

# Atlanta Geological Society Newsletter

**Next meeting of the Atlanta Geological Society is  
April 29, 2008**

**Fernbank Museum of Natural History (Clifton Road)  
Social begins at 6:30 pm – Meeting begins at 7:00 pm**

## President's Perspective...

April 2008

My apologies to Dr. Kim Cobb and the Membership for missing the February 19th meeting, but I was out with the flu. I did hear, however, that Kim's presentation on the science of global warming was well received. Fortunately I recovered and could attend Dr. Kurt Frankel's talk on March 25th on the deformation rates in the Death Valley fault zone. His presentation was well attended by the Membership. Personally, I felt like I received a 2-hr lecture in a little over 1-hr's time – very interesting indeed. Our thanks to Kim and Kurt for their presentations and follow-up discussions. I'm also looking forward to this month's lecture by Dr. Pam Gore on Georgia's new science curriculum, and May's lecture by Dr. Don Thieme on ancient wetlands in Telfair County. Here's a question: What other professional society in the Atlanta area, or in Georgia for that matter, provides almost monthly geological presentations to their members? We sure do have a great Society.

As a reminder, be sure to pay your \$25 membership dues so that you may attend the AGS June social. All 2008 Members in good standing and their families are encouraged to attend, enjoy each other's company, share a meal with their colleagues, perhaps win a door prize, and enjoy an IMAX movie provided by Chris Bean of the Fernbank Museum (Grand Canyon Adventure: River at Risk). Last year we had some very good BBQ, and we'll be doing it again this June. But we could use some assistance. First of all, be sure to pay your Membership dues (\$25 for a Professional Membership and a recently

reduced \$5 for a Student Membership) so that you may attend the June Social. Second, contact David Sanders of the Hospitality Committee (770/990-1446) to pledge whatever interesting door prizes you can scrounge from your employers, local department store, or perhaps from your own stock of geological goodies. The AGS will give the donors abundant credit. Last year we gave away many wonderful prizes. Just bring in whatever you have and we'll be sure to call out your name and/or company name when the recipient claims his/her door prize.

Finally, I'd like to take a quick moment to update y'all on recent changes in my career. Starting on February 25th, I began working for a professional groundwater and environmental engineering services firm new to the Atlanta area. I am now an Associate and the office manager for the Leggette, Brashears & Graham, Inc. (LBG) office located in Kennesaw. LBG has been around for 64 years and is the nation's first consulting firm to specialize in groundwater geology. I manage a staff of three other hydrogeologists, all of whom are Members of our Society, with a focus on groundwater development for public supply and industrial growth, mine dewatering projects, and environmental investigations and remediation. Please wish me luck with my new endeavor. I hope to see you at the next meeting.

Nils Thompson, AGS President

## Refreshments for the April 2008 Social are provided by:

**XENCO Laboratories** – A Minority-Owned, Small Business network of laboratories. Our facilities span from Texas to the East Coast and offer a wide variety of environmental services. It is our goal to provide quality products and services in a safe and environmentally responsible manner respecting the role of our regulatory agencies to protect the public interest. It is the policy of XENCO Laboratories to produce environmentally sensitive analytical data that is scientifically admissible, legally defensible, and of known quality relative to the use for which the data is intended. XENCO Laboratories is committed to compliance with the requirements of the Scope of Work and specifications provided by our clients. Our mission is to provide comprehensive analytical testing global solutions while being your local partner wherever your needs may be with a total committed to satisfy our clients needs beyond their expectations On-Time Every-Time! For more information regarding all your laboratory needs, please contact Kevin Fernander of XENCO Laboratories at (770) 449-8800.

## April Presentation



**Presenter: Dr. Pam Gore**

**Title: New Science Curriculum in Georgia's Schools  
The New K-12 Earth Science Curriculum**

**Abstract:** The presentation will address the development of Georgia's new science curriculum and how it ranks nationally, and will address the K-5 science standards to be covered in elementary schools statewide, along with the standards for the 6th grade middle school Earth Science course, and the high school Earth Systems course.

