scholarship
- Class of 1999 Scholarship in Honor of Sharron E. Williams
- DeSimone Consulting Engineers Scholarship
- EwingCole Award
- John Flynn Memorial Scholarship
- Foreman Architects-Engineers Scholarship
- Foreman Program & Construction Managers Scholarship
- Louis and Judy Geschwindner Endowed Scholarship
- Hadco Lighting Scholarship
- Illuminating Engineering Society - Philadelphia Section Scholarship
- Illuminating Engineering Society - Susquehanna Section Scholarship
- The Lighting Practice Scholarship
- Robert J. McNamara Scholarship
- Vincent L. Pass Scholarship
- Melvin H. Peters Endowed Scholarship
- Pittsburgh Builders Exchange Scholarship
- James M. Pohlen Memorial Scholarship
- John R. Potter Memorial Scholarship
- Franklin Ruth Memorial Scholarship
- Ryan-Biggs Scholarship
- Simpson Gumpertz & Heger, Inc. Scholarship
- SmithGroup Scholarship
- TAC Scholarship
- C. Herbert Wheeler Memorial Scholarship

2006 AWARDS
- Thornton-Tomasetti Group - Outstanding Record of Study in Structures
- Larry Perez Award - Outstanding Record of Study in HVAC
- Peerless Lighting Award - Outstanding Record of Study in Illumination
- PACE Group - Outstanding Record of Study in CM
- James G. Davis Construction - Outstanding Capstone Project Electronic Portfolio (CPEP)
- John J. Brinjac Memorial - Outstanding 5-Year Record of Study in AE (Design)
- Southland Industries - Outstanding Thesis in the Area of Specialty Construction

SENIOR THESIS KICK OFF LECTURE
The AE department was pleased to host the annual AE Senior Thesis Kickoff Seminar on April 27, 2006 at the Nittany Lion Inn. The featured speaker was Mr. Charles Israel, principal of Lighting Design Alliance who spoke about “A Consultant’s Impact on the World.” The seminar featured a visual tour of numerous projects by his firm, highlighting the scope, participation and ultimate solutions for a variety of projects around the world.

Chip Israel (B.A.E. 1984) has been a lighting designer for over 20 years. In 1992, he founded Lighting Design Alliance, a full-service architectural lighting design firm, with a highly-select team of lighting-design professionals who now serve a variety of clients worldwide. His award-winning designs range from building facade lighting, custom fixture design, corporate office spaces, to theme hotels and resorts. Some landmark projects that he has designed include: First Interstate World Tower, Sanwa Plaza at Figueroa & Wilshire, Sony High Definition Post Production, Mission: Bermuda Triangle, Disney's Wilderness Lodge, UCLA Site Lighting Master Plan, Oakley Technical Center, Disney Institute, and Disney's All Star Resort.

In addition, Israel has been an instructor at UCLA and the American College of Applied Arts in the field of interior lighting. He has been a guest lecturer at the University of Southern California on the topic of Lighting and Daylighting for Architecture.

He is a member of the board of directors and director of education at the International Association of Lighting Designers (IALD), and serves as president of the IALD Education Trust. He is past president of the Designers Lighting Forum; and a member of the Hospitality Committee and Bridges and Building Committee with the Illuminating Engineering Society of North America (IESNA). He also serves on the board of directors for the La Sfacciata Lighting Academy.
2006 JURY

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<th>Name</th>
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<td>Craig Allender</td>
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<td>Rhonda Forney</td>
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<td>Mark Gillespie</td>
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<td>William Glassmoyer</td>
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<td>Russell Heiken</td>
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<td>David Holbert</td>
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<td>Robert Holland</td>
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<td>Charles Israel</td>
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<td>Joel Weinstein</td>
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SPECIAL THANKS

A special thank you to all those who generously sponsored the cost of some of the student meals at the Senior Thesis banquet. This is an enormous help to the department in defraying the cost of the banquet and is greatly appreciated by both the department and our students. Companies and individuals that sponsored students included:

