NAGT Geo2YC Division

FOUNDATIONS

Newsletter of the Geo2YC division of the National Association of Geoscience Teachers
Volume I, Issue 1: January 2012

The wonderful world of webinars: 2YC geoscience faculty join online discussions of Climate and Hazards

A coal hauler truck at the Dry Fork Mine near Gillette, Wyoming. Summer 2011. Photo by Callan Bentley.

by Katryn Wiese
City College of San Francisco

During the 2010-2011 Academic Year, On the Cutting Edge hosted a series of monthly 1-hr online webinars on Climate and Energy. These were well attended and well received and brought together participants from every type of research and academic institution including a healthy sampling of two-year-college faculty. Topics covered included: engaging students in the nuclear energy debate, common classroom misconceptions in climate science, using climate models, and a book club event on an open source textbook on Sustainable Energy. Web resources from all the events can be found here: http://serc.carleton.edu/NAGTWorkshops/climatechange/webinar/index.html

This year, we've continued the online webinar format, but the theme is Natural Hazards, and it's a build up to our summer face-to-face workshop in Bozeman, Montana on Teaching Environmental Geology.

The online webinars are a easy, low-commitment way to think about topics you teach and how to improve them, both in content, and in teaching strategies and methodology. And it's a great way to connect with folks who have common interests but who are separated by thousands of miles.

November 18, 2011 we held a webinar on "Climate Change Risk in an Unknowable Future," presented by Edmond Mathez, Department of Earth and Planetary Sciences, American Museum of Natural History, New York.
A recording of the presentation along with all references and resources is available on the series website: http://serc.carleton.edu/NAGTWorkshops/hazards/webinars/index.html

Turtle Mountain and run out from the Frank Slide, Alberta: Canada's deadliest landslide. Summer 2011. Photo by Callan Bentley.

As I'm writing this review, I'm also busily preparing for the January 13, 2012 webinar on Natural Hazards Programs at the USGS -- Policy and Mitigation presented by David Applegate, Associate Director for Natural Hazards, United States Geological Survey (USGS), Reston, VA.

Upcoming events in the series:
February 10, 2012: "U.S. Volcanic Hazards" -- Peter Cervelli, Deputy-Scientist-In-Charge of the Yellowstone Volcano Observatory, United States Geological Survey (USGS), Menlo Park, CA
March 16, 2012: "What's Shaking at SCEC? Education and Outreach Resources for Earthquake Preparedness" -- Mark Benthien, Education Director, Southern California Earthquake Center (SCEC), University of Southern California

Upcoming face-to-face workshop:
June 2-6, 2012 Teaching Environmental Geology Workshop -- Montana State University in Bozeman.
Application deadline - March 1, 2012
Limited stipends are available to help defray workshop costs; the stipend application deadline - March 12, 2012
This workshop is designed specifically for instructors of Environmental Geology. Session topics focus on exploring ways to effectively teach this topic in undergraduate Earth science courses. Each participant will submit and participate in the review of teaching activities. One of the important results of the workshop will be contributions of teaching materials, insights on teaching methodology, and the development of classroom resources that take advantage of cutting edge technology.
Web page for the event:
http://serc.carleton.edu/NAGTWorkshops/environmental/workshop12/index.html

I hope that if anyone is interested in participating in these or other On the Cutting Edge workshops, you'll jump right in. Having two-year-college faculty in the mix really improves the outcomes and experience.

Any questions? Feel free to contact me: Katryn Wiese (katryn.wiese@mail.ccsf.edu)

In Memoriam: John Bartley


John

The Geo2YC community mourns the passing of John Bartley, professor *emeritus* of geology at Michigan's Muskegon Community College. He died last month of cancer. His efforts as part of the Geo2YC Organizational Committee were instrumental in generating our group.

