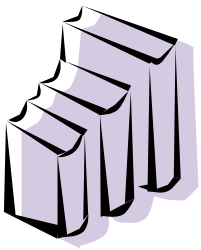
STRUCTURAL GEOLOGY AND TECTONICS DIVISION Newsletter

Volume 19, Number 2 September, 2000



CHAIRPERSON'S MESSAGE

I'd like to take this opportunity to thank the many SG&T members who responded to my call for volunteers/nominations for service on the Management Board and Division committees. I was overwhelmed by the response, and it was a real pleasure not to have to twist arms to find candidates for the various positions! The process resulted in a diverse slate of candidates for Management Board positions; the candidates represent both academia and industry, and cover a wide range of interests and experience. Many more people expressed interest in serving than there are positions available; rest assured that your names will be carried over for future opportunities. Speaking of candidates, the Division for the first time has gone to an **electronic balloting procedure** for election of new officers. Traditionally, only a very small percentage of members vote in GSA elections; we are hoping that electronic balloting will result in a large increase in voter 'turnout'. Election information is available on the GSA webpage -- excuses such as "I lost my ballot" will no longer keep you from voting! Please remember to cast your votes before the September 15 deadline.

Two of the columns in this newsletter will likely spark a lively exchange of ideas. **John Bartley** has written a thoughtful letter on issues related to the high cost of Elsevier publications, including *Journal of Structural Geology* and *Tectonophysics*. Many libraries around the country are being forced to cancel journal subscriptions owing to rapidly increasing costs. Public discussion of the economics associated with publishing in these journals seems long overdue. **Terry Engelder** has written an article that suggests a method for evaluating the impact of second authorship on citation indices (see his announcement and reference to a website). Feel free to respond to either of these columns at the Board Meeting at GSA.

One of the principle duties of the Management Board each year is to make sure that the Division is well represented at the annual GSA meeting. As part of this duty, **Laurel Goodwin** and I will spend a week in August evaluating and scheduling all of the structural geology and tectonics abstracts submitted for the Reno meeting. We will do our best to avoid unnecessary overlap between sessions, but with 11 SG&T-sponsored topical sessions and the usual open sessions, some conflicts will likely occur. The optimistic view of such conflicts is that they represent a healthy level of activity of interest to SG&T members. The Division is offering up to **five $100 scholarships** to students attending any of the 10 fieldtrips and 3 short courses sponsored by the Division; Students can apply by emailing me **(selver@unm.edu)** their name, institution, class, specialty, short course or fieldtrip title, and a one-paragraph rationale. The deadline for applications is September 15.

As I write this column, I am sweltering in an unusually hot Albuquerque summer. Two of my graduate students have just been chased home early by the Bobcat fire in Colorado, which turned their field area into an inferno. However, they will be meeting me in the Alps later in the summer, where the typically cool and rainy weather will be a welcome change. I hope that all of you enjoy the summer, whether you are in the field, lab, or office (or even on vacation!). I look forward to seeing you in Reno.

-- Jane Selverstone

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One of the difficulties of writing the NSF newsletter article is that much can happen or change between writing it and the time you read it. This time, many items of concern to the Tectonics community are undecided or unknown at writing time (June) but will be or should be known by fall. This, coupled with the fact that the Tectonics program is still without a "rotator", has caused me to abbreviate this issue.

The June 1 deadline resulted in approximately 80 proposals for Tectonics, and these will be reviewed at the September 20-23 panel meeting. We expect to have a "rotator" on board before the panel meeting. The announcement for filling the Section Head positions for the Earth Sciences Division closed in August, and the selection process should be well underway by the time the newsletter is published.

The Fiscal year 2001 budget for NSF, leave alone the Earth Sciences, is in flux, and may still be, come fall. This year, the earthscope initiative is involved in a big way, so the outcome of this year's budget process is particularly important for earth scientists.

The June 1, 2000 deadline was the last one where paper copies could be submitted. Starting in October 2000, all proposals must be submitted electronically by Fastlane. Call up NSF's web site (http://www.fastlane.nsf.gov) for more information on Fastlane than you might wish to know. Our next deadline is December 1, 2000, so if you plan to submit a proposal for that deadline, be sure to review this well beforehand. Finally, the project on developing an Earth Sciences database, initiated by Krishna Sinha and his committee, has made considerable progress, and the scope has expanded to include all of Earth Sciences, as it should. In recognition of this, the Instrumentation and Facilities Program has been assigned responsibility for the initiative, taking over from Tectonics.

The following awards were finalized since the last newsletter article....

Tom Wright
Program Director, Tctonics
Earth Sciences Division
National Science Foundation

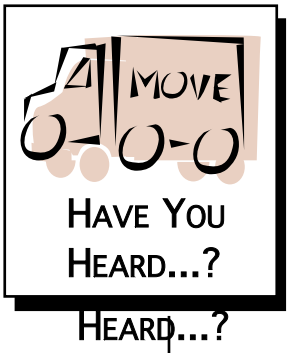
Active Tectonics Awards for January 1- July 1, 2000

Award #	PI	Institution	Title
9909437	Brandon	Yale U.	Collaborative Research: Investigation of the Evolution of the Southern Alps of New Zealand through Thermochronological Analysis of West Coast Granites
9980427	Owen	Univ. S. Cal.	Collaborative Research: Active Extension in Canyonlands National Park, Utah
9980433	Crider	Bryn Mawr	Collaborative Research: Active Extension at Canyonlands National Park, Utah
9910522	Baldwin	Syracuse U.	Collaborative Research: Investigation of the Evolution of the Southern Alps of New Zealand through Thermochronological Analysis of West Coast Granites