- Craig Allender, Simpson Gumpertz & Heger
- ASHRAE, Central Pennsylvania Chapter
- Donald Bahnfleth, Woolpert, Inc.
- Robert Banas, Leach Wallace Associates
- Joseph R. Borda, Gulf Landings Development Corp.
- Cynthia Cogil, SmithGroup
- Daniel Cuoco, Thornton-Tomasetti Group
- Helen Diemer, The Lighting Practice
- Herbert L. Duffield, Furlow Associates Inc.
- Dan Fichtner, Providence Engineering Corporation
- Hope Furrer, Hope Furrer Associates, Inc.
- Pamela Garbini, Bovis Lend Lease
- Mark Gelfo, TLC Engineering for Architecture
- Mark Gillespie, McKinney Properties, Inc.
- Russell Heiken, GRG Consulting Engineers
- David H. Holbert, Holbert Apple Associates, Inc.
- Robert J. Holland, AIA
- L. Robert Kimball, L. Robert Kimball & Associates
- Robert J. McNamara, McNamara/Salvia
- Jen Mitarotonda, Girard Engineering
- William Moyer, James G. Davis Construction
- Thomas Myers, Lutron
- John O’Keefe, Clark Construction Group
- Eric Rathgeber, Rathgeber/Goss Associates
- Paul Rouis, Ryan-Biggs Associates, P.C.
- Franklin Ruth, III, Pennsylvania Department of General Services.
- Johann Szautner, PSPE/PEPP
- James Thompson, York International Corporation
- Matt Tressler, McClure Company
- Daniel Waltersdorf, Barton Associates
- Joel Weinstein, Thornton-Tomasetti Group
Chris Glinski (5th year CM) looked at several aspects of construction of the Silver LEED™ rated Columbia Heights Community Center, located in Northwest Washington DC. For his thesis, he performed four analyses that all tied in with the environmental aspects of LEED™. The first analysis included LEED™ Goals / Points alignment research in order to create a tool for planning future LEED™ projects. The second analysis looked at the structural, mechanical, and construction impacts of replacing the south brick façade with architectural precast brick panels in hopes of reducing waste quantities and the schedule. His third analysis looked at replacing the large W 40x215 steel I-beams in the gymnasium with open web joists, again, in hopes of reducing material quantities. The system was structurally analyzed and only the filler beams between the large members could be replaced. Chris’s last analysis looked at reducing soil waste quantities by casting the foundation system in trenches in lieu of bulk excavation and forming. This proved to greatly reduce spoil as well as the schedule. Chris Glinski plans to obtain his B.A.E. / M.A.E. upon graduation this December 2006 and then join the Forrester Construction Co. team in the Washington, DC area. In the years to come, he will pursue his LEED™ accreditation and P.E. license while climbing the ladder of project management.

Sean T. Howard thesis focused on the Executive Tower, an 11-story building located in downtown Washington DC, in late July 2005. He studied several different structural systems throughout the fall semester and derived a logical proposal that fit the needs of land owners in the DC area to add a 12th floor to the system by means of three studies to lower the total building height. He designed a new entrance into a retail space to recess the building. Then, he re-routed the mechanical duct work to evenly distribute air flow and reduce the depths of the ducts. Finally, he converted the flat slab system to a post tensioned system to reduce the slab thickness. After graduation this spring, Sean began working with O’Donnell and Naccarato in Fairfax, VA.

Jessica Lucas chose the Hearst Tower located in New York City as the focus of her senior thesis design. The Hearst Tower is an 856,000 sq. ft. high-rise office building that is expected to be the first high-rise in New York City to achieve LEED Gold Certification. Jessica’s proposed mechanical system design included utilizing a dedicated outdoor air system paralleled by radiant floor heating and cooling to replace the four large variable air volume units currently serving the office tower. An investi-
The AE department is doing well these days. We have a very strong demand from qualified students to enter the B.A.E. program each year. We have an equally strong demand for our graduates, as evidenced by the highly successful AE Career Fair each November. However, we face some significant challenges in our quest to continue enhancing the quality and reputation of our department.

With more than 400 B.A.E. students, 100 graduate students, and only 16 AE faculty members, the student-to-faculty ratio in AE is already quite high. Moreover, in recent years Penn State has increased its emphasis on faculty-driven research to the extent that tenured and tenure-track faculty are expected to be actively involved in externally funded research activities concurrently with their teaching responsibilities. This research has important benefits to our students, faculty, institution, and profession, but it is quite labor intensive.

It is imperative that we work diligently to continue enhancing the first-tier quality and reputation that are now hallmarks of the Penn State AE department. We must take action now to enable ongoing improvement of the B.A.E. program. The resulting positive impacts on the department and the AE profession are extremely promising.

