“Study provides useful information for residential construction in hurricane- or earthquake-prone areas.”

STORY FEATURED ON PAGE 9
A Message from

Architectural Engineering Department Head
Dr. Chimay Anumba

Dear Alumni and Friends,

I have had a very busy start to my tenure as Department Head with many activities during the Spring semester. First, there were a number of familiarization meetings with faculty, staff and students within the Department, as well as with key people in the Dean’s Office and other parts of the university. Then there was the development of the Department’s 5-year Strategic Plan, which I had to present to the Dean’s Executive Committee within 2 weeks of arriving at Penn State! This was followed by the Industrial and Professional Advisory Council (IPAC) meeting in early March, which I really enjoyed, as the AE Department is blessed with a truly outstanding and supportive group. We have also had to work on preparations for our ABET accreditation visit scheduled for Fall 2008.

We also had the Senior Thesis Presentations and Banquet (see page 8) and other student-centered activities. I am immensely grateful to all those that enabled us to recognize our students’ achievements and to give out over $100,000 in scholarships and awards. The summer has largely been spent meeting alumni and friends of the Department, planning for the 2008/09 academic year, and moving my family over from the UK.

The new academic year brings with it tremendous challenges and opportunities, and I am looking forward to an exciting year. The ABET accreditation visit will take place October 26-28 and we are getting ready for it. It is an important opportunity for us to demonstrate the alignment of our program and processes with the expected educational outcomes for our graduates.

This year the Department will actively work towards the implementation of the new 5-year Strategic Plan (excerpts of which are available on the Web site). An action plan will be drawn up this Fall with defined tasks and activities, as well as clear timescales and milestones to ensure that we can monitor progress in a proactive manner.

You will be pleased to know that we have been successful in our bid for a new faculty position co-funded by the Penn State Institutes for Energy and the Environment (PSIEE). The new position will be based in the AE Mechanical Systems Group, with a joint appointment in the Power and Controls Group within the Department of Electrical Engineering, and will develop new research initiatives in the area of Sustainable Building Energy Systems. We are excited about the potential contribution of this position to our strategic goal of being leaders in high performance green buildings. A search will be initiated this Fall.

The annual AE Career Fair will be held on October 28. This year marks the Fair’s first year at the Bryce Jordan Center, which has the capacity to accommodate up to 160 companies. We welcome all companies that support the Career Fair and look forward to developing a strategic partnership that provides wider support to our students and the AE program.

As some of you may be aware, 2010 marks 100 years of the AE Program at Penn State. You will agree with me that this is worth celebrating! We are now beginning to plan towards this and more details are included on page 3 of this newsletter.

I would like to thank you for continued support and look forward to meeting more of you as I travel around the country this academic year.

With best regards,

Dr. Chimay J. Anumba
Professor and Department Head

“The new academic year brings with it tremendous challenges and opportunities, and I am looking forward to an exciting year.”
A Look to the Future: 2010

Greetings from Penn State’s Architectural Engineering Department! My name is Eric Ziegler and I am the Associate Director of Development for the College of Engineering and am assigned to be the Development liaison to the Architectural Engineering Department. I am proud to be working with the AE Department head, Dr. Chimay Anumba along with the entire faculty and staff of the department to assist in all things dealing with fundraising and AE alumni initiatives. Our goal is to advance the programs and vision of the AE department at Penn State so that it will remain one of the best AE programs in the nation.

I would like to take the time to update you on some of the development programs that we have currently underway within the department. Some of these programs you may have already heard about and some may be new to you. They are all top priorities within the development plans of the AE Department:

**The AE Practitioner Instructor (PI) Program:**
This is an ongoing initiative to establish a $3.14 million endowment that will enable the Department to bring qualified mid- to senior level industry professionals to campus to teach up to ten selected courses in architectural engineering each year. So far, almost $800,000 has been raised. Our heartfelt thanks go out to all those who have given their support toward the PI Program. It is a vital program that will enable our students to better understand the industrial context of AE by learning from senior professionals. More information on the PI program can be found at: http://www.engr.psu.edu/ae/pi

**The AE Department Mentor Program:**
The vision of this new program is to establish a strong partnership between the AE department at Penn State and AEC companies such that all AE students are supported by both academic and industrial mentors throughout the duration of their studies. The program will support several activities throughout the year at which industrial mentors can interact more closely with AE students. More information on this program is available from Dr. Anumba.

**The AE Centennial Celebration**
As outlined in this newsletter, 2010 will mark the centennial of the AE department at Penn State. We plan to involve as many alumni as possible in this celebration, both on campus and via regional events. Keep your eyes open for more details of this wonderful event and plan to take part in some capacity to celebrate 100 years of AE excellence at Penn State!

As always, the department is grateful to all of you who have generously supported our programs in the past. Please note that all gifts intended for the AE program should be so designated, as general gifts to Penn State are not automatically directed to the AE Department. More details about options for where your support for the department can be directed can be found at: http://www.engr.psu.edu/ae/supporting_ae

Thank you! And...Fight on State!

Eric J. Ziegler
Associate Director of Development
ejz3@psu.edu

---

**DEVELOPMENT NOTES/UPDATE**

**AE CENTENNIAL (1910 – 2010)**
ARCHITECTURAL ENGINEERING TO CELEBRATE 100 YEARS OF EXCELLENCE AND INNOVATION

Founded in 1910, the Architectural Engineering Program at Penn State University has a long and distinguished tradition of excellence and innovation. It is the oldest, continuously accredited architectural engineering program in the United States, and is arguably the best. 2010 marks the 100th anniversary of the program and we are now in the initial planning stage of this important milestone. The intention is to have a series of events throughout the calendar year (2010), including a major Homecoming event at University Park. We would like to actively involve all alumni, friends, students, faculty and staff in planning and participating in the Centennial celebrations. As such, we would welcome suggestions for events, volunteers to help with events, contributions to an AE Centennial Fund, etc. In addition to the Homecoming event, other suggestions currently under consideration include:

- Alumni and student-led events (at University Park and around the country);
- Time capsule (to be opened in 25, 50 or 100 years time);
- Centennial brochure/History of AE at Penn State;
- International conference and/or series of workshops on campus;
- Exhibition on the influence of AE alumni on the built environment over the last 100 years;
  - Major projects by AE alumni
  - Google Earth directory of these projects
- Celebration of AE successes (alumni, students, faculty and staff);
- Have a legacy project on campus;
- Campus tours;
- Development/Fundraising events.

