“California University of Pennsylvania hosts the Pennsylvania Geographical Society”

Annual Meeting Program

October 28th and 29th 2005

Greensburg, PA
Dear PGS Attendee,

Welcome to Greensburg, PA! Thank you for joining us for what we hope will be an extraordinary meeting of the Pennsylvania Geographic Society, its members and guests. You will find a great variety of topics, discussions and workshops in which to engage. As one example of this diversity, this year we are welcoming the Three Rivers Chapter of the National Weather Association (NWA) and their invited speakers to engage in discussion and learning through our common academic interests in Geography. Historically, the Atmospheric Sciences have their root in Geography and you will see many “flavors” of that connection here over the next couple days.

Additionally, thanks to many of you for traversing across the Allegheny Plateau to the western-half of the state. Greensburg (originally New Town) is historically located as a midway point between Fort Ligonier and Fort Pitt. Typical of many “western” Pennsylvania towns, Greensburg is home to many industries including: coal, concrete, chemicals, printing and publishing, machinery, fabricated metal products, etc. Inside your bundle of registration materials, you will find an entire guide book to all the local attractions in this region. Being situated between both Pittsburgh and the Laurel Highlands, you will find a great deal of diversity in historical, cultural, and recreational activities. I hope that you will be able to find some extra time to enjoy some of those attractions.

The local arrangements committee wishes all of you an enjoyable and educational event during your time with us. If there is anything that we overlooked, please let us know and/or if you have questions about the region and the amenities it may offer you, please ask us. We look forward to promoting our Geographic discipline and engaging in enlightening discourse.

Sincerely,

Chad Kauffman, Associate Conference Chair
California University of Pennsylvania
Hotel Accommodations

Vista Plateau Restaurant

Vista Plateau Hours:
- Breakfast: 6:30AM - 11:00AM
- Lunch: 11:00AM - 2:00PM
- Dinner: 5:00PM - 10:30PM

Prospect Lounge

Prospect’s features a limited menu, and entertainment on selected nights.
2004-5 Officers
Mary Graham – President
Thomas R. Mueller – President-Elect
Kay Williams – Treasurer
Jamie Mitchem – Secretary
Diane Stanitski – Executive Director; Editor, Viewpoint
William Kory – Editor, Pennsylvania Geographer
Greg Faiers – Assoc. Ed., Pennsylvania Geographer
John Benhardt, Sr. – Past-President

2004-5 Executive Board
John Benhart, Jr. - Technology
Mary Braccili - Publicity
Joseph Bencloski - Awards
Ola Johannson - Outreach to Students
Chad Kauffman - Outreach to Public/Private Schools
Sue Lucas - Outreach to Public/Private Sector
Bev Wagner & Tara Clopper - Outreach to Pre-Service Teachers
Ed Grode - Outreach to K-12 Teachers
Diane Stanitski & Timothy Hawkins - Membership

Local Arrangements Committee
Mary Braccili - Lehigh-Carbon Community College
Chad Kauffman - California University of Pennsylvania
Jamie Mitchem - California University of Pennsylvania
Thomas Mueller - California University of Pennsylvania
Daria Nikitina - California University of Pennsylvania
Susan Ryan - California University of Pennsylvania

Cover Design by the California University of Pennsylvania - Travel Tourism Research Association (TTRA)
## Preliminary Program

