

Volume 33. Number 1 February. 2013

Chair's Message

As usual in the winter newsletter, we look back at the Structural Geology and Tectonics Division meeting, awards ceremony, and party at the 2012 GSA annual meeting. See below for photos of the award-winners, citationists, and assorted attendees of the event. This is an excellent reminder to mark your calendar for this year's event on Tuesday, October 29 in Denver and to encourage your SG&T-interested students, colleagues, and friends to come to the division meeting and celebration.

In the past few months, the SG&T board and members of the Joint Technical Program Committee and the awards committees have been busy planning for 2013, including:

- preliminary organizing and sponsoring of session and field trip proposals for the annual meeting (Denver, October 27-30, 2013). The Denver meeting looks like it will be a big one for SG&T-themed sessions. We received a large number of requests for sponsorship or cosponsorship; see the article below from Joint Technical Programming Committee member Christine Siddoway for more information; and
- organizing for awards nominations. In recent months, the Outstanding Publication Award (OPA) committee produced a streamlined nomination procedure for this award. Details about this and other SGT awards can be found on our Division webpage at http://rock.geosociety.org/sgt/index.html. Note that there is still time to nominate papers for the OPA and people for the Career Contribution Award, but the deadline is looming: March 1. The deadline for proposals for the Stephen E. Laubach Structural Diagenesis Research Award is April 15.

One of the most important functions of the SG&T Division is to provide funds to student members. Every year, we invite applications from students who wish to attend field trips or short courses at the GSA annual meeting (for students presenting their research at the meeting), and we provide meeting-travel funds to students awarded grants by GSA for their research. These student award funds come from your division membership fees and additional donations. Please keep an eye out for e-mails announcing deadlines for students to apply for these funding opportunities. Student awardees from 2012 are listed below

Something new: To help celebrate the 125th anniversary of GSA, our division has solicited 12 SG&T-themed essays from various researchers in the U.S. and beyond, with one essay to appear on the 28th day of each month on GSA's "Speaking of Geoscience" blog. The <u>first one</u>, by Christian Teyssier, was published on January 28. The schedule for the essays is as follows:

- **January**: Christian Teyssier, University of Minnesota (USA)
- **February**: Joann Stock, California Institute of Technology (USA)
- March: Peter Hennings, Conoco-Philips (USA)
- **April**: Robert Stern, University of Texas-Dallas (USA)
- May: Mark Quigley, University of Canterbury (New Zealand)
- **June**: Marin Clark, University of Michigan (USA)
- July: Christie Rowe, McGill University (Canada)
- August: Micah Jessup, University of Tennessee (USA)
- **September**: Sarah Titus, Carleton College (USA)
- October: Peter DeCelles, University of Arizona (USA)
- **November**: Haakon Fossen, University of Bergen (Norway)
- **December**: Mark Jessell, University of Toulouse (France)

Note that you can post comments and questions on the Speaking of Geoscience blog.

Donna L. Whitney SG&T Chair (2012-2013) University of Minnesota – Twin Cities

The SG&T Division Student Fund

Students represent the future of our division, and the board considers the support of students who are interested in structural geology and tectonics to be among our highest priorities. The student fund, established within the GSA Foundation, will allow us to more effectively meet this priority. Our initial goal is to grow the fund to \$80,000 before drawing interest from it. The interest from this amount, even in bad economic times, will provide more support for students than the division has ever been able to offer. You can donate to the fund at the GSA Foundation web site (http://www.gsafweb.org/makeadonation.html and then scroll down to SG&T Student Fund).





A record number of topical sessions have been proposed for the GSA 125th Anniversary meeting this year, organized upon the theme, *Celebrating Advances in Geoscience: Our science, our societal impact, and our unique thought processes*. The Structural Geology and Tectonics Division is sponsoring **30** sessions that review_advances, examine paradigms, and celebrate the breadth, depth, and vigor of the many topics of interest to Division members. In addition, six superb Rocky Mountains field trips will unveil advances achieved within the past decade, offering opportunities for on-the-outcrop dialog and direct access to exemplary field relationships that spurred breakthroughs.