Professor Emeriti Gifford Albright and Louis Geschwindner have both accepted to co-chair the AE Centennial Committee and would love to hear from you. Please send suggestions for activities/events for this year-long celebration to Nancy Smith (njnsarc@engr.psu.edu), who is secretary of the Centennial Committee.

In addition to having lots of fun, we would like to position the Department for continued success in the next 100 years. The Centennial provides an excellent focal point for ensuring that the Department has the resources to maintain its excellence over the next 100 years. An AE Centennial Fund will be established for this purpose. Please contact Dr Chimay Anumba on 814-865-6394 or by email: anumba@engr.psu.edu if you are interested in contributing to this or other initiatives.

Please visit our Web site for more details and to update your contact information at: www.engr.psu.edu/ae/AE-Centennial.asp

We look forward to hearing from you!!!
Alumni Updates

70’s and earlier

Where are you?!  We would love to hear from you!

80’s

Robert A. Young '84g associate professor and historic preservation program director in the College of Architecture + Planning at the University of Utah in Salt Lake City. Earlier this year I published my first book, Historic Preservation Technology, through John Wiley & Sons Publishing Co. I was also recently named the University of Utah 2008 Distinguished Service Professor.

Rex Giardine '86, is employed by Syracuse University as an assistant director for Capital Projects.

Jeff Conley, '87 is with SEQUIL Systems, Inc., a LEED + Commissioning firm he started in 2001. Located in Delray Beach, FL (office is a "par 6 from the ocean"), SEQUIL has clients such as Burnham Institute, Autodesk, NASA and a LEED Platinum project using a "chilled beam" radiant cooling.

Jeff and his wife Lenna Laskaris '86 B.S. Psych have 2 sons, Bryce 10 and Grant 7, (shown on the Penn in Hong Kong.

Victor Hui '98 is a deputy project manager with Redland Precast Concrete Products, Ltd. in Hong Kong.

Richard W. Girard '99 is a project manager with Leach Wallace Assoc. in Elkridge, MD. His duties include managing an MEP design team working primarily on healthcare, with some commercial and institutional, new and renovation design projects. Most notable and recently completed projects include a central energy plan expansion and surgery addition at Carolina Medical Center - Mercy Hospital in Charlotte, NC, a Surgery Department renovation and 50-bed Newborn Intensive Care Unit fit-out at Children’s National Medical Center in Washington, D.C. He was promoted to project manager in June 2007.

He was married on Oct. 13, 2007 to Amanda B. Stolarski (graduate of Syracuse University).

Kathleen R. (Doyle) Mancini '99 is currently working with EDIS Company in Wilmington, DE.

The AE Class of 1998 held its 10-year reunion in State College on July 18-20. Ten members of the class, Dr. Bill Bahnfleth, family and friends were in attendance. A great time was had by all! Highlights included a tour of Forest Resources and Stuckman Family buildings, a picnic at Spring Creek Park, a State College Spikes baseball game and two trips to Cafe 210 West! A big thank you to the reunion team of Chuck Tomasco, Justin Ziegler and Angie Cotie (Hamlett) who organized the event and to Mike Prinkley for leading the tour!

The AE Class of 1993 held its 15-year reunion on July 18-20 in State College. Twelve members of the class along with their spouses and families attended including Kevin Houser, fellow classmate and now AE professor!

00’s

John Vivino '01 is a project manager with Gardiner & Theobald, Inc. in New York, NY. He is currently managing the renovation project for the United Nations Headquarters.

Jason Moyer '01 is a mechanical engineer with UR5 Corp. - Washington division where he is supervising mechanical design and assisting the department head.

Kelly J. (Doyle) Krieg, '03, staff engineer at Structural Engineering Services in Export, PA, and her husband John, EE '03 welcomed son Evan John, born Nov. 1, 2007, weighing 5lbs. 2 oz. As you can see from the photo, he’s already a little Penn Stater!

Andrea Hauber '04 is working with Kling Stubbins in Philadelphia, PA.

John Graef '05 is a project engineer II with Jacobs Engineering Group, Inc. in San Diego, CA.

Shane Semple '05 is an electrical EIT with Astorino in Pittsburgh, PA. He is responsible for lighting and electrical design.

Elizabeth Hostutler '06 and Steven Puchek '06 are engaged to be married and plan on tying the knot on Sept. 27, 2008, in Baltimore, MD.

Julie (Thorpe) Patrick '06 is currently working with Southland Industries in Dulles, VA.

Eric Yanovich '06 is a structural engineer, EIT with Cubellis, Inc. in Philadelphia, PA.

Jason McFadden '06 project engineer for Barton Malow Company, provided the inside story of building the first LEED certified baseball park, Penn State's Medlar Field at Lubrano Park. McFadden was joined by Marvin Bevan, '83 Penn State's Physical Plant project manager, for the presentation at the third annual National Association of College and University Business Officers Smart and Sustainable Campuses Conference, April 2, 2008, at the University of Maryland College Park. McFadden and Bevan explained the logistics of the entire project, with details of how a facility becomes LEED certified.

Chris Ankeny '07 is employed by Clark Nexsen Architecture and Engineering in Norfolk, VA.

Ben Douglass '07 structural engineer with Haynes Whaley Associates, Inc. in Herndon, VA.

Former AE Department Head Gifford Albright '53 has been spotted around town in the first SMART car in Happy Valley. This unusual vehicle is 8.8 ft. wide, 5.1 ft. tall and 5.1 ft. wide and has a top speed of 90 mph. It is designed to achieve 40 city/45 highway mpg and two smart cars can fit into an average parking space.

