ROBERT RILEY, a senior health physics major from Danville, has opened new doors for future Bloomsburg University students, by becoming the first BU recipient of the National Academy of Nuclear Training Scholarship.

This past summer, Riley interned at Exelon Nuclear, one of the nation’s leading competitive power generators. During his internship, he was given the opportunity to travel across the state, working and gaining new skills at various nuclear power plants.

To be selected as a scholarship recipient, students must have a minimum GPA of 3.0 and demonstrate determined work and academic performance, as well as exhibit strong motivation and abilities in their course of study.

Interns from various universities, including Penn State University and University of Pennsylvania, were eligible for the scholarship. “It was good to get in there and compete with the big guys,” Riley says. “I got to show them that a BU student can do the job just as well.”

Riley credits BU’s health physics program for his success. Coordinated by David Simpson, nuclear physics and health physics professor, BU is the only university in Pennsylvania to offer a baccalaureate degree program in health physics. The program combines numerous fields of science to teach the proper methods of protection against potential radiation hazards. “[Simpson] really put the opportunity forward for me,” Riley says, “And he does that for all of his students.”

Being the first BU student to receive the National Academy of Nuclear Training Scholarship, Riley has proven the potential of BU’s students and academic programs. “It makes me proud,” Riley says “to open the door for future Bloom students.” Following graduation, Riley hopes to continue his work in the nuclear power industry doing radiation protection.
Amber Pitt Receives a Wild Resource Conservation Grant

AMBER PITT, assistant professor of biological and allied health, was awarded a Wild Resource Conservation Grant of $38,463 from the Pennsylvania Department of Conservation and Natural Resources to examine the effect of land use regimes on hellbender habitat and population persistence in Pennsylvania.

This summer and fall, Pitt, Sean Hartzell, a senior biology major from Bloomsburg, and BU graduate student Jamie Shinskie '12, of Coal Township, led a team of undergraduate and graduate student researchers to assess the habitat and distribution of hellbenders in the Susquehanna River Drainage. Hellbenders, Cryptobranchus alleganiensis, are large, long-lived, aquatic salamanders that inhabit high-quality, highly oxygenated, fast-flowing streams and rivers in the eastern United States. They are sensitive to siltation, sedimentation and chemical contaminants within streams and, as a result, habitat degradation has resulted in sharp declines in hellbender populations throughout their range. Hellbenders are currently being considered for listing as a federally endangered species.

Researchers, including graduate student Linda Tucker Serniak of Lake Ariel and undergraduate students Ryan Smolock, a senior from Ashland; Kent Cooper, a senior from Danville; and Michael Baade, a sophomore from Weatherly, gained experience collecting hellbender environmental DNA (eDNA) samples and evaluating the within-stream habitat upon which hellbenders rely. This research will reveal the current distribution of hellbenders in an area that has undergone dramatic land use changes, allow for the elucidation of the main drivers of population decline and local extinction, or extirpation, and provide valuable information that can be used to inform management and conservation decisions.

Karl Kapp


At the conference, students helped Kapp facilitate a pre-conference workshop, Play to Learn. The goal of the workshop was to teach people the basics of designing a learning game.

“IT was such a great feeling to get feedback of what people thought of my project. At that moment nothing could make me happier. Well, that was until people showed interest in me and wanted to stay in touch,” said Terrance Jones '13, a graduate student who took part in the conference.

BU also became a College Partner of the eLearning Guild, which gives students access to a variety of professional development resources and opportunities. Partnering has the added benefit of substantial discounts for all future e-learning conferences.
Ali Hussain Earns Award at the Annual Undergraduate Research Symposium

ALI HUSSAIN, a senior biology major, pre-medicine option, from Harrisburg, presented a poster, *Differential Methylation of GNG7 in Normal B6 Mouse Tissues*, at the 17th annual Undergraduate Research Symposium in the Chemical and Biological Sciences at the University of Maryland, Baltimore County (UMBC). The poster featured research he and Jeffrey Dailey, a senior biology major from Easton, completed in the laboratory of William Schwindinger, assistant professor of biological and allied health, and was awarded the second place certificate in Hussain’s poster group. The symposium, sponsored by the National Institute of General Medical Sciences (NIGMS), featured 246 abstracts and 276 undergraduate student presenters. The event consisted of morning and afternoon poster sessions, workshops on Professional Communication and Ethics for Scientists and a plenary talk by Dr. David Asai from the Howard Hughes Medical Institute (HHMI), *Transition States, Hilde Mangold, and You*.