**October 28th and 29th, 2005**

### SCHEDULE OF EVENTS

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<tr>
<th>Thursday</th>
<th>Conference Registration- Four Points Sheraton Lobby</th>
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<tr>
<td>6:00-8:00 p.m.</td>
<td>PGS Executive Board Meeting — Executive Board Room</td>
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<tr>
<th>Friday</th>
<th>Conference Registration- Four Points Sheraton Lobby</th>
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<td>7:00 a.m. - 5 p.m.</td>
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<tr>
<th><strong>Friday</strong></th>
<th><strong>Keystone IV</strong></th>
<th><strong>Hempfield VI</strong></th>
<th><strong>Hempfield VII</strong></th>
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<tr>
<td>8:00-9:10 a.m.</td>
<td>Student Paper Competition</td>
<td>American Society of Photogrammetry and Remote Sensing (ASPRS)-Sponsored Session - Geo-Spatial Technology</td>
<td>Themes in Water Resources</td>
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<tr>
<td>Chair: Joseph W. Beneloski</td>
<td>8:00 – Sean Hribal, California University of PA, “More Accurate MOS Temperature Forecasts Using Bias Correction and Consensus.”</td>
<td>Chair: Thomas R. Mueller</td>
<td>8:00 – Jack Livingston, Slippery Rock University, “Natural Habitat Fragmentation in the White River Badlands: Mathematical Predictions of Species Area Effects.”</td>
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<tr>
<td>8:40 – Joel Hoffman, California University of PA, “Meteorological Forecasts and Observations from the Mount Washington Observatory during the summer of 2005.”</td>
<td>9:00-9:10-Questions</td>
<td>8:40 – Richard J. Hoch, Canaan Valley Institute, “LiDAR Data Acquisition and Applications.”</td>
<td>9:00-9:10-Questions</td>
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<td>9:15-9:30 a.m.</td>
<td>Coffee Break – Hallway between Breakout Rooms</td>
<td>9:00-9:10-Questions</td>
<td>9:00-9:10-Questions</td>
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<td>Time</td>
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| 9:30-11:00 | Keystone IV| Student Paper Competition  
Chair: Swarndeep S. Gill  
**9:30** – Dean D. Davison,* Delaware Valley AMS, “The 2004 New Lisbon Tornado.”  
10:30-10:40 Questions  
* - Not competing |
| 9:30-11:00 | Hempfield VI| Geosciences Education Issues  
Chair: Janet Smith  
**9:30** – Marc V. Gigliotti, California University of PA, “Instructional Technology in a Geosciences Classroom.”  
**9:50** – Peter Hayward, University of Connecticut, “Notes from a Grad Student.”  
**10:10** – Janet S. Smith, Shippensburg University, “Teaching Pre-Service Teachers Geography: Impossible Dream or Incredible Opportunity?”  
10:50-11:00 Questions  
** - Elaine Bosowski Student Paper Award |
| 9:30-11:00 | Hempfield VII| Issues in Political & Population Geography  
Chair: John Benhart, Jr.  
**9:30** – John Benhart Jr., Indiana University of Pennsylvania, “Strategic Planning Initiatives and Geographic Change in Franklin County, Pennsylvania.”  
**9:50** – Karen Trifonoff, Bloomsburg University, “Changing Demographics in Pennsylvania.”  
**10:10** – James C. Saku, Frostburg State University, “Understanding the Population Dynamics of Aboriginal Canadians.”  
**10:30** – Philip Mobley, George Mason University, “Points, Lines, and Arcs - Historical Boundaries of the Commonwealth of Pennsylvania.”  
10:50-11:00 Questions |
| 11:15 a.m.-12:15 p.m. | Kick-Off Speaker, Lunch and PGS Annual Business Meeting—Atrium | Lunch: Menu TBD (Pre-registration Required)  
Sponsored Student Pizza Lunch - Free lunch for student participants (Three Rivers NWA Hospitality Suite)  
PGS Annual Meeting Kick-Off Speaker: John E. Benhart Sr., Professor Emeritus, Shippensburg University  
PGS Annual Business Meeting  
PGS Annual Meeting Kick-Off Speaker: John E. Benhart Sr., Professor Emeritus, Shippensburg University |
| 1:00-2:10 p.m. | Keystone IV| Three Rivers National Weather Association-Sponsored Speakers  
Chair: Chad M. Kauffman  
**1:00** – Suzanne Zurn-Birkhimer, Purdue University, “An Analysis between ENSO Cycle and Tornadoes in the United States.”  
**1:20** – Kenneth F. Dewey, University of Nebraska-Lincoln, “Part I: Observations from the 2004 F-4 Hallam, Nebraska Tornado.”  
**1:40** – Kenneth F. Dewey, University of Nebraska-Lincoln, “Part II: Hallam, NE Tornado Aftermath.”  
2:00-2:10 Questions |
| 1:00-2:10 p.m. | Hempfield VI| Recreation, Travel & Tourism Geography  
Chair: Thomas D. Wickham  
**1:00** – Thomas D. Wickham, California University of PA, “Travel Distance and Species Preferences during Pennsylvania’s Hunting Season.”  
**1:40** – Susan Ryan, California University of PA, “AgriTourism in Pennsylvania: Impacts Assessment.”  
2:00-2:10 Questions |
| 1:00-2:10 p.m. | Hempfield VII| Regional Geography: Geography of Eastern Europe & Russia  
Chair: Mary M. Graham  
**1:00** – Donald W. Buckwalter, Indiana University of Pennsylvania, “Land-Use Patterns of Moscow in the Pre-Revolutionary Era.”  
**1:40** – Mary M. Graham & Richard D. Stone, York College & Shippensburg University respectively, “Kremlin: A Fortress Not a Government.”  
2:00-2:10 Questions |
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<th>Keystone IV</th>
<th>Hempfield VI</th>
<th>Hempfield VII</th>
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<tr>
<td>2:15-3:25 p.m.</td>
<td><strong>Issues in Regional Climate Systems</strong></td>
<td><strong>Geospatial Environmental Hazards &amp; Planning</strong></td>
<td><strong>Panel Discussion: Women in Science</strong></td>
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<td>Chair: Chad Kauffman</td>
<td>Chair: Jamie D. Mitchem</td>
<td>Chairs: Suzanne Zurn-Birkhimer,</td>
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<td><strong>Parameterization Procedures in the Atmosphere</strong></td>
<td><strong>Panel Discussion: Internship Opportunities for Students</strong></td>
<td><strong>Cultural Applications of Geography</strong></td>
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<tr>
<td>3:25-4:45 p.m.</td>
<td>Chair: Timothy Hawkins</td>
<td>Chairs: John Benhart Jr. &amp; Thomas D. Wickham</td>
<td>Chair: Alison Feeney</td>
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<td></td>
<td>4:05-4:10 Questions</td>
<td>4:00-4:45</td>
<td>4:05 – John Hintz, Bloomsburg University, “Grizzly Bear Reintroduction in Idaho, or, It is Just the Bitterroot Ecosystem.”</td>
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<td>4:10-5:00</td>
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<td>4:25-4:35 Questions</td>
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<td>-Room Preparation for Dinner-</td>
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<tr>
<td>5:00-5:45 p.m.</td>
<td>- PGS Reception All Conference Participants Invited (Lounge area) - Cash Bar Available</td>
<td>6:00 p.m.</td>
<td>7:30 p.m.</td>
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<td><strong>Panel Discussion: Careers in Geography</strong></td>
<td>Banquet (Atrium &amp; Keystone IV): Menu TBD. (Pre-registration Required)</td>
<td><strong>Annual PGS Awards</strong> (Atrium/Keystone IV): Recognition of 2005 PGS Award Winners and the PGS Distinguished Geographer Susan Cutter, Director of the Hazards Research Lab &amp; Geography Department Chair at University of South Carolina.</td>
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<td></td>
<td>Chairs: William Kory and Diane Stanitski</td>
<td>7:30 p.m.</td>
<td>9:30 p.m.</td>
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<td>4:00-4:45</td>
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<td>Four Points Sheraton Lounge: Live Music (Band not sponsored by PGS or Three Rivers NWA)</td>
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# Schedule of Events