Tectonics Awards for January 1- July 1, 2000

Award #	PI	Institution	Title
0001130	Cashman	U Nev, Reno	Evolution of the Sierra Nevada - Basin and Range Boundary - Tephrochronologic and Gravity Constraints on the Record in Neogene Basin Deposits
0001147	Rusmore	Occidental	Collaborative Research: Cenozoic Exhumation and Tilting in the Southern Coast Mountains
0073747	Spear	RPI	Dating New England: A Collaborative Study of the Timing of Metamorphism, Assembly and Exhumation of the Central New England Orogen
0073754	Cheney	Amherst	Dating New England: A Collaborative Study of the Timing of Metamorphism, Assembly, and Exhumation of the Central New England Orogen
0073759	Suppe	Princeton U.	Rate and Mechanisms of Faulting and Growth Folding Over 10Ka to 20Ma and Chronology of Maximum Glacial Advances in the Southern Tian Shan Fold-and-Thrust Belt, China
9910977	Faulds	U Nev, Reno	Collaborative Research: Four-Dimensional Evaluation of a Major Continental Detachment Fault: Structural, Paleomagnetic, and Thermochronologic Constraints
9909275	Duebendorfer	N. Arizona U.	Collaborative Research: Four-Dimensional Evaluation of a Major Continental Detachment Fault: Structural, Paleomagnetic, and Thermochronologic Constraints
0001192	Meigs	Oregon State	Collaborative Research: Role of Glaciers in the Exhumation and Topographic Development of the Active Chugach/St. Elias Orogen, Alaska
0001222	Davis	U of Arizona	Inverse and Forward Modeling of the Utah System of Colorado Plateau Basement-Cored Uplifts
0001223	Farley	Cal Tech	Collaborative Research: Cenozoic Exhumation and Tilting in the Southern Coast Mountains
0001239	Spotila	VPI	Role of Glaciers in the Exhumation and Topographic Development of the Active Chugach/St. Elias Orogen, Alaska
0002690	Dalziel	U.Texas Austin	The Lapetus Ocean-its Birth, Life, and Death: The Wilson Cycle
9909393	Pazzaglia	Lehigh U.	Exhumation and Topographic Evolution of the Post-Orogenic Appalachians Determined by Apatite U-Th/He Dating
0000922	Kent	Columbia U.	Testing the J1 Cusp and Supposed Association with Normal Polarity Massive Flood Basalts in the Hartford Basin
0002008	Fitzgerald	Syracuse U.	Collaborative Research: Four-Dimensional Evaluation of a Major Continental Detachment Fault: Structural, Paleomagnetic, and Thermochronologic Constraints
0000965	Selverstone	U. New Mex.	Interactions between Deformation and Metamorphism: Controls on Shear Zone Rheology and Metamorphic Memory
0001006	Wesnousky	U Nev, Reno	Mechanism of Slip Transfer in the Central Walker Lane
0001044	Burbank	PA St U	Strain Rates, Patterns, and Partitioning during Continental Transtension

THE LATEST...



We, the editors, are grateful that so many of you responded to our call for "Have you heard…" input. The moving vans must have done well for the summer 2000. Congratulations to all the award recipients - no doubt there are a few shy ones that we haven't heard from! We were pleased to hear that **Bill Muehlberger** received the NASA Public Service Medal for "exceptional contributions to NASA's Earth Observations from Human Spaceflight and Astronaut training in the Earth Sciences." Bill has dedicated much of his "free" time over the past years to teaching astronauts about geology. **Steve Reynolds** received Arizona State University's Faculty Achievement Award which is one of ASU's highest teaching honors. Congratulations Steve! **Bob Holdsworth** of the University of Durham was recently awarded the Lyell Fund for the year 2000 by the Geological Society for "noteworthy published science".

There are a few "nice guys" ("guy" being a gender-neutral term) in the SG&T community who just seem to be gluttons for punishment. This year one of these individuals is **George Davis**, who has just been chosen to be Provost at the University of Arizona. To quote the current president at the University of Arizona: " George Davis has earned universal respect for his scholarly distinction as a geoscientist and for his superb teaching, but equally importantly he has earned the personal trust and affection of the students, faculty and staff who know him best." Good luck George - we certainly hope this doesn't mean that you will be taking fewer grad students or teaching less!!

Congratulations to former co-editor, **Scott Wilkerson**, who has just received tenure and been promoted to Associate Professor at DePauw University in spite of having spent time co-editing the SG&T newsletter. **Randy Marrett** of UT Austin, was also recently promoted to Associate Professor. Other forms of promotion include the acceptance of post-doctoral positions. **Eric Cowell**, student of **An Yin** at UCLA has just accepted a position to stay at UCLA to run the Ar lab for one year. **Marty Grove**, currently on the research staff, will also remain at UCLA but will spend more time on the ion probe. **Keegan Schmidt**, PhD student of **Scott Paterson**, will take a post-doc position with **Jean Morrison** at the University of Southern California to work on (and run) the stable isotope lab. **Karl Karlstrom's** PhD student, **Brad Ilg**, has accepted a post-doc at the University of Wellington in New Zealand to work with **Tim Little**.

There were a number of new hires in the academic arena. **Mousumi Roy** just accepted a tenure-track position as Assistant Professor at University of New Mexico, where she has been a Caswell Silver Research Professor for the last two years. Mousumi was a PhD student of **Wiki Royden** at MIT. **Danny Stockli**, a former **Elizabeth Miller** PhD student and post -doc in **Ken Farley's** lab at Caltech, will move to the land of OZ for a tenure track position at the University of Kansas in the fall of 2001. **Gayle Gleason**, a former PhD student of **Jan Tullis** at Brown University, has a tenure track position in the Dept. of Geology at SUNY College, Cortland starting fall 2000. Gayle has been teaching in a one-year position at Colby College. **Dazhi Jiang** took a tenure track Assistant Professorship at the University of Maryland in August 1999. Dazhi got his PhD at the Univ. of New Brunswick with **Joe White** in 1996 and was a NSERC post-doc fellow with **Paul Williams** at UNB and **Richard Brown** at Carleton University. **Leah Joseph**, who worked with **David Rea** and **Ben van der Pluijm** on Antarctic Ocean circulation and ice stability using grain size and magnetic fabric analysis of deep-sea cores, starts a teaching position at Hobart and William Smith Colleges in Geneva, New York this fall. **Suzanne Baldwin** and **Paul Fitzgerald** have both accepted jobs at Syracuse University as Associate Professors in the Department of Earth Sciences and moved from the University of Arizona in July 2000. At SU they will be setting up a thermochronology facility which will include a noble gas lab, a (U-Th)/He lab and a fission track lab. **Lisa McNeill**, the current holder of the **Dorothy Hodgkin** Royal Society Fellowship at Leeds University, has been hired as a lecturer at the University of Southampton. Lisa received

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Have You Heard, continued
her PhD at Oregon State University working with **Bob Yeats**. **Tim Kusky**, formerly at Boston University, has accepted a faculty position in tectonics at St. Louis University (welcome to the mid-continent). Two recent **Peter DeCelles** PhD students have new positions: **Carmala Garzione** will start as an Assistant Professor at University of Rochester in fall 2000 and **Brian Currie** is now at Miami University following his University of Chicago post-doc position. **Laurent Godin**, a PhD student of **Richard Brown** at Carleton University is cutting his Oxford post-doc with **Mike Searl**e short in order to take a faculty position at Simon Fraser University (BC). **Martha Withjack** recently left Exxon Mobil to start an academic career as a Professor of Geology at Rutgers University.

