Members of BU’s Geography and Planning Society, led by senior Josh Prosceno, researched, designed and printed seven tree benefit tags that hung from Main Street trees during Renaissance Jamboree on Saturday, April 30.

The dollar amount on each tag reflected the current size of the tree and the increasing returns over 10 years as the tree continues to grow. Each tag also identified the tree species and explained tree benefits, including storm water mitigation, carbon dioxide storage, air quality improvement, energy offset, electricity savings and increased property value. The students used data from the U.S. Department of Agriculture’s i-Tree software to estimate benefits.

The project was presented in honor of Arbor Day, following the Arbor Day Foundation theme, “Every Tree Counts.” Bloomsburg has been designated as a Tree City USA for 16 years; one requirement for the designation is an Arbor Day observance.

The Geography and Planning Society also completed a tree inventory in the Town Park and prepared maps and tree benefit analyses for the park.
Student’s research gets national spotlight

A senior geology and planetary geoscience major presented his research, “Integration of Quickbird Satellite Imagery and GIS to Map Subzones within a Salt Marsh near Wallops Island, Va.,” in Washington, D.C., on Tuesday and Wednesday, April 12 to 13.

Research by Brian Culp, a resident of Danville and native of Grand Island, N.Y., was among 74 presentations chosen from more than 700 reviewed for the Council of Undergraduate Research “Posters on the Hill” event. BU faculty members Cynthia Venn and Michael Shepard of the geography and geosciences department were co-authors of Culp’s research, which also was featured during BU’s Research Day on Friday, April 29.

While in Washington, D.C., Culp discussed the importance of undergraduate research during face-to-face meetings with several legislators.

At the state level, two BU students presented posters during the eighth semi-annual Undergraduate Research at the Capitol on April 26, sponsored by Pennsylvania’s Legislative Office for Research Liaison. Justin Idzenga, a senior geoscience major from River Vale, N.J.,, presented “The Pine Forest Acid Mine Drainage Treatment System, St. Clair, Schuylkill County, PA: An Anoxic Limestone Drain with an Oxygen Problem” and Kathleen Paiva, a senior geoscience/earth science major from Ogdensburg, N.J.,, presented “Development of Touch Maps to Aid the Visually Impaired in Developing Spatial Awareness of Oceanographic and Geographic Features.”

Venn served as research adviser to both students. Faculty member Christopher Hallen of the chemistry and biochemistry department also advised Idzenga.

Tapsak receives 24th patent

Mark Tapsak received word earlier this year that an invention he worked on prior to arriving at Bloomsburg University had been patented, adding number 24 to his lengthy list of patent achievements. Tapsak, associate professor of chemistry at BU and an expert in polymer chemistry, has taught at the university since 2004 when he left the business world in favor of the classroom.

At the San Diego-based company, DexCom, he worked with other engineers to develop an implantable glucose monitoring device that continuously checks diabetics’ glucose levels for one-year—a device that doesn’t replace the traditional finger-prick sticks, but rather supplements them.

An aspect of this glucose monitoring device recently became the latest patent for Tapsak, whose favorite part of the project was working with engineers and experts from various backgrounds to create the final product. The device is designed to help diabetics maintain a consistent blood-sugar level throughout the day and avoid the peaks and valleys that may occur when only checking a few times per day.

Improvements in the device’s design and shape came after DexCom picked up the technology from the University of Wisconsin Medical Center, where it was developed. Tapsak and his colleagues succeeded in creating a smoother-running and less invasive device that would be more marketable to health care professionals.

The monitor, which is slightly smaller than an average-sized USB thumb-drive, is connected to a beeper-like receiver that would be kept in a pocket or purse, and provides continuous updates via radio frequencies relayed from inside the patient.

Years after his work for longtime employers Medtronic and DexCom, the assignees for his patents, Tapsak finds himself teaching the skills which led him to a successful career in the engineering industry.

“Since I’ve been in academia, I’ve been very active doing polymer science with BU students,” said Tapsak. “I still do consulting work for companies, but I’m being paid for ideas or opinions, so I’m not the person coming up with the inventions. My name won’t be on those patents.”