Here is the obituary that was published in the *Grand Rapids Press* on December 22, 2011:

BARTLEY - John Bartley, born September 30, 1951, died on December 20, 2011 after enduring, with exceptional humor and grace, a six-month ordeal with multiple myeloma. John, a strong advocate for science education, taught geology and math at Muskegon Community College where for the past several years, he also served as chair of the department. He gave freely of his time over decades to Michigan Science Olympiad as event supervisor, board member, and for several years, as director. He was also working with other two-year college faculty to establish a forum for geology teachers at two-year schools within the National Association of Geoscience Teachers, Inc. He will be missed by Jackie Bartley, his beloved wife of 37 years; his parents, Isabelle and William W. Bartley of New Castle, PA; his sisters, Chris Christian (Matt) of Salinas, CA, and Patricia Serotkin (Robert) of Ebensburg, PA; brother, Tony Bartley (Carol) of New Castle, PA; niece, Katie Bartley; nephews, Matt and Andy Bartley and Ian Aughinbaugh (Linsey); and grandniece, Angel Aughinbaugh, as well as two faithful dalmatians and many loyal friends. A memorial service will be held at Grace Episcopal Church in Holland, MI on January 3, 2012 at 1 p.m. In lieu of flowers, memorial contributions may be made to Hospice of Holland, MI or Mary Free Bed Rehabilitation Hospital in Grand Rapids, MI. Arrangements by the Northwood Chapel of Dykstra Funeral Home.

Where it all began…

by Heather Macdonald
The College of William & Mary

Planning workshop participants discuss ways to collaborate with K-12 educators. Summer 2010. Photo by Heather Macdonald.

A workshop on *The Role of Two-Year Colleges in Geoscience Education and Broadening Participation in the Geosciences* was held at Northern Virginia Community College, Annandale, Virginia, in June 2010 to discuss issues, challenges, and opportunities for geoscience faculty and students in two-year colleges (2YC) and to make recommendations for strengthening this component of the geoscience community. The workshop included sessions on strategies for supporting all students to be successful, the role of 2YC in broadening participation in the geosciences, and preparing geoscience students for the future (workforce development and transfer). They discussed supporting student recruitment, retention, and learning through tutoring and peer mentoring programs, field work, early research experiences, and other strategies. Conversations between participants and professional organizations focused on how increased communication with 2YC faculty could support faculty and students from two-year colleges and the need to career materials tailored to students in 2YC. Participants considered strategies for addressing isolation and building community, recognizing the importance of including adjunct faculty in these efforts. Recommendations included the need to collect and disseminate information about 2YC including demographic information and best practices of 2YC geoscience programs, the desire to establish an organization for 2YC geoscience faculty, more opportunities to communicate (workshops and electronic communications), and other approaches for supporting 2YC students, faculty, and programs. The new GEO2YC Division of NAGT is a direct outcome of the 2010 workshop! The workshop website includes the workshop program, presentations, and essays submitted by participants. Participants valued the opportunity to discuss issues of common interest; we think this event holds the current record for the highest number of geoscience faculty from 2YC in a workshop and look forward to when the record is broken.


Planning workshop participants discuss ways to support Geo2YC before there was a Geo2YC. Summer 2010. Photo by Heather Macdonald.

The workshop was sponsored by the National Association of Geoscience Teachers and was supported, in part, by a grant from the National Science Foundation Opportunities to Enhance Diversity in the Geosciences program (*GEO-0939671*). AGI, GSA, IRIS, and NOAA also provided support for the workshop. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Science Foundation.

The workshop was convened and facilitated by Heather Macdonald, Robert Filson, Laura Guertin, Kaatje van der Hoeven Kraft, and John McDaris.

Did you know…?

A wealth of resources from the fall AGU meeting relevant to Geo2YC educators is available at SERC:

http://serc.carleton.edu/geo2yc/sessions/AGU2011-ED11E.html

Check it out!

NAGT Geo2YC Division

AGI to Host a Professional Development Workshop for Underrepresented, Early-Career Minorities Pursuing Faculty-Track Positions

by Heather Houlton
American Geosciences Institute

Alexandria, VA – The American Geosciences Institute (AGI), in collaboration with the National Academy of Engineering (NAE), is hosting a professional development workshop for underrepresented, early-career minorities interested in careers in research and academia.

The workshop, entitled Developing a Diverse Professoriate: A Professional Development Workshop for Underrepresented-Minority, Early-Career Faculty in the Geosciences, will be held in the Washington D.C. area from Wednesday, April 4 through Friday, April 6, 2012.

The workshop seeks to increase underrepresented minority participation in the geosciences. Participants will learn integral leadership and training skills to help promote early-career success, and aide them in overcoming common barriers within their institutions. The workshop will include 5 topical sessions on subjects such as research and grant writing, and instructional and educational guidance, and will include meetings and discussions with agency and professional society representatives.

