

Atlanta Geological Society Newsletter

Next meeting of the Atlanta Geological Society is
MARCH 25, 2008

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

Refreshments for the March 2008 Social are provided by:



Georgia's Own Credit Union is a full-service financial institution, offering an array of highly competitive deposit and loan products, including CDs, IRAs, mortgages and auto loans, low rate Visa options and free All Access checking. Because every member is an owner, our earnings are returned to you, rather than a group of stockholders, which ultimately leads to better rates, fewer fees, and higher dividends. This can translate into hundreds of dollars in savings a year, so why not join today? Contact Georgia's Own representative Margaret McDaniel (404.874-1166 ext 9273) to get started. To share this benefit with your coworkers, have your HR department contact Margaret at mmcdaniel@georgiasown.org for information on how your company can add Credit Union membership as a free benefit to its employee benefits package. You can also learn more by visiting our website at georgiasown.org.

Spring 2008 Georgia State University Department of Geosciences Seminar Schedule

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

March 13th:

Dr. Dorothy Payne, United States Geological Survey, Atlanta

Topic: Solute-transport modeling for management of saltwater intrusion at Hilton Head Island, S.C.
- "What's the use?"

March 20th:

Dr. Zhigang Peng, Department of Earth and Atmospheric Science, Georgia Tech

Topic: Remote triggering of non-volcanic tremors

April 3rd:

Dr. Seth Rose, Department of Geosciences, Georgia State University

Topic: Assessing the human impact on the hydrochemistry of the Chattahoochee Basin

April 17th:

Dr. Mike Higgins and Mr. Ralph Crawford,

United States Geological Survey (retired)

Tentative Topic: New geological mapping for the Atlanta region

March Presentation

By Dr. Kurt Frankel
Assistant Professor, Earth and Atmospheric Sciences
Georgia Inst. of Technology, MC 0340
311 Ferst Dr.
Atlanta, GA 30332

TITLE: Reconciling short- and long-term rates of deformation along the Death Valley-Fish Lake Valley fault zone: Implications for Pacific-North America plate boundary kinematics.

ABSTRACT: Modern analysis of the kinematics and rates of plate boundary deformation requires a multidisciplinary approach that combines detailed landform analysis with geochronologic constraints on the rates of tectonic and surficial processes. Such an integrated approach is being used to analyze the manner in which the Death Valley-Fish Lake Valley fault zone (DV-FLVFZ) stores and releases seismic strain. The primary objective of this study is to measure intermediate- and long-term (thousands to millions of years) slip rates on the DV-FLVFZ to compare with short-term (decadal), space-based geodetic rates of deformation. Comparison of these rate data over a wide range of time scales is helping elucidate the constancy of seismic strain release in both time and space. High-resolution airborne laser swath mapping (ALSM) digital topographic data are helping define the extent of the surface expression of the DV-FLVFZ. More importantly, ALSM data are allowing accurate identification and measurement of fault offsets exposed in alluvial landforms throughout Death Valley and Fish Lake Valley. These fault offset data, when combined with cosmogenic nuclide geochronology are providing accurate determinations of fault slip rates at a variety of time scales along this important section of the Pacific-North American plate boundary.

BIOGRAPHY: Kurt became interested in geology while attending the University of North Carolina at Chapel Hill, where he received a B.S. in geological sciences in 2000. It was during an undergraduate field course in eastern California where he first became interested in studying deformation related to the Pacific-North America plate boundary. After finishing his degree at UNC, Kurt went on to earn an M.S. in geological sciences from Lehigh University in 2002. At Lehigh, his research focused on late-Cenozoic landscape evolution of the southern Rocky Mountains and Rio Grande Rift. Kurt received a Ph.D. in geological sciences in 2007 from the University of Southern California and currently holds the position of Assistant Professor of Earth and Atmospheric Sciences at the Georgia Institute of Technology.

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 for additional information.

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. The March 29th workshop will feature Dr. Tim Long leading a discussion on seismic techniques and investigations. The next examination will be held October 3, 2008.

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

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 March...