S.M.A.R.T. Car in Front of Nittany Lion

Shown above, Albright compared the size of his car to the famous Nittany Lion on campus. We think the lion has him by a nose!
The architectural engineering department is pleased to announce that **Russell Heiken** of Apopka, FL., executive vice president of X-nth, Inc. was a recipient of the 2008 Outstanding Engineering Alumni Award in the College of Engineering.

Russell Heiken attended Penn State and graduated from the Architectural Engineering program with a bachelor's degree in 1981.

In 1982, Russ Heiken joined the firm Goulet-Rigby-Geiger (GRG) at their newly opened headquarters in Florida. The firm provided a full range of building engineering services. In 1990, the owners of GRG sold majority interest to RG Vanderweil Engineers, Inc. in Boston and changed its name to GRG Vanderweil Engineers, Inc. The Vanderweil Companies became one of the largest building engineering firms in the country with annual revenues approaching $70 million.

In 2001, the Florida operation officially ended its affiliation with the Vanderweil organization and the Vanderweil's equity in the 75-person firm reverted back to the original two partners and five key employees, one of whom was Russell Heiken. The firm has continued to grow, gaining assets and over 350 new employees, as well as opening new offices in Atlanta, Baltimore, Boston, Las Vegas, Milwaukee, Orlando, San Diego and Seattle. Mr. Heiken was a key leader in this impressive business growth record.

In 2007, GRG changed its name to X-nth, Inc. to reflect the firm's commitment to go to the nth degree to provide a broad spectrum of innovative design solutions for their clients. Some examples of the type and size of building projects now handled by this company are:

- **Hospitality**: 45 million square feet in hospitality projects completed.
- **Entertainment**: 7.2 million square feet in entertainment projects completed.
- **Gaming**: 13 million square feet in gaming projects completed.
- **Mission Critical**: 2 million square feet in raised floor environment projects completed.
- **Healthcare**: 17 million square feet in healthcare projects completed.
- **Science-Technical**: 100 million square feet in Science-Technical projects completed.

Russ Heiken’s responsibilities as executive vice president and director of Healthcare Services at X-nth, Inc. includes client interface/satisfaction, setting project goals and direction, assuring manpower resource availability and contributing to the building systems designs. His healthcare experience includes all types of projects - from small renovations to new Greenfield hospitals. His expertise is in large-scale projects located throughout the country and internationally. He focuses on energy saving designs that are budget conscious and appropriate for the owner. He is in a key leadership role in developing further the overall X-nth business operation.

Outside of his successful business activities, Russ has maintained a long-standing friendship with the AE Department. On numerous occasions he has participated in the AE Career Fair, served as a member of the AE Senior Thesis Jury and has maintained an active leadership role as a member of the Industrial and Professional Advisory Council (IPAC). He is also a Practitioner Instructor (PI) Program Partner. He frequently comes to campus to provide AE class lectures and seminars on state-of-the-practice issues related to the building industry.

Russ is an excellent role model and mentor for the many Architectural Engineering students with whom he regularly interacts. He is very popular with our students, and is well respected by our faculty and staff. We are pleased that he has been honored as our 2008 Outstanding Engineering Alumnus.

---

**AE Guest Lecture**

**Glenn R. Bell** - senior principal and chief executive officer of Simpson Gumpertz and Heger, Inc. (SGH) in Waltham, MA, gave a lecture to AE faculty and students on Mar. 4, 2008. The topic was “Architecture and Tomorrow’s Building Engineering: Leading a New Design Paradigm for the Twenty-First Century and Beyond.”

Mr. Bell joined SGH in 1975 as a graduate engineer and has continuously advanced over the years to his current position. He has been responsible for major works in all areas of SGH’s practice including structural engineering, building technology, and engineering mechanics and infrastructure. Under his leadership as CEO since 1995, SGH has grown substantially in size and breadth of capability.

Mr. Bell, a long-time friend of the AE Department is a standing member of the Penn State AE Department Industrial and Professional Advisory Council (IPAC); a Practitioner Instructor (PI) Program Partner; and sponsor of the SGH Scholarship in AE and the SGH Outstanding Senior Thesis Award in the Area of Sustainable Design. He has also served as a member of the AE Senior Thesis Jury.
Awards/Honors

James Freihaut (left) associate professor was granted academic tenure effective June 2008. Congratulations!

Several AE faculty, students, and alumni were recognized for their technical and service contributions at the ASHRAE Annual Meeting held in June in Salt Lake City, UT.

Joseph Firranteillo, James Posey Associates, Baltimore, MD; BAE/MS ’07, William Bahnfleth (right) professor and director, Indoor Environment Center, Amy Musser, Vandemusser Design, LLC, Asheville, NC; BAE ’04, PhD ’98, James Freihaut, director, Indoor Environment Center Indoor Aerosol Laboratory, and Jae-Weon Jeong, assistant professor, Sejong University, Seoul, Korea; Ph.D. ’04, postdoc ’04-’07, received a Technical and Symposium Paper Award, one of four given annually, for “Use of Factorial Sensitivity Analysis in Multizone Airflow Model Tuning,” which was presented at the 2007 Winter Annual Meeting in Dallas, TX. Firrantello received the Willis H. Carrier Award for the same paper. This award is given annually for “the best published paper of outstanding quality presented at a society meeting by a member of any grade who was 32 years of age or less at the time of presentation of the paper.”

Vladimir Vukovic, MS ’05, and doctoral candidate and Jelena Srebric, associate professor (right) received a Technical and Symposium Paper Award for “Application of Neural Networks Trained with Multi-Zone Models for Fast Detection of Contaminant Source Position in Buildings,” which was presented at the 2007 Annual Meeting in Long Beach, CA.