**Biography:** Dr. Pamela J. W. Gore is Professor of Geology at Georgia Perimeter College, where she has taught since 1989. She has been involved in geoscience education including the design of an online Earth & Space Science for Middle School Teachers course, an Earth Systems High School Teacher Workshop (which was offered in summer 2007 with Bill Witherspoon), and an Integrated Science: Life/Earth Science course for Early Childhood Teacher Education majors. She serves on the Science Education Advisory Committee of the Georgia Department of Education, and assisted with the development of frameworks and tasks for the 6th grade Earth Science course and the new high school Earth Systems course.

### The Professional Registration Committee Needs YOU...

If you are an AGS member and would like to contribute to the Professional Registration Committee by leading a lecture on one of the subjects listed below, then please contact me either by e-mail or at the monthly AGS meetings. The lecture should be for one hour followed by a Q&A session. We need different speakers for each workshop. Your volunteering to teach on one of these subjects is essential to the success of the Professional Registration Committee – we need more widespread participation by the AGS membership. Speakers can be compensated for expenses and will receive certificates to acknowledge their participation. The following content domains are covered in the Georgia Professional Geologist exams:

- |  |   |
|--|---|
| A. General Geology                             | B. Mineralogy, Petrology, Petrography                       |
| C. Sedimentology, Stratigraphy, & Paleontology | D. Quaternary Geology, Geomorphology, & Surficial Processes |
| E. Structure, Tectonics, & Seismology          | G. Engineering Geology                                      |
| F. Hydrology, & Environmental Geochemistry     |   |
| H. Economic Geology & Energy Resources         |   |

Ken Simonton, P.G., Chair  
Professional Registration Committee

**NEW DATE**

**Georgia State University**

**NEW DATE**

#### **Department of Geosciences Seminar Schedule**

All seminars are held in Room 314 Kell Hall Thursday afternoons from 4:00-5:00 pm

**NEW DATE: April 24<sup>th</sup>**

Dr. Mike Higgins and Mr. Ralph Crawford,  
United States Geological Survey (retired)

Topic: New geological mapping for the Atlanta region

### AGS Career Development – Professional Geologist Registration

The AGS sponsors a monthly two-hour workshop to help prepare candidates for the Professional Geologist Licensure Examination. The workshops are held in the Human Resources classroom at the Fernbank Science Center, 156 Heaton Park Dr. from 10:00 am until 12:00 pm the last Saturday of every month. Everyone is welcome to the workshops; AGS membership, while preferred, is not a prerequisite. We do not "teach the test;" our aim is to review fundamental concepts of the earth sciences and acquaint candidates with industry specific information not easily obtainable from the literature. Please inform anyone who might be interested in becoming a professional geologist of our workshop. Please consider joining us even if you are not a P.G. candidate. The workshops are interesting and informative. If you are interested in attending and would like more information, I can be contacted at [kws876@yahoo.com](mailto:kws876@yahoo.com). The subject of the April 29th PG workshop will be economic geology with emphasis on coal, petroleum and oil shale. Dr. Yo Sumartojo will lead the class, he is a career geologist with a Georgia PG and has presented at this workshop before on the topic of mineralogy. The next examination will be held October 3, 2008.

### Part-time Geology Instructors Needed at Georgia Perimeter College for Spring Semester 2008

Criteria needed to teach at GPC:

Masters degree in Geology with at least 18 graduate semester hours (27 graduate quarter hours) in geology.

Staffing need for Spring Semester on the Dunwoody Campus:

MWF 8:00 a.m. – 8:50 a.m. Physical Geology lecture

TR 6:00 p.m. – 7:15 p.m. Physical Geology lecture

Thurs. 11:00 a.m. – 1:45 p.m. Physical Geology lab

Tues. 7:30 p.m. – 10:15 p.m. Physical Geology lab

Tues. 2:00 p.m. – 4:45 p.m. Historical Geology lab

MWF = Monday, Wednesday, & Friday

TR = Tuesday & Thursday

Who should you contact:

**Dr. John Anderson**  
**Department Chair, Dunwoody Campus**  
**770-274-5077**



### Geologic Image for April...

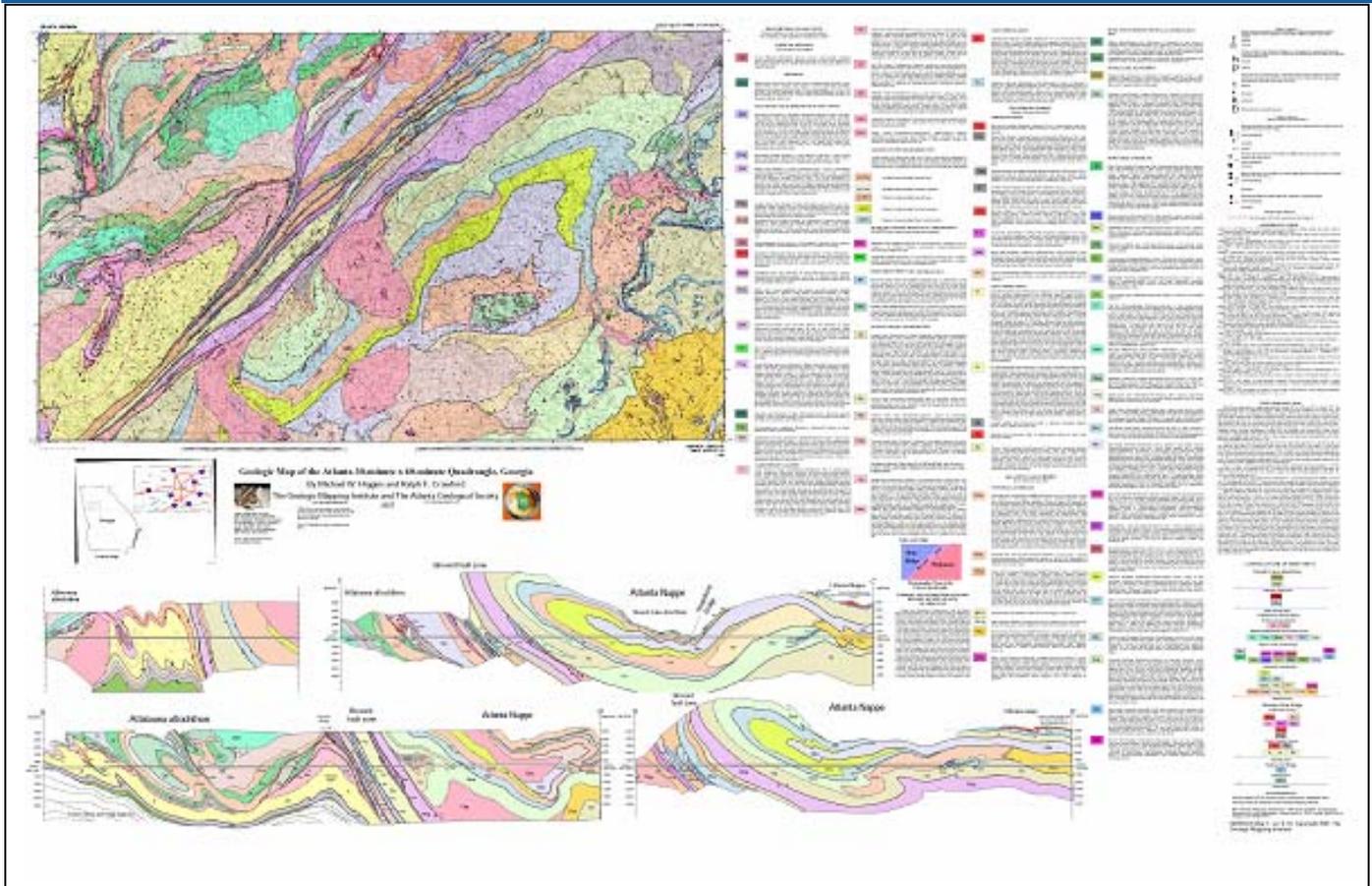
*Recent, unlithified chain of cusped small 3-D ripples, Back Sound, NC*

Used with permission. For more interesting geological images please visit:

<http://southeasterngeology.org/SedimentaryStructures/ss1.htm>

Note that the use of any of Dr. Heron's images requires permission.





