STRUCTURAL GEOLOGY AND TECTONICS DIVISION Newsletter

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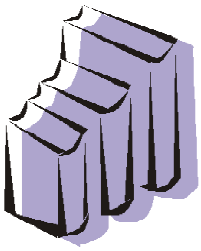

CHAIRPERSON'S MESSAGE

Hello all:

I am writing this note as First Vice-Chair **Martha Withjack** and I begin work on the Joint Technical Program Committee (JTPC), which schedules sessions for the annual meeting. It is always a challenge to take a great variety of abstracts, topical sessions, general sessions, and a finite number of meeting rooms for all of the disciplines GSA represents and construct a coherent meeting with a minimum of thematic conflicts. This year, JTPC Chair **John Geissman** has done an exceptional job of avoiding conflicts between topical sessions, and we hope to do the same with general sessions. This is one of the most important - and time-consuming - jobs that the GSA Divisions manage. We are most grateful to the conveners of our record number of topical sessions for sharing the load. Because so many of you have taken an active role in these activities, it should be a terrific meeting (take a look at all the offerings of interest to structural geology and tectonics in the later pages of this newsletter). I hope to see you all there. Remember also that we offer support for student members of our Division to attend short courses and field trips (see ad later in these pages). We are happy to give away all of the money we have allocated to deserving applicants, so please apply. And don't forget our awards ceremony. I'm pleased to announce that this year's Career Contribution Award will be given to Robert Wallace; we'll let the other awards remain a surprise.

In my last letter to you, I emphasized changes that would affect our community. I hope that many of you responded to my blast e-mail with applications to attend the workshop on Setting Priorities in the Solid Earth Sciences. Let me also draw your attention to the EarthScope Town Hall Meeting on Wednesday morning. The purpose of this session is twofold: 1) to acquaint interested parties with the different components of EarthScope (which equate to different funding opportunities) and 2) to explore possibilities for interdisciplinary research within each EarthScope initiative. In other words, it will provide participants with opportunities to see how EarthScope will work and how individuals with particular expertise might fit into the program. Knowledge really is power; please attend. And special thanks to **Mike Brown**, **Cathy Manduca**, **Tracy Rushmer**, **Basil Tikoff**, and **Ben van der Pluijm** for the significant amount of time and energy put into organizing these activities. Thanks are also due **Dave Pollard** for organizing an NSF-funded workshop on New Departures in Structural Geology and Tectonics. See his solicitation for input later in this newsletter; please take the time to respond. I do not think it is possible to overemphasize the importance of these opportunities to provide input to NSF.

The Denver meeting represents the efforts of many people over the course of the year, made manifest in technical sessions, field trips, short courses, and awards. The work begins in the previous year, as our short course committee identifies possible topics and appropriate leaders for workshops. Our awards committees and the management board evaluate candidates for the Division's awards, beginning in early Spring (thanks to this year's committees for their excellent work). And early each year, a Council of Chairs meeting provides an opportunity for exchange of information and ideas between divisions and (this year for the first time) affiliated societies. We meet with the President (currently **Tony Naldrett**) and Executive Director (**Jack Hess**) of GSA, and provide recommendations for the GSA Council. Two key topics at this year's meeting were GSA's financial situation and GSA's participation in an aggregate of online society journals (both discussed in recent issues of GSA Today). It is evident that our leadership recognizes the 'need to look ahead, think outside the box, and plan for the future' (GSA Today, v. 12, no. 7, p. 12). They have solicited your ideas for

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changing GSA and adding new revenue streams to meet future needs; please send your thoughts to the Long-Range Planning Committee via **Ann Cairns**, **acairns@geosociety.org.**

Additional information re: the Denver meeting is available through our website, **http://rock.geosociety.org/sgt/index.html**, which **Kevin Smart** will update to include other timely information. For example, it will include the schedule for the Workshop on Setting Priorities in the Solid Earth Sciences and tips from **Art Goldstein** on how to handle NSF's new requirement for identifying and articulating the "Broader Impacts" of your proposed research. (Thank you, Art!) And while you're at the website - please vote for one of this year's excellent candidates for Second Vice-Chair: **Michele Cooke**, **Dave Lageson**, and **Tracy Rushmer**. If you don't want to vote online, take a moment to print out the ballot included in this newsletter and mail it in. This is a critical time for the structural geology and tectonics community; the board is trying to find ways that our priorities can be communicated to NSF and discussing how best to spend money freed by going to an electronic newsletter. You will want to vote for a candidate you feel can represent you in these endeavors.

A final word of thanks to all of those of you who volunteered or nominated candidates to serve the Division; I was delighted by the response to my request. Rest assured that if you have not heard from us yet, you will in the future!