Dean’s welcome

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During the summer, we will work on new outreach programs for the community and local schools, including a college advancement program, astronomy program and summer camps for middle school and high school students. More exciting endeavors—our new cardiac rehabilitation clinic—will begin this fall.
Forty-seven students present research

Blacksburg University’s Office of Research and Sponsored Programs and Colleges of Business, Education, Liberal Arts and Science and Technology sponsored a university-wide Research Day on Friday, April 29. College of Science and Technology students offered poster presentations and talk sessions.

Following are the names of students who presented 15-minute talk sessions and posters on the same topic, the title of their research and names of their faculty mentors:

Laura Kaldon, “Synthesis of a Polyisobutylene-Supported Nheterocyclic carbene for use as a recoverable ligand,” Philip Osburn

Alan Shaffer, “Developing N-Heterocyclic Carbene Adducts: Surveying Nucleophiles for Addition to N, N’ (2-alkyl)arylimidazol-2-inium Halide Salts,” John P. Morgan


Jarid Metz, “Synthesis of 1-{2,6-dimethylphenyl} thiomethyl)-6-(2,6-dimethylphenyl)-1H-imidazolium pyridine bromide as a Potential Hemilabile Ligand,” Philip Osburn

Ken Myers, “Synthesis of 1-(phenylthiomethyl)-6-(2,6-dimethylphenyl)-1H-imidazolium pyridine bromide as a Potential Hemilabile Ligand,” Philip Osburn

Andrew Gerhart and David Moyer, “Laser Absorption and Double Resonance Spectroscopy of Methylene near 1.2μm,” Ju Xin

Following are the names of students who presented 15-minute talk sessions, the title of their research and names of their faculty mentors:

Jordan Peoples, Chris Swope and Victoria Ziolkoswki, “development of norm-referenced fitness Standards for Blacksburg university Students,” Swapan Mookerjee

Michael Busada, “Analyzing new methods to measure cellular proliferation rates in human melanoma cells,” Angela Hess

Ben McFadden, “Synthesis of a vegetable-oil-based thermoplastic polyester,” Mark Tapsak

Oran Tansey, “The Role of Transcriptional Cofactors Ada2 and Stb5 in Candida albicans dimorphism,” Karl Henry

Dustin Hunsinger, “Development and Optimization of a Plate Assay for Thrombin Activity,” Garland Crawford

Neil Sullivan, “Genetic structure of native and non-native populations of the invasive leaf-cutting bee (Megaechile apicalis),” John M. Hranitz

Paige Ricci, “Characterization of microsatellite primers for the invasive leaf cutting bee (Megaechile apicalis),” John M. Hranitz

Meghan Duell, “Honey Bee Stress: Behavioral and Physiological Effects of Varostop,” John M. Hranitz

Jonathan Bobek, “Honey Bee foraging groups show diverse color preferences,” John M. Hranitz

Jon Stewart, “Synthesis of a Vegetable-Oil-Based Thermoplastic polyamide,” Mark Tapsak

Ghaith Ibrahim, “Expression of EphA4 and ephrin-B2 in highly aggressive and poorly aggressive human melanoma tumor cells,” Angela Hess

Rodrigo Cano, “Computer Generated Worlds in DirectX,” Erik Winters

Emily Whisel, “Probiotics: Evaluation of Weight Gain Benefits to Calves,” Judy Kipe-Nolt


Jacqueline North, “Interactions among Tetrapeptides, Thrombin and Fibrinogen During Clotting,” Toni Trumbo-Bell


Jason Vognetz, “Heart Shift and Reduction in Heart Dose to Left-Breast Cancer Patients Using the Deep Inspiration Breath Hold Technique,” Naz Afarin Fallahian


Diana Pierce, “Comparative expression profiles of Eph receptors and Ephrin Ligands in the Human Keratinocytes and Melanocytes,” Angela Hess

Hannah Cronk, “Extraction and Analysis of Lavender Oil from Pennsylvania-Grown Lavendula augustfolia For use in Fragrances,” Toni Trumbo-Bell

Continued on next page.
Student research

(continued from page 3)

Following are the names of students who presented posters, the title of their research and names of their faculty mentors:

**Brian Culp**, “Integration of Quickbird Imagery and GIS to Map Subcones within a Salt Marsh Near Wallops Island, VA,” Cynthia Venn, Michael Shepard and Jeff Brunskill