How are we to achieve this goal?
Inspired by the numerical value of \( \pi \), the department is looking to raise $3.14 million to establish the Practitioner Instructor Program Endowment for the Penn State architectural engineering department. A portion of the annual interest from the endowment’s principal will be used to bring qualified mid- to senior-level professionals to campus to teach selected courses in architectural engineering at University Park. The remainder of the interest will be reinvested in the endowment to counter inflation. As an endowed program, the PI Program will be a permanent enhancement to the already renowned Penn State architectural engineering program. It is anticipated that the PI Program will support up to ten courses taught by AE practitioner instructors each academic year. Interest from the endowment will provide support for other aspects of the PI Program, including field trips, guest lecturers, instructor travel expenses, state-of-the-art instructional equipment, course materials, and other course-related enhancements. Courses taught within the PI Program will be first-class offerings.

For the students
AE students will reap significant benefits from PI Program instructors. These new PI faculty will bring to campus the newest methods and techniques used in the field. They will discuss the latest issues confronting architectural engineers and bring to the classroom real-world examples of some of the most challenging problems architectural engineers now face. The PI Program will make our AE students an even more valuable commodity when they graduate. These students will not only have the strong core knowledge and skills given to them from the current curriculum, but they will also be equipped with the wisdom and experience of top-caliber practitioner instructors.

Making PI a reality
Any contribution you make will bring the unique Penn State AE PI Program closer to fruition. Individuals and/or companies may wish to consider the following levels of investment and the related benefits:

**$15,000—PI Associate of Architectural Engineering**
- Acknowledgement in the AE department’s newsletter (2,900 circulation)
- Name of investor/company added to the acknowledgement plaque in the department’s main office
- Name of investor/company on the PI Program web page
- Quarter-page recognition in the PI Program booklet, which will be distributed to all fourth and fifth-year AE students each year

**$30,000—PI Partner of Architectural Engineering**
- All Associate-level benefits
- Personalized “thank you” plaque for your office
- Name of investor/company and logo on PI Program web page
- Half-page recognition in the PI program booklet, which will be distributed to all fourth and fifth-year AE students each year

**$60,000—PI Principal of Architectural Engineering**
- All Partner-level benefits
- Name of investor/company, logo, and hyperlink to your company’s homepage on the PI Program web page
- Full-page recognition in the PI Program booklet, which will be distributed to all fourth and fifth-year AE students
- Participation in a special “Meet the Top Architectural Engineering Seniors” social to be held in September in forthcoming years

**$300,000—Named PI Program Instructor**
- All Principal-level benefits
- Creation of a permanent, named PI Program instructor position, as well as the first right each year to nominate a candidate to be appointed to that PI position during that upcoming academic year
We gratefully acknowledge our first wave of PI Program Investors:

**Named PI Program Instructor**
Turner Construction Company
Practitioner Instructor of Architectural Engineering

**PI Program Principals**
Bard, Rao + Athanas Consulting Engineers, LLC
Alliance Structural Engineers, LLC

**PI Program Partners**
Simpson Gumpertz & Heger, Inc.
GRG Consulting Engineers, Inc.

**PI Program Associates**
Foreman Architects-Engineers & Construction Managers
Mr. Herbert L. Duffield

$510,000*
(16%)

Total Goal: $3.14 million

*Reflects contributions as of 6/06

For more information, please visit the PI Program online at www.engr.psu.edu/ae/pi
THREE AE FACULTY RECEIVE TENURE
The AE department is pleased to announce that Drs. Michael J. Horman, David R. Riley and Jelena Srebric were granted academic tenure. In addition, Horman and Srebric joined Riley at the rank of associate professor, effective July 1, 2006. Congratulations to three outstanding AE faculty members!

FACULTY HONORS
Dr. Thomas Boothby and Professor Kevin Parfitt recently received the Association for Preservation Technology International (APT) Anne M. de Fort-Menares Award. The award recognizes the most outstanding article published in the APT Bulletin demonstrating excellence in the application of historical research to preservation practice. Their work, titled “Case Studies in Diagnosis and Repair of Historic Thin-Shell Concrete Structures,” outlines the fundamental technical issues in the maintenance of thin-shell concrete structures; identifies technical resources; and describes two case studies of thin-shell concrete buildings, including design, construction and repair history and procedures.