In the industry or non-academic circuit there has also been a fair amount of movement. **Julia Stowell** has become a Research Scientist at the Bureau of Economic Geology in Austin, after finishing a post-doc with **Randy Marrett**. **Tim Wawrzyniec**, formerly of Vastar Resources in Houston has also moved to the Bureau of Economic Geology as a Research Scientist. **Don Medwedeff** has moved from ARCO Exploration in Plano, Texas to the Structural Geology Team of Chevron Petroleum Technology Company in San Ramon, CA. **Kevin Kveton** of Chevron as moved from Cairns, Australia where he worked on Papua New Guinea Exploration to Bahrain in the Persian Gulf where he manages exploration new ventures in the Middle East and North Africa. **Erin Campbell-Stone**, a former **Barbara John** PhD student, is staying with Chevron, but moving from Louisiana to Bakersfield, CA to work in development in the San Joaquin Valley. **Peter Hennings** has recently left Exxon Mobil to head a group of structural geologists at Phillips Petroleum Company in Bartlesville, Oklahoma. **Bruce Clark**, president of Leighton and Associates in Orange County, CA, has been appointed to be a member of the Seismic Safety Commission by Governor **Gray Davis** of California. After eight years in post-doc and term positions with the USGS, **Peter Haeussler** was pleased to become a permanent geologist with the USGS - so it pays to "hang in there!"

ANNOUNCEMENTS:

You may know that the first joint meeting sponsored by the SG&T and the Tectonic Studies Group of the Geological Society of London - The Nature and Tectonic Significance of Fault Zone Weakening - was held on March 7-9th in London. The meeting was a great success (a summary of proceedings is given on the web page address at the end of this message) as as Principal convenor, I would like to thank all those researchers from North America who attended and contributed so much to the event. We should do this sort of joint thing again!!

Bob Holdsworth
Reactivation Research Group
Dept. of Geological Sciences
University of Durham
R.E.Holdsworth@durham.ac.uk
http://www.dur.ac.uk/~dg10www1/rrg.htm

Dear SG&T board, newsletter editors, and members,

This letter was stimulated by some unpaid advertisements for the *Journal of Structural Geology* that appeared in the Spring 2000 SG&T division newsletter. I wish to share my personal views on the issue of publishing in, and otherwise serving, Elsevier Science journals, of which *JSG*—for better or worse—is one.

Last year I made a personal decision to no longer publish in *JSG* or to review papers for *JSG*. This year, after 18 years as a subscriber, I allowed to lapse my personal subscription to *JSG*. While I cannot entirely avoid citing papers published in Elsevier journals, whenever I have a choice I will instead cite a paper by the same authors that appeared in a non-Elsevier publication. These personal decisions

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were driven by my unwillingness to support Elsevier Science, Ltd.

The relationship between a scientific community and a commercial publisher can and should be symbiotic. Unfortunately, a symbiote can evolve into a parasite that, rather than helping its host, harms it. In my opinion, this has happened to the symbiosis between our scientific community and a number of commercial scientific publishers, but perhaps most notably Elsevier because it controls such a large portion of the market.

I am virtually certain that every academic member of the division has heard about his/her libraries' seemingly permanent problem with its journal-acquisition budget. I wonder how many are aware of how major a factor Elsevier's pricing policies are in this perpetual budget crisis? At the University of Utah's Marriott Library, which contains all of our science holdings except those in the health sciences, Elsevier journals comprise 5.5% of the journal titles but 23% of the journal-acquisition budget. I recently reviewed Elsevier institutional subscription rates for earth science journals from 1994 through 1998—a period of low overall inflation—and found that the typical Elsevier price increase was 50-100%, greatly exceeding typical increases by other scientific publishers over the same period. This trend appears to continue through to the present.

Why can Elsevier get away with this? I see three main reasons. First, Elsevier has an alarmingly large share of the global for-profit scientific publishing market. I encourage you to check for yourself who publishes which scientific journals. You will find that, as a result of a combination of launching new journals and acquisition of competitors (e.g.,Pergamon Press, the original publisher of *JSG*), Elsevier enjoys a very dominant position in the global market for commercial science journals. Second, researchers rarely are selective consumers when it comes to publications related to their specialties. If it contains results related to your area of research then, regardless of cost or quality, you want it to be in your library, right? And research libraries are a scientific publisher's principal customers. Finally, there is the publish-or-perish system that all too often values quantity over quality. Nonprofit journals presently cannot publish more than a small fraction of the papers that academics prepare in the pursuit of tenure, promotion, merit salary increases, and funding from federal agencies. We therefore provide commercial publishers with a practically unlimited supply of content, and then proceed to promote the publishers' products to our students and colleagues.

There are relatively few practical measures that we as scientists can undertake to affect the high commercial journal prices that sap the financial resources of our research libraries. Perhaps the most direct, and potentially the most effective, depends on recognizing that commericial publishers rely heavily on voluntary service from and promotion by academic scientists. If we didn't donate to commercial publishers our hard-won research results; review manuscripts for them without charge; promote our papers that they publish; and insist that our libraries buy their products; then commercial publishers might consider more seriously the effects that aggressive pricing has on their principal customers.

These are the reasons that I made a personal decision to stop doing volunteer work for Elsevier. I encourage others to follow me.