## GEOLOGIC MAP OF THE ATLANTA 1-DEGREE X 30-MINUTE QUADRANGLE, GEORGIA

By Higgins, M.W. and Crawford, R.F. (2006)

The Geologic Mapping Institute

**(\$25.00 – Contact Allison Keefer [(404) 675-8642] for more details)**

The Atlanta quadrangle, roughly centered on the City of Atlanta, spans from the Valley and Ridge province in its northwestern corner across the Blue Ridge and into the inner Piedmont. The Brevard zone crosses the quadrangle diagonally. The Blue Ridge in western Georgia and Alabama consists of a pile of nappes made up of folded thrust sheets. In the Villa Rica nappe Chilhowee Group rocks are both above and below the core of Great Smoky Group rocks. Southwest of the Brevard zone is the Atlanta nappe, which preserves a klippe of the Lake Russell allochthon, Carolina superterrane, at Soapstone Ridge. Carolina superterrane rocks (Paulding Complex) are also found northwest of the Brevard. Mylonites along the S.E. edge of the Brevard zone dip under the Atlanta nappe. These mylonites also dip under the N.E. end of the nappe, where they belong to the Dacula shear zone. East of the Atlanta nappe the Lithonia Gneiss consists of a granitoid phase and the Mount Arabia Migmatite. The migmatite occurs mostly around the edges of the granitoid phase and was probably formed when the Ordovician granitoid phase intruded Stonewall biotite gneiss, which occurs around the edges of the Lithonia and locally as roof pendants on/in the granitoid phase. Atop the Lithonia, the Stonewall Gneiss and units of the Allatoona allochthon are the aluminous schist and Chattahoochee Palisades Quartzite of the Sandy Springs Group that have been thrust upon the underlying rocks. The Lithonia and its country rock, the Stonewall Gneiss constitutes a mantled gneiss dome assemblage. Sandy Springs Group rocks emerge from beneath the Brevard and form an outcrop belt along its N.W. side. Northwest of the Sandy Springs outcrop belt the Allatoona allochthon occupies the upper synformal limb of the Talladega nappe and is arched over the Dog River window to expose western Blue Ridge rocks of the Great Smoky and Chilhowee Groups. Northwest of the Allatoona allochthon Great Smoky Group and Chilhowee Group rocks emerge from beneath the allochthon and are part of the Talladega belt. Ordovician granitoids have intruded the Great Smoky rocks, providing evidence that the Emuckfaw/Lay Dam/Bill Arp rocks are older than Ordovician.

## Fernbank Museum of Natural History

### Upcoming Public Programs and Events

(All programs require reservations, including free programs)

### Fernbank Museum of Natural History

767 Clifton Rd, NE Atlanta, GA 404-929-6400  
For details on exhibits, films, and events, please visit our website at [www.fernbankmuseum.org](http://www.fernbankmuseum.org)

#### On Exhibit:

- *In the Dark* Special Exhibition
- *Daufuskie Island* Photography
- *Satilla River Dugout Canoe*

#### Upcoming Public Programs:

- **Girl Scout Day.** Saturday, April 12, 10 a.m. – 2 p.m. Discounts for Girl Scouts in uniform, with science career discussions, downloadable badge activities and more.
- **Archaeology of Georgia's Spanish Period Symposium.** Saturday, April 26, 9 a.m. – 4 p.m. Advanced registration required at 404.929.6414.
- **Archaeology Day.** Saturday, May 3, 10 a.m. – 2 p.m. Included with Museum membership or admission.

#### Now Showing in IMAX: (Check our website for special screenings)

- *Journey to Amazing Caves*
  - *Grand Canyon Adventure: River at Risk*
- Martinis and IMAX:** Friday evenings, 5:30 p.m. – 10 p.m.