Applications are due Monday, January 23.

Participation is open to persons who are underrepresented minorities, persons with disabilities, or those teaching at a minority serving institution. Applications are open to early-career faculty, post-doctoral students, or students in the final year of their Ph.D. All applicants must intend to pursue an academic-based career with an emphasis on teaching. For more information on eligibility requirements, and to learn more about the workshop, please visit www.agiweb.org/workforce, or contact Heather Houlton at hrh@agiweb.org. This workshop is being supported by NSF Grant 11-08210.

Upcoming deadline:
Dottie Stout professional development grants

http://nagt.org/nagt/programs/stout.html

NAGT awards grants to faculty and students at 2 year colleges and K-12 teachers in support of the following:

- Participation in Earth science classes or workshops
- Attendance at professional scientific or science education meetings
- Participation in Earth science field trips
- Purchase of Earth science materials for classroom use

Grants of $750 will be made annually in three categories: Community College Faculty, Community College Student, and K-12 Educator.

Award winners will also be given an one-year membership to the National Association of Geoscience Teachers, which includes an online subscription to the *Journal of Geoscience Education* and the *In The Trenches* magazine.

Geo2YC President's column:
Airing our new voice

by Dave Voorhees
Waubonsee Community College

I am writing this from my new MacBook Air. I decided to leave the 'dark side' in November, and have not looked back. I have been truly impressed with the design and its ability to function and excel in the PC world. Software and hardware work like they should, even when first installed (*i.e.*, truly 'plug and play'). I had some doubts about not having a mouse, but the trackpad makes the mouse look like a slide rule. My new MacBook Air is a great fit to my lifestyle, and a vast improvement to my computer use.

I mention this because, as you know, Geo2YC is a new Division of NAGT. We are the MacBook Air of the geoscience community. We are just now figuring out all our new 'programs' and 'trackpads', and making sure that they all work together smoothly, effortlessly, and seamlessly.

Geo2YC President Dave Voorhees, out standing in his field.

Our first task in this first year of our Division is to figure out how many GB of memory we have, or to define who we are. Since you are reading this, you are probably part of our membership database (*i.e.* memory). We are using data from AGI, SERC and Heather Macdonald (Thanks Heather!) to see where our known colleagues and members are. However, we can use your help. Do you have colleagues at your institution or in your home state who are not members of Geo2YC or not aware of Geo2YC (or NAGT)? We want to reach out to those colleagues, and for that we need your help. If you know of such colleagues, please tell them about us. If you are uncomfortable doing this, please tell us about them, so we can gently start those conversations. We would like to know who we are, as well as who we aren't. This is kind of like what my Grandfather used to say: "The smartest man is the man who knows what he doesn't know'.

We also would like to know how we can help you. The Geo2YC Division Organizational Committee (THANKS to Bob Blodgett for his leadership!) drafted our Bylaws, which contains our Mission statement: http://nagt.org/nagt/divisions/2yc/index.html. The Executive Board has begun discussing specific projects and programs to bring these to life, but we would also like to hear ideas from you. I have begun to contact Presidents of other geoscience societies to develop partnership arrangements, and if I have specific ideas and suggestions from you, these partnerships will be that much stronger. We want to make Geo2YC an organization that helps you, and also helps those colleagues who are not yet a part of us.

I do want to make note of the passing of John Bartley in December. I first met John at the workshop at Northern Virginia Community College "The Role of Two-Year Colleges in Geoscience Education and in Broadening Participation in the Geosciences: A Planning Workshop" in 2010. At that workshop, it was clear to me that John was a passionate advocate for geoscience education at Muskegon Community College, where he taught for several years. He naturally became involved in the Geo2YC Organizational Committee and coordinated the writing of our bylaws. Although I did not know John long, I feel a void from his passing.

Let's try to live up to the immortal words of Lou Reed, and let's make this inaugural year the "beginning of a great adventure"!

— Dave

P.S. – Here's a session proposal that Suzanne Metlay, of Front Range Community College, and I put in for the 2012 National GSA Meeting in Charlotte, NC:

Technical Session Proposal submitted for GSA Charlotte, 2012 ***PENDING APPROVAL***

Innovations & Challenges in Non-Major Instruction in Two- and Four-Year colleges

This session explores innovative pedagogy of part- and full-time faculty in geoscience classes predominantly of diverse students solely seeking general education requirements. This requires innovative strategies to ensure engagement and success in all learning environments.

Rationale: Most introductory geoscience classes taught in the traditional, field, or online environments at Two- and Four-year Colleges are composed of students whose main goal is to satisfy general education requirements for their Associate's or Bachelor's degrees. While few of our students will go on to become scientists, most will become voters, taxpayers, and decision-makers who need to better understand their interactions with natural resources and the physical world. For most of these non-major students, this is the single science class they will take at the college level. Open admission policies, as well as students with family responsibilities, demanding work schedules and financial limitations bring additional challenges and surprises to the introductory geoscience

classroom. Part-time and full-time faculty are invited to share their approaches and innovative pedagogies in traditional, field, and online learning environments that effectively teach the rigors of the geosciences and scientific literacy. Some of these approaches and pedagogies are uniquely leveraged in many Two-year colleges by fostering partnerships with federal/state organizations, organizing community and K-12 outreach, working with geotechnical and/or certificate programs, mentoring student research and service learning, increasing participation of minority groups, working with preservice and in-service teachers, and engaging unlikely learners in the field.

Mineralogy at a 2YC?

Northern Virginia Community College Mineralogy students on a field trip to the Moorefield Mine near Amelia, Virginia. Spring 2011. Photo courtesy Shelley Jaye.

by Shelley Jaye
Northern Virginia Community College

Hi Everyone! I wanted to let you know about the fully transferrable Mineralogy course that I am teaching at on the Annandale Campus of Northern Virginia Community College (NOVA). Minerals and common rocks, thin sections and field trips build the foundation for this lecture/lab integrated course. I have seen consistent enrollment since first offered during the spring semester of 2011.

Articulation agreements are in place and expanding to include all of the Virginia four year schools. The key to success has been striking a balance in offering a class that provides the rigor needed for the decided Geology major as well as suits the needs of the varied student population at a 2YC. The course has attracted second semester introductory geology students, allowing them a new option for a second lab science course. Geology and mineral enthusiasts in the community as well as potential and current secondary school Earth Science teachers are included as common enrollees.

Developing this course from scratch was a daunting challenge; I turned to the Carleton College Science Education and Resource Center (SERC) website for help. Available materials included successful course design models, links to current courses, syllabi, as well as class and lab activities; it is a treasure trove of ideas that allowed me to develop a successful course first time offered.

Coincidently, a NAGT sponsored On the Cutting Edge, Professional Development for Geoscience Faculty workshop in "Teaching Mineralogy, Petrology and Geochemistry in the 21st Century" was being offered in the summer of 2011 at the University of Minnesota. I was able to attend the workshop with funds received through award of a 2011 NAGT Dorothy Stout Professional Development Grant. The workshop was outstanding! I developed a great support network and learned so much from my colleagues. Emphasis at the workshop was placed on activity based teaching in the classroom and also in the field. The workshop began with sessions at UMN and ended with a field trip to many amazing field localities in northern Minnesota. I took these great ideas and infused them into the Mineralogy course which includes a concentration on the rock forming minerals and common rocks in the lab as well as taking advantage of the great natural exposures available in Virginia and Maryland to teach in the field. Next up on my agenda is developing a "Hard Rock Lab Techniques" short course, aka, teaching the students how to make their own thin sections. Thanks NAGT and SERC!

On the Cutting Edge workshop participants examine a rhyolite exposure on the north shore of Lake Superior. Summer 2011. Photo by Shelley Jaye.

Dottie Stout grant to ramp up GIS use

by Christine Witkowski
Middlesex Community College

Receiving a 2011 Dottie Stout grant award enabled me to attend the TwiST (Teaching with Spatial Technology) Workshop "Empowering Student Discovery Through GIS" at Cayuga Community College June 28-30, 2011 in Auburn, New York. This workshop was designed to teach K-12 teachers and college faculty members how to incorporate GIS, GPS, and satellite data in classroom activities, with a particular focus on conducting community mapping projects. The community mapping focus is ideal for the Environmental Science program at Middlesex Community College, because our students will learn better with activities and projects geared to their own communities. As a result of this training, and the purchase of 2 GPS units from the grant money, I will be developing new activities for two courses in the Environmental Science program: Introduction to Environmental Science and Dynamic Earth. In the future, I plan to seek other sources of grant funding to purchase additional software and hardware that will enable me to develop more in-depth projects and new courses.