BAHS Sophomores Honored for Academic Performance

PHI KAPPA PHI is the nation’s oldest, largest and most selective honor society that recognizes and promotes academic achievement in all fields of higher education. Each year, Bloomsburg University’s Chapter presents awards to exceptional students on the basis of their academic performance in the freshman year.

On Nov. 7, eight sophomore biological and allied health sciences students were among those honored: health science majors Hanan Ben Nacef, from Hackettstown, N.J.; Aubrey Cole, from New Oxford; Kayla Lavella, from Elysburg; and Mallory Tomaschik, from Catawissa; biology and Russian major Andrew Denisenko, from Waynesboro; biology major Shaidy Moronta, from Hazleton; medical imaging majors Samantha Sharo, from Upper Black Eddy, and, Derek Stahl, Lewisburg.

The ceremony featured a panel discussion by BU upperclassmen on *Enriching the College Experience*. Panel participants included seniors Bryce Foster, of Hummelstown, and Sean Hartzell of Bloomsburg. Foster shared his study abroad experiences in Madagascar, while Hartzell discussed research projects that he conducted with faculty Clay Corbin and Amber Pitt.

Pre-medical Science Club members check out Primary Care Day

MEMBERS of the Pre-medical Sciences Club traveled to Penn State College of Medicine, Hershey, for Primary Care Day 2014. The program included panel discussions on admissions, primary care medicine and medical student life. Students also had the opportunity to participate in patient encounters and clinical workshops. Among the offerings were sessions on newborn exams, joint injections, pelvic exams and skin biopsies. The program ended with a guided tour of Penn State College of Medicine. Pre-medical Sciences Club members who attended are junior Eric Elliot, from Selinsgrove; sophomores Katie Mullen, Bloomsburg; Vincent Yaeger, Felton, Del.; Alex Schlack, Beaver Meadows; Gabriella Bonchack, Pottsville; Jonathan Perez, Sinking Spring; and Andrew Denisenko, Waynesboro; and freshmen Ali-reza Mobaraki, Orefield, and Daniel Deignan, Milford.

Testing the waters of Fishing Creek

STUDENTS from BU’s Aqueous Geochemistry and Freshwater Biology courses teamed up to conduct a study of Fishing Creek Watershed’s East Branch. They will pay specific attention to the contributions of anthropogenic acid deposition, or “acid rain,” and natural organic acidity from wetlands to the streams’ overall water chemistry. They will speak on their findings to the Fishing Creek Watershed Association in spring 2015 at the request of the Columbia County Conservation district.

Taking his education to new heights

JONATHAN SHRIMP ’09 recently earned his doctorate of philosophy, chemistry and chemical biology from Cornell University. Shrimp is working in a two-year postdoctoral position at the National Cancer Institute, Frederick, Md. There he develops high-throughput screening assays that simultaneously conduct tests for samples. He also creates fluorescent chemical probes that help reveal cancerous cells. The ultimate goal of his work is targeting cancer cells and assisting in the surgical removal of cancer.
Mucking Around in a Mid-Atlantic Salt Marsh

CYNTHIA VENN AND JENNIFER WHISNER of the Department of Environmental, Geographical and Geological Sciences spent time this summer slogging through marshlands in Greenbackville, Va. Over three trips to the Chincoteague Bay Field Station in Wallops Island, Va., Venn and Whisner, assisted by seniors Matthew Mattesini, a professional geology major from Riverside, and Dylan McElhaney, an environmental biology major from Havertown, established baseline vegetation conditions in a new plot in the Greenbackville marsh. They also installed a network of piezometers to assess groundwater flow patterns as well as three observation wells instrumented to continuously monitor salinity, temperature and water depth.

Support from a Bloomsburg University Henry Carver Margin of Excellence award made it possible to establish this hydrologic network, which will help monitor changes in groundwater flow and water quality due to both local anthropogenic effects and changing sea levels. These efforts build on Venn’s years of work using salt-sensitive marsh plants as markers of sea level rise and will support the Intercoastal Observation Network, a regional effort to monitor effects of sea level rise in the mid-Atlantic coastal area.

GrrCON 2014

PHILIP POLSTRA, associate professor of computer forensics and 22 BU digital forensics students attended the GrrCON security conference in Grand Rapids, Mich., on Oct. 16th and 17. Polstra gave two presentations – an invited talk, Autonomous Remote Hacking Drones, related to his recently released book, Hacking and Penetration Testing with Low Power Devices and an impromptu discussion on semi-automated methods of developing custom Linux distributions. This was Polstra’s third consecutive year as an invited speaker at GrrCON.