Prof. Bahnfleth also received the ASHRAE Exceptional Service Award which recognizes members who have served the Society "faithfully and with exemplary effort, far in excess of that required for the Distinguished Service Award." Recipients must have been a full grade member for a minimum of ten years and be a past recipient of the Distinguished Service Award (which he received in 1998).

Every year, the Penn State Engineering Society (PSES) honors outstanding teaching, research, service, and advising among the faculty and staff of the College of Engineering. Award recipients are nominated by their respective departments and are selected by a panel of peers and PSES representatives.

The Penn State Engineering Society Outstanding Teaching Award recognizes and rewards outstanding engineering educators for excellence in teaching and for contributions to the art of teaching. These teaching awards are established to confer honor on individuals whose inspiration and contributions to learning are truly memorable. The 2008 PSES Premier Teaching Award recipient is associate professor Linda M. Hanagan. Hanagan joined Penn State in 1998 as an assistant professor and was promoted to associate professor in 2004.

The Penn State Engineering Society Service Award recognizes and rewards a current or former faculty member, an alumnus, or friend who has donated time, expertise, and energies in the form of outstanding and special service to a department, unit, or to the College. The 2008 PSES Distinguished Service Award recipient is Louis F. Geschwindner (right).

The Penn State Engineering Society Outstanding Staff Award recognizes and rewards outstanding service by staff employees in the College of Engineering. The 2008 PSES Outstanding Staff Award was presented posthumously to Sharron E. Williams. Sharron was the student records staff assistant for nearly 34 years in the Penn State architectural engineering program. Sharron lost her battle with cancer, and passed away on Dec. 8, 2007. Sharron’s PSES Award plaque is displayed in the AE Department as a tribute to her many years of service. (see article on page 7)


AE high-performance green building research was featured in the Penn State Industrial Research Office newsletter (IRON) available online at: www.research.psu.edu/iro/iron/summer2008/index.html

New Kid on the Block

AE bookkeeper Wendy Flanagan and her husband Alan welcomed their first child, a son, Sean Alan, born on May 23, 2008, at Mount Nittany Medical Center in State College.

He weighed 6 lbs. 10-1/2 oz. and was 21 inches long.

Congratulations to the new Mom and Dad!

SSAE Option Social

The Student Society of Architectural Engineers (SSAE) and the AE Department co-sponsored the annual Options Social on Mar. 27, 2008, at the Nittany Lion Inn. Nine 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 (njs1@psu.edu) in the AE main office to have your name added to the mailing list.
Department News / What’s happening in AE

Phi Alpha Epsilon Induction Ceremony
Phi Alpha Epsilon held its annual induction ceremony on April 28 at the Allen Street Grill. Overall, 26 fourth-year and 12 fifth-year students were inducted. Congratulations!

Commencement
Commencement for the College of Engineering was held on May 16, 2008. Architectural Engineering conferred 82 B.A.E., 55 M.A.E., 2 M.S., 4 M.Eng. and 5 Ph.D. 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!

PACE Research Seminar
The Partnership for Achieving Construction Excellence (PACE) Research Seminar was held on April 23-24, 2008 at the Nittany Lion Inn. Held each spring, the research seminar combines presentations of research results and timely industry speakers for a diverse audience of building industry professionals and university students. The topics for this year’s seminar were “Workforce Development, BIM and Prefabrication.”

The Partnership for Achieving Construction Excellence (PACE) Round Table Meeting will be held on Oct. 15-16, 2008. Registration details are available online at: www.engr.psu.edu/pace/index.asp

PI Program Update
Inspired by the numerical value of PI, the AE department is looking to raise $3.14 million to establish the Practitioner Instructor Program Endowment. A portion of the annual interest from the endowment will bring professionals to campus to teach selected courses. The remainder of the interest will provide support for other aspects of the AE Program, including field trips, guest lecturers, instructor travel expenses, state-of-the-art instructional equipment, course materials, and other course-related enhancements.

We thank all donors who are helping to make the PI Program a reality! Pledges and contributions received amount to $753,500. Major PI donors include:

**Named PI Program Instructor ($300,000)**
- Turner Construction Company

**PI Principals ($60,000)**
- Alliance Structural Engineers, LLC
- Bard, Rao + Athanas (BR+A) Consulting Engineers, LLC
- Clark Construction Company

**PI Partners ($30,000)**
- Barton Malow Company
- Grunley Construction Company
- JBA Consulting Engineers
- Simpson Gumpertz & Heger, Inc.
- Vanderwell Engineers
- X-rth, Inc.

**PI Associates ($15,000)**
- Barton Associates, Inc.
- Mr. Herbert L. Duffield
- Foreman Architects-Engineers and Construction Managers
- HSC Builders and Construction Managers
- ONCORE Construction, LLC
- Wiss, Janney, Elstner Associates, Inc.

**Contributors ($ various)**
- Timothy W. Butler
- LSC Design, Inc.
- SSOE, Inc.
- Prude Construction Corporation

Sharron Remembered by AE Students...

**Sharron Williams**, beloved student record’s secretary from 1973-2007 is fondly remembered by the students of Architectural Engineering both past and present. Several fundraisers were organized by the AE students during the Spring 2008 semester with all proceeds donated to the Sharron Williams Memorial Scholarship Fund that was established in her honor.

Anyone who knew Sharron knew that she loved jewelry. She had a large collection of unusual earrings, bracelets, and rings. As a tribute to her, AE Graduate Student **Sarah Klinetob** made a wide selection of beautiful hand-crafted earrings that were on sale during Donut Day throughout the Spring semester (photo right).

In addition, the AE Graduate Student Association held a fundraiser selling AE coffee mugs.

On Feb. 27, 2008, the AE student society groups (S:PACE, SSAE, DBIA, IES and ASHRAE co-sponsored the Mr. AE Contest on campus. The tongue-in-cheek competition was well attended by the students. Proceeds of admission and student “votes” were donated to the scholarship fund in Sharron’s memory.