"Sages" of Geo2YC to address needs & challenges with professional development

by Eric Baer
Highline Community College

SAGE 2YC - Supporting and Advancing Geoscience Education in Two-Year Colleges is a new three-year program funded by the National Science Foundation. Designed to support the continuing growth of a vibrant 2YC geoscience faculty community, SAGE 2YC will provide a variety of professional development opportunities, foster the growth of professional networks, and develop web-based resources for 2YC geoscience faculty and programs.

SAGE 2YC will offer a series of national and regional workshops focused on strategies for preparing 2YC students for the geoscience workforce (both technical training and successful transfer) and on teaching students with a range of abilities, experiences, and goals. The first national workshop, "Preparing Students in Two-year Colleges for Geoscience Degrees and Careers" will be in Tacoma, Washington July 18-21, 2012. This summer's workshop will be followed by other national and regional workshops in the next three years, by short-courses at national geoscience meetings, and by webinars.

Planning workshop participants discuss ways to improve online teaching. Summer 2010. Photo by Heather Macdonald.

This project specifically addresses the needs and challenges of 2YC faculty, and there will be a number of ways that 2YC faculty can participate. Funding to support faculty travel and other costs will be available. For further information, contact one of the project's principal investigators: Robert Blodgett (Austin Community College) rblodget@austincc.edu, Jan Hodder (University of Oregon) jhodder@uoregon.edu, Heather Macdonald (College of William and Mary) rhmacd@wm.edu, or Eric Baer (Highline Community College) ebaer@highline.edu.

FOUNDATIONS is edited by Callan Bentley, Northern Virginia Community College. Please get in touch with your feedback: cbentley@nvcc.edu

Geo2YC announces Outstanding Adjunct Faculty Awards

...and you can help award them!

Students test the pH of water in Quantico Creek, downstream of a pyrite mine in Prince William Forest Park, Virginia. Summer 2009. Photo by Callan Bentley.

The Geo2YC division wants to recognize adjunct faculty for their outstanding work. We are soliciting Geo2YC members to serve on a committee to evaluate nominations. The idea is that winning adjunct instructors will be profiled here in FOUNDATIONS. If you want to volunteer to help out with this effort (gathering and judging nomination letters), then please let us know. Drop a line to Geo2YC President Dave Voorhees at dvoorhees@waubonsee.edu.

We would like to have the committee organized by April or so, in order to solicit nominations over the summer, and award our first Outstanding Adjunct Faculty Award by the fall annual meeting of GSA in Charlotte, North Carolina.

Thanks for helping out!

Like what you see here in FOUNDATIONS? Join NAGT and Geo2YC today with this form

MAIL TO
National Association of Geoscience Teachers
P.O. Box 1897, Lawrence, KS 66044, U.S.A.

The membership year runs from January through December.

NAGT Membership Application / Renewal

ONLINE MEMBERSHIP SERVICES ARE AVAILABLE AT: www.nagt.org

Name (please print) _____
Mailing Address _____ City _____
State/Province _____ Zip/Postal Code _____ Country _____
Phone (____) _____ Fax (____) _____ E-mail _____

Check One:
❑ College Faculty at _____
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PAYMENT (SEE OTHER SIDE FOR MEMBERSHIP OPTIONS)
❑ **Check** (in U.S. funds), made payable to: **National Association of Geoscience Teachers**
❑ **Credit Card:** Card type _____ Card number _____ Expiration date _____
Amount authorized: $ _____ Authorized signature: _____

APPLICATION TYPE ❑ New Applicant ❑ Renewal

Regular, domestic membership
(*JGE* online only and *In The Trenches* in print)
❑ $45

Signature of NAGT member: _____
School: _____

I want printed copies of *JGE* mailed to me ❑ $35
Membership in NAGT's Geo2YC Division ❑ $7

TOTAL $ _____

The full range of membership services is available online.