Finally, I wish to address the fact that *JSG* presently is the only major journal devoted to

structural geology. If we do not publish in it or in *Tectonophysics*—another Elsevier journal favored by some structural geologists—then where will we publish? There are, of course, nonprofit journals with broader missions that commonly publish structural geology papers, such as *AAPG Bulletin*, *GSA Bulletin*, *JGR*, *Journal of the Geological Society of London*, and *Tectonics*. However, these journals have neither the room to accommodate all of the worthy papers that presently appear in *JSG*, nor will they accept all of the types of papers that typically appear in *JSG*.

I therefore believe that it is time for us to launch a nonprofit society-sponsored structural geology journal. Coincidentially, in a June 1 press release GSA announced that it is "exploring a collaboration with EPIC (the Electronic Publishing Initiative at Columbia) and SPARC (the Scholarly Publishing & Academic Resources Coalition) to launch a new electronic aggregation of major geoscience journals." While the press release focuses on electronic journals, my communications with Rick Johnson at SPARC indicate that SPARC also is interested in new paper-and-ink journals to compete with commercial publications and already has enjoyed significant successes (see http://www.dlib.org/dlib/may00/johnson/05johnson.html).

The start of the new millenium seems to me the ideal time for structural geologists to launch a high-quality nonprofit specialty journal—perhaps, but not necessarily, in collaboration with GSA, EPIC, and/or SPARC—that will provide a non-Elsevier alternative for structural geologists.

John Bartley

MUST 2000, Minneapolis, May 20-21, 2000

Over the years, several people in the midwest had expressed the need for a regional meeting of the structure-tectonics community. The idea of a Midwestern Universities Structure and Tectonics (MUST) group was to share our knowledge base and resources as much as possible, and get graduate students together in an informal environment. The first MUST meeting took place May 20-21, 2000, in the Department of Geology and Geophysics at the University of Minnesota, Minneapolis. Next year, the meeting will be organized by Basil Tikoff at the University of Wisconsin, Madison, on "Visualization of Strain"; in 2002, we will have a field-trip meeting led by Dan Holm along the Kapuskasing transect.
MUST 2000 focussed on the theme of Thermochronology and Tectonics. Twenty eight faculty, postdocs, and students from Illinois, Indiana, Iowa, Kansas, Minnesota, Missouri, Ohio, and Wisconsin, participated in a forum on techniques and applications of thermochronology. For more information on program and abstracts, visit the MUST web site:
http://www.geology.wisc.edu/~maitri/must.html

Christian Teyssier

There will be a theme session at the 2001 GSA Cordilleran Section Meeting, April 9-11, 2001 in Los Angeles, CA, titled: EASTERN AND SOUTHEASTERN ASIAN CONTINENTAL TECTONCS. This session will be held at the Universal Sheraton Hotel at Universal Motion Picture Studio and Theme Park. Eastern Asian geographic/geologic areas of special focus will include the Koreas, Mongolia and adjacent areas in Russia along the Mongolo-Okhotsk suture, China (including Tibet) and Southeast Asia. If interested contact Greg Davis (gdavis@earth.usc.edu).

Accounting for second authorship in an assessment of faculty for promotion and tenure!

As part of assessing faculty performance for P&T, some, if not most geoscience departments use the Science Citation Index (SCI) that is currently available on the web. The SCI counts only the first authors of papers cited in the literature and the number of citations without any further filtering. Such an index is inherently biased against second authors, often the faculty who have funded and nurtured the research of their student, the first author. In the case of a student-mentor relationship, the mentor often constructs the problem and is ultimately saddled with the final responsibility for writing the paper, particularly when the student moves out of the academic sector after graduation.

I have tested a citation index that filters some of the distracters that tend to skew the data found in the current SCI. This test uses the citation list from the 41 papers in the 20th anniversary special issue of JSG. In brief, on a two-author paper, this system is designed to reward the second author almost as handsomely as the first author. Papers with more than two authors are treated differently with junior authors receiving less credit than the first author. One effect of accounting for co-authorship is that the relative impact of authors is different from that generated using the SCI. For example, John Ramsay had such an impact on structural geology during the past 20 years that he will sit at the top of most citation indices. However, the author who ranks 2nd when second authorship is recognized will drop to a subordinate position (9th) when the SCI data is consulted. I present the details of this analysis at (http://www.geosc.psu.edu/~engelder/citation). In summary, when co-authorship is considered, a P&T committee will gain a different impression of who is contributing to the structural geology community.

Terry Engelder
Penn State

ATTENTION GRADUATE STUDENTS:

The Structure and Tectonics Division of GSA will provide a few awards of $100 each to help subsidize the cost of Division-sponsored field trips at GSA meetings. If you are interested, send your name, your advisor's name, your institution, what year you are in school, and the title and leader of the field trip that you are interested in attending to Dr. Jane Selverstone via email, by September 15, 2000: selver@unm.edu.

The 2000 GSA Annual Meeting ('Summit 2000') will be held November 13-16 in Reno, Nevada. Members of the SG&T Division should make note of the following sessions, symposia, and short courses. Some of these are Division-sponsored and others are just likely to be of interest. The April and June issues of GSA today have complete listings of sessions, as does the GSA website. Organizers for Division-sponsored or co-sponsored symposia or theme sessions should submit reviews of their sessions to Barbara or Mary for inclusion in the March 2001 Newsletter.