A review of the 30 session titles reveals that the emphases are on dynamic structural-tectonic systems, processes, and – in keeping with the meeting theme-- *advances* in a variety of SG&T disciplines! A sampling of topics for the topical sessions includes Laramide tectonism and sedimentation; Cordilleran and Gondwanan terranes; investigations of ancient orogens, including the Ancestral Rockies, Grenville and Appalachian orogens; and continental extensional tectonics from rift to drift, including a dedicated session on the Rio Grande rift. Attention to extension is nicely balanced by an overarching session on hinterland, retroarc fold-thrust, and foreland systems.

Meanwhile, co-sponsored sessions explore economic resources within a structural context; physical volcanology and magma transport; and microstructures and metamorphic petrology; geochronology and rock magnetism. A landmark session celebrates *all aspects* of Arizona geology, in commemoration of the 125th anniversary of the Arizona Geological Survey.

Additionally, there will be two sponsored sessions that will invite contributions of EarthScope-affiliated research; these are *The Structure and Evolution of the North American Lithosphere: An Integrated Perspective*, and *Lithospheric Evolution: The North America Cordilleran Lithosphere from Pacific Coast to High Plains*.

Finally, a quick mention of the Rocky Mountains field trips that will be offered. Destinations include the Homestake Shear Zone; the northern Front Range - Proterozoic metamorphism and deformation; and a transect from the Sevier fold-and-thrust belt to the Laramide foreland. On a field trip in New Mexico, the Picuris Orogeny (1.5-1.4 Ga) will be 'rolled out', while in western Colorado the ever-timely question of the Neogene uplift and upper Colorado River drainage integration will be examined. Last but not least, an overnight trip to the Colorado Springs embayment will feature *Strata*, *structures and enduring enigmas* (one of which, nearing resolution now, has persisted for 120 years!). Watch upcoming issues of GSA Today for the full listing of field trips, topical sessions, and events.

Christine Siddoway SG&T Joint Technical Program Committee Representative Colorado College

Call for Nominations

Outstanding Publication Award (Nomination deadline -- March 1, 2013):

This award is given annually for a published work (paper, book, or map) of exceptional distinction that clearly advances the science of structural geology or tectonics. In 2012 the award went to Doug Yule and Kerry Sieh for their 2003 paper on a part of the San Andreas fault zone.

The Outstanding Publication Award is not limited to members of the Division or the Society, and awardees may be single or multiple authors, with no restrictions as to nationality, citizenship, publisher or publishing agency. The award may not be given posthumously unless the decision to give the award is made before the death of the awardee(s). A list of past awardees is provided on the SG&T website and an example of the plaque presented to the awardees is provided below. Click here to download a PDF a copy of the nomination instructions.

The nomination process is simple, quick, and enjoyable. The award is important because it serves to recognize exceptional science and creativity while also inspiring others. Participation in the process offers you a chance to revisit and reflect on publications that have had a major impact on your work and (or) teaching.

Please take a few moments to make a short list of exceptional publications. Return to your list and reread your favorites. As you review these favorites, jot down a few notes. Finally, choose one to nominate and write a nomination that supports your choice. Some questions to consider:

- Why is the publication exceptional?
- How has the contribution changed your work?
- What are specific advances made by the publication?
- How might the work have influenced the work of others?

Nominations include:

- (1) A full citation.
- (2) Nomination (as short as a paragraph; letters or reviews may also be included).
- (3) Name and address of nominator.

The nomination deadline is: March 1, 2013.

