

# Central Region Newsletter

## American Society for Photogrammetry & Remote Sensing

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### Three Influential Professors Set to Retire

On Saturday, May 20th, the University of Wisconsin-Madison will honor Drs. Thomas Lillesand, Frank Scarpace and Alan Vonderohe for their nearly 90 years of combined service to the University and for their greater contributions to the field of geospatial science. All three plan to retire from the UW at the end of the Spring 2006 semester. The professional community will pay tribute to these men at an afternoon symposium and evening dinner banquet at the Pyle Center on the UW-Madison Campus.

These events are sponsored by the UW Spatial Information and Analysis Consortium (SIAC), the Department of Civil Engineering, the Environmental Remote Sensing Center (ESRC), the Gaylord Nelson Institute for Environmental Studies, the Land Information Computer Graphics Facility (LICGF), the Department of Forest Ecology and Management, the Department of Geography, and the WI State Cartographer's Office.

Registration for the symposium is free. The dinner banquet will cost \$30 per person. Pre-registration will be required for both events. Look for further information and registration brochures to be distributed in the near future. This information will also be posted at [www.siac.wisc.edu/symposium](http://www.siac.wisc.edu/symposium) after April 10th.

In addition, a "Book of Letters" will be compiled for each of these gentlemen. If you would like to send a letter with your reflections and best wishes to Tom, Frank and/or Al, please mail it to:

Marcia Verhage  
Environmental Remote Sensing Center  
1225 West Dayton Street, Room 1239  
University of Wisconsin  
Madison, Wisconsin 53706  
[verhage@wisc.edu](mailto:verhage@wisc.edu)

Finally, if you or your company/agency are interested in co-sponsoring these events through a financial contribution, please contact Marcia at (608) 262-1585.

We hope you will join us!  
Sincerely,

## Events Calendar

16-17 May 2006. **2006 Pennsylvania GIS Conference: earth, arc, Google and beyond The Mass Commercialization of Geospatial Technology Where Can IT Take Us?**, Radisson Penn Harris Hotel and Convention Center, Camp Hill, Pennsylvania. This conference will bring the Pennsylvania GIS community together for the 14th year to present, discuss and debate critical issues affecting the development and use of geospatial data and technology in the Commonwealth. This year we will explore emerging new geospatial technologies and the innovative applications they are spawning. We will focus on the ever accelerating mass commercialization of the geospatial world. On-line conference registration begins February 1, 2006. Exhibitor registration opens December 1, 2005.

Organizations and individuals interested in the conference should check the website for the latest information. The website URL is: <http://www.pagisconference.org>

## Contact Information:

Brady Stroh, GIS Conference Coordinator  
Penn State Harrisburg – Church Hall  
777 West Harrisburg Pike  
Middletown, PA 17057  
Phone: 717-948-6428  
Fax: 717-948-6306  
Email: [bms16@psu.edu](mailto:bms16@psu.edu)  
Website: <http://www.pagisconference.org>

13-15 September 2006. **2006 GIS in the Rockies** conference at INVESCO Field at Mile High stadium in Denver, Colorado. Call for papers. See <http://www.gisintherockies.org/> for more information.

13-15 September 2006. **COMMERCIAL REMOTE SENSING SATELLITE SYMPOSIUM: Key Trends and Challenges in the Global Marketplace**, Ronald Reagan Building, Washington, DC. Topics include:

- \* U.S. Commercial Remote Sensing Policy: Issues and Challenges
- \* The Business Landscape of Commercial Remote Sensing
- \* What's next? Bringing Commercial Remote Sensing to Market
- \* Commercial Remote Sensing in a Global Context: Trends from Outside the U.S.
- \* The Role of Commercial Remote Sensing in Natural Disaster Assessment and Response
- \* GEOSS and the Commercial Remote Sensing Sector
- \* The Industry View: An International Dialogue with CEOs

Event details can be found at: [www.CRSSymposium.com](http://www.CRSSymposium.com)

29 October - 1 November 2006. **Pictometry's First Annual User Conference**, Orlando, Florida. For more information, contact Will Smith at 585-486-0093 X270, or by email [will.smith@pictometry.com](mailto:will.smith@pictometry.com).

6-10 November 2006. **ASPRS 2006 Fall Conference—Measuring the Earth (Part II)** - Latest Developments with Digital Surface Modeling and Automated Feature Extraction, ASPRS, San Antonio, Texas. For more information visit, [www.asprs.org/fall2006](http://www.asprs.org/fall2006).

Karen Tuerk

on behalf of the UW Spatial Information and Analysis Consortium (SIAC)

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## New Members!

## Addenda

The Central Region welcomes two new regular and seven student members for this issue.

### Student Members

- Ms. Evgenia Brodyagina, Galena, Kansas
- Mr. Tyler Cribbs, Clever, Missouri
- Mr. Justin Hart, Kimberling City, Missouri
- Mr. Matthew R. Peters, Springfield, Missouri
- Mr. Gwen Vogler, Springfield, Missouri
- Mr. Jason Whitseh, Springfield, Missouri
- Mr. Muhammad T. Rahman, Norman, Oklahoma

### Regular Members

- Mr. Dal Chappell, Shawnee Mission, Kansas
- Mr. Marcus Heilman, Ozark, Missouri



Scott Perkins and Barry Budzowski present John Thayne with this year's Francis E. "Gene" Lortz Scholarship

## Central Region Elections

Please expect to receive a Regional Election BALLOT via e-mail and/or surface mail. The ballots need to be returned via e-mail to [barryb@westernair.com](mailto:barryb@westernair.com) or if you print the ballot out and mark it; the completed ballot needs to be sent to:

Western Air Maps, Inc.  
ATTN: Barry Budzowski  
9401 Reeds Road  
Overland Park, KS 66207

**Ballots need to be returned by May 30th 2006 at midnight.**

## Technical Presentations

# Taum Sauk Reservoir Failure

### **Catastrophism Revisited in Missouri: Exposed Flood Features in the Taum Sauk Reservoir Outwash Zone**

In the early morning hours of December 14<sup>th</sup>, 2005, a portion of the northwest wall of the Upper Taum Sauk Reservoir failed, releasing ~1.5 billion gallons of water down the western slope of Proffit Mountain (Reynolds County, Missouri). The resulting flood waters had devastating effects on down valley systems. The complexities of the flood damage features associated with the Taum Sauk event are remarkable considering the limited time (~one hour) in which they occurred. Our preliminary investigation of the system suggests that highly variable flow regimes have affected different segments of the valley in different ways. These flow regimes changed as a result of numerous features including: orientation of water release from the breached reservoir relative to valley slope, changes in valley topography, valley curvature, difference in erosion resistance of various segments of soil and bedrock, entrainment of trees + rocks + soil debris in the frontal and lateral lobe margins of the flood waters, the transient nature of released water volume, addition of clear water tail end to the flood waters, etc.

A 1.6 mile long side-canyon draining the western slope of Proffit Mountain was locally stripped of soil, colluvium, alluvium, and bedrock. New bedrock exposures include Precambrian felsic porphyries, granitic sequences, a highly weathered mafic unit, a paleoweathered boulder field, Cambrian-aged basal dolomite and sandstone sediments in unconformable contact with the Precambrian rocks, partially lithified valley fill colluvium, and loose unconsolidated alluvium.

Other portions of the valley were partially filled with sediment debris derived from the erosion of the previously mentioned units plus debris from the failed dam structure. Local scouring occurred in the East Fork valley, most notably at a location directly across from the mouth of the Proffit Mountain valley, however, most of the East Fork Valley (including the Shut-Ins) have been affected by debris infilling rather than erosion processes.

### **Fielding Technology – Experiences from the USGS Geography Program**

Technological advances in remote sensing, LIDAR, data availability, and geospatial software applications have enhanced regional data collection, monitoring, and analysis. However, many USGS field researchers rely on manual data entries, sketches and paper map annotations in their field work. Emerging information technologies such as personal digital assistants (PDA's) and tablet-based personal computers (Tablet PC's), offer the potential to simplify and enhance data collection and field trip planning.

The Mid-Continent Geographic Science Center is incorporating these tools in several project areas including Land Cover Trends, Taum Sauk reservoir breach, and investigations in New Orleans after Hurricane Katrina. Our experiences have shown that mobile mapping technologies are easily integrated with field work and can improve productivity of field operations.

The Central Region would like to thank the United States Geological Survey's Gary Krizanich and Dave Shaver for taking the time to travel to Springfield and make this presentation.







Dave Shaver presenting at Missouri State University



Gary Krizanich makes a point to the audience.

## University of Arkansas Technical Presentations



Dr Cothren, University of Arkansas, demonstrating some of CAST's technology.

The University of Arkansas and the CAST Center was the site for the ASPRS Central Region's first Technical Session of 2006, held the afternoon of April 20, 2006. Sixteen ASPRS members, students and other interested parties gathered for the two hour program and CAST open house. The session opened with a welcome to attendees from Dr. Fred Limp, Director for the Center for Advanced Spatial Technologies. Ms. Angela Payne led off the program with a presentation entitled "Long-range Terrestrial Laser Scanning in Bolivia and Peru". Ms. Payne detailed the trials and tribulations of

doing terrestrial LIDAR acquisition using an Optech ILRIS LIDAR sensor at Machu Picchu and Tiwanaku in South America. The LIDAR collection for both sites required multiple sessions from several vantage points and required that the expedition adapt to and overcome some unique problems found at each site. Ms. Payne also reported on the Optech sensor performance and ended her presentation by detailing the plans for additional LIDAR collection this summer at Tiwanaku using the Optech ILRIS and the newly acquired Konica-Minolta 9i LIDAR sensor.

Mr. Vibhava from the Department of Biological and Agricultural Engineering detailed his work in a presentation entitled "Spatially Distributed Hydrologic Modeling with GIS and Artificial Neural Networks". Mr. Vibhava gave an explanation of how artificial neural networks operate, discussed his neural network design and reviewed how he was applying his network to distributed hydrologic modeling. Mr. Vibhava shared his results and the results he is getting are markedly better than the results he would get using SWAT resources. Mr. Vibhava closed



Ms. Payne lectures on research in Bolivia and Peru.

his presentation by outlining his future plans for using artificial neural networks to model sedimentation or other hydrologic events.

Mr. Ethan Inlander of the Nature Conservancy discussed his work in a presentation entitled “Inventorying and Modeling Sediments from Unpaved Roads in the Ozarks”. Mr. Inlander reviewed the Nature Conservancy’s overall mission and then detailed his organization’s work in inventorying the unpaved roads in a particular watershed. Mr. Inlander described what specific characteristics and features were being cataloged and added into the watershed GIS and discussed how unpaved roads contributed to sedimentation within watersheds. Mr. Inlander detailed the Conservancy’s role in educating local governments and private citizens about proper maintenance of unpaved roads and what improvements could be made to ditches and other structures to mitigate sedimentation from unpaved roads.

The meeting closed with an open house of the CAST facility. Both the Optech and Minolta-Konica terrestrial LIDAR sensors were on display. CAST also shared a peek at their ADS-40 imagery and informal discussions were held about LIDAR processing from the NW Arkansas LIDAR point cloud.

I would like to extend my gratitude to Dr. Bajwa and Dr. Cothren for their roles in putting this technical event together on short notice. The presentations were top notch and I want to extend a “well done” to all three presenters.

—By Barry Budzowski

## Classifieds

The Region Board of Directors has created a Classifieds section in the newsletter. Region members seeking to hire or to be hired should send information to the Newsletter editor.

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14670 County Rd 8420  
Rolla MO 65401  
philrufe@hotmail.com  
(573) 563 -7485

### **Donors Wanted for a Central Region Corporate Scholarship.**

The Board awarded two scholarships in 2003 and would like to continue this practice in future years. However, the principal in the Gene Lortz Scholarship Fund is sufficient to sustain one scholarship only. We would like to ask corporate members to consider donating to fund a new Central Region Corporate Scholarship to support students and future professionals in our region. Please contact our treasurer if you are interested in making a donation.

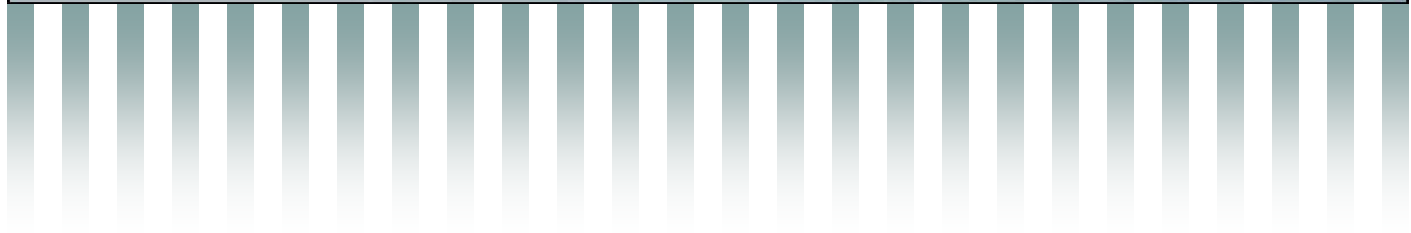
Jerry Wagner  
USGS—MCMC MS 509  
1400 Independence Rd  
Rolla MO 65401  
jwagner@usgs.gov  
(573) 308-3764

### **Donors Wanted for the Francis E. ‘Gene’ Lortz Scholarship:**

The Board awarded two scholarships this year and would like to continue this practice in future years. However, the principal in the scholarship fund is insufficient to sustain the current level and number of awards. We would like to ask our members to consider donating to this fund to support students and future professionals in our region. Please contact our treasurer if you are interested in making a donation.

Jerry Wagner  
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*We're on the web!*  
[www.rollanet.org/~asprs/](http://www.rollanet.org/~asprs/)

*The Imaging & Geospatial Information Society*



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