Pardee Keynote Sessions

K1 **Geology in the New Millennium I: Resource Collapse, Environmental Catastrophe, or Technological Fix?**
Stephen L. Gillett

K4 **A New Age of Planetary Exploration: Sample Returns, In Situ Geological Analysis, and Human Missions to Other Worlds**
Ralph Harvey, Cassandra Coombs

K8 **Lamont and Plate Tectonics: History of Geology Division Millennium Symposium: Lamont 1949–1999**
Gerald M. Friedman

Topical Sessions

T8 **Integrated Studies of Active Western North America Tectonics**
Richard A. Bennett, Anke Friedrich

T9 **Kinematics vs. Mechanics: Are Only One or Both Useful Rationales for Understanding Rock Deformation?**
GSA Structural Geology & Tectonics Division. William M. Dunne

T10 **The Colorado Plateau: Its Origin, Boundaries, Lithospheric Structure, and Evolution**
Randy Keller, Anne Sheehan

T11 **Neotectonic Microplates of the Pacific-North America Boundary**
GSA Structural Geology & Tectonics Division. Francis C. Monastero, Allen F. Glazner, Douglas Walker

T12 **Superplume Events in Earth History: Causes and Effects**
Kent C. Condie, Dallas Abbott, David J. Des Marais

T13 **Recent Advances in Our Understanding of Flat Slab Subduction: A Comparison Between Modern and Ancient Subduction Settings in the Americas**
GSA Structural Geology & Tectonics Division; American Geophysical Union. Brendan A. McNulty, Daniel L. Farber

T14 **Geophysical and Tectonic Signatures of Triple Junction Migration: Mendocino and Others**
Kevin P. Furlong

T15 **Cenozoic Basin and Range Tectonics and Geophysical Constraints**
John N. Louie, John G. Anderson; Geoff Blewitt

T16 **Deep Structure of Archean Cratons**
Andrew A. Nyblade, Richard W. Carlson

T17 **Evolution of the Lake Tahoe Basin: Geologic Framework, Neotectonics, Seismology, Geophysics, Geomorphology, Hydrology, and Environment**
Structural Geology and Tectonics Division. Mary M. Lahren, Richard A. Schweickert, University of Nevada, Reno.

T18 **Earthscope-A Look into Our Continent: Opportunities for Interdisciplinary Research in Geophysics and Geology**
John G. Anderson

T19 **The Walker Lane: An Evolving Transform Plate Boundary**
GSA Structural Geology & Tectonics Division. James E. Faulds, John S. Oldow, Wayne R. Thatcher

T20 **Reconstructing Miocene and Younger Extension Across the Northern Basin and Range Province**
GSA Structural Geology & Tectonics Division. Elizabeth L. Miller, Trevor A. Dumitru

T21 **New Developments in the Mesozoic Tectonic Evolution of the North American Cordillera**
GSA Structural Geology & Tectonics Division. Sandra J. Wyld, William McClelland, James E. Wright

T22 **The Late Paleozoic Tectonics of Central and Western North America-The Ancestral Rocky Mountains-Insights into Intraplate Deformation**
GSA Structural Geology & Tectonics Division; Friends of the Ancestral Rocky Mountains. Charles F. Kluth, Gerilyn S. Soreghan

T23 **The Antler Foreland Basin System**
Katherine A. Giles, James Trexler

T24 **Proterozoic Tectonic Evolution of Western Laurentia: Continental Accretion to Breakup of Rodinia**
GSA Structural Geology & Tectonics Division. Karl E. Karlstrom

T25 **Rates of Magmatic and Host Rock Processes in Arcs**
GSA Structural Geology & Tectonics Division. Robert B. Miller, Scott R. Paterson, Samuel A. Bowring

T26 **Paleomagnetic Applications to Geologic Problems**
Richard D. Elmore, Michael T. Lewchuk

T27 **Evolution of the East African and Related Orogens and the Assembly of Gondwana**
GSA Structural Geology & Tectonics Division; GSA International Division. Timothy M. Kusky, Robert D. Tucker, Robert J. Stern

T28 **Mexico: Four Centuries of Geological Exploration**
Claudio Bartolini, Harold Lang, Enrique Cabral Cano

T29 **Xenolith-Based Studies of the Physical and Chemical Evolution of the Deep North American Lithosphere**
G. Lang Farmer, Michael L. Williams

T30 **Lake Basins as Archives of Continental Tectonics and Climate**
Alan R. Carroll, Paul Buchheim

SHORT COURSES

1. **Characterization and Modeling Fluid Flow in Fault and Fracture Zones: The Reality and the Idealized**
Saturday–Sunday, November 11–12,
Cosponsored by GSA Structural Geology and Tectonics Division; James P. Evans — Utah State University; Jonathan S. Caine — U.S. Geological Survey, Denver; Craig B. Forster — University of Utah; **Limit:** 40. **Fee:** $470, students $450.

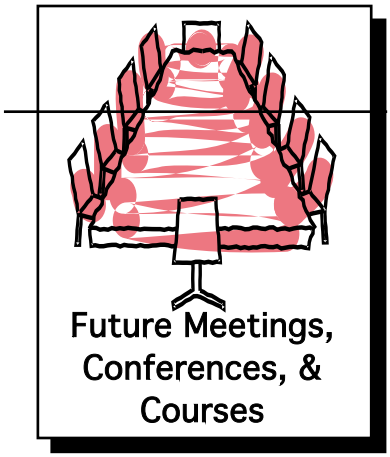
2. **Digital Mapping Systems: Digital Data Capture and Analysis for the Field Geoscientist**
Saturday–Sunday, November 11–12
Cosponsored by GSA Structural Geology and Tectonics Division; Kent Nielsen — University of Texas at Dallas; Carlos Aiken — University of Texas at Dallas; Xueming Xu —

University of Texas at Dallas; **Limit:** 30. **Fee:** $470, students $450.

3. **Science of Earthquakes: Earthquake Geology and Paleoseismology**
Saturday, November 11&12, *Cosponsored by GSA Structural Geology and Tectonics Division; GSA Engineering Geology Division;* Charles M. Rubin — Central Washington University; Thomas K. Rockwell — San Diego State University; **Limit:** 40. **Fee:** $370, students $350.

GIS for the Geosciences
Friday–Saturday, November 17–18, *Cosponsored by GSA Planetary Geology Division;* Richard Bedell — Homestake Mining Company, Sparks, Nevada; **Limit:** 60. **Fee:** $370, students $350.

3-D Seismic Interpretation: A Primer for Geologists
Saturday–Sunday, November 11–12; Sponsored by SEPM; Bruce Hart — McGill University; **Limit**: 35. Fee: $425 SEPM members, $455 nonmembers, $300 students.



(Notices of future meetings, conferences, and short courses of interest to Division members are welcomed by the editors. Further information can also be found on the Society Web page.)

2000

September 3–8: Goldschmidt 2000, Oxford, UK. Contact**:** P. Beattie, Cambridge Publications, Publications House, PO Box 27, Cambridge UK CB1 4GL; Phone: +44-1223-333438; Fax: +44-1223-333438; E-mail: Gold2000@campublic.co.uk; Web Site: www.campublic.co.uk/science/conference/Gold2000.