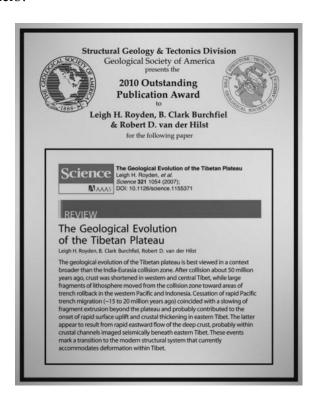
Mail or e-mail nominations (or questions) to:

Jonathan Caine, Chair - Outstanding Publication ward Committee

Award Committee

U.S. Geological Survey 1 Denver Federal Center Box 25046, MS 964 Denver, CO 80225 USA iscaine@usgs.gov

Phone: (303) 236-1822



Call for Nominations

Career Contribution Award (Nomination deadline March 10, 2013)

This award will be given for the 26th time in 2013. It is awarded to an individual who throughout his/her career has made numerous distinguished contributions that have clearly advanced the science of structural geology or tectonics. In 2012 the award went to Richard Allmendinger of Cornell University.

Nominees need not be citizens or residents of the United States, and membership in the Geological Society of America is not required. The Career Contribution Award cannot be given posthumously, unless the decision to give it was made before the death of the awardee. All nominations will be held under consideration for a period of three years, after which time they will be retired. A new nomination for the same individual can be submitted after the previous nomination is retired. A list of past awardees is provided on the SG&T website and an example of the plaque given to the awardee is provided below.

Nominations should include the following information:

- (1) Name of nominee, present institutional affiliation and address.
- (2) Summary statement of nominee's major career contributions to the science of structural geology and tectonics.
- (3) Selected key published works of the nominee.
- (4) Name and address of nominator.

Mail or e-mail nominations (or questions) to: **Steve Wojtal**, *Chair - Career Contribution Award Committee* Oberlin College 52 W. Lorain St.

Carnegie Building, Rm. 403 Oberlin, OH, 44074

Phone: (440) 775-8352 Steven.Wojtal@oberlin.edu



Call for Nominations

Stephen E. Laubach Structural Diagenesis Research Award (Proposal deadline April 15, 2013)

The *Stephen E. Laubach Structural Diagenesis Research Award Fund* promotes research combining structural geology and diagenesis, and curriculum development in structural diagenesis. The 2012 award went to Erika Swanson, a Ph.D. student at Caltech.

The donors believe multidisciplinary approaches often reveal new insights into long-standing problems and expose productive avenues for enquiry. To help promote the cross disciplinary emphasis of this annual award, the *Sedimentary Geology* and *Structural Geology & Tectonics Divisions* have been designated to jointly select the recipient. Graduate students, postgraduate and faculty level researchers are eligible.

This award addresses the rapidly growing recognition that fracturing, cement precipitation and dissolution, evolving rock mechanical properties and other structural diagenetic processes can govern recovery of resources and sequestration of material in deeply buried, diagenetically altered and fractured sedimentary rocks. The award highlights the growing need to break down disciplinary boundaries between structural geology and sedimentary petrology, exemplified by the work of Dr. Stephen Laubach and colleagues. Application Instructions for the *Stephen E. Laubach Structural Diagenesis Research Award* can be found on the SG&T webpage. Please contact Christie Rowe at McGill University with questions or for more information (christie.rowe@mcgill.ca).

Highlights from the Structural Geology & Tectonics Banquet at the 2012 National Meeting in Charlotte, N.C.

GEOLOGICAL SOCIETY OF AMERICA STRUCTURAL GEOLOGY AND TECTONICS 2012 CAREER CONTRIBUTION AWARD

Presented to Richard Allmendinger



GEOLOGICAL SOCIETY OF AMERICA STRUCTURAL GEOLOGY AND TECTONICS 2012 OUTSTANDING PUBLICATION AWARD

Presented to Doug Yule and Kerry Sieh for the following paper

Yule, D., & Sieh, K. (2003) Complexities of the San Andreas fault near San Gorgonio Pass: Implications for large earthquakes. *Journal of Geophysical Research* **108** (B11), 2548 doi:10.1029/2001JB000451.