The goal is to create an endowed scholarship in the AE department so that each year, the interest income from this fund would produce an annual scholarship in perpetuity (approximately $1,000) to be given to deserving AE undergraduate students in Sharron’s memory. After nearly 34 years of dedicated service to the faculty and students in the AE department, we think this is a wonderful way to honor her legacy!

If you would like to donate to the Sharron Williams Memorial Scholarship Fund, checks can be made payable to “Penn State” and noted on the comment area as the Sharron Williams Memorial Scholarship. Checks can be sent to the attention of **Nancy Smith** in the AE Main office at 104 Engineering Unit A, University Park, PA 16802.

Thank you!

IPAC Meeting
The Industrial and Professional Advisory Council (IPAC) meetings were held in the College of Engineering on March 3-5, 2008. AE faculty and student representatives consulted at length with IPAC members of industry. The focus of the discussions was on strategic planning and preparation for ABET 2008. Ms. Roberta Liss of C.B. Richard Ellis Group in Washington, DC, was elected IPAC chair.

Next AE Career Fair
The next AE Career Fair will be held on Oct. 28, 2008 at the Bryce Jordan Center on campus. Contact Lori Smith (lorismith@psu.edu) or check online for further details on our homepage at: www.engr.psu.edu/ae (click on 2008 AE Career Fair link).
The 2008 Senior Awards and Recognition Banquet was held on May 2, at the Nittany Lion Inn. We were very pleased to present over $100,000 in scholarships and awards (shown below) 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 37 industry professionals met in the afternoon to judge the top eight fifth-year thesis presentations.

2008 - SENIOR THESIS AWARDS/RECIPIENTS

Acuity Brands/Lithonia Lighting - 1st Place Lighting/Electrical Thesis in Memory of Mickey Woods (Mike Royer)
Balfour Beatty Construction - 2nd Place CM Senior Thesis (Jenna Marcolina)
Barton Associates - 2nd Place Mechanical Thesis (Maxwell Chien)
Barton Associates - 2nd Place Lighting/Electrical Thesis (Nicholas Kutchi)
Barton Malow Company - 1st Place CM Senior Thesis (Nicholas Nigro)
Cagley & Assoc. - 1st Place Structural Thesis (David Finley)
Hope Furrer and Associates - 2nd Place Structural Thesis (Alexander Kosis)
PSPE/PEPP - Best Overall AE Senior Thesis (Jason Sambolt)
Simpson Gumpertz & Heger - Outstanding Senior Thesis in the Area of Sustainable Design (Kyle Macht)
Southland Industries - Outstanding Senior Thesis in the Area of Specialty Construction (Monja Belizaire)
Transystems Corporation - 1st Place Mechanical Thesis (Jason Sambolt)

2008-2009 AE SCHOLARSHIPS / SPONSORS

Gladys M. Baird Memorial Scholarship
Baker IngramAssoc. Scholarship
James W. Bathgate Memorial Scholarship in Architectural Engineering and Chemical Engineering
Beaver Scholarship in Heavy Construction
Laraine and Jack Beiter Excellence Endowment Scholarship in Architectural Engineering
Borda & Fernsler Family Scholarship sponsored by Joseph & Marlene Borda and Frederick & Patricia Fernsler
BR + A Consulting Engineers Prof. Jack Everetts and Prof. Melvin Isenberg Memorial Scholarships sponsored by Eugene Bard
Cagley & Associates Scholarships
Clark Construction Group Scholarship
AE Class of 1975 Scholarship
DeSimone Consulting Engineers Scholarship
Ellerbe Becket Scholarship
EwingCole Scholarship
Prof. John Flynn Memorial Scholarship
Foreman Architects-Engineers Scholarship
Foreman Program & Construction Managers Inc. Scholarship
Louis and Judy Geschwindner Endowed Scholarship
Hadco Lighting Scholarships
Illumination Engineering Society - Philadelphia Section Scholarship
Johnson Controls Scholarship
The Lighting Practice Scholarship
Robert J. McNamara Scholarship

Charles A. Merica Memorial Scholarship sponsored by Clark Construction Group
Prof. Vincent Pass Scholarship sponsored by Joseph & Marlene Borda
Melvin H. Peters Endowed Scholarship
Pittsburgh Builders Exchange Scholarships
James M. Pohlen Memorial Scholarship
John R. Potter Memorial Scholarship
Franklin Ruth Memorial Scholarship
Ryan Biggs Assoc. Scholarship
Simpson Gumpertz & Heger Scholarship
SmithGroup Scholarship
Prof. C. Herbert Wheeler Scholarship sponsored by Joseph & Marlene Borda
Sharron E. Williams Memorial Scholarship
Michael J. and Virginia A. Youchak Scholarship

2008-2009 AWARDS

John J. Brinjac Memorial Award - Outstanding 5-Year Performance and Record of Study in AE; sponsored by Brinjac, Kambic & Assoc.
CUH2A Awards - Outstanding Performance in Mechanical in the 4th Year AE Class and Outstanding Performance in Lighting/Electrical in the 4th Year AE Class
Cannon Design Award - Outstanding Record of Study in HVAC
James G. Davis Construction - Outstanding Capstone Project Electronic Portfolio (CPEP) Award
Forrester Construction Ethics Award
Hettema Leadership Awards - Sponsored by Turner Construction
Holbert Apple Assoc. Award - Outstanding Performance in Structures in the 4th Year AE Class
Howard and Callie Kingsbury Award for Excellence in Architectural Acoustics
Gershon Meckler Memorial Award - Innovative Building Mechanical System Design
Charles A. Merica Award - sponsored by Clark Construction Group
Allan Naugle Memorial Award; sponsored by Fredrick Fernsler
PACE Group - Outstanding Performance in Mechanical in the 4th Year AE Class
PACE Group - Outstanding Record of Study in CM - 5th year AE Class
Peerless Lighting Award - Outstanding Record of Study in Illumination - 5th year
PSPE/PEPP - Professional Practice Award
Thornton-Tomasetti Group - Outstanding Record of Study in Structures - 5th year

SPECIAL THANKS!
A special thank you to all those who generously sponsored the cost of some of the student meals at the 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 the students.