ICON LAB GOES PC
The Immersive Construction (ICon) Lab, under the direction of Dr. John Messner, is becoming a more interactive space for students and users thanks to the addition of tablet PCs. As students enter the lab, they obtain a tablet PC, which is capable of easily interacting with the three-screen display and the SMART Board via wireless internet access and collaborative software applications. This set-up allows for hand sketching/drawing, taking handwritten notes on presentations, using computer applications in tutorial sessions, and sharing any content on a student’s computer with the entire class in an easy and natural manner. An emerging research area within universities and industry is to identify the characteristics of interactive design spaces. This project will allow the Computer Integrated Construction Research Team to evaluate the use of the ICon Lab as an interactive classroom and interactive design space. The research team will also continue to gain knowledge regarding the interaction of the diverse display media and the value this provides to student learning. The AE ICon experiences will help shape design criteria for new interactive classrooms throughout the University. We wish to thank Information Technology Services (ITS) at Penn State for supporting this project.

AE HEAD SERVES AS GUEST EDITOR
Drs. Richard Behr and Joseph Minor served as guest editors for a special issue of the ASCE Journal of Architectural Engineering titled: “Structural Design of Architectural Glazing,” to be published in September 2006. Professor Kevin Parfitt has served capably as editor of the Journal of Architectural Engineering since fall 2003. The journal continues to emerge as a leading forum for scholarly work related to AE research and AE practices.

AE PROF NEW ASHRAE DIRECTOR-AT-LARGE
Dr. William Bahnfleth, professor of architectural engineering and director of the Indoor Environment Center, was elected to a three-year term as a director-at-large of the American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) at its 2006 Annual Meeting held June 24-28, 2006. The board is responsible for setting policy for the 50,000+ member society and for managing its $15 million annual budget.

DISNEY TO TEACH AE
Robert Holland, 2005’s Senior Thesis Kickoff Lecturer, long-time supporter of AE and a Penn State architecture alum, will be a practitioner instructor in the fall 2006 semester. Bringing his extensive experience and a passion for AE to the job, Holland will be assisting in AE 481W, the fall semester component of the senior thesis project. He will also teach one section of ARCH 441, fourth-year architectural design studio, to a group of AE students. Throughout his 25-year Disney career, Holland has been an integral part of many of the Walt Disney Company’s finest “firsts.” From managing the development of Disney’s Grand Floridian Resort & Spa, Disney’s first luxury resort; to the Hotel Santa Fe at Disneyland Paris; to Disney’s Coronado Springs Resort, the first moderately priced resort/convention center at Walt Disney World Resort; to the Disney Magic, Disney’s first cruise ship; Holland has been involved in much of the company’s new project development.

BEST 2005 ENGINEERING JOURNAL PAPER
Professor emeritus, Dr. Louis Geschwindner, and Robert O. Disque won the Best Engineering Journal Paper of 2005 competition for their paper, “Flexible Moment Connections for Unbraced Frames Subject to Lateral Forces—A Return to Simplicity.” The paper was published in the second quarter 2005 issue of the Engineering Journal, available online to AISC members and ePubs subscribers at www.aisc.org/epubs.

INDOOR ENVIRONMENT CENTER (IEC) ADVISORY BOARD MEET AT PENN STATE
On May 25-26, 2006 the Indoor Environment Center Advisory Board and the IEC faculty/staff and graduate students met at the Hintz Family Alumni Center to review that past year and plan for the future. Dr. William Bahnfleth, director of the IEC, opened the meeting with a progress report highlighting the nearly $2 million of externally funded research on indoor air quality, efficient lighting, and building security conducted by the center since its creation in 2005. Board members in attendance included Ronald Bielinski, Gary Debes, Jim
Kendig, Dan Kerr, Dan Nall, Dennis Stanke, Lynn Werman, and John Wimer.

For more information about the IEC, please visit the IEC web site at: www.engr.psu.edu/ae/iec.

COMMENCEMENT

Commencement for the College of Engineering was held on May 12, 2006. Architectural Engineering conferred 52 B.A.E., 23 M.A.E., 4 M.S., and 2 M.Eng. degrees. An evening reception was held in the Bryce Jordan Center for the AE graduates, their guests, and AE faculty and staff. Congratulations to our most recent graduates!

STUDENT MARSHALL

Steven Puchek (GPA 3.94) was named the class student marshal to represent AE in the spring 2006 commencement ceremony. Dr. Louis Geschwindner, professor emeritus, served as faculty marshal.