### Atlanta Geological Society Treasurer Report – April 2008

Membership Status - 2008

Professional	Student	Corporate
49	5	4

-----  
**Account Balance as of 4/1/2008:**  
**\$4,378.20**  
-----

Please pay your dues in a timely manner. Too many individuals allowed their membership to lapse last year. This represents a significant loss of revenue and prevents the Society from meeting philanthropic commitments. If you cannot attend the March meeting then please consider mailing your dues to the AGS Treasurer along with the completed last page of this newsletter. Also, please make sure that we have your most current e-mail address.

Based on our records we have numerous "members" that last paid dues in 2004, 2005 or 2006. Those members that last paid in 2005, were dropped from the mailing list in October 2007. **Those members that last paid dues in 2006 will be dropped from the mailing list effective April 15, 2008.**

Please contact Ken Bechely if you are unsure of your membership status.

**Martinis & IMAX®** is presented at the Fernbank Museum of Natural History every Friday evening, January through November; from 5:30 p.m. to 10 p.m. Enjoy no cover charge when you visit us between 5:30 p.m. to 6:30 p.m. This event includes a wine bar, where featured wines can be purchased by the glass and by the bottle. Dinner is also served in the Dining Room, where smaller parties can order chef-prepared dishes-from gourmet pizzas to prime entrées-and dine together in a more intimate and sophisticated setting. Desserts and coffee are available as well.

As always, a full cash bar is offered in the Great Hall where patrons can enjoy a lively atmosphere and musical performances by some of Atlanta's best jazz artists. Bands perform live from 6:30 p.m. to 10 p.m. IMAX® film tickets are \$10. For those who wish to enjoy the atmosphere of Martinis & IMAX® without attending a film presentation, there is a \$5 cover charge after 6:30 p.m. The cover charge is waived for members and patrons who purchase an IMAX® ticket. To purchase tickets in advance, call 404.929.6400.

## Highlights From the 2<sup>nd</sup> Annual AGS International Conference On Scientific Procedures, Analysis, and Management (SPAM)

The following were awarded “Best Papers” as an outgrowth of the AGS conference held April 1<sup>st</sup>, 2008. This year’s theme was “Scientific Procedures, Analysis and Management (SPAM).” Questions or inquiries regarding additional information or to purchase the conference proceedings please contact Dr. Emilio I. Kerumba <ikerumba.emilio@spam.com>

### Orogenic Transversal Slippage Along Hyperstacial Tectonic Zones In The Upper Silurian Bigboy Sequence

#### ABSTRACT

The Upper Silurian Bigboy sequence has yielded cognitive realization of orogenic transformations of transversal slippage. This has occurred along hyperstacial tectonic zones where microtextured clastics meet macro-phenocryst dodecahedral paleosols. Hyperbaric divergence along this contact relates to plutonic upheavals in the mantle substrate. Intensive petromicrographic and hand-lens study plots to a hyperbolic slope and correlates to a fault displacement ranging from 10 km or less. Transversal slippage at this scale can only occur when the lunar orb is in the hepta-domicile, or more specifically, at a cyan-luna. The hyperstacial tectonic zone is unique to the Bigboy sequence as it once served to feed into local sections. The loss of the Bigboy from surface outcrops trends paleo-directionally in a manner which suggests a hyperstacial tectonic zone. The Bigboy sequence is named for a local disco-restaurant, often visited during our field work, behind which are excellent exposures of the section.



#### **Dr. I.B. Unwise**

Professional Reader/Singer/Performer of Geology at the Continental School of Marine Studies. Dr. Unwise received his B.S. and M.S. degrees in Geology from Clipper College. He received his doctorate (Ph.D.) at the Punksberg Institute, where his dissertation titled Advanced Hyperactivity and Geologic Hyperbole was just released on CD and music video. His interests include point-counting, titration analysis, and disco clubs.



#### **Dr. Y-U.B. Wan Tu**

Associate Professor of Geology and Home Economics at the Wilson School of Culinary Studies. Dr. Wan Tu received his B.S. and H.E degrees with honors at WSCS. His Masters degree was through a lengthy correspondence course at Oven College, Sumwher, Illinois. His Ph.D. was received at the prestigious Institu' de la Parie, where he was able to combine cooking classes with studies in the Bowen reaction series. Hobbies include scanning-electron micro-basket weaving, and glass etching.