Hankin Distinguished Lecture
Nick Retsinas, Director, Joint Center for Housing Studies, Harvard University will present a lecture on “State of Affordable Housing,” on Nov. 19, 2008, at 4:00 pm at the Nittany Lion Inn, Ballroom A/B.

For more information go to www.engr.psu.edu/ce/divisions/residential/Hankin_lecture_series.html
Lateral Load Resistance of Interior Steel Stud and Wood Stud Light-Frame Walls

This pilot study was undertaken by Profs. Ali M. Memari and Bohumil Kasal to develop a better understanding of the differences in behavior of interior gypsum wall board (GWB) sheathed wood stud and steel stud light-frame wall systems under monotonic and cyclic racking loading conditions. It was of interest to also evaluate the effect of finishing GWB joints with tape and joint compound on the lateral load resistance of both construction types. Five specimens of steel and four specimens of wood stud wall panels of 8 ft x 8 ft dimension were constructed and tested on the test frame shown in Figure 1. The wood members were 2 in. x 4 in. studs, while the steel studs were 3 5/8 in. wide C-studs and C-tracks. The ½ in. thick 4 ft x 8 ft GWB sheathing panels were attached with screws to the framing to create a horizontal joint at mid-height of the 8 ft x 8 ft wall panel. Typical cyclic load test result on one wood-frame specimen is also shown in Figure 1 along with the envelope curve and the monotonic load curve. The figure shows good energy-dissipating properties. Figure 2 shows typical failure modes for specimens without joint tape and compound finish.

Some of the results obtained from the study are as follows: (a) The wood stud specimen with finished surface strength was about 55% higher compared to unfinished surface specimens; the steel stud specimen with finished surface, however, showed about 45% increase in strength over specimens without surface finish; (b) Based on monotonic test results, the load capacity of the wood stud specimens were approximately 90% higher than the load capacity of steel stud specimens; and (c) All specimens had ductility factors of at least 2.5. The study provides useful information for residential construction in hurricane- or earthquake-prone areas where lateral building resistance is critical. The work was sponsored by the Pennsylvania Housing Research Center and involved a number of undergraduate students.

Figure 2. Failure modes of wood stud and steel stud specimens without joint tape and compound finish.

Some of the results obtained from the study are as follows: (a) The wood stud specimen with finished surface strength was about 55% higher compared to unfinished surface specimens; the steel stud specimen with finished surface, however, showed about 45% increase in strength over specimens without surface finish; (b) Based on monotonic test results, the load capacity of the wood stud specimens were approximately 90% higher than the load capacity of steel stud specimens; and (c) All specimens had ductility factors of at least 2.5. The study provides useful information for residential construction in hurricane- or earthquake-prone areas where lateral building resistance is critical. The work was sponsored by the Pennsylvania Housing Research Center and involved a number of undergraduate students.

Figure 1. Test facility and typical results of cyclic load-displacement diagram

AE Sabbatical Leaves

Two AE faculty members, Profs. Thomas Boothby and Jelena Srebric have recently returned from sabbatical leaves.

Tom Boothby had a productive year-long sabbatical leave, of which 6 months were spent in Italy accompanied by wife Anne and daughters Clara (17) and Kathryn (7). Photo left is Boothby and his daughters enjoying the ‘passegiata’ at home in Arona.

In Fall 2007, following an initial visit to the Politecnico di Milano, Tom worked at Penn State on the development of structural models of the Santa Maria Novella in Florence, Italy. Dimensional and experimental data gathered will be useful in the development of an accurate structural model, and the model of the vaults would be of use in the interpretation of the construction history of this monument. He also attended a conference on Auxerre Cathedral in France before returning home to Penn State where he completed a model of one of the earlier vaults in the nave of Santa Maria Novella.

Spring 2008 saw the continuation of the modeling work which included the larger square vaults, and the development of a shell element only procedure for modeling rib vaults. This work was done in close collaboration with Prof. Alberto Taliercio of the Politecnico di Milano. During an extended site visit, additional dimensional data and photographs were collected of the transept, and a series of impact-echo experiments were completed on the vaults in order to have a better account of their thickness. This work was assisted by Elisabetta Pistone, an MS graduate of Politecnico di Torino who will be pursuing her Ph.D. studies at Penn State AE this fall.

Dr. Srebric spent her sabbatical working with colleagues from the Penn State College of Medicine in Hershey, PA, and the Harvard’s School of Public Health in Cambridge, MA. The collaborations resulted in a case study of a green building, and its health effects on occupants. The main goal was to assess whether the indoor environment in a green building has clear advantages when compared to environmental conditions in typical U.S. office buildings as documented by the Environmental Protection Agency (EPA). The case study was conducted in the office building of the Pennsylvania Department of Environmental Protection (DEP) in Ebensburg, Cambria County, PA, which is a LEED Gold certified office building. Simultaneously with the measurements of building indoor environmental parameters, building occupants completed a comprehensive survey related to occupants’ perceptions of indoor environment and their health. The study collected a large amount of data, which are still being analyzed, and publications are under preparation. Overall, the sabbatical enabled Dr. Srebric to broaden her experience to the field of health science through collaborative efforts. Dr. Srebric’s plans to introduce these new scientific research results into Architectural Engineering design courses. In addition, she has developed an informal organization for exchange of resources and expertise among her long-term collaborators. The organization is called the “Building Research Network,” and enables leveraging of the existing resources. Industry members are welcome to participate in this exchange program, if interested in the most recent research results in building science. As an example of such an exchange is an invited lecture that Dr. Srebric delivered at the Building Technology Program, Massachusetts Institute of Technology (MIT) on March 10, 2008. The invited attendees were not only from the academic environment, but also from the industry partners in the greater Boston area. The topic of the lecture was “Passive Building Envelope Solutions for Sustainable Housing,” which included recent research results on the assessment of thermal performance of green roof samples in Dr. Srebric’s laboratory.
**Student Honors**

**Natalie Bryner**, (AE 4th year) was selected as the 2008 Joelle Award recipient for Women in Engineering Leadership. A committee of engineering faculty, staff and the Joelle sponsor selected her for this honor from a competitive pool of outstanding candidates. Chloe Abraczinskas, aerospace engineering and **Rachel Chicchi**, (AE 4th year) were both Joelle Award First Runner-ups. The Joelle Award for Women in Engineering Leadership recognizes outstanding contributions by a woman student to the College of Engineering. Natalie was recognized at the Engineering Diversity Advisory Awards Dinner on Monday, April 7 at the Atherton Hotel.