The students vied in several competitions, including a forensics challenge and security capture-the-flag (CTF) contest. In their first CTF competition, the students earned second place from 13 teams. For the forensics challenge, the BU team came in third. For their prize they were given two copies of a book on memory forensics.

The CTF team consisted of Andy Rector, Mifflinburg; Landan Cheruka, Wallingford; Brandan Schondorfer, Allentown; and Chris Grube, Easton. The Forensics Challenge was led by Daniel Pany, Northampton, with assistance from Jessica Mantz, Douglassville, and Chris Luciano, Hanover Township.

COST Faculty Share Successful Teaching Techniques

COST FACULTY shared successful teaching techniques with incoming faculty during the second annual Teaching Exchange, part of the New Faculty Institute sponsored by the Bloomsburg University Teaching and Learning Enhancement Center (TALE).

John Hranitz, biology and allied health sciences (BAHS), provided information on Bloomsburg University’s support for undergraduate research, scholarly and creative activities through the URSCA program. Tom Klinger, BAHS, shared tips for creating successful field experiences. Toni Trumbo-Bell, chemistry and biochemistry, explained how to use student response technology for in-class testing and how to capture and share written notes with pencasts. Jennifer Venditti, BAHS, introduced concept mapping and ways it can be used to facilitate deep learning. Chris Whisner, Jennifer Whisner and Cindy Venn, environmental, geographical and geological Sciences (EGGS) explained the design and implementation of their new field course in EGGS.

Venn also presented a poster on how getting students out of their seats helps them learn with map exercises in an oceanography class, a project developed in a TALE Teaching Excellence Academy. Mindy Miller, nursing, provided insight on effective uses of student response systems, known as “clickers,” outside the traditional classroom.
Tri-Beta Biology Honor Society Welcomes New Members

NEW MEMBERS were inducted into Beta Beta Beta Biological Honor Society on Oct. 26. Beta Beta Beta, known as Tri-Beta, is a society for students dedicated to improving the understanding and appreciation of biological sciences and extending boundaries of human knowledge through scientific research.

The induction ceremony was led by current officers: President Adam Kulp, Gilbertsville; Vice President Blake Shoemaker, Northumberland; Secretary Katie Hawkins, Littlestown; Historian Jacob Morton, Catawissa; and Treasurer Katie Sue Geissinger, Ellsottsburg. Featured speaker Marianna Wood, associate professor of biological and allied health, addressed "Foraging in chipmunks and the value of basic research."

The new inductees are:

Regular members: Katlin Aunkst, Mount Holly Springs; Carrie Barry, Danville; Chris Bastardi, Skillman; Kira England, Kulpmont; Brooke Ebshen, Lititz; Sean Hartzell, Bloomsburg; Jade Heisman, Laporte; Kerri Horwath, Blakeslee; Natalie Mayo, Latrobe; Corey McKenna, Easton; Lexie Mundell, West Easton; Leah Miller, Doylestown; Philip Mosolino, Carbondale; Sharon Pitcavage, Ashland; Jean-Nicole Place, Montoursville; David Strawn, Easton; Shelby Weikel, Gordon; Season Whitening, Bloomsburg; and Jennifer Young, Ardmore.

Associate members: Josie Pervola, Danville; Samantha Rodrigues, Kingston; and Morgan Strong, Moscow.

Graduate member: Alan Belles, Bloomsburg,

Sigma Pi Sigma has its Largest Class

TEN STUDENTS WERE INDUCTED into the Bloomsburg University Chapter of Sigma Pi Sigma, the nationally recognized physics honor society. Students chosen demonstrated academic excellence in the physics major or a closely related field. This group makes up the honor society’s largest class since its founding in 1970.

Physics majors inducted are Noah Long, Berwick; Shana Cuff, Ringtown; Matthew Lesher, Schwenksville; Robert Riley, Danville; Matthew Gift, Boyertown; Joshua Halboerster, Bath; Austin Olson, Waynesboro; Robert Chambers, Bloomsburg; and James Austin, Newtow. Ikechukwu “Henry” Ukonze, Union, N.J., an electronics engineering technology major, was also inducted.

Students elected to membership must attain high standards of general scholarship and outstanding achievement in physics. Undergraduate candidates must be in the upper one-third of their class in general scholarship to meet the minimum standard; a higher minimum average is often established for physics courses.

66 Alumni Return for Career Day

MORE THAN 750 STUDENTS gathered in the Kehr Union Ballroom to explore careers in science and technology during Career Day on Friday, Oct. 10. They were joined by 66 alumni and 18 business booths to expose students to internship, graduate study and career opportunities. Students were able to choose between 17 informational sessions from professionals followed by a networking with alumni working in their fields of study.