### Carboniferous Recombination of Diagenetic Textures Observed In Thin-Sections Of The Lower Boeevil Calcarenite Petro-Facies

#### ABSTRACT

Thin-section analysis of the Lower Boeevil Calcarenite petro-facies has yielded important results for petroleum reservoir potential. Typically, carboniferous recombination of the secondary and tertiary diagenetic textures results in porosity approaching 95 percent. However, usually permeability remains zero. The Lower Boeevil Calcarenite displays permeability values ranging from 5E10 to 10E20. Analysis was conducted using the Zeise heat-lamp analysis (ASTM Heat 123a). The change in permeability was the result of recombination of diagenetic textures from rhombohedral saddles to tetragonal Bucky-Balls. This effect was caused by diurnal oscillations of the Milankovitch megacycles over the course of a single astrobleme. Hydro-fracture of the carboniferous is not necessary to increase the porosity and permeability of the Lower Boeevil Calcarenite Petro-facies where recombination of diagenetic textures has occurred.



#### **Dr. Will E. Makit**

Professor of Geology at the University of Huumbug. He received his B.S. from Whatsamatta U. and his M.S. from the University of Whatsittoya. He was Knighted with an Honorary Ph.D. following his donation to the royal family trust fund. His interests include trace fossil extraction and prehistoric taxidermy.



#### **Dr. Thom Fulery**

Assistant Professor of Geology at the University of Waterbrook. He received his B.S. and M.S. in geology from the University of Pondlake and his Ph.D. from the Fluvialenstein Institute. His recent book about water hydrology in a continental setting is a fast flowing approach to fluid dynamics and is becoming the standard in the field. His interests include tennis, softball, and dropping water-balloons from the fourth floor of the Geology/Geography Building on unsuspecting students.

## Atlanta Geological Society Found and Lost Department



I found this hear cat going through my trash the other night. He werent to frindly and I had to use a broom to get him away from my trash can. It was pretty mad with my flashing my spotlight on him. My wife is telling me to do the right thing because this cute fella probably belongs to somebody out there whos missing him and hes rightfully yourn. You need to call me soon as this here cat dont seem to warm up to me or my hound dog Bo. In fact, he seems to be getting meaner and rneaner every time I open the box with him in it. But he does seem to like the dog food that I put in there.

My wife has come to teaching him a trick. It seems to get excited and then falls over stiff as a board – he won’t move even if Bo gets to pushing on him with his nose. I told Bessie that that’s a fine trick, but not to spend much time teaching it other tricks since the owner will come fetch him away. I dont want my wife to take no shining to this here cat.

Please come and get your cat.

## Stone Mountain Missing...

One of the world’s most famous and beloved monadnocks on a peneplain is missing and we need your help. If you happen to see or know the whereabouts of this prominent Georgia landmark, then please call the “**Center for Missing Monadnocks**” at 1-555-MONADNOCK.

### Have you seen me?

- Name:** Stone Mountain
- Date of Intrusion:** 300 Ma
- Date of Exposure:** ???
- Probable Age:** Likely 220 Ma
- Height:** 825 feet
- Weight:** Not telling
- Color:** Overall gray with black tourmaline.
- Date Missing:** April 1, 2008
- From:** Stone Mountain Park, GA

BEFORE



AFTER



## AGS Officers

**President:** Nils Thompson  
[nils.thompson@lbgatlanta.com](mailto:nils.thompson@lbgatlanta.com)  
 Phone (678) 594-9893, Ext. 202

**Vice-President:** Allison Keefer  
[allison\\_keefer@dnr.state.ga.us](mailto:allison_keefer@dnr.state.ga.us)  
 Phone (404) 675-8642

**Secretary:** Jim Kennedy  
[jim\\_kennedy@dnr.state.ga.us](mailto:jim_kennedy@dnr.state.ga.us)  
 Phone (404) 463-0679

**Treasurer:** Ken Bechely  
[ken.bechely@earthtech.com](mailto:ken.bechely@earthtech.com)  
 Phone (770) 990-1415

### AGS 2008 Meeting Dates

Listed below are the planned meeting dates for 2008. Please mark your calendar and make plans to attend.