**Jaclyn Yamrich**, “Preparing for Marcellus Drilling: 3. Water Quality Assessment for Bear Creek and Wild Rice Lake, Crystal Lake Camps, Lycoming/Sullivan County, PA,” Cynthia Venn and Christopher Hallen

**Lauren Lowenberger**, “Bluebird skeletal morphology: a phylogenetic thrush or a functional flycatcher?” Clay Corbin

**Laura Kaldon**, “Preparing for Marcellus Drilling: 1. Existing Water Quality at Mud Lake and Adjacent Wetland Crystal Lake Camps, Lycoming/Sullivan County, PA,” Cynthia Venn and Christopher Hallen

**Katie Daud**, “The Search for Lunar Lobate Scars Using Images from the Lunar Reconnaissance Orbiter Camera,” Michael Shepard

**Elizabeth Chamuris**, “Preparing for Marcellus Drilling: 2. Crystal Lake Water Chemistry Assessment, Crystal Lake Camps, Lycoming/Sullivan County, PA,” Cynthia Venn and Christopher Hallen


**Rodrigo Cano**, “Solving Nonlinear Equations for Biostatistical Applications with JAVA,” Mehdi Razzaghi

**Paul Krasner**, “Mapping at the Saturnian Moon Mimas,” Michael Shepard

**Kathleen Paiva**, “Development of Touch Maps to Aid the Visually Impaired in Developing Spatial Awareness of Oceanographic and Geographic Feature,” Cynthia Venn

**Jon Stewart**, “Synthesis of Vegetable Oil-Based Step-Growth Polymers Using a 2’ Wiped-Film Still,” Dr. Mark Tapsak

**Ross Merieski**, “Analysis of Oneida #3 Acid Mine Drainage Treatment Facility and the Resultant Effects on Little Thomhicken Creek, Hazleton (Schuylkill County), PA,” Cynthia Venn

**Ben McFadden**, “Synthesis of Vegetable Oil-Based Step-Growth Polymers Using a 2’ Wiped-Film Still,” Mark Tapsak

**Justin Idzenga**, “The Pine Forest Acid Min Drainage Treatment System: An Anoxic Limestone Drain with an Oxygen Problem,” Cynthia Venn and Christopher Hallen
Faculty, students honored for excellence

Faculty and students were honored for academic achievement during the Spring Honors Symposium in April.

Receiving faculty awards were Helmut Doll, instructional technology; Angela Hess, biological and allied health sciences; Michael Shepard, geography and geosciences; Melissa Snyder, nursing; and Biswajit Ray, physics and engineering technology.

Scholarships were awarded within each of the college’s nine departments and students were recognized for outstanding academic achievement, as follows:

Audiology and Speech Pathology
Brittany Bohach, J. Bryden Scholarship; Michele Brita, Outstanding Undergraduate Senior; Maria Eboli, F.F. DeRose Scholarship; Amanda Sissock, Husky Scholarship; and Kollene Sistek, Cynthia Schloss Scholarship.


Biological and Allied Health Sciences
Sarah Fugleman, James E. Parsons Microbiology Scholarship; Sarah Lech, James E. Cole Scholarship; Kelsey Matthews, Biology and Allied Health Science Scholarship; Joelle Bittner, Outstanding Allied Health Senior; Michelle Stipanovic, Outstanding Biology Senior; and Jason Notl, Margaret Till Physiology Award.

Summa Cum Laude: Rose Marie Novinger; Magna Cum Laude: Jillian K., Cory Charles Worgen and Taylor Seelye; and Cum Laude: Debon Berger, Jessica Whitenight and Sean Scubelek.

Chemistry and Biochemistry
Benjamin McFadden, ACS in Inorganic Chemistry; Adam Miller, Junior Chemistry Achievement and ACS Chemistry Undergraduate; Kenneth Myers, ACS Outstanding Senior; David Yovic, David Murphy Memorial Scholarship; Hannah Cronk, POLYED Undergraduate Award for Achievement in Organic Chemistry; Alan Weaver, BS Chemistry American Institute of Chemists Foundation, Outstanding Senior Award; and Kenneth Myers, BS Biochemistry, American Institute of Chemists Foundation, Outstanding Senior Award, and Phi Lambda Upsilon, National Chemistry Honor Society.