The Geological Society of America Structural Geology and Tectonics Division 2012 **Outstanding Publication Award** winners Kerry Sieh (2^{nd} from left) and Doug Yule (2^{nd} from right) with SG&T Chair Ron Bruhn on the right and Citationist Andrew Meigs on the left. The full text of the citation and responses can be found on the SG&T website (Click here).

GEOLOGICAL SOCIETY OF AMERICA STRUCTURAL GEOLOGY AND TECTONICS 2012 Stephen E. Laubach Structural Diagenesis Research Award

Presented to Erika Swanson



The Geological Society of America Structural Geology & Tectonics Division 2012 *Stephen E. Laubach Structural Diagenesis Research Award* winner Erika Swanson with SG&T Past-Chair Scott Johnson.

Student Research Awards

Each year the SG&T division recognizes graduate students for excellent research proposals in the annual GSA solicitation. This year's impressive winners were recognized at SG&T's Business Meeting and Awards Ceremony at the GSA annual meeting in Charlotte and received funds to help with travel to the meeting or to participate in a Short Course or Field Trip.

Funds to attend the National Meeting

Aileen Chea, San Francisco State University Brian Culp, Pennsylvania State University David Oakley, Pennsylvania State University John Templeton, Columbia University/LDEO James Worthington, University of Arizona Alph Wright, Texas A&M University

Funds for Short Course or Field Trip

Levi Crooke, University of Alabama Stephen Hughes, North Carolina State Univ. Chong Ma, University of Florida Amelia Nachbor, Univ. of Wisconsin-River Falls Kraig Koroleski, Michigan State University Aiman Shahpurwala, Michigan State University

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GSA SG&T Division Management Board Meeting Minutes

Tuesday, 6 November 2012, 11:30 AM-1.30 PM, Westin Hotel, Minneapolis Prepared by Yvette Kuiper, Secretary/Treasurer of the GSA SG&T Division

Attending:

Ron Bruhn, Kurt Burmeister, Dyanna Czeck, Scott Johnson, Yvette Kuiper, Andrew Meigs, Charlie Onasch, Phil Resor, Sarah Roeske, Christine Siddoway, Donna Whitney, Steven Wojtal. Wesley Hill (GSA) stopped by to introduce herself

1. Welcome and Introductions – Ron Bruhn

2. Financial status of the Division – Yvette Kuiper

Income has been higher this year due to the increase in dues, and also higher the past two years because of the 30 year anniversary bottles and caps, and the sale of Rite-in-the-Rain field books. Income from the sales starts to dwindle now. With the increased income we moved \$5,000 to the SGT Student Fund. We also increased our student travel awards. Thus, the Division is seeing an increased cash flow. The SGT Student Fund is now more than \$47K. We discussed some ideas of what we could do with that money and will continue that discussion in the future.

3. Status of Divisions Web, Facebook and Newsletter Efforts – Ron Bruhn, Kurt Burmeister Currently we communicate with our members through our Webpage, Facebook and the Newsletter (and occasional email blasts). We discussed what the most effective way of communication is. There is no straight answer to that question; various people have various preferences. Kurt Burmeister (Facebook Manager) will contact Kevin Smart (Webmaster) to coordinate the Facebook and Web pages better. Furthermore, we will conduct a survey to members (and their students) to investigate what the general preferences are.

4. Joint Technical Program Committee (JTPC) – Phil Resor

Members of the committee are: Phil Resor (outgoing), Christine Siddoway (chair), Dan Gibson (incoming).

The deadline for session submissions is January 8, 2013. There were four sessions this year. Other sessions were offered but did not receive enough abstracts, so were incorporated into other sessions. We discussed the potential for sessions for the 125th GSA anniversary, such as Pardee sessions or special sessions with a different format (e.g. longer talks, more discussion, digital posters).