April 29<sup>th</sup> - Dr. Pam Gore (New Science Curriculum in Georgia's schools)

May 27<sup>th</sup> - Dr. Don Thieme (Ancient Wetlands in Telfair County)

June 24<sup>th</sup> - Social (Members and Guests Only)

July - no meeting

August 26<sup>th</sup> - Open

September 30<sup>th</sup> - Open

October 28<sup>th</sup> - Open

November 18<sup>th</sup> - Open

December - no meeting

Continue to check the newsletter and website for details regarding upcoming speakers/topics.

## AGS Committees

**AGS Publications:** Allison Keefer  
 Phone (404) 657-8642  
[allison\\_keefer@dnr.state.ga.us](mailto:allison_keefer@dnr.state.ga.us)

**Career Networking/Advertising:** Todd Roach  
 Phone (770) 242-9040, Fax (770) 242-8388  
[tdr@piedmontdrilling.com](mailto:tdr@piedmontdrilling.com)

**Continuing Education:** Nils Thompson  
 Phone (678) 594-9893, Ext. 202  
[nils.thompson@lbgatlanta.com](mailto:nils.thompson@lbgatlanta.com)

**Fernbank Liaison:** Chris Bean  
 Phone (404) 929-6313  
[chris.bean@fernbank.edu](mailto:chris.bean@fernbank.edu)

**Field Trips:** Josh Jenkins  
 Phone (770) 421-3412  
[jljenkins@mactec.com](mailto:jljenkins@mactec.com)

**Georgia PG Registration:** Ken Simonton  
[ken\\_simonton@dnr.state.ga.us](mailto:ken_simonton@dnr.state.ga.us)

**Grants & Scholarships:** Bill Waggener  
 Phone (770) 478-5734  
[wgwaggenerii@bellsouth.net](mailto:wgwaggenerii@bellsouth.net)

**Hospitality:** David Sanders  
 Phone (770) 990-1446  
[david.sanders@earthtech.com](mailto:david.sanders@earthtech.com)

**Membership:** Ben Bentkowski  
 Phone (404) 562-8507  
[bentkowski.ben@epa.gov](mailto:bentkowski.ben@epa.gov)

**Newsletter Editor:** Carl Froede Jr.  
 Phone (770) 562-8550  
[froede.carl@epa.gov](mailto:froede.carl@epa.gov)

**Website Design:** DeLyn Thompson  
 Phone (770) 421-3538  
[dmthompson@mactec.com](mailto:dmthompson@mactec.com)

**Share your research and work experiences:** The Georgia State University Geology Club invites AGS members to present research/work experiences at club meetings. Please contact Ms. Eliza Andrews at [eandrews3@student.gsu.edu](mailto:eandrews3@student.gsu.edu) for additional information.

## Join the Atlanta Geological Society

### Membership Application/Information Update Form

Annual membership dues for the Atlanta Geological Society are \$25 for professional membership, **\$5 for students (new reduced rate)**, and \$100 for corporate sponsorship (which includes up to 4 professional memberships). For further details, contact the AGS Treasurer:

**Ken Bechely**

Phone: 770-990-1415

Email: [ken.bechely@earthtech.com](mailto:ken.bechely@earthtech.com)

Make checks payable to the "Atlanta Geological Society" and remit with the completed form to:

**Atlanta Geological Society**

Ken Bechely, Treasurer

1455 Old Alabama Rd., Ste. 170

Roswell, GA 30076

Name: \_\_\_\_\_

Organization: \_\_\_\_\_

Address: \_\_\_\_\_

Mailing Address: \_\_\_\_\_

Phone: (Work) \_\_\_\_\_ (Home) \_\_\_\_\_ (Cell) \_\_\_\_\_

Fax: \_\_\_\_\_

Email 1: \_\_\_\_\_

Email 2: \_\_\_\_\_

Ready to Serve the Society?

Remember that although we have officers and various standing committees, it is ultimately the membership that keeps the Atlanta Geological Society active and growing. We have a world of experience within our membership. Please consider volunteering. Your Atlanta Geological Society needs you.