Puchek was not only in the integrated bachelor's and master's of architectural engineering degree program, but also achieved an architectural studies minor. He won numerous awards including the Lithonia – Robert J. Besal Scholarship, the LiteControl Scholarship, and the IES Susquehanna Scholarship. A true student leader, he was also named student marshal, he was awarded a life membership in the Penn State Alumni Association.

In addition to being named student marshal, he was awarded a life membership in the Penn State Alumni Association.

PACE RESEARCH SEMINAR

The Partnership for Achieving Construction Excellence (PACE) Research Seminar was held on April 18 - 19, 2006 at the Penn Stater Conference Hotel. They year’s theme was “C.L.I.M.B: Changes in Leadership, Innovation, Markets, and Business.”

SSAE OPTION SOCIAL

The Student Society of Architectural Engineers (SSAE) and the AE department co-sponsored the annual Options Social on March 27, 2006 at the Nittany Lion Inn. Thirteen professionals represented the four options (structural, mechanical, lighting/electrical, and construction management) in the AE curriculum.

The event included a dinner for the professionals, a panel discussion, and a reception. Everyone who attended found the evening to be very informative and educational.

If you are interested in participating at next year’s option social, please contact Nancy Smith in the AE main office to have your name added to the mailing list.

PHI ALPHA EPSILON INITIATION CEREMONY

Phi Alpha Epsilon, the AE honor society, welcomed 33 new student members to its ranks on March 24, 2006 at a ceremony and dinner held at the Allen Street Grill in State College, PA.

CLOSING THE LOOP

The Center for Sustainability, under the leadership of Dr. David Riley, has started Closing The Loop—a newsletter that chronicles that latest events and news for the CFS. Visit the Center online to sign up to receive the newsletter: www.engr.psu.edu/cfs.

IPAC MEETING HELD

The Industrial and Professional Advisory Council (IPAC) meetings were held in the College of Engineering on March 20-22, 2006. AE faculty and student representatives consulted at length with eight members of industry. The focus of the discussions was streamlining and enhancements to the AE program, along with AE endowment building.

PAPERS PRESENTED

Dr. William Bahnfleth presented “Energy use and economic comparison of chilled water pumping alternatives” at the ASHRAE Annual Meeting, June 24-28, 2006, in Quebec City, Canada.

Dr. James Freihaut and Dr. Bahnfleth both presented papers at the Air and Waste Management Association/EPA Indoor Environmental Quality Conference (July 17-19, 2006) in Raleigh-Durham, NC. Dr. Bahnfleth presented a paper titled “Methodology for quantitative evaluation of control measures for indoor air contaminants.” Dr. Freihaut presented paper was titled, “Surface-to-air suspension behavior of allergen-containing particles in indoor environments.”

Dr. Freihaut also presented two papers at the XXV Congress of the European Academy of Allergology and Clinical Immunology held at Vienna, Austria, July 10 – 14, 2006, with collaborators from Allied Research International (Toronto, Canada), University of Virginia Center of Allergy and Asthma Research, and Indoor Biotechnologies Incorporated (Charlottesville, VA). The titles were

(Continued on page 12)

BOY OH BOY!

Two future AE’s were born within a day of each other causing excitement and joy in the department. Salihcan (John) Paul Kremer was born to Paul Kremer, AE research associate and his wife Gül on May 10. The next day, May 11, Connor E. Wilkinson was born to Advanced Engineering Aid Corey Wilkinson and his wife Tracy.

Congratulations to these two families!
calculated based on specified NEC parameters. Mark also investigated the energy savings of ground source heat pump units versus fan coil units. This lead him to conduct a cost analysis of the various systems and their potential for energy and initial cost savings. Mark will graduate in December 2006, and will decide on an engineering firm for the start of his professional career.

Timothy Moore, in the structural option, conducted his thesis research on ‘Erie on the Park’ a 25-story condominium complex located in the River North district of Chicago, Illinois. The structural work that Timothy did for his thesis project consisted of redesigning the building as if it was constructed using concrete instead of steel. This led to the implementation of a post-tensioned floor system and an integrated slab-frame and shear wall lateral system. The cost and schedule of this design were determined for construction management breadth and a rainwater retention system was designed as a LEED breadth topic. In August 2006, Timothy joined Thornton-Tomasetti in New York City.