Cum Laude: Kenneth Myers.

Exercise Science and Athletics
Charles E. Brightbill, Bill Sproule Award; Evan L. Matthews, Graduate Honor Award in Exercise Science; and Michael A. Welgosh Graduate Honor Award in Clinical Athletic Training.

Magna Cum Laude: Matthew Joseph McMahon; and Cum Laude: Julie M. Kuznicki and Christopher A. Tressler.

Geography and Geosciences
Aileen C. Elliot, Daniel Tearpock Field Camp Scholarship; Merissa A. Wert, Daniel Tearpock Field Camp Scholarship; Joshua A. Prosceno, Outstanding Achievement Award Geography/Planning; and Audra Mitchell, Outstanding Student in Geoscience.

Cum Laude: Reade Carrathers and Lauren Jean Robinson.

Instructional Technology
Linda Brown, Paul Huckette, Jesture Myers, Jessica Sanford and Matthew Thomas, Outstanding Student in Instructional Technology.

Mathematics, Computer Science and Statistics
Jacob Jacavage, J. Edward Kerlin Scholarship; Carrie Mensch, Marek Mathematics Scholarship; Emily Claypotch, James Pomfret Mathematics Award; C. Ryan Kelly, Highest Achievement in Computer Forensics Award; Scott Kiedeich, Highest Achievement in Computer Science Award; and Nicholas Boccella, Reardon Award.


Nursing
Brittany Martin, Spirit of Nursing Award; Miranda Beach, Jaime Debuski and Laura Postles, Nursing Student Achievement Award; and Nicole Ransbottom and Jeryl Simon, Theta Zeta Chapter, Sigma Theta Tau International Honor Society of Nursing Undergraduate Student Recognition.

Summa Cum Laude: Jaime Debuski; Magna Cum Laude: Kylie Laine Matthews, Jeryl Aileen Simon, Lain W. Sheatler and Amy Margaret Wislock; and Cum Laude: Miranda Beach, Brittany Rose Martin, Lindsay Beck, Jennifer L. McLean, Laura Ashley Garzio, Laura Postles, Cassandra E. Kling, Nicole Nadine Ransbottom, Sarah Kathryn Lawrence, Katie Raymis, Megan Leonhartsberger and Rachael Quinne Snyder.

Physics and Engineering Technology
Stephen W. Grib, Levi Grey Scholarship; Alex P. Hallden-Abbert, P. James Moser Scholarship; Alex P. Hallden-Abbert and Aaron J. Homiak, Outstanding Students in Electronic Engineering Technology; and Eric J. Otruba and Jason A. Vognetz; Outstanding Students in Physics.

Magna Cum Laude: Jason A. Vognetz; and Cum Laude: Eric J. Otruba.

Presenting the awards were Jorge Gonzalez, audiology and speech pathology; George Chamuris, biological and allied health sciences; Michael Pugh, chemistry and biochemistry; Timothy McConnell and Joseph Hazzard, exercise science and athletics; Dale Springer and Sandra Kehoe-Forutan, geography and geosciences; Timothy Phillips, instructional technology; Curt Jones and William Calhoun, mathematics, computer science and statistics; Christine Alchinch, nursing; and Peter Stine, physics and engineering technology.

Bloom HS team wins science title

The Wolf Pack, a team from Bloomsburg Area Senior High School, won the 2011 Bloomsburg University Science Iditarod in April. Members of the winning team are Adam Naessig, Andrew Zimmerman, Zack Minter and Ryan Erwin. Their coach was Michael Copenhaver.

Teams of high school students from the region took part in the quiz-bowl style competition in geosciences, biology, chemistry and physics. The competition was moderated by students, faculty and administrative volunteers from BU’s College of Science and Technology.

Other winning teams were:
Upper Dauphin Black from Upper Dauphin Area High School, second place overall, winner in biology and chemistry.
Wyoming Green of Wyoming Area High School, third place overall and physics winner.
Chen Innuedo of North Schuylkill Area High School, geosciences winner.
Also competing were students from Lourdes Regional, Western Wayne Area, Mount Carmel Area and Pittston Area high schools, as well as a team of homeschooled students from Columbia County.