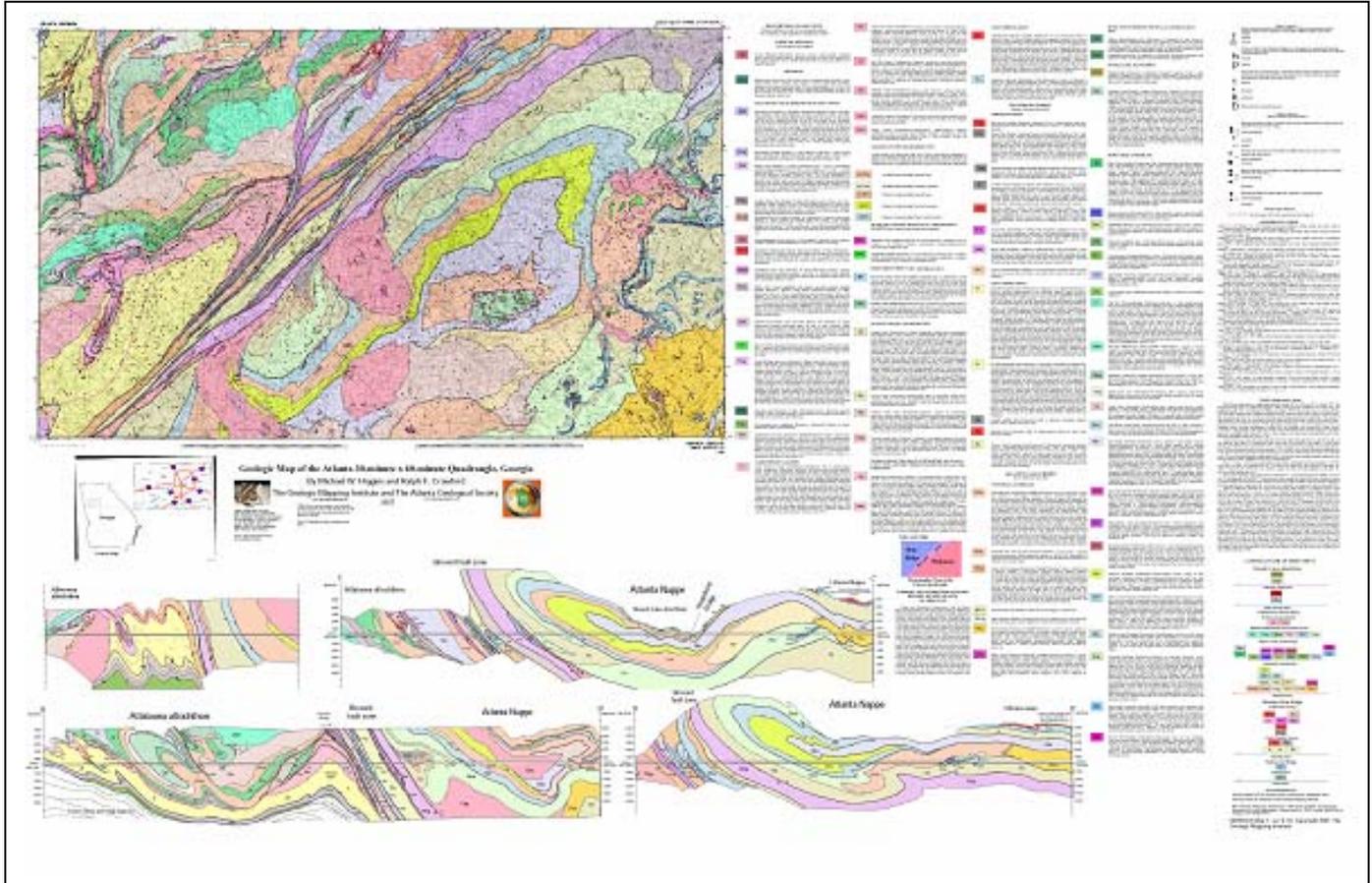
Deformed cross-stratification

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

<http://southeasterngeology.org/SedimentaryStructures/ss2.htm>

Note that any use 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 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 tickets and details on exhibits, films, and events,
 please visit our website at www.fernbankmuseum.org

On Exhibit:

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

Upcoming Public Programs:

- **Art and Nature Workshop: Drawing Light in the Dark.** Saturday, March 15, Noon – 5 p.m.
Registration required.
- **Native Plant Workshop.** Sunday, March 30, 2 p.m. – 4 p.m. Registration required.
- **Young Curator Camp.** Thursday-Friday, April 10 and 11, 9 a.m. – 2 p.m. Registration required.
- **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.