Adam Senk’s senior thesis project focused on the mechanical redesign of the existing systems of Penn State’s Chemistry building. His project included a redesign of the chiller plant in the basement of the building at 4050 tons to look at alternative energy sources for powering the plant and effects on emissions and equipment costs of these sources. Adam’s presentation included an atrium smoke evacuation system retrofit done using a transient model developed by Newcomb and Boyd and a computational fluid model developed using the program Phoenics VR. Adam also focused on analyzing the column loading of the buildings steel skeleton to determine if the columns and beam are within capacity to carry the additional gravity based load.

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“CONGRATULATIONS!”

(Continued from page 11)


Dr. Freihaut will present “Simulating Transient Particle Deposition/Re-Suspension in Indoor Environments” at the upcoming 3rd International Building Physics Conference in Montreal, Canada, Aug. 27 – Sept. 1, 2006.

IEC GUEST LECTURERS
Dr. Shinsuke Kato, director of the Center for Development of Instrumentation Technology and professor at the Institute of Industrial Science of the University of Tokyo gave a guest lecture for the Indoor Environment Center on “Recent Developments in Indoor Air Quality Control” on June 21, 2006.

Dr. Agami Reddy, visiting IEC scholar, also presented to the Indoor Environment Center. His presentation, held on Jan. 18, 2006, was titled “A Scientific Methodology for Calibrating Detailed Building Energy Simulation Programs.” Dr. Reddy is professor of civil, architectural and environmental engineering at Drexel University.

DEPARTURES
Dr. Martin Moeck has resigned his faculty position at Penn State AE effective June 30, 2006. He has accepted an associate professor position in the School of Architecture and Landscape Architecture at Arizona State University.

Moeck joined the AE faculty in August 2001. During his time at here, Moeck spearheaded the effort to install the first digital addressable lighting interface (DALI) instructional laboratory at Penn State. The first of its kind in the United States, this “hands-on” teaching laboratory is a 1,200 sq. ft. facility with more than $120,000 of state-of-the-art equipment donated from lighting industry sponsors.

All of the faculty and staff join in wishing Dr. Moeck and his family all the best as he pursues his new challenges at Arizona State.

Corinna Fisher, AE Staff Assistant accepted a new position as career fair coordinator with Career Services in the MBNA Career Services Building on campus. She will be responsible for coordinating the large, spring and fall University-wide career fairs held at the Bryce-Jordan Center. Congratulations Corinna — you will be missed in the AE Department!
firm of Schick Matts Construction Company in Erie. Acting as a general contractor primarily for commercial building projects, the firm of Schick Matts grew in size and prominence over the next twenty years.

Outside of work, Matts’ main interest is boating, and he has been a member of the Erie Yacht Club for over 40 years. He is also an active member of the Erie Power Squadron and served as Treasurer for a number of years. The Erie Power Squadron is an organization dedicated to the advancement of safe boating education and provides educational materials and classes in a wide array of safe boating disciplines. He is also a member of the Erie Historical Society and the Flagship Niagara League.

Matts has been generous with his time and financial support of numerous charitable and philanthropic endeavors. He has a long-standing friendship with the AE department and has maintained an active role by serving regularly on the AE Senior Thesis jury. He has also demonstrated a strong commitment to support new initiatives to enhance the AE program through his generous donations to the AE Department Academic Excellence Endowment. In addition, he and his wife, Elie have also established a bequest to endow the Charles and Elinor Matts Professorship in AE. This generous gift will have a lasting impact on the AE department, allowing the department to enhance faculty ranks and encourage exceptional individuals to explore innovative activities in teaching and research for the good of the whole department.

The faculty and staff of the Department of Architectural Engineering join in congratulating Charles Matts on the prestigious honor of being named a 2006 Outstanding Engineering Alumnus.
SEDIDIROMA—AE GOES TO ITALY

Thirty AE students spent seven weeks this summer in Rome, Italy participating in the ever popular Sedi di Roma study abroad in Rome summer program. The students took a heavy course load of 12 credits of architecture courses that could count towards an architecture studies minor.

The program includes two courses, Architecture of Rome and Cartography of Rome, which were taught on location. Sitting on the actual ruins they were learning about, students attended lectures by Prof. Romolo Martemucci and Prof. Alan Ceen. Prof. Dan Linzell of Penn State civil engineering offered a course in medieval masonry. The studio project consisted of the conversion of an existing building at Piazza Collegio Romano into a refugee center. The students work will be on exhibit in the gallery of Engineering Unit B this fall.