5. Outstanding Publication Award (OPA) committee – Dyanna Czeck

Members: Adolph Yonkee (outgoing), Jonathan Caine (chair), and Dyanna Czeck (incoming). Dyanna pointed out the problem that very few nominations are made, at least in part because the process of nominating appears to be too much effort. She proposed to create a template for nominations to make it easier to nominate.

We decided to attach \$500 to the award in the future; these funds may be used towards travel expenses, but we will keep the use of these funds flexible because there may be complexity in the authorship, papers etc.

6. Career Contribution Award (CCA) committee – Steven Wojtal

Members: Gary Axen (outgoing), Steve (chair), and Sarah (leaving early to be 2nd V-C). We discussed potential new members for the committee. We decided to attach \$1,000 to the award in the future, with the idea that the funds be used for travel expenses, but again keeping this flexible depending on the logistics/awardee.

7. Stephen E. Laubach Structural Diagenesis Research committee – Charles Onasch

Members: Charles Onasch (chair) and Christie Rowe (incoming)

This is a joint committee with the Sedimentology Division. Each division has two members. In the past, the two divisions decide on the award in alternate years. Because the process creates confusion, it was proposed that either one division takes responsibility, or that two awards are made each year, with one for each division. These proposals will be discussed with the Sedimentology Division.

8. Student Membership and Awards – Donna Whitney and Andrew Meigs

- a. Graduate Student Research Awards we support Graduate Student Research Awardees to attend the Annual GSA meeting, either in the year they receive the award or the year after. (if they don't come to a meeting, they get a plaque but no money).
- b. Support for GSA field trip and short course fees not many students apply, so we have been supporting anyone who applies. We should try to get more applications.
- c. Student Fund our endowment keeps growing. We may be able to do even better by actively soliciting gifts from donors, perhaps through a GSA Foundation person, if appropriate.

9. Scientific Initiatives – Discussion

As time was running out, Yvette gave a quick overview of the status of the SG&T community cyberinfrastructure and NSF EarthCube initiatives. While these initiatives are still in the developmental stages, the possibilities are endless. Now is the time for us as a community or as individuals to formulate our goals and coordinate with EarthCube as it becomes a substantial source of funding and support. The SG&T Division is not driving the initiatives, but we fully support them and continue to serve as a messenger and facilitator.

The meeting was adjourned at 1:45 pm

Special Announcement

Structural Geology and Tectonics EarthCube Initiative

There is currently an effort to develop a Structural Geology and Tectonics digital database for our community. This effort was facilitated by the EarthCube initiative at NSF, although the recognized need for a digital database for Structural Geology and Tectonics has been recognized for some time. The new rules at NSF regarding storing primary digital databases is yet another motivation for this effort. There was a workshop in October 2012 in Chicago, as part of the EarthCube initiative, for the Structural Geology and Tectonics community. The results of this workshop can be seen on the EarthCube webpage: http://earthcube.ning.com/page/executive-summaries

At the workshop, there was a general consensus that building of a Structural Geology and Tectonics database was critical for storing, managing, and querying structural data and with respect to the EarthCube initiative.

Here is our current plan.

1. We have formed a "core" committee of 5 people: Hassan Babaie (Georgia State), Ryan Clark (Arizona Geological Survey), Julie Newman (Texas A&M), Doug Walker (Kansas), and Basil Tikoff (Wisconsin). We will be responsible for the design of the structure of the database, which will heavily borrow from existing sources (there are examples from national surveys that will be quite useful). The plan is that this core committee will meet several times during spring semester 2013.

- 2. We will invite other structural geologists to form a "general" committee. These structural geologists will only need to meet once during spring semester. The concept is to invite representatives from several "schools" who think deeply, and in particular ways, about specific geological structures (e.g., faults, fabrics). Thus, for any of the spring 2013 meetings, we will have the core committee and 3-4 extra structural geologists/tectonicists who work on faults to design the digital database for faults. The same strategy will hold for folds, shear zones, fabrics, etc.
- 3. We would like to have a 5-7 day long field workshop in summer 2013 (most probably early fall likely July 21-27 or July 28-August 3), in which a large group of people go to the field and see if we can agree on the structure of the database to store and query data related to the field data, and to make sure it is operational for most/all conceivable uses. The workshop will be held in an area where the geology is diverse. The anticipation is that we will get a sufficient diversity of opinion that can lead to a database version that is generally acceptable to the community in covering data from submicroscopic to regional scales, and for the diverse communities of structural geologists/tectonicists who deal with the experimental and theoretical aspects of the discipline.
- 4. In summer 2014, we will run an open meeting (perhaps as a GSA Field Forum) to introduce the beta version of the digital database to people. Our hope is that the database will be sufficiently robust and comprehensive after this meeting that it will be ready for adoption by the community.

There are also a group of us who are trying to integrate with other aspects of EarthCube (e.g., education end users, sedimentology, etc.). This involves the individuals listed above, but also Matty Mookerjee (Sonoma State), Yvette Kuiper (Colorado School of Mines), Terry Pavlis (University of Texas – El Paso), and others. Specifically, Matty Mookerjee is the lead organizer of a RCN (Research Coordination Network) on field geology for EarthCube. He is trying to include other communities (such as sedimentology, petrology, education) into this initiative. There are other plans within Structural Geology to integrate with EarthCube, but those plans are still in the work-in-progress stage.

We are also working with the experimental deformation community (mostly through liasons Terry Tullis (Brown) and Andreas Kronenberg (Texas A&M)) to work on possible EarthCube initiatives. This group is currently trying to organize at a national level through an open collaboration called DEFORM (Deformation Experimentalists at the Frontier Of Rock and Mineral research) – contact Terry Tullis for more information. One proposal concerning interaction of field-oriented structural geologists and deformation experimentalists that was discussed at a meeting at the Fall AGU 2012 meeting was organized around the topic of rheology, although the exact path forward is not clear.

This process is open to anyone who wants to be involved. Please contact Basil Tikoff or Doug Walker if you would like to participate.

Special Announcement

"DEFORM" Deformation Experimentalists at the Frontier of Rock and Mineral Research

Whether you engage in experimental rock deformation or apply results from such work to understanding nature, we invite your institution to join a new open collaboration called DEFORM (Deformation Experimentalists at the Frontier Of Rock and Mineral research), and invite you to help us write an NSF proposal to support our research efforts. If interested in either one, please fill out a form (takes 4-5 minutes) at:

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 $\underline{https://docs.google.com/spreadsheet/viewform?fromEmail=true\&formkey=dEhZRkh0cURBaFlERm1PT2RtcTZzSnc6MA}$

DEFORM's Mission Statement:

"DEFORM exists to facilitate experimental rock deformation research that furthers our understanding of fundamental processes and properties. Support and development of communal experimental facilities that foster innovative science are our core objectives. We enable research relevant to understanding deformation in the natural environment and encourage the participation of new users from all scientific disciplines."

Institutions having personnel who apply results from experiments as well as those who do experiments are encouraged to join. There is no cost.

Please respond if:

- 1) You believe your institution would be interested in being a member of DEFORM, and/or
- 2) You would like to help write an NSF Proposal to support this research (we want this to be an open process).

Only one person from a given institution needs to fill out an application to join DEFORM, so you could coordinate your response with others. If several from one institution respond, we will sort that out and contact all who respond if your answers concerning your institutional representative are inconsistent. Even if others from your institution respond, if you would like to help write an NSF proposal, please fill out the form at this website:

 $\underline{https://docs.google.com/spreadsheet/viewform?fromEmail=true\&formkey=dEhZRkh0cURBaFlERm1PT2RtcTZzSnc6MA}$

Institutions are encouraged to join whether from the USA or outside the USA, non-profit or for-profit, doing experiments or applying their results. Due to anticipated NSF funding, foreign institutions and for-profit institutions will be non-voting members, but otherwise will be full scientific participants.

A set of Draft ByLaws is available at: https://dropbox.brown.edu/download.php?hash=6795d706

Once our initial membership is established, we will have a formal ratification of the ByLaws, so if you have any suggested changes now, we encourage you to send them in an email with Subject "DEFORM ByLaws" todeform1000@gmail.com <x-msg://891/deform1000@gmail.com>.

If you have questions about any of this, send an email with Subject "DEFORM Question" to deform1000@gmail.com <x-msg://891/deform1000@gmail.com>.

So the bottom line is, if your institution would like to join DEFORM or help write an NSF proposal, please fill out the form at:

 $\frac{https://docs.google.com/spreadsheet/viewform?fromEmail=true\&formkey=dEhZRkh0cURBaFlERm1P}{T2RtcTZzSnc6MA}$

Please do this as soon as possible. All legitimate applications will be accepted. For more information please contact: Terry Tullis, Department of Geological Sciences, Brown University, Providence, RI 02912-1846

Notes from the NSF Tectonics Program

David Fountain and Stephen Harlan, Program Directors

Below is a list of the **Tectonics Program Awards** (September 2011 and March 2012 Panels)

RUI: Tectonic Development of the Yanshan Fold-Thrust Belt, Northeast China

Award: 1145230 Cope (DePauw University)

Erosion and Exhumation History of the Nepalese Frontal Himalaya Since Earliest Miocene Time:

Constraints on Kinematic History

Award: 1140068 DeCelles (University of Arizona)

Collaborative Research: Integrated Studies of Continental Triple Junction Tectonics, Northern Central

America

Award: 1144418 DeMets (University of Wisconsin Madison) Award: 1144612 Rogers (California State University Stanislaus)

Analysis of the Shallow Slip Deficit Using Sub-Pixel Image Correlation: Implications for Fault

Evolution, Slip Rates, and Seismic Hazards

Award: 1147436 Dolan (University of Southern California)

Collaborative Research: Late Cenozoic Vertical Crustal Motions and Erosional Mass Transfer in the Southern San Andreas Fault Zone

Award: 1144946 Dorsey (University of Oregon Eugene)

Award: 1145115 Spotila (Virginia Polytechnic Institute & State University)

Award: 1145067 Cooke (University of Massachusetts Amherst)
Award: 1144355 Housen (Western Washington University)

Collaborative Research: Precambrian Crustal Evolution in Western Laurentia: Implications from the Sawtooth Metamorphic Complex

Award: 1145073 Dutrow (Louisiana State University & A&M College)

Award: 1145212 Mueller (University of Florida)

Collaborative Research: Subduction Zone Segmentation over Multiple Seismic Cycles, South-Central

Chile

Award: 1145170 Ely (Central Washington University)
Award: 1144537 Horton (University of Pennsylvania)

Evaluating the Role of Glaciation on the Structural Configuration of the Southern Alaska Syntaxis

Award: 1145223 Haq (Purdue University)

Collaborative Research: Constraints on Initiation of Low-Angle Normal Faults Within the

Seismogenic Regime

Award: 1145183 John (University of Wyoming)

Award: 1145192 Grimes (Mississippi State University)

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Collaborative Research: Resolving the Nature and Extent Archean Crustal Components in

Southwestern Laurentia Using Hf and U-Pb Analysis of Zircon and Baddeleyite

Award: 1145247 Karlstrom (University of New Mexico)

Award: 1144521 Gehrels (University of Arizona)

Discrete Element Simulations of Cohesive Contractional Wedges: Kinematics and Mechanics of Fold

and Thrust Belts

Award: 1145263 Morgan (Rice University)