**Dan Vallimont** (AE 3rd Year) took third place overall at the NCAA Division I Wrestling Championships held March 20-22. In the wrestle-backs, Vallimont, who wrestles in the 157 lb. class, beat the number 1 seed, returning national champ and ended up taking third place overall. He went 5-1 in the tournament to earn his first All-America medal.

Work done by **Kathryn Ritter** (AE 4th year) and Joseph Papalia, (Architecture) was exhibited in a juried show titled, "Geology: Materials of the Earth as Seen in Art." The show, the first of a series titled, "Art of the Natural World," was held at Lock Haven University's Durrwachter Alumni Center from March 25 through April 4, 2008.

The American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) has named two Penn State AE students as scholarship recipients for the 2008-09 academic year.

The Henry Adams Scholarship, established by the consulting firm of Henry Adams Inc. in memory of its founder was awarded to **Alysa Adams**, (AE 3rd year); and the Alwin B. Newton Scholarship who’s namesake was an industry pioneer who was granted 219 patents and strived to provide knowledge to younger people in the industry, was awarded to **James Gawthrop**, (AE 4th year).

**Student Marshal**

**Ashley Bradford** is the top 5th year student who was named the class student marshal to represent AE in the spring 2008 commencement ceremony. Ashley chose Prof. Moses Ling to serve as faculty marshal at the commencement on May 16. She graduated in the integrated bachelor’s and master’s of architectural engineering degree program.

Ashley is a Schreyer Honors Scholar, a Leonhard Scholar and a member of Tau Beta Pi, Phi Alpha Epsilon and the Golden Key Honor Societies. She has been the recipient of the SmithGroup Scholarship, the EwingCole Award and the President’s Freshmen Award as well as being named to the Dean’s List every semester since entering the AE program! A true student leader, she is a member of the Women in Engineering Program, an officer of Tau Beta Pi, and has served as an AE Student Envoy. She has also served as Treasurer, THON Chair and Co-Adviser for the Penn State Lionettes Dance Team. Following graduation, Ashley joined TAC, Inc. in Austin, TX as part of their Energy Solutions Project Development group.

In addition to being named Student Marshal, she will be awarded a Life Membership in the Penn State Alumni Association. **Congratulations Ashley!**

**ASHRAE Winter Meeting Trip**

The 2008 American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) Winter Meeting was held Jan. 19-23 in New York, NY, and Penn State AE students were well represented by a contingent of 22 ASHRAE student branch members. Students had the opportunity to learn from a wide range of programs presented by highly regarded professionals and researchers about ventilation, indoor air quality, building energy simulations, sustainable building design strategies, and more.

The group also participated in student activities including the student breakfast, student congress, welcome party and a variety of social events. All students attended the student breakfast to meet colleagues from other schools and to hear several speakers about the new trends in HVAC industry and tips for job interviews. This year, current AE graduate student **Justin Bem** and recent graduate **Kevin Kaufman** won third place in the HVAC system selection category. All winners were honored at the Plenary Session and again at the Student Breakfast.

Student Branch President **Josephine Lau** attended the student congress, in which 20 representatives from different student branches have a forum to provide input into the ASHRAE student program. The meeting also provided students with a chance to learn about how other student chapters, universities, and AE departments operate. The Young Engineers in ASHRAE committee also hosted a social for new HVAC engineers and students to meet and share experiences.

The world’s largest trade show, the International Air-Conditioning, Heating, and Refrigerating Exposition, was held in conjunction with the ASHRAE meeting. Around 1800 exhibitors set up display booths showcasing their latest HVAC products for the nearly 60,000 HVAC&R professionals who attended the Expo. The event was an excellent learning experience where students could see HVAC equipment they are learning about in person and ask manufacturers questions.

The AE Department was also represented in New York City by professors **Bill Bahnflieth**, Jim Freihaut, Jelena Srbric, Moses Ling and emeritus professor **Stanley Mumma**. The faculty gave a number of program presentations and also participated in technical, standards, and other committee meetings. Our Solar Decathlon team also sent a representative, **Angela Lewis**, to present their experiences and technology used in the solar house – “Morning Star.”

**To the Top!**

AE Graduate student **Michael Royer** (BAE ‘08) and AE research assistant **Dan Clark** chose to take some time off from architectural engineering to travel to Peru’s Cordillera Blanca, the world’s second highest mountain range. They spent five weeks climbing several peaks, reaching elevations of over 20,000 feet on multiple occasions. The two topped out at 20,846 ft on Nevado Chopicalqui. Setting up a home base in the town of Huaraz.

The trip was a cultural experience as well as an extreme adventure. Both Michael and Dan hope to continue traveling and climbing and are eager to plan a return trip to visit many new friends in Huaraz.
Glunt Fellows Announced
On May 7, 2008 the Glunt Committee met at the Penn State campus and, by a margin of 2008/2009, elected the Glunt Fellows. The recipients of the Glunt Fellowships are Maral Amini, Brian Wolfgang and Tanya Myers. Maral Amini is a PhD student (CE) working on effects of wind loads on low-rise buildings; Tanya Myers, an MS student (CE) works on updated wind loads for Pennsylvania, and Brian Wolfgang, an MS student (AE) will work on heat and mass transfer through imperfectly insulated walls.