September 6–8: 3rd Conference on Tectonic Problems of the San Andreas Fault System, Stanford, California. Contact**:** B. Kovach , Department of Geophysics, Mitchell 360, Stanford University , Stanford , CA 94305-2215 USA ; Phone: +1-650-723-4827; Fax: +1-650-725-7344; E-mail: kov@pangea.stanford.edu; Web Site: pangea.stanford.edu/GP/sanandreasconf.html.

September 17–24: GSA Penrose Conference The Iapetus Ocean — Its Birth, Life, and death: The Wilson Cycle, Edinburgh, Scotland. Contact: Lois J. Elms, LJElms@aol.com

September 17-22: National Earthquake Hazards Conference, Seattle, Washington. Contact Lois J. Elms, LJElms@aol.com or http://www.wsspc.org.

September 17–20: AAPG Rocky Mountain Section Annual Meeting, Albuquerque, New Mexico. Contact: Paul A. Catacosinos, 1001 Martingale Ln. SE, Albuquerque, NM 87123, (505) 299-3544.

September 25-27: 3rd Symposium on the Iberian Atlantic Margin, Faro, Portugal. Contact: http://www.ualg.pt/ciacomar/Simp/indexE.html.

October 4-6: 8th German biannual conference on structural geology and tectonics, Freiburg Germany. Contact: http/www.geologie.uni-freiburg.de/root/tsk8/info.html.

October 10 – November 14: American Institute of Professional Geologists (AIPG) 2000 Annual Meeting, Milwaukee, Wisconsin. Contact: D. H. Rezabek , RMT, Inc., 744 Heartland Trail, Madison, WI USA; Phone: +1-608-662-5170; E-mail: dale.rezabek@rmtinc.com; Web Site:

www.aipgwis.org.

October 10-12: Third Meeting of Asian Seismological Commission and Symposium on Seismology, Earthquake Hazard Assessment and Earth's Interior Related Topics, Tehran Iran. Contact: http://www.ut.ac.ir/geo/asc2000.htm.

November 12–15: Sixth International Conference on Seismic Zonation, Palm Springs, California. Contact: EERI, 499 14th St., Suite 320, Oakland, CA 94612-1934, (510) 451-0905, fax 510-451-5411.

November 13–16: GSA Annual Meeting, Summit 2000, Reno, Nevada. Contact: GSA Meetings Department, (303) 447-2020, ext. 239, or 1-800-443-4472.

December 2–7: Geochemistry of Crustal Fluids and Chemical Fluxes at the Earth's Surface, Granada, Spain. Contact: J. Hendekovic, European Science Foundation, 1 quai Lezay-Marnésia, 67080 Strasbourg Cedex, France, phone 33-388-767135, fax 33-388-366987.

2001

January 12–16: Geology of Oman, Muscat, SULTANATE OF OMAN. Contact: T. Peters, Universitat Bern, Mineralogisch-Petrographiches Institut, Baltzerstr. 1 , 3012 Bern SWITZERLAND ; Phone: +41-32-631-87-83; Fax: +42-31-631-43-48; E-mail: tjerk@mpi.unibe.ch; Web Site: www.geoconfoman.unibe.ch.

February 19–23: 7th International Winter Seminar on Geodynamics, Sopron, HUNGARY. Contact: L. Banyai, Geodetic and Geophysical Research Institute, PO Box 5, H-9401, Sopron, HUNGARY ; Phone: +36-99-314290; Fax: +36-99-313267; E-mail: banyai@ggki.hu; Web Site: www.ggki.hu.

April 2–4: The 7th Jordanian Geological Conference, Amman, JORDAN. Contact: H. Khoury, PO Box 142277, Amman 11814, JORDAN; Fax: +962-6-586-2569; E-mail: info@jordanian-geologists.com; Web Site: www.jordanian-geologists.com.

April 5–6: The Geologic and Climatic Evolution of the Arabian Sea Region, London, UK Contact: P. Clift, Department of Geology and Geophysic, MS#22, Woods Hole Oceanographic Institution , Woods Hole , MA 02543 USA; Phone: +1-508-289-3437; Fax: +1-508-457-2187; E-mail: pclift@whoi.edu.

June 10–14: Gordon Conference: Interior of the Earth, Holyoke, Massachusetts, USA. Contact: J. Vidale , Earth and Space Sciences, UCLA , Los Angeles , CA 90095-1567 USA; Phone: +1-310-206-3935; Fax: +1-310-825-2779; E-mail: vidale@ucla.edu; Web Site: www.grc.uri.edu/01sched.htm.

August 18–30: International Association of Geomagnetism and Aeronomy's (IAGA) - International Association of Seismology and Physics of the Earth's Interior (IASPEI) Joint Scientific Assembly, Hanoi, VIETNAM. Contact: N. Thoa , Vietnam Institute of Geophysics, Box 411 BUU DIEN BO HO, Hanoi VIETNAM; Phone: +844-8352380; Fax: +844-3364696; E-mail: iaga-iaspei@fpt.vn; Web Site: www.iagaandiaspei.org.vn.

Call for Applications!

Looking to expand your professional horizons? Believe in serving society through science? Ready for a unique challenge? Apply for GSA's Congressional Science Fellowship 2001–2002.

Put your expertise and experience to work helping shape science and technology policy on Capitol Hill. Work directly with national and international leaders.

The Congressional Science Fellow will be selected from top competitors early in 2001. Successful candidates are GSA members who possess either a Ph.D. in the earth sciences or a related field, or a Master's degree in the earth sciences or a related field with at least five years of professional experience. If you possess this professional background, have experience in applying scientific knowledge to societal challenges, and share a passion for helping shape the future of the geoscience profession, GSA invites your application. The fellowship is open to U.S. citizens or permanent residents of the U.S. **The deadline to apply is February 2, 2001.**

To learn more about the Fellow experience, contact David Verardo, 1997–1998 GSA Congressional Science Fellow, at (202) 314-2234 or dverardo@usgcrp.gov.