Sedi di Roma is located in the heart of Rome. Students resided in a former convent at Piazza Navona and attended classes and studio in Palazzo Doria Pamphili, both historical and without air-conditioning. In addition, there were several field trips to Venice, Parma, Florence, Pompeii, Paestum and Villa Adriana. During their free time, many students took advantage of the beautiful beaches and resorts in northern Italy and enjoyed the thrilling World Cup soccer championships.

We can attest that Penn State AE’s are all over the world. One day while standing outside the Palazzo Doria Pamphili, Prof. Moses Ling was approached by a clergy member. Ling said, “This can’t be.” It was Fr. Phil Sanders (’86, ’89g), an AE lighting/electrical graduate. Is there any doubt that all roads lead to Rome?

For additional information on AE study abroad programs, see www.engr.psu.edu/ae/study_abroad/rome_italy.asp.

AE WINS 2006 JURAN DOCTORAL AWARD

Leidy Klotz, an AE graduate student, won the 2006 Juran Doctoral Award. The award is administered by the Joseph M. Juran Center for Leadership in Quality and is designed to stimulate doctoral students’ thinking about quality principles early in their careers. Winners of the doctoral award receive a $2,500 prize, as well as a $2,500 match from the provost’s office for award recipients from Penn State. Klotz’s winning proposal is titled “Continuously Improving Green Buildings: Using Quality Principles to Identify Valuable Green Building Delivery Process Features” and addresses the work he is doing with the design and construction division at the University’s Office of Physical Plant (OPP).

STUDENT AWARDS

Heather Sustersic was awarded the Art Livingood Scholarship Award sponsored by ACI on April 21, 2006. She was nominated by Drs. Thomas Boothby and Linda Hanagan.

A team of Penn State AE students landed first-place in the HVAC System Selection and HVAC System Design categories of the 2006 ASHRAE Student Design Competition. The competition building project was a multi-unit residential/commercial building in Dallas, TX. The team included: Justin Bem, Kevin Kaufman, Jonathan Gridley, Jessica Lucas, and Yulien Wong. Dr. William Bahnfleth served as their advisor. The students will receive a $1500 award for each winning entry and will present their work at the 2007 ASHRAE winter meeting in Dallas.

NEW B.A.E. CURRICULUM APPROVED

Incoming AE students will matriculate under a new undergraduate curriculum starting this fall. The AE Curriculum Committee responded to a request from the dean of the College of Engineering to review all existing programs for quality and efficiency. After over a year of examination and deliberation by the committee and the AE faculty as a whole, the revised curriculum was reviewed and approved through the University, cumulating with the approval this June by the University Faculty Senate.

Key components of the revised program are:

- AE202 – This standing second year course will move forward to the fall semester of the second year to introduce new AE students to concepts in architectural engineering, such as sustainability, building envelope, fire protection, professional practice and engineering economics. (Don’t worry, the solar house will not be lost.)
- AE404 – A new structural course will introduce non-structural option students to a system approach to structures. AE404 will replace the formerly required AE401 (steel) and AE402 (concrete) for students in the other three options.
- CMPSC201 – After over 30 years of being a required course in the AE curriculum, neither Fortan nor C++ will be a required course for all AE students. In place of a programming language, students are expected to learn application programs within normal coursework. AE was the fourth engineering program in the College to eliminate the programming language requirement.
- AE439 and AE475 – These two formerly required courses will become department elective courses for structural students.
- EE365, EE425 and EE461 – At the request of the electrical engineering department, these courses will become department elective courses for lighting/electrical students. Students electing these EE courses are expected to complete the prerequisites as well.

As the result of the adjustments, the program totals 160 credits, an 8-credit reduction from the previous 168 credits. Student workload will average 16 credits per semester. (See www.engr.psu.edu/ae/advising)
Dear Alumni and Friends,

DEPARTMENT HEAD LETTER IS COMING!

Best wishes to you and your families.

Yours truly,

Richard A. Behr, Ph.D., P.E.
Department Head

Alumni Update
Let us hear from you!

Name

Date of Degree(s)  Option

Home Address

Home Phone

Employer

Address

Office Phone

E-Mail Address

Type of Organization

Occupation and Title

Responsibilities

Additional Comments (may be published in the next newsletter if applicable)
Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.

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