--Laurel Goodwin

I. Changes in Grant Proposal Guide.

As many of you know by now, the NSF Grant Proposal Guide has been amended to require explicit discussion, in both the Project Summary and Project Description, of each review criterion; Intellectual Merit and Broader Impacts. Proposals that fail to meet this new requirement will be returned without review. Whereas most of you are well aware of what comprises Intellectual Merit I have noticed that there continues to be considerable confusion over precisely what NSF means by Broader Impacts. In a nutshell, everything other than Intellectual Merit constitutes Broader Impacts. Participation of graduate and undergraduate students, inclusion of under-represented minorities and women, international collaboration and publication of results are all examples of Broader Impacts. In most cases, it is really quite easy to break these out and discuss them separately. Some of you may feel that this mandating of explicit discussion of Broader Impacts comprises a PC way of funding otherwise unfundable research. Let me assure you that the NSF, regardless of how strong the Broader Impacts may be, does not fund proposals that have not addressed important and significant research. Rather, Broader Impacts are most useful in attempting to differentiate between a large group of equally significant projects, all of which are worthy of funding if the budget allowed. Another way of looking at this is that NSF commonly talks about their goal as focusing on "People, Ideas and Tools", with "People" placed first on purpose. Many of the Broader Impacts considerations address the "People" issues and most of the Intellectual Merit considerations comprise the "Ideas" and "Tools". You can find examples of Broader Impacts at **http://www.nsf.gov/pubs/2002/nsf022/bicexamples.pdf**

II. ALERT: Upcoming Funding Opportunity

In the next two years there will be an ongoing competition for new Science and Technology Centers. For those who are unfamiliar with this program, it provides considerable funding for multi-institution centers dedicated to interdisciplinary research. The process involves submission of pre-proposals leading to selection of proposals that will be included in the final competition. Below is text from the STC web page at NSF (**http://www.nsf.gov/od/oia/programs/stc/start.htm**).

"The National Science Foundation (NSF) established the Science and Technology Centers (STC) Program in 1987, as part of the President's State of the Union Address, to fund important basic research and education activities and to encourage technology transfer and innovative approaches to interdisciplinary activities. The STCs explore new areas and build bridges among disciplines, institutions, and other sectors. They offer the research community an effective mechanism to: embark upon long-term scientific and technological research activities; explore better and more effective ways to educate students; and develop mechanisms to ensure the timely transition of research and education advances made into service in society.

Specifically, center support enables academic research teams to:

1. Exploit opportunities in science and engineering where the complexity of the research problems or the resources needed to solve them require the advantages of scale, duration, facilities, or collaborative relationships that can be best provided by campus- based research centers;
2. Involve students, research scientists, and engineers from academic, industry, non-profit organizations, and federal laboratories in partnerships to enhance the training and employability of professionals with an awareness of potential applications for scientific discoveries;
3. Receive long-term, stable funding at a level that encourages risk-taking and ensures a solid foundation for attracting quality undergraduate and graduate students (with special emphasis on women and minorities) into science and technology careers;
4. Facilitate the transfer of knowledge among academia, industry, and national laboratories."

I believe that there are some excellent opportunities in the tectonics community for new STC's and I encourage those with creative and innovative ideas to contact me or someone else at NSF/EAR to discuss the process and possibilities.

III. New Awards

Listed below are the proposals funded from the Dec. 1, 2001 submissions. Looking back over the fiscal year 2001 I note that the program received proposals for 164 projects (collaborative proposals are considered to represent a single project, even if there might be two or three separate proposals) and funded 47 of them, a success rate of almost 29%.

--Art Goldstein
Program Director, Tectonics
Earth Sciences Division
National Science Foundation

LIST OF AWARDS GRANTED

(June 2001 – December 2001)

The following proposal was inadvertently left out of the last newsletter; our apologies to Claudia and Eric.

Lewis, Claudia	Collaborative Research: Processes driving rock uplift and flexural deformation following convergent tectonics: the fluvial terrace record, Ebro Basin, Spain
McDonald, Eric	Collaborative Research: Processes driving rock uplift and flexural deformation following convergent tectonics: the fluvial terrace record, Ebro Basin, Spain

(December 2001 – June 2002)

Baldwin, Suzanne	Continental Extension in the western Woodlark Basin: P-T-t-D constraints from Normanby and Misima Islands
Bennett, Richard	Collaborative research: Co-evolution and dynamic interplay of the San Jacinto and southernmost San Andreas fault zones
Brandon, Mark	Collaborative Research: Thermomechanical Models of Forearc Deformation at the Cascadia Subduction Zone
Butler, Robert	Collaborative Research: A Multidisciplinary Study of an Exhumed Active Continental Margin: The Wrangell Transect, SE Alaska
Cashman, Susan	Comparison of Microscale Fault Fabrics Formed in Creeping and Stick-Slip Faults
Copeland, Peter	Collaborative Research: A test of the out-of-sequence model for the Main Central Thrust, western Nepal
Crawford, Maria	Collaborative Research: A Multidisciplinary Study of an Exhumed Active Continental Margin: The Wrangell Transect, SE Alaska
Davidson, Cameron	Collaborative Research: A Multidisciplinary Study of an Exhumed Active Continental Margin: The Wrangell Transect, SE Alaska
Dawers, Nancye	Can We Constrain the Evolution of Crustal-Scale Normal Fault Arrays Using Geomorphic and Structural Criteria?
DeCelles, Peter	Collaborative Research: A Test of the Out-of-Sequence Model for the Main Central Thrust, Western Nepal
Dewers, Thomas	Composition and Structure of Gouge from the Focal Depths of Recent Earthquakes: Rupture Zones in South African Gold Mines