Three-Dimensional Characterization of a Pseudotachylyte-Bearing Fault

Award: 1145238 Resor (Wesleyan University)

Investigating the Slip Rate of the Main Frontal Thrust in the Eastern Himalaya, NE India

Award: 1145038 Yin (University of California Los Angeles)

CAREER: Identifying the Dominant Controls on Strain Localization in the Lower Crust

Award: 1150438 Gerbi (University of Maine)

CAREER: Paleotopography using Clumped Isotopes in the Basin and Range: Refining the Three

Dimensional Evolution of a Continental Extensional Province

Award: 1151247 Niemi (University of Michigan)

CAREER: Combining Field Data and Computational Models to Characterize the Distribution of

Oceanic Transform Fault Deformation throughout the Lithosphere

Award: 1151851 Titus (Carleton College)

Collaborative Research: RUI: Age, Petrology, and Tectonic Setting of Purported Taconic-aged plutons,

Ashland-Wedowee-Emuckfaw Belt, Southern Appalachians

Award: 1220540 Barineau (Columbus State University) Award: 1220532 Mueller (University of Florida)

Using Temperature to Measure Fault Stress: Analysis of Data from the Fault Zone of the Mw 7.9

Wenchuan Earthquake

Award: 1220642 Brodsky (University of California Santa Cruz)

Collaborative Research: Non-equilibrium Topography and Crustal-scale Imbrication in an Arc-

continent Collision, Taiwan

Award: 1220453 Byrne (University of Connecticut)

Award: 1220317 Lewis (Indiana University of Pennsylvania)

Analysis of Fault Growth and Linkage Using Work Minimization

Award: 1219919 Cooke (University of Massachusetts)

Does the Holocene Slip History for the Mojave Section of the San Andreas Fault Indicate Secular

Variation in Slip and a Discrepancy with Geodetic Rates?

Award: 1220588 Cowgill (University of California Davis)

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Collaborative Research: Structure and Kinematics of an Accommodation Zone within the Evolving

Afar Triple Junction, Central Afar (Ethiopia and Djibouti)

Award:1220474 Gomez (University of Missouri Columbia)

Award:1220450 Tesfaye (Lincoln University)

What Determines Whether the Deep Continental Crust Flows?

Award: 1219942 Hacker (University of California Santa Barbara)

Experimental Constraints on Crustal Rheology Award: 1220075 Hirth (Brown University)

Collaborative Research: Spatial and Temporal Growth of Upper Crustal Intrusions, Henry Mountains,

Utah

Award: 1220318 Horsman (East Carolina University)
Award: 1220336 Giorgis (SUNY Geneseo)

Award: 1220340 Morgan (Central Michigan University)

Collaborative Research: Shear Zone and Detachment Formation during Syn-convergent Extension in

the Andes: Cordillera Blanca, Peru

Award: 1220237 Jessup (University of Tennessee Knoxville)

Award: 1220216 Shaw (Montana State University)

Collaborative Research: Carbonation of Serpentinite in the San Andreas Fault: How Fluid-rock

Interactions Impact Aseismic Creep

Award: 1220280 Klein (Woods Hole Oceanographic Institute)

Award: 1219908 Golsby (Brown University)

Collaborative Research: Deformation Thermometry and Water Weakening of Quartz Tectonites - Case

Studies from the Himalaya and the Caledonides of NW Scotland

Award: 1220345 Law (Virginia Polytechnic Institute & State University)

Award: 1220295 Thomas (Rensselaer Polytechnic Institute)

Award: 1220138 Kronenberg (Texas A&M University)

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Test in Northeast Bhutan

Award: 1220300 Long (University of Nevada Reno)

Geochronology of Bedrock-hosted Secondary Iron Oxides and Shallow Crustal Fluid-flow and Brittle

Deformation Histories

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RUI: Coupled Fold-fracture Evolution in the Stillwell Anticline, West Texas

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