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

- *Journey to Amazing Caves*
- *Sea Monsters* (closes March 21)
- *Grand Canyon Adventure: River at Risk* (opens March 22)
- **Martinis and IMAX:** Friday evenings, 5:30 p.m. – 10 p.m.

Atlanta Geological Society Treasurer Report – February 2008

Membership Status - 2008

Professional	Student	Corporate
41	2	4

Account Balance as of 2/29/2008:
\$4,476.44

January 1, 2008, marks not only the first day of the New Year, but also the time that you, as a member of the Atlanta Geological Society, need to submit your annual dues. The Society voted several years ago to follow a calendar year. The new AGS officers begin in January and your membership dues are also due. **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. This will ensure that you receive a timely notice of the monthly posting of the newsletter at the AGS website and other Society business too. Thank you. [Those members that last paid dues in 2006 will be dropped from the mailing list effective April 1, 2008.](#)

Please contact Ken Bechely (see AGS Officer listing in this newsletter) if you are unsure of your current membership status.

Martinis & IMAX®: 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.

The 16th Annual David S. Snipes/Clemson Hydrogeology Symposium
Clemson University
Department of Environmental Engineering and Earth Sciences

[Pre-Registration for this event ends on March 14, 2008](#)

Presentations: April 3, 2008

Oral and poster presentations will take place at the Madren Center. As usual, the lectures will cover a wide range of topics including Contaminant Transport, Remediation, Numerical Modeling, Characterization, Watershed Hydrology, Engineering Geology, GIS and Remote Sensing, Geophysics, Geochemistry, Stratigraphy, and Regulatory Issues. We encourage everybody to submit an abstract and give a presentation of their work.

Also this year we will be offering a half day REMCHLOR course presented by Ron Falta. To reserve a spot please indicate your interest on the registration form. This meeting is approved for up to eight continuing education hours for SC Professional Geologists, as is the field trip. The registration cost for the April 2nd event includes coffee and pastries in the morning, lunch, and refreshments in the afternoon. Pre-registrations will be accepted up to March 14th. You may register at the event, but advance notice is needed to ensure receiving lunch.

The post-Symposium mixer at the Geology Museum is made possible by the generosity of Clemson alumni and other sponsors.

You can view past Symposium programs and the 2005 Powerpoint presentations (in PDF) at the website (<http://www.ces.clemson.edu/hydro/symposium/index.html>). Please consult this website for more information regarding the 2008 symposium. Additionally, you may contact BrameS@clemson.edu or call 864-656-7167. Thank you and we hope to see you at the symposium.

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

AGS Officers

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 Phone (404) 657-8642

Secretary: Jim Kennedy
jim_kennedy@dnr.state.ga.us
 Phone (770) 421-3402

Treasurer: Ken Bechely
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.

March 25th - Dr. Kurt Frankel
 (Interaction between active tectonics and geomorphology)

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

May 27th - Dr. Don Thieme
 (Ancient Wetlands in Telfair County)

June 24th - Social (Members and Guests Only – Please make sure that you are a member in 2008)

July - no meeting

August 26th - Open

September 30th - Open

October 28th - Open

November 18th - Open

December - no meeting

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

AGS Committees

AGS Publications: Allison Keefe
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allison_keefe@dnr.state.ga.us

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dmthompson@mactec.com

Graves Mountain "Rock Swap and Dig"

WHEN:

1. Friday, April 25, 2008, 8:00 am to 6:00 pm
 2. Saturday, April 26, 2008, 8:00 am to 6:00 pm
 3. Sunday, April 27, 2008, 8:00 am to 6:00 pm
-
1. Friday, October 3, 2008, 8:00 am to 6:00 pm
 2. Saturday, October 4, 2008, 8:00 am to 6:00 pm
 3. Sunday, October 5, 2008, 8:00 am to 6:00 pm

You are invited to field collect minerals at Georgia's premiere mineral location!

The caretaker in charge of Graves Mountain, Clarence Norman Jr., has announced plans to hold TWO three day dig and rock swaps on the Mountain during April 25, 26, & 27, 2008 and during October 3, 4, & 5, 2008. He will have the mountain open to collecting from 8:00 am to 6:00 pm each day. All participants must stop at the welcome table in the Hospitality tent to sign a liability release and make a small contribution to defray the cost of opening the mountain and providing port-o-lets. There will be several golf cart type, four wheeled vehicles available to transport those participants who have trouble walking long distances. The dig will cease and everyone is expected to be off the mountain by around 6:00 pm each day. Participants will be allowed to park in a designated area on the mountain.

Rock Swap and Hot Food/Drinks:

Junior will set aside an area in the upper parking lot for tables to be setup for daily rock swaps. Anyone who would like to setup a table(s), please contact Junior at the phone numbers listed below. Hot food cooked on the grill, cold drinks and chips will be available for purchase on the mountain during all three days of these events. Don't forget to bring some extra money to buy the special "Graves Mountain Rock Swap and Dig" T-shirt!

THESE DIGS ARE OPEN TO ALL

Mark your calendar and tell all your friends about this great event!

Contact Information:

Clarence Norman Jr. (Junior) - 706.359.3862 (business) or 706.359.2381 (home).

Wikipedia versus Uncyclopedia

What is a geologist? Two different sources - two different answers. For those of a more serious nature, please review the Wikipedia. For those with a wacky if not warped bent, please review the Uncyclopedia.

- 1) <http://en.wikipedia.org/wiki/Geologist>
- 2) <http://uncyclopedia.org/wiki/Geologist>

The links are provided in an effort to prevent any potential copyright infringement issues. Under the advice of the AGS Legal Counsel, we are advised to state that *...the information presented at either website does do not necessarily represent the views or opinions of the AGS or affiliated societies. No claim is made regarding the accuracy or intended meaning of said websites. This information is of a professional nature and should not be attempted at home or in the company of minors.*



American Institute of Professional Geologists (AIPG) Georgia Section Presents:

Innovative Remediation Technology Conference

May 7-8, 2008

SCHEDULE: Wednesday May 7, 2008 and Thursday May 8, 2008
7:45 AM – 4:00 PM 7:45 AM – 12:00 PM

LOCATION: Kennesaw State University
Continuing Education Building
3333 Busbee Drive
Room 400
Kennesaw, Georgia 30144

This conference will focus on innovative technologies being used in the environmental field including but not limited to chemical oxidation and surfactants. Case studies will include petroleum hydrocarbons and chlorinated solvents sites. Presenters will include representatives from private consultants, regulatory personnel, industry, and legal backgrounds. Attendees will earn 10 personal development hours of continuing education.

If your company is interested in interviewing geology students that are graduating, let us know. If there is enough interest we will set up an area on May 8th for interviews or to receive student resumes.

Name: _____

Employer: _____

Address: _____

City/State/Zip: _____

Telephone: (____) _____ Fax Number (____) _____ E-Mail _____

REGISTRATION: \$150.00 AIPG members \$110.00, students \$20.00, student AIPG members free.
After April 16, 2008: Registration fee \$175.00.

SPONSOR: \$200.00 One free registration, a one page summary of services, and send an electronic copy of company logo to be placed in attendees notebook.

METHOD OF PAYMENT:

1. Company Check #: _____ Personal Check #: _____ On-line: _____
Make checks payable to AIPG Georgia Section (all funds go to AIPG) Go to: //www.aipg.org

MAIL TO: Ron Wallace * 3650 Garrards Crossing * Roswell, GA 30075
Phone (404) 362-2589 E-Mail : ronald_wallace@dnr.state.ga.us

REFUNDS & CANCELLATIONS:

All cancellations must be received in writing and sent to Ron Wallace by mail or e-mail. Phone cancellations are not accepted. All cancellations postmarked-dated by April 16, 2008, will receive a REFUND minus a 25% administrative fee. After April 16, 2008, registrants are no longer eligible for refunds; however, substitutions are welcome. Call (404) 362-2589 for substitutions. **NO REFUND FOR THOSE WHO REGISTER AND FAIL TO ATTEND.**

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

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.