The J. Roger Glunt Fellowship (http://www.engr.psu.edu/ce/divisions/residential/Glunt.html) was endowed in honor of J. Roger Glunt, past president of the National Association of Home Builders. The Glunt Fellowship provides additional financial resources to cover travel, research and educational expenses. The Glunt Fellows also receive travel funds to attend the 2009 International Builders Show in Las Vegas – the largest professional show in the country.

ASHRAE Student Trip
Funding for the ASHRAE student trip (reported on page 10) was made possible in part by contributions to the AE Department from AE alumni and friends as well as support from the ASHRAE Central PA Chapter. Those interested in helping to underwrite travel to the 2009 Winter Meeting in Chicago should contact Prof. Bahnfleth at (wbahnfleth@psu.edu). Thank You!

First Borda Fellows Named
Two AE graduate students, Kenrick Hartman and Stefanie Terentiuk have been selected as the first recipients of the Joseph and Marlene Borda Graduate Fellowship in Architectural Engineering. Borda, a 1967 AE alumnus, established the fellowship to recognize and provide financial assistance to outstanding graduate students in the AE program. Over the last several years, he has also established three AE undergraduate scholarships: The C. Herbert Wheeler Memorial Scholarship; the Vincent Pass Scholarship; and Borda and Fernsler Families Scholarship. In 2000, Borda was honored as a recipient of the COE Outstanding Engineering Alumnus Award. This is the highest honor bestowed by the College of Engineering on an Alumnus.

Stefanie Terentiuk has a B.S. in Applied Physics from Providence College. She is currently the president of the AE Graduate Student Association and assisted in the design phase of the Solar Decathlon last year. She is very interested in traveling and seeing new places and cultures. For her master’s research she is testing structural insulated panels (SIPs) under seismic loading to see which designs perform the best. SIPs are used in a lot of sustainable buildings and have the ability to cut down heating and cooling costs by 30-40 percent. She is advised by Prof. Ali Memari.

Kenrick Hartman graduated with a BS in CEE, along with minors in engineering mechanics and engineering leadership development. He served as an officer in an impressive variety of student organizations and service organizations, including Chi Epsilon (CE honorary society) president. He is an avid cyclist, musician, and a cappella singer. In fall 2008, Kenrick will be pursuing MS research related to developing probabilistic models to predict the serviceability and life safety performance of glazing systems under earthquake-induced wall system rocking displacements. He will be co-advised by Profs. Ali Memari and Richard Behr.

AE Scholarship/Award Recipients
Below are just a few of the AE students who have benefited from the generosity of our alumni and friends who support the AE Scholarship & Awards Program. Below are excerpts from the student letters written to the sponsors expressing their thanks.

Katie Ritter (4th year-structural student in the BAE/MAE program) recipient of the Louis and Judy Geschwindner Scholarship in AE.

“I am truly grateful for your generous contribution to my education and your faith in me as a worthy investment!”

Katie is an active member of the Society of Women in Engineering.

Courtney Yip (4th year-lighting/electrical student in the BAE/MAE program) recipient of the Lighting Practice Scholarship.

“Thank you so much for your confidence and willingness to help me achieve my goals.”

Courtney completed an internship with the Lighting Practice during summer 2007.

Michael Smith (4th year-mechanical student in the BAE/MAE program) recipient of the Foreman Architects-Engineers Scholarship.

“Thank you for your generosity in making an investment in my education and my future and believing that I represent the high standards set forth by the scholarship.”

Michael was an active participant on the Penn State team for the 2007 Solar Decathlon.

Joseph Podwats (4th year-construction management student) recipient of the Pittsburgh Builders Exchange Scholarship.

“It is difficult and expensive to put yourself through college so all financial aid helps. I truly appreciate all contributions that support my goal of being an architectural engineer with a focus on construction management.”

Joseph current serves on a planning committee to help send Penn State students to USGBC’s Greenbuild conference in Boston in November 2008. He is also a team leader for Fresh Start, an organization designed to engage incoming freshmen by getting them involved with community service.

David S. Finley, (Structural BAE/MAE 2008) recipient of the Cagley & Associates Award for First Place Structural Thesis.

“You participation in our development makes the (AE) program what it is today. I truly feel that the close relationship between academia and the industry professionals enhances our program and the quality of education for its students.”

Post graduation David has accepted a position with Wiss, Janney, Elstner Associates, Inc.

Thanks for Supporting AE
We are extremely grateful for the outstanding support that we regularly receive from our alumni and friends. We would like to particularly thank those that give on an annual basis, as these are often overlooked even though they represent a major source of support for the AE Program.

The AE Department seeks continuously to enhance the quality of our program and is working towards new faculty (to reduce our student-faculty ratio), new technical and administrative staff (to better support our students), enhanced instructional laboratory facilities (many existing equipment need to be upgraded or replaced), scholarships for undergraduate and graduate students (to reduce the tuition burden on our students), etc. In addition to annual gifts, we would be grateful for endowments in support of the AE program/department; endowed professorships; and graduate fellowships. You can also contribute in the following ways: speaking in our classes, serving as an industry consultant for the senior thesis, sponsoring short and long-term activities and initiatives designed to enhance the quality of our students’ experience. Please contact the Department Head, Dr Chimay Anumba on (814) 865-6394 or by email: anumba@engr.psu.edu if you are interested in contributing in some way. Please visit our website for more details:

www.engr.psu.edu/ae/supporting_ae
ALUMNI UPDATE —Let us hear from you!
Have a message you want to share: fill out this form, or complete the Alumni Update Form on-line at the AE website at www.engr.psu.edu/ae/contact/Alumni-Update-Form.asp.

Name
Office Phone

Date of Degree(s)  Option
E-Mail Address

Home Address
Type of Organization

Home Phone
Occupation and Title

Employer
Responsibilities

Address
Additional Comments (may be published in the next newsletter if applicable)

This publication is available on alternative media upon request
Penn State is committed to affirmative action, equal opportunity, and the diversity of its workforce.