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<tr>
<td>7:00-8:00</td>
<td>Optional College/University Breakfast Meeting in the Four Points Sheraton Restaurant. Discussion: <em>Challenges Facing College and University Departments of Geography</em></td>
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<tr>
<td>7:00-8:00</td>
<td>Optional K-12 Breakfast Meeting in the Four Points Sheraton Restaurant. Discussion: <em>Challenges Facing K-12 Geography Teachers</em></td>
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**Saturday**

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<th>Time</th>
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<tr>
<td>7:30-8:00 a.m.</td>
<td>Conference Registration- (until 8:00 a.m.) Four Points Sheraton Lobby</td>
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<tbody>
<tr>
<td>8:00-8:45 a.m.</td>
<td><strong>Uncovering Atmospheric Understanding</strong></td>
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<td>Chair: Swarndeep S. Gill</td>
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<tr>
<td>8:00</td>
<td>Chad Kauffman, California University of PA, “Tornadoes in a Barrel: How Technology is Rapidly Changing the Challenge of Storm Interception.”</td>
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<tr>
<td>8:20</td>
<td>Diane Stanitski, Shippensburg University, “Ocean and Atmosphere Interaction...Assisting Our Understanding of Global Climate.”</td>
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<tr>
<td>8:40-8:45</td>
<td>Questions</td>
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<tr>
<td>8:45-9:35 a.m.</td>
<td><strong>Teaching College Geography Workshop</strong></td>
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<td><em>(with an emphasis on Introductory Classes):</em></td>
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<tr>
<td></td>
<td>William Kory</td>
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<td>John Benhart, Sr.</td>
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<td>John Benhart, Jr.</td>
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<tr>
<td>9:40-11:10 a.m.</td>
<td><strong>Physical Geography</strong></td>
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<td>Chair: Lawrence L. Moses</td>
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<td>9:40</td>
<td>Lawrence L. Moses, California University of PA, “The Effects of Subsidence Resulting from Underground Bituminous Coal Mining on Surface Features in Western Pennsylvania 1998-2003.”</td>
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<td>10:20</td>
<td>Joe Reese, Edinboro University, “Earthscape Edinboro: An Exercise Connecting Students with their Local Landscape.”</td>
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<td>10:40</td>
<td>Michael Applegarth, Shippensburg University, “An Arizona Tour.”</td>
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<tr>
<td>11:00-11:10</td>
<td>Questions</td>
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<td>9:40-11:10 a.m.</td>
<td><strong>Pennsylvania Geographic Alliance (PGA) Workshop</strong></td>
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<td>Jim Wetzler</td>
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<td>“Population and Mission Geography”</td>
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**Hempfield VI**

**Hempfield VII**

**Opportunities for K-12 Educators in Geography Workshop**

Opportunities Abroad: John Katana will discuss teaching experiences in China and applications provided for next summer's 2006 Teaching Opportunities.

Opportunities Locally: Ed Grode, Editor of *The Geography Teacher*, will provide resources and discuss opportunities for K-12 Educators.
11:15 a.m. -  Field Trip Departure-Meet at the front entrance of the Four Points Sheraton  

11:15 a.m.- 3:30 p.m.  
Dr. Daria Nikitina & Lisa Horvath (and California University of PA Geology Club) invite you to attend a memorable field excursion into the unique environment of the Southwestern Pennsylvania area. The trip will examine physiographic landscapes in the region and will include a visit to Frank Lloyd Wright’s Architectural Masterpiece, “Fallingwater.” During the trip, Nikitina & Horvath will discuss the local Geologic history and point-out various natural physical attractions. (Cost: $25 includes lunch, transportation & admission to Fallingwater (pre-registration required))
PGS Award Recipients for 2005

**Distinguished Teacher Award:**

*John J. Katana*, Indiana Junior High School, Indiana, Pa.

and

*Russell G. Namie*, Harrold Middle School, Greensburg, Pa.