Furlong, Kevin	Collaborative Research: Co-evolution and Dynamic Interplay of the San Jacinto and Southernmost San Andreas Fault Zones
Geissman, John	Collaborative Research: Deformation Rates and Kinematics of Ancient and Active Displacement Transfer, Central Walker Lane, Western Great Basin
Gilotti,Jane	Collaborative Research: Formation and Exhumation of UHP and HP Terranes in the Greenland Caledonides - Understanding Processes at the Base of Continental Collisions
Graham, Stephan	Collaborative Research: Initiation and Long-Term Slip History of the Altyn Tagh Fault System, Northern Tibetan Plateau, NW China: A Tertiary Basin Piercing Point Study
Hager, Bradford	GPS Study of the Kinematics of the Intersection of the Tarim, Tien Shan, and Pamir
Heizler, Matthew	Collaborative Research: Mesoproterozoic Tectonics of Inboard Laurentia: Insight Into Assembly and Configuration of Rodinia
Holm, Daniel	Collaborative Research: Influence of a Proterozoic Southern Laurentia Long-Lived Convergent Orogen In the Lake Superior region, USA
Housen, Bernard	Collaborative Research: Comparing Deformation Rates in Wrench Borderlands from Geodetic and Geologic Data to Evaluate the Permanent and Recoverable Components
Johnson, Scott	Collaborative Research: The Tectonothermal Evolution of a Convergent Orogen
Jordan, Teresa	Genesis of the Western Slope of the Altiplano Plateau and Atacama Basin
Karlstrom, Karl	Collaborative Research: Mesoproterozoic Tectonics of Inboard Southwestern Laurentia: Insight Into Assembly and Configuration of Rodinia From Study of Sedimentary Successions
Kodama, Kenneth	The Red Bed Paleomagnetic Inclination Correction and the Accuracy of the Late Paleozoic North American Apparent Polar Wander Path
Kusky, Timothy	Collaborative Research: Neoproterozoic vergence in the East African Orogen: A structural and geochronological analysis of the polydeformed Itremo Group, central Madagascar
Kusky, Timothy	Investigation of Archean ophiolites and oceanic crust and mantle fragments in mélange, north China craton: Implications for Archean tectonics
Law, Richard	Kinematic evolution and exhumation history of the South Tibetan Detachment System, Everest Massif, Tibet
Lee, Jeffrey	Collaborative Research: Recent Kinematic Evolution of the Northern Eastern California Shear Zone from Geologic Data
Liu, Mian	The rise and fall of the Himalayan-Tibetan plateau: An integrated 3-D finite element modeling
McClelland, William	Collaborative Research: Formation and Exhumation of UHP and HP Terranes in the Greenland Caledonides - Understanding Processes at the Base of Continental Collisions
Mitra, Gautam	3-D geometry of the Moine thrust and its implications for 3-D strain distribution and thrust sheet kinematics
Oldow, John	Collaborative Research: Deformation Rates and Kinematics of Ancient and Active Displacement Transfer, Central Walker Lane, Western Great Basin
Owen, Lewis	Collaborative Research: Recent Kinematic Evolution of the Northern Eastern California Shear Zone from Geologic Data

Proussevitch, Alex	Uplift History of the Colorado Plateau Since the Late Miocene: Analysis Using Vesicular Basalts as a Paleoaltimeter
Reilinger, Robert	GPS Measurements of Plate Interactions and Intra-Plate Deformation in the Western Mediterranean
Ritts, Bradley	Collaborative Research: Initiation and Long Term Slip History of the Altyn Tagh Fault System, Northern Tibetan Plateau, NW China: A Tertiary Basin Piercing Point Study
Schneider, David	Collaborative Research: Influence of a Proterozoic Southern Laurentia Long-Lived Convergent Orogen In the Lake Superior region, USA
Stowell, Harold	Variability of Metamorphic P-T-T Paths in Compressional Magmatic Arcs and the Relationship Between Magmatism, Metamorphism, and Crustal Loading: Example from the North Cascades, WA
Tikoff, Basil	Collaborative Research: Comparing Deformation Rates in Wrench