For application information, check our Web site at www.geosociety.org/science/csf/scifello.htm or contact Karlon Blythe, Program Officer, GSA Headquarters, (303)-447-2020, ext. 136 .

VOTE FOR OFFICERS ON-LINE

If you haven't already voted please visit the following web site to vote for the 2nd vice chairperson and the secretary/treasurer. Brief biographies are presented below.
http://rock/geosociety.org/balloting/structural.asp

Candidates for 2nd Vice Chair:

Randall Marrett (marrett@mail.utexas.edu)
Randy Marrett is currently Associate Professor in the Department of Geological Sciences at the University of Texas at Austin. He was an undergraduate at the University of California at Santa Cruz and did his Ph.D. research at Cornell University. He worked for four years at Amoco's research lab before moving to Austin in 1994. Randy's research interests cover a range of processes and scales involving structural geology and tectonics of the upper continental crust. Current projects include testing models of detachment folding through study of meso- and micro-deformation mechanisms, quantifying size and spatial distributions of fracture arrays, comparing geologic and geodetic measures of deformation rate, and studying regional tectonics of the Sierra Madre Oriental (Mexico) and Central Andes (Argentina and Chile). He teaches service and introductory courses, structural geology, field camp, and graduate classes on structure and tectonics. He has served on the SG&T Division's Best Paper Award Committee, as panelist for New Directions in Rock Mechanics (American Rock Mechanics Association), and as vice-chair and chair of the Reservoir Deformation Research Group (AAPG).

Karl Mueller (karl@emarc.colorado.edu)
I am a structural geologist with interests in active transpressive orogens, fault-related folds and earthquake geology. My background includes studies of the active Laguna Salada pull-apart basin in northern Baja California (M.Sc.), Tertiary extension and basin development in the Ruby-East Humboldt metamorphic complex in northeast Nevada (PhD - University of Wyoming) and active fault-related folding and seismic hazards in the Los Angeles Basin (Postdoc - Princeton). My service-related experience includes serving as a member of the local committee for the 1999 Denver GSA annual meeting. I am presently an assistant professor of structural geology at the University of Colorado at Boulder. My current research interests combine structural characterization and numerical modeling of active blind thrusts and fault-related folds in the Los Angeles Basin and northern Transverse Ranges of California, the Lake County Uplift of the New Madrid seismic zone, and the Kansai region of Japan. Much of my work involves the use of digital elevation models, tectonic geomorphology, and dense geodetic networks. My interest in working as an officer in GSA's Structural Geology and Tectonics Division is to increase its involvement in active tectonics. I am particularly interested in broadening SG&T's links with researchers who work to define the kinematic and temporal histories of active structures - at scales ranging from trench excavations to plate margins and for time periods from 0.1 - 1000 ka. I am convinced the field of structural geology and tectonics is rapidly broadening its scope from more traditional field-based studies, to those that include seismology, geomorphology, geodesy and Quaternary age dating. My goal is to increase the Division's involvement in these fields through short courses, symposia and theme sessions at annual and regional GSA meetings.

Martha Withjack (drmeow3@yahoo.com)
Martha Oliver Withjack received her B. A. from Rutgers University in 1973, and her M. S. and Ph. D. from Brown University in 1975 and 1978, respectively. Her Ph. D. thesis involved the mechanics of continental rifting. She is now a professor of geology in the Department of Geological Sciences at Rutgers University. Before joining Rutgers University in January 2000, she worked as a research geoscientist at Mobil Research and Development Corporation (1988-2000), ARCO Oil and Gas Company (1983-1988), and Cities Service Oil and Gas Company (1977ñ1983). Her research interests include extensional, inversion, and salt tectonics, physical and analytical modeling of structures, and structural interpretation of seismic data. She was an AAPG Distinguished Lecturer (1984-1985), a recipient of the AAPG J. C. "Cam" Sproule Memorial Award (1986), a Distinguished Lecturer for the Petroleum Exploration Society of Australia (1996), a recipient of the AAPG Matson Memorial Award (1999), and a

fellow of the Geological Society of America.

Candidates for Secretary/Treasurer:

Erin Campbell-Stone (RCMP@chevron.com)
In 1997 I completed a Ph.D. with Barbara John at the University of Wyoming and accepted a position with Chevron working as a development geologist in the Gulf of Mexico. For my dissertation I conducted detailed geologic mapping and structural analysis in the Sacramento Mountains of southeastern California, and documented the geometry and evolution of part of a regional Miocene detachment fault system. Collaboration with geophysicists provided gravity and seismic reflection/refraction interpretations to constrain the subsurface shape of a synextensional intrusion. In order to confirm the timing of the intrusion and denudation of these crystalline rocks, I allied with a geochronologist who performed thorough geochronologic and thermochronologic analyses. Cooperation with paleomagnetists provided additional constraints on the amount of footwall tilt, and allowed me to interpret change in orientation of stress during extension and magmatism. Currently my work focuses on salt tectonics and associated deformation of Miocene and Pleistocene sedimentary rocks on the Gulf of Mexico shelf, offshore Louisiana. I am using 3-D seismic reflection, well logging, and geochemical data to document the timing and interaction between migration of salt, fault formation, and sedimentation. My experience relating to the Secretary/Treasurer position includes acting as treasurer for a field trip during the International Conference on Geochronology, Cosmochronology in 1995, as well as commonly documenting and disseminating results of my meetings with corporate management.

Peter Clift (pclift@whoi.edu)
I graduated with a BA in Geology from Oxford University in 1987 and with a PhD from Edinburgh University in 1990, where I worked on the timing and nature of terrane accretion and ophiolite obduction in the Greek Neotethys. It was as a graduate student that I first joined GSA. After this I moved on to work on marine equivalents, using a postdoc in Edinburgh to study the tectonics and sedimentation related to arc rifting in Tonga. This work was mostly based on my participation in Ocean Drilling Program Leg 135. I still continue to work on the volcaniclastic record of modern arcs and their accreted orogenic equivalents in the Himalaya and in the Irish Caledonides. After a three year postdoc I worked at Texas A&M University for the Ocean Drilling Program (1993-1995) as a staff scientist, sailing on cruises to the East Greenland and West African margins. I've been at WHOI since 1995 and at present spend most of my time working on Cenozoic sedimentation and tectonics in South and East Asia, especially the Arabian and South China Seas. I am especially interested in linked onshore-offshore work and in the application of single grain provenance and thermochronology methods to syn-orogenic sediments. I have served on the Editorial Board for Geology since 1998.

Peter J. Vrolijk (Peter.J.Vrolijk@EXXON.sprint.com)
Education: B.S., Mass. Inst. Tech., 1980; M. S., Mass. Inst. Tech., 1981 (Experimental sediment transport); PhD, Univ. California, Santa Cruz, 1987 (Fluid flow in the Kodiak accretionary complex). Interests: I study brittle fault processes, especially in sedimentary materials. Over the years I have worked on applications of fault processes to fluid flow (including oil and gas migration and trapping, orogenic fluid flow, and groundwater hydrology), geologic reconstructions (fault dating), and fault rheology and strength (fault-induced mineral changes). Experience: I have been a research geologist for the past 10 years with Exxon Mobil Upstream Research Co. (formerly EPR Co.), providing me the opportunity to practice geology on 5 continents in a wide range of structural settings. As a post-doc at Cambridge University (NATO post-doc) and the University of Michigan I worked on fault-controlled fluid flow processes in the Barbados accretionary prism (ODP). For the last 5 years I have been an Associate Editor for GSA Bulletin and was external editor for ODP Leg 131 (Nankai Trough).

BALLOT

Election of Officers for the Structural Geology & Tectonics Division

If you haven't already voted on-line, now is the time to do it OR copy this ballot and send it in to GSA. The on-line ballot can be found at: http://rock.geosociety.org/balloting/structural.asp

To Fellows and Members of the Division:

The slate of officers of the Division presented by the Nominating Committee is submitted herewith. Please vote by checking the appropriate box or by typing in the name of your nominee in the space provided. Biographical data for the nominees can be found on the previous two pages. This ballot (or the electronic version) must be received no later than September 15, 2000. The election results will be announced at the business meeting of the Division in Reno, Nevada, in November.

SECOND VICE-CHAIR	Randall Marrett	☐
	Karl Mueller	☐
	Martha Withjack	☐
	write in:_____	
SECRETARY (2 year term)	Erin Campbell-Stone	☐
	Peter Clift	☐
	Peter J. Vrolijk	☐
	write in:_____	

send to: Ballot Structural Geology and Tectonics Division
Geological Society of America
P.O. Box 9140
Boulder, CO 80301-9140

your GSA member number:_____

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For a legal vote, this ballot must be **signed**

Signature:______________________

print name:_____________________

Address:_______________________

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Boulder, CO 80301-9140

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Geological Society of America

Structural Geology and Tectonics Division

CAREER CONTRIBUTION AWARD NOMINATION

This award will be given for the fourteenth time in 2001. It is given to an individual who throughout his/her career has made numerous distinguished contributions that have clearly advanced the science of structural geology or tectonics. 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. Past recipients are:

1988: John H. Handin
1989: John Rodgers
1990: John G. Ramsay
1991: Clint D.A. Dahlstrom
1992: John C. Crowell
1993: Benjamin M. Page
1994: Richard P. Nickelsen
1995: B. Clark Burchfiel
1996: Winthrop D. Means
1997: Hans Ramberg
1998: Albert W. Bally
1999: Hans Laubscher
2000: S.Warren Carey

Name of nominee, present institutional affiliation and address:

Summary statement of nominee's major career contributions to the science of structural geology or tectonics (attach additional page if necessary):

Selected key published works of the nominee (attach additional page):

Name and address of nominator:

Mail (or fax) to: Ron Bruhn
Dept. of Geology and Geophysics
717 W.C. Browning Building
Salt Lake City, UT 84112-1183 Fax 801-581- 7065

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Address:_______________________
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Ron Bruhn
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717 W.C. Browning Building
Salt Lake City, UT 84112-1183

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MEMORIAL TO PROFESSOR GEORGE W. VIELE

George W. Viele, Professor Emeritus at the University of Missouri-Columbia, died of an apparent heart attack on January 19, 2000 in Columbia, Missouri. George was born on April 10, 1927 in Wausau, Wisconsin, to George W. and Meta Kruse Viele. He served in Europe with the US Army in 1945-46, after which time he worked for two years with a USGS team of geologists on Pagan Island. He received his A.B. degree in geology from Yale University in 1951 and his Ph.D. in geology from the University of Utah in 1959. George then joined the faculty at the University of Missouri-Columbia, where he taught until his retirement in 1992. In the area of research, George Viele is credited with having brought the study of Ouachita Mountain tectonics into the modern age. Certainly, his greatest legacy is having mentored innumerable students in their studies of Ouachita geology and having cultivated a relationship with the Arkansas Geological Survey that continues to serve all those with an interest in Ouachita geology. In the area of classroom teaching/learning, George is best remembered for having tutored countless students as director of MU's summer field school in the Wind River Range of Wyoming. His service to the Geological Society of America culminated with his contribution as coeditor of the DNAG volume on the Appalachian-Ouachita system.

Tom Freeman
Distinguished Teaching Professor Emeritus
University of Missouri-Columbia

RESOURCE BIN

Several websites have been brought to our attention that might be of interest to the SG&T community:

http://tapestry.usgs.gov

http://www.crowdingtherim.org

David Allison submitted a "shameless promotion" for an application that he developed for stereographic analysis. This program can be downloaded as a self-extracting ZIP file from the following site:

http://www.usouthal.edu/usa/geography/allison/w-netprg.htm

Once the files are extracted, no further installation is necessary (i.e. no setup program). A few example data files are included to test the application. NETPROG is freeware for academia, shareware for commercial users. Please download the program and give it a try, and contact David Allison if you have questions.
David T. Allison
Dept. of Geology and Geography
University of South Alabama
(334) 460-6381

1998-1999 Structural Geology and Tectonics Division

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This newsletter is published biannually by the Structural Geology & Tectonics Division of GSA

If you have any suggestions, ideas, professional and technical opinions, announcements, career changes, not-for profit offerings, and/or industry news, please send them to us! The deadline for inclusion of materials in the next issue will be January 15, 2001.

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