**Distinguished Scholar Award:**

*Dr. Peirce F. Lewis*, Emeritus Professor, The Pennsylvania State University

**Distinguished Service:**

*Dr. John E. Benhart, Sr.*, Dept. of Geography and Earth Science, Shippensburg University of Pennsylvania

and

*Dr. Thomas R. Mueller*, Dept. of Earth Sciences, California University of Pennsylvania

**Ruby S. and E. Willard Miller Lifetime Achievement Award:**

*Dr. Peirce F. Lewis*, Emeritus Professor, The Pennsylvania State University

**Distinguished Geographer Award:**

*Dr. Susan L. Cutter*, Professor of Geography and Director of Hazards Research Lab, University of South Carolina
Judith Aker: Indiana University of Pennsylvania

“Spatial Analysis of Garlic Mustard In An Upland Forest Community”

This poster presentation will focus on the results of a garlic mustard study undertaken at the Conemaugh Dam recreation area in southwestern Indiana County, Pennsylvania. I investigated the influence of the white-tailed deer and other factors contributing to the spread of garlic mustard (Alliaria petiolata) in forested ecosystems. Results indicate that other forces unique to invasive species such as garlic mustard are causing its proliferation in the study area. The distance-decay effect was used to determine an inverse relationship between garlic mustard and distance from the deer trail. The investigation of garlic mustard behavior versus its proliferation will be illustrated.

Michael Applegarth: Shippensburg University

“An Arizona Tour”

A journey through Arizona provides us with a first-hand look at this desert Southwest state. The state’s physiographic provinces include the Basin and Range, Mogollon Rim, and Colorado Plateau. In terms of geomorphology--and culture--these areas are unique yet come together to make up a very diverse state. This presentation will explore the physical and cultural geography of several sites within each of these regions. Our trip will include stops in Sedona, along Route 66, and along the Colorado River, one of the most important rivers in the southwestern United States.

Yasser Ayad: Clarion University of Pennsylvania

“Application of Geographic Information Techniques in Evaluating Coal Mining Effects Presentation”

Earlier coal mining activities in western Pennsylvania have left it with different environmental problems. In many parts of the region, the natural landscape is still suffering from its impacts. Geographic Information technology can assist in evaluating and assessing the level of such impacts at different levels. Two specific cases are portrayed in this presentation: prioritizing stream remediation from Acid Mine Drainage (AMD) caused by coal mining, and assessing the structural condition of surface strip mined landscape using landscape ecological metrics.
Robert Begg : Indiana University of Pennsylvania

"The Bulgarian Roma Since 1989: demographic and migratory patterns"

This paper examines the demographic, locational, and internal migration characteristics for Bulgarian Roma from 1992 to 2001. Using GIS, we make a preliminary examination of obshtina-to-obshtina migration flows for Roma over a ten year period. Although migration has clearly been one adaptive strategy among Bulgarian Roma, the predominant forms have been short-distance migration, urban-to-rural or rural-to-rural, and apparent return migration. These have implications for the future distribution of Roma within Bulgaria and for their situation within Bulgarian society. We believe they also argue against large scale out-migration to Europe following Bulgaria’s entrance to the EU in 2007.

Joseph W. Bencloski : Indiana University of Pennsylvania
Jenny L. Butchko : Indiana University of Pennsylvania

“A Landsat Digital Image Analysis of Sedimentary Strata Reversal Associated with the Meteorite Impact at Barringer Meteor Crater, Arizona”

An unsupervised classification performed on a Landsat 7 image of the Barringer Meteor Crater site in Arizona revealed a reversal of the normal sedimentary rock sequence in the ejecta field on the leeward side of the impact site. Previous geological research has documented the reversal of the sedimentary layers near the crater rim, however, our study focused on the sediments in the ejecta field. By comparing the normal superimposed sequence of sedimentary strata exposed on the sides of nearby Diablo Canyon with the ejecta field sequence, our study verified the reversal of blast deposited sediments over a larger geographic area.

John Benhart, Jr. : Indiana University of Pennsylvania

“Capitalism, Industrialization, and City Planning: Land Companies and Model Industrial Real Estate Ventures in East Tennessee in the Late Nineteenth Century”

A new type of capitalism was introduced to the Upper Tennessee River Valley of East Tennessee beginning in the mid-1880s. Land companies – corporate entities with open capital structures – began using model real estate ventures as comprehensive profit strategies that had as their main selling point the planning and development of industrial cities. These cities were different from existing cities in the American South, in that they were conceived and planned based on specific ideas related to sanitary and urban reform movements. Case studies of Harriman and Lenoir City, Tennessee will be used to illustrate the how land companies planned and developed model real estate ventures in the Upper Tennessee River Valley region.
The spatial pattern of urban development in pre-revolutionary Moscow established a template that is still pertinent to post-Soviet urban planning. Historical functions of defense and commerce established a city center surrounded by concentric ring roads. The center focused on the Kremlin, Kitai Gorod, and Red Square. The terrain of the Russian Plain permits development in many directions from the center, so pre-Revolutionary Moscow copied the radial boulevard pattern of western European cities. Furthermore, a sector orientation reflected attraction and aversion factors. Industry and upper class residential districts headed in opposite directions based on topographic amenity and the necessary orientation of railroads toward the east and south.

Every four days from 1 October 2004 through 21 December 2004 a forecast was submitted by 7 PM EST describing the surfing conditions for the following four days. Each forecast included wave heights, wind speed, wind direction, and type of surf (i.e., chop, clean, side shore etc) for each day. Following the forecast, included a forecast discussion explaining the conditions to expect for the following days and why they would occur. Following the discussion a brief list of bibliographic information was amended. 10-15 June 2005, the top-five forecasters for each location was awarded a trip to Cape Hatteras, NC for a surf practicum. At the surf practicum students learned how forecast wave conditions form Surfline’s East and West Coast Managers Mark Willis and Adam Wright. The students did not spend all day in the classroom; their free time was spent surfing with a few of RedBull’s pro surfers (Billy Hume & Ian Parnell) and enjoying the limitless supply of RedBull.

The researcher will explain how the seabeach interacts with severe thunderstorm complexes to create Tornadic cells on the East coast. I will specifically examine the radar data, surface data and damage pictures to explain my hypothesis.
Average annual snowfall is just one indicator of the extent of snow hazards across a region. Another indicator is the average snowfall per snow-day. In this research, average annual snowfall and average annual snow-days are used to compute average daily snowfall intensities for all National Weather Service locations in the Eastern United States. A swath of 2” and greater daily snowfall intensities are found from southeastern Mississippi and Louisiana, through the piedmont areas of Alabama, Georgia, the Carolinas and Virginia and into the Washington D.C. area. The lowest daily intensities are found from Northwest Ohio through the Pittsburgh area where averages are below 1” per day. It appears that prevailing storm tracks and sources of available moisture play the largest role in daily snowfall intensities.

It is hard to ignore the current fascination of reality television. While originating in the 1940s with programs such as *Candid Camera* and *Truth or Consequences*, the explosion of staged programs, and the addition of competitive game-show styles, seems to have captured television audiences after the airing of Survivor in 2000. Regardless of your viewpoint of reality TV, the majority of students watch some reality-based programming, and thus by incorporating it into lesson plans students can get excited about learning and build important team cooperation skills. Examples from general education World Geography and upper-level cartography courses will be described.

Groundwater modeling by the U.S. Geological Survey and community education form the foundation of a public water supply protection program for the Borough of Shippensburg and surrounding townships in Cumberland and Franklin counties. The system consists of three wells and a surface water reservoir that supply roughly 2 million gallons per day to approximately 15,000 persons. The wells are some of the most productive in the Commonwealth; they tap a colluvium-covered carbonate aquifer along the rural, largely undeveloped, flank of the Blue Ridge. The program is designed to foster cooperation between the townships and Borough in order to preserve the pristine condition of the recharge areas.
Swarndeep S. Gill : California University of Pennsylvania  

“Microphysical Measurements in Supercells for the Study of Tornado Formation”

While finer scale observations of tornadoes have increased rapidly in the past 10 years, many questions still remain unanswered about tornado formation. Remote observations of tornadoes by mobile radar give important information on tornado dynamics, but thermodynamic and microphysical measurements are sparse to non-existent in previous studies. Cloud and precipitation microphysics have been shown to be important to thermodynamic properties of the RFD, the precipitation core downshear of the updraft, and cell mergers, all of which are important to tornado formation.

A large collaborative effort to study tornadoes and tornado formation is proposed for 2008 and will finally include microphysics measurements. In the second Verification of the Origins of Rotation in Tornadoes Experiment (VORTEX II) Theis Laser Disdrometers will be part of the mobile mesonet ensemble. It is proposed that 5 disdrometers be used in the field taking measurements as a compromise between maximizing sampling ability in a rapidly changing environment and minimizing cost. Both precipitation drop size distribution and rain rate can be measured from the disdrometers and will be helpful in answering important thermodynamic aspects of both tornadic and non-tornadic supercells.

Carol Ann Gillespie : University of Pittsburgh  

“Teaching Pre-Service Teachers Geography: Impossible Dream or Incredible Opportunity?”

Instructing pre-service teachers how to teach geography to their students involves much more than reviewing the state and national geography standards. The greatest challenge seems to be combining sufficient geography content with “best practice” pedagogical techniques for teaching geography. This paper shares practical information and experience gained while teaching this class at two post-secondary institutions in Pennsylvania.

Mary M. Graham : York College  
Richard D. Stone : Shippensburg University  

“Kremlin: A Fortress, Not a Government”

When most Americans think of the word Kremlin, they equate it with Russia’s national government in Moscow. In the Russian language the word Kremlin, however, means a fortified place or a fortress. Hence many kremlins may be found in Russia. This presentation will examine four different kremlins: the well-known Kremlin at Moscow and three more kremlins located on the Volga River at Kazan, Nizhniy-Novgorod, and Yaroslavl. It will discuss the characteristics that all four kremlins have in common as well as what makes each of the four kremlins unique.
Timothy Hawkins: Shippensburg University

“Parameterization of the Snowmelt Runoff Model during Drought Conditions”

The snowmelt season for water years 2001 to 2003 was modeled for the Salt, Tonto, and Verde basins in Arizona using the Snowmelt Runoff Model (SRM). The purpose of this exercise was to assess how well the SRM could simulate the snowmelt runoff conditions in Arizona, an arid subtropical environment that was also experiencing drought. Comparisons of modeled and simulated stream flow values suggest that the SRM simulated well the runoff from these basins. These simulations necessitated accurate parameterization of the SRM. This parameterization process differed from previously established model simulations in other basins.

Peter Hayward: University of Connecticut

“Notes from a Golledge Student”

From August 2002 to December 2004 I had the privilege of working with one of the greatest geographers of modern times, Professor Reginald Golledge. I have gained so much from being a 'Golledge Student'. Reg is a professional, a distinguished scholar, and above all, a friend to his students. Below is an account of the times I spent with Reg and the things I learned during my tenure at UC Santa Barbara.

John Hintz: Bloomsburg University

“Grizzly Bear Reintroduction in Idaho, or, It is Just the Bitterroot Ecosystem”

This paper examines the debates that took place during the 1990s over the reintroduction of grizzly bears into central Idaho. As the debates developed, two groups emerged advocating distinct and increasingly opposed programs for grizzly reintroduction. The paper focuses on the more ambitious of these two pro-grizzly bear reintroduction cohorts. Representing the region in contestation as a wholly naturalized “ecosystem,” this cohort failed to adequately account for the real social differences within the region. A more sufficient register of the social differentiation within the region might have led to an appreciation of the necessity for compromise and a stronger pro-reintroduction environmentalist coalition.

Richard Hoch: Canaan Valley Institute

“LiDAR Data Acquisition and Applications”

This presentation will review the Light Detection and Ranging (LiDAR) data acquisition process, and the pre-flight parameter identification as it relates to varying applications when using an Optech ALTM 3100 instrument. LiDAR data produces high resolution elevation data that is captured and used for a variety of applications including; land-use planning, floodplain delineation, timber and biomass calculations, cut-and-fill analysis, stream bank assessment, and more. The elevation accuracy of this data is <15cm @ 1200 feet flying height. However, it is important to note and understand the various parameters that must be determined during the flight planning stage in order to properly capture the data for the particular application. Parameters include: above ground level flying height, flight speed, beam-divergence, scan frequency, scan rate and pulse rate frequency. Each of these parameters will be discussed in the context of various applications.
In this presentation, a consensus forecast from the NGM, GFS, and Eta models using max/min temp forecasts for day 1 and day 2 is described. The author uses ME, MAE, and other statistical techniques to determine the optimal weighting (how much influence to give each of the models). The author attempted to do something unique by examining warm season vs. cool season, 00Z vs. 12Z and max vs. min to further refine consensus. Moreover, on-going analysis considers an adjustment that uses bias for the past few days or weeks to continuously re-weight and improve consensus forecasts.

Storm-Chasing has origins as both scientific and recreational endeavors. The former was and is pursued by researchers attempting to identify tornadogenesis and various other physical processes in the near-storm environment. The latter endeavor was recently popularized by various media outlets and the ubiquitous proliferation of video recording devices. As an undergraduate research experience for the burgeoning atmospheric scientist, storm interception is an in situ exercise in convective forecasting. Advances in mobile technology, wireless connectivity to the Internet and satellite data feeds have enhanced all storm pursuits. In this presentation, the author will outline the specific manner in which the use of technology has increased the probabilities of storm interception for a field course in atmospheric sciences at California University of Pennsylvania.

Early morning convection on 30 May 1998 became a breeding ground for a series of strong supercells that would eventually spawn an eruption of tornadoes in southeastern South Dakota. As the day progresses, the convective development strengthens with the intersection of the front boundary and the dryline. This initial set of thunderstorms marked the beginning of the outbreak. One of the five tornadoes to strike SD carved an almost 30 mile path through Spencer, SD devastating the town as the tornado experienced a change in intensity. At its peak, the Spencer tornado acquired a damage rating on the Fujita Tornado Intensity Scale of an F4. The evolution of this tornado displayed many unique characteristics that appear to be as a result of the convection earlier that day. The path and progression of the deadly Spencer tornado is the focus of the study.
According to Environmental Defense’s Scorecard, Pennsylvania ranks as one of the worst (dirtiest) states in total environmental releases of chemicals that harm human health and the environment. This paper examines the top 10 chemicals (by total amount released) in Pennsylvania based on the Toxic Release Inventory (TRI), which includes only chemicals and companies covered by national emissions reporting systems. This data will be mapped at the county level, and the chemicals will be analyzed according to their toxicity and persistence (exposure) characteristics to indicate the dangers they pose to human health and the environment. Finally, spatial variations and environmental justice implications of these chemical releases will be addressed.

The story of Pennsylvania's boundaries provides a wealth of knowledge about the history and development of our nation. The natural boundaries of the Delaware River and the shores of Lake Erie provide physical delimiters to the state while the north, south, and western limits were created by charters, treaties, and surveys. In some cases, disputes over the boundaries resulted in bloodshed to settle claims made by neighboring and not so neighboring states. This paper provides highlights associated with the boundaries of the state and some of the more notable geographic references that have helped define the political construct of Pennsylvania.

Western Pennsylvania’s underground bituminous coal mines are numerous and widespread. The consequence of having numerous mines over an extensive region is great complexity. Natural and human interrelationships with mining activities abound. The study reports impacts to natural and artificial surface processes and features caused by underground bituminous coal mining in western Pennsylvania between August 1998 and August 2003.

Recently, the Department of Housing and Urban Development (HUD) released a report analyzing crime in public housing units. In 2005, the Fayette County Public Housing Authority requested that the California University of PA Crime Mapping Center complete a study to investigate incidents of crime in public housing units in Brownsville, Pennsylvania. The investigators used the HUD report as a blueprint for this study and compared the number of crimes occurring on public housing grounds versus non-public housing locations. The study examined all crimes, but focused more specifically on harassment incidences in this study.
International field study courses offer tremendous opportunities for students to acquire and in-depth and genuine regional knowledge. At the same time teaching such courses is fraught with unique challenges and potentially disastrous pitfalls in terms of both curriculum and logistics. This may be further distinguished by unique "classroom management" issues.

This presentation offers insights, recommendations, and a template for planning and teaching an international field studies course. This draws from the experiences of teaching a seventeen day course in China in the summer of 2005 that focused on urban development and planning but also addressed a wide range of other geographical topics. The course venues were Beijing and Shanghai.

Joe Reese: Edinboro University

"Earthscape Edinboro: An exercise connecting students with their local landscape"

The physical geography around Edinboro is noteworthy in many ways. Modern and ancient Earth systems are documented in abundance in our area, including Lake Erie and pro-glacial shorelines, kettle lakes, glacial and river landforms, diverse ecosystems, and a long history of human interaction with and exploitation of those landscapes and the underlying bedrock geology. The operation and interaction of these systems defines our local setting. This combination of aspects constitutes Edinboro's earthscape. As a class exercise, students capture the essence of northwestern Pennsylvania's earthscape by identifying the area's defining aspects, exploring these, and portraying them effectively and interestingly to classmates.

Susan Ryan: California University of Pennsylvania

"Agritourism in Pennsylvania and Impacts Assessment"

Agritourism is the synthesis of Pennsylvania's two largest industries, agriculture and tourism. Over 1600 of Pennsylvania's 59,000 farms have been formally accounted as being currently involved in agritourism. This presentation will discuss the results of an extensive study of agritourism in Pennsylvania, funded by the Center for Rural Pennsylvania, a legislative agency of the General Assembly. This project sought input of all involved in agritourism in Pennsylvania including Pennsylvania's farmers, established agritourism providers, state tourism and promotion agencies/convention and visitors bureaus, and the agricultural tourists.
Aboriginal Canadians are the largest minority group in Canada. As a minority group, they exhibit unique population characteristics. The question is what are their population characteristics and to what extent are these characteristics different from the rest of Canada? What factors account for the differences? Using census data of Canada, this paper attempts to offer answers to these questions. Specifically, the paper focuses on the impact of changes in the definition of Aboriginal Canadians by Census Canada on their total counts. The geographic distribution of Aboriginal Canadians and selected population variables are also discussed. The analysis shows that compared to the rest of Canada, Aboriginal population is younger and increasing very rapidly. While Ontario is the province with the highest concentration of Aboriginal Canadians, majority of them reside in the Prairie and Western Provinces.

The El Niño-Southern Oscillation (ENSO) has been shown to have a substantial effect on U.S. climatology. Yet ENSO’s influence on tornado climatology during winter in the southeast U.S. has only been given research attention over the last decade. Several studies have looked at U.S. tornado climatology and how ENSO affects it. While most have shown a slight negative correlation between sea surface temperatures (SST) and tornado activity, no study has looked closely at how the strength of an ENSO phase affects tornadoes in the southeast U.S. during winter.

ENSO was broken up into 5 categories (strong El Niño, weak El Niño, neutral, weak La Niña, and strong La Niña years). The percent from average tornado reports, strong tornado reports, tornado days, and strong tornado days for each state in the study and the entire southeast region as a whole was calculated. Also the average of the four parameters was used to create the Tornado Activity Index (TAI).

The TAI for the entire southeast showed increases during each ENSO extreme and weak La Niña years. When looking at each state in the study, there was a gradual east-to-west increase in TAI for strong La Niña years. A stronger southeast ridge during strong La Niña years shifts the focus for tornado development north and west. So while the maximum TAI may occur during strong La Niña’s in Louisiana, more tornadoes may be likely to occur in Alabama and Georgia during weak La Niña years. Results indicate that further research should lean towards spatial analysis of sufficient parameters for tornado development.
Preliminary results indicate that most structures built before 1877 in Worcester County, Maryland were built primarily on freely drained soils. The geomorphology of the county is almost entirely gently-sloping areas of broad interfleuves. The uniformity of slope suggests that it is a minor factor in spatial preference. Of the 2,834 structures built before 1877, 48% were sited on moderately well or well drained soils, although these soils comprise only 25% of county area, indicating that soil drainage is a major environmental control. Only 10% were located on the most poorly drained soils (Very Poorly drained) which account for 21.6% of the area, indicating that such soils were intentionally avoided as building sites. Very xeric sites (Exceptionally or Somewhat Exceptionally drained soils) contained 9% of the buildings, but accounted for only 5.3% of the area. The research shows that soil properties and their relative location within the county seem to have a decided impact on the selection of pre-1877 building sites.

Janet S. Smith : Shippensburg University

“The Spatial Patterns of NCLB in Pennsylvania”

Over four years ago, federal legislation known as No Child Left Behind (NCLB) was enacted. This new law embodies a significant education reform of the Elementary and Secondary Education Act that was passed in 1965. This reform in K-12 education is having an influence on education at many different scales—within local schools and school districts, to state departments of education, and colleges and universities. Additionally, numerous local, state, and federal programs are being re-written in response to NCLB.

One of the most influential aspects of NCLB involves the assessment of individual schools and school districts. In compliance with NCLB, each school district is responsible for completing an assessment that documents that individual schools as well as all students are making adequate yearly progress toward specified educational outcomes.

The purpose of this project is to analyze spatial and demographic characteristics of schools identified as “Schools in Need of Improvement” within Pennsylvania. Data were gathered from the Pennsylvania Department of Education and managed through a GIS.
Wayne Smith : California University of Pennsylvania


In 2000, business travel comprised 12.8 percent of all Canadian domestic travel trips, with approximately one third of these business trips taken by women (2000 Canadian Travel Survey (CTS) Micro-data). Despite the size of this actionable market segment, there is little academic research on the female business traveler (Foster and Botterill, 1995, Westwood, Pritchard and Morgan, 2000) or, indeed, on women and travel in general (Swain, 1995). The purpose of this study is to describe and model domestic business travel in Canada on the basis of gender. The results indicate that while some similarities exist, female domestic business travelers are more likely to engage in activities beyond their original purpose of travel, are more likely to combine purposes (such as visiting friends or relatives) and are more likely to be single, younger and more highly educated than their male counterparts. Despite these demographic and trip characteristic differences, this research shows that in an exploratory model, male business travel behaviour could be predicted more accurately and at a much higher rate than female business travelers. A rationale for this and a possible conceptual model is presented that has implications for future research.

Diane Stanitski : Shippensburg University

“Ocean and Atmosphere Interaction…Assisting With Our Understanding of Global Climate”

Our global ocean and atmosphere move and respond in tandem, as though performing a dance. Heat and gases are exchanged at the interface of these two flowing bodies; thus, change in one often produces change in the other. This presentation describes our current understanding of oceanic and atmospheric phenomena and variables as they link directly or indirectly to one another, including hurricane development as a function of ocean temperature, thermohaline circulation as influenced by various climate change scenarios, and the El Nino Southern Oscillation (ENSO) as a function of air pressure and water temperature fluctuations. A Repeat Hydrography Program is underway to quantify the role of the ocean in sequestering anthropogenic CO₂, clearly an important issue as atmospheric composition is modified.

Karen Trifonoff : Bloomsburg University

“Changing Demographics in Pennsylvania”

The 2000 Census documented the slowest growth rate of Pennsylvania’s population, which has resulted in a loss of congressional representation. Much has been written regarding this demographic decline, as well as the increase in the percent of population of Pennsylvania over age 65. Less attention has been given to the aging of Pennsylvania’s housing stock. The purpose of this paper is to compare and contrast the age of the housing stock in the counties of Pennsylvania with the percent of the population over 65, median age, income, and housing value. Through this analysis, regional trends and prospects are identified.
Original work by the author in the late 1990s showed seasonal and geographical shifts in tornado frequency within the United States during episodes of El Nino and La Nina. Many similar studies have examined the same phenomena either on smaller scales or using different techniques. This talk will address the similarities and differences in these studies and compile a final analysis of the relationship between tornado frequency and intensity and the ENSO cycle.
Your input is most important for future annual meetings and other PGS programs. Please complete this form and return it to the PGS Registration table before you leave the meeting.

1. I attended: Annual Meeting: All ( )
   Or
   Geographical Workshop(s) ( )
   PGA ( )
   K-12 Educators ( )
   Teaching College Geog. ( )
   Field Trip ( )

2. How would you rate this meeting?
   Poor Neutral Excellent
   Overall ( ) ( ) ( ) ( )
   Site/Location ( ) ( ) ( ) ( )
   Program ( ) ( ) ( ) ( )
   Hotel Rooms ( ) ( ) ( ) ( )
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3. Friday Presentations:
   Poor Neutral Excellent
   AM before break ( ) ( ) ( ) ( )
   AM after break ( ) ( ) ( ) ( )
   PM after lunch ( ) ( ) ( ) ( )
   Lunch Presentation ( ) ( ) ( ) ( )
   PM after break ( ) ( ) ( ) ( )
   Panel Discussion(s) ( ) ( ) ( ) ( )
   Comments:

4. Saturday Sessions:
   Poor Neutral Excellent
   Opening Breakasts (optional) ( ) ( ) ( ) ( )
   AM Presentations ( ) ( ) ( ) ( )
   Teaching College Geography ( ) ( ) ( ) ( )
   PGA Workshop ( ) ( ) ( ) ( )
   Opportunities for K-12 Educators
     i. Abroad ( ) ( ) ( ) ( )
     ii. Locally ( ) ( ) ( ) ( )
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5. Vendors

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6. PGA Annual Awards Luncheon

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7. PGA Annual Banquet

Banquet Speaker

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7. My expectations of the Annual Meeting were:

Why? __________________________________________

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Best Feature(s) of Annual Meeting: __________________________________________

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Limitation(s) of Annual Meeting: __________________________________________

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Key take-home benefit(s): __________________________________________

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8. What would make the Annual Meeting more valuable to you?

9. Would you like to serve on the Program Committee for the next annual meeting? ( ) Yes ( ) No

If yes, please provide your name: ____________________________ or contact the PGS Local Arrangements Committee.

Additional Comments: