



A Local Technical Assistance Program - LTAP

# ALABAMA TECHNOLOGY TRANSFER CENTER

AT AUBURN UNIVERSITY

Presents a Seminar on

## *GPS and GIS for Civil Engineers and Land Surveyors*

**Huntsville**  
**June 5, 2012**

**Pelham**  
**June 6, 2012**

**Montgomery**  
**June 7, 2012**

**Mobile**  
**June 8, 2012**

Dear Colleague:

This seminar “GPS and GIS for Civil Engineers and Land Surveyors” is a practical, one-day seminar where you will learn how to explore global positioning systems (GPS), examine GPS instrumentation and surveying methodology, learn about anticipated developments in GPS, examine types of geographic information systems (GIS), learn about building a GIS, and explore methods of integrating GIS into surveying practice.

Specific topics will include the science of GPS, quality control, and the future of GIS. The concept of Real Time Kinematic (RTK) satellite navigation will be explained.

This seminar should be of interest to those people who practice surveying, but also those who work in the civil engineering field, including county engineers, city engineers, public works officials, transportation engineers, DOT personnel, federal employees, contractors, and consultants.

Please complete and return the enclosed registration form. A fee of \$125.00 per person should be mailed with your registration. Payment may be made by phone or fax if paying with Visa, MasterCard or government agency purchase order. **Registrants are reminded that registration is not complete until payment is made.** The registration fee includes handout materials, break refreshments, lunch and a certificate of participation. Thank you for your continued support of the Alabama Technology Transfer Center. Larry Sellers, Garry Havron and I look forward to your attendance at this seminar.

Sincerely,

A handwritten signature in black ink that reads "Robert L. Vecellio". The signature is written in a cursive, flowing style.

Robert L. Vecellio  
Alabama T<sup>2</sup> Center Director

## ***SEMINAR TOPICS***

### **GPS Surveying**

- Science of GPS
- GPS signals
- GPS instrumentation
- Planning a survey
- Modeling observations
- GPS processing
- Biases and quality control
- Result transformation and presentation
- Anticipated developments in GPS
- Geo RTK GPS unit

### **GIS for Surveying**

- Types of geographic information systems
- Building a GIS
  - Data creation
  - Data capture
  - Projections, coordinate systems and data registration
  - Spatial analysis
- GIS software
- Integration of GIS into survey practice
- Future of GIS

## ***SEMINAR SCHEDULE***

<b>8:00 a.m.</b>	<b>Registration and Check-In (Coffee)</b>
<b>8:30 a.m.</b>	<b>Welcome and Overview/ Seminar Instruction</b>
<b>10:30 a.m.</b>	<b>Break</b>
<b>12:00 noon</b>	<b>Lunch</b>
<b>1:00 p.m.</b>	<b>Seminar Instruction continues</b>
<b>2:30 p.m.</b>	<b>Break</b>
<b>4:00 p.m.</b>	<b>Seminar Evaluations/Certificates and Adjournment</b>

## ***Locations and Dates***

### **Huntsville— June 5, 2012**

Holiday Inn - Research Park  
5903 University Drive  
Huntsville, AL 35816  
**800.845.7275**

### **Pelham— June 6, 2012**

Pelham Civic Center  
500 Amphitheater Road  
Birmingham, AL 35124  
**205.620.6448**

### **Montgomery — June 7, 2012**

Renaissance Hotel  
201 Tallapoosa Street  
Montgomery, AL 36104  
**877.545.0311**

### **Mobile — June 8, 2012**

Hampton Inn & Suites Providence Park  
525 Providence Park Drive  
Mobile, AL 36695  
**251.776.5866**

### ***Seminar Instructor***

**Dr. Stacey D. Lyle** is a professional land surveyor who teaches Geospatial Surveying Engineering and Geographic Information Science at Texas A&M University Corpus Christi. He also is a Research Scientist for The Conrad Blucher Institute for Surveying and Mapping, an endowed research center dedicated to surveying and mapping research. Dr. Lyle's research includes NASA's Geospatial Authentication Algorithm for Mobile Online Intelligent Decision Support Systems and open source real-time mapping software over distributed systems. Previously Dr. Lyle worked as a GPS and Photogrammetrist Specialist, Coordinator Technical Support, and Director of Machine Automation for Leica Geosystems. He also works as an expert witness on boundaries court cases, specifically GIS and GPS technology cases. Dr. Lyle has a B.S. degree in Civil Engineering Technology and an M.S. degree in Computer Science and a Ph.D. in Geography. He is a member of the Institute of Navigation, the Geographic and Land Information Society, The Surveying and Mapping Society of Georgia, and the Texas Society of Professional Surveyors.

### ***Continuing Education Units***

Participants completing this seminar will receive 0.60 Continuing Education Units (CEUs). The CEU is a nationally accepted measure of continuing education credit and is awarded at the rate of one CEU for each ten contact hours of qualifying instruction. Auburn University makes every effort to ensure that its CEU granting programs conform to the requirements of the State of Alabama Board of Licensure for Professional Engineers and Land Surveyors for the award of Professional Development Hours to support the annual renewal of professional registration.

### ***Sponsorship***

This seminar is one of the series of conferences and workshops being conducted as part of the Alabama Technology Transfer Center at Auburn University. This program is a part of the Local Technical Assistance Program (LTAP) supported by the Federal Highway Administration, the Alabama Department of Transportation and Auburn University.

This seminar is the 277<sup>th</sup> offered, with more than 37,000 attendees, since the program's inception in 1983. In addition to conducting training seminars, the T<sup>2</sup> Center also publishes a quarterly newsletter, distributes publications and maintains a lending library of videotapes on technical subjects. The Alabama Technology Transfer Center is administered at Auburn University through the Engineering Continuing Education office and the Department of Civil Engineering. For further information and suggestions for future programs, contact Robert L. Vecellio, Department of Civil Engineering, at (334) 844-4320 or [vecellio@eng.auburn.edu](mailto:vecellio@eng.auburn.edu)

### ***Accommodation of Participants with Disabilities***

It is the policy of Auburn University to provide accessibility to its programs and reasonable accommodation for persons defined as having disabilities under the Americans with Disabilities Act of 1990. Please contact us at least two weeks prior to the event so that proper consideration can be given to any special needs

### ***Cancellation Policy***

We understand that circumstances may arise that could require you to cancel your registration, and we make every effort to accommodate your needs. Due to commitments to our instructors and facilities, the registration fee is not refundable if a registrant withdraws less than five working days before the seminar. You may substitute registrants; please notify us in advance if possible. Non-paid, no show registrants will be invoiced for the full cost of the seminar. Business and Engineering Continuing Education reserves the right to cancel or modify any program offering, but will provide registrants the option of a full refund. Auburn University will not be responsible for expenses incurred by a registrant as the result of a cancelled or rescheduled program.

### ***Registration***

Your pre-paid registration guarantees you a seat in the seminar as well as information on any changes to the seminar. Registration on the day of the seminar will be accepted on a space available basis, but enrollment will close when the capacity of the seminar is reached. **Participants are reminded that registration is not complete until payment is received.**

Registration Form

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*Please print or type; register one person per form; photocopy if more forms are needed.*

Name \_\_\_\_\_ Last Four Digits of SS# \_\_\_\_\_

Employer \_\_\_\_\_ Position \_\_\_\_\_

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**Fee: \$125.00**

Payment by:     Check (Payable to Auburn University)

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**Return Registration Form and Payment to:**

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217 Ramsay Hall  
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Fax (334) 844-5715  
[www.engce.auburn.edu](http://www.engce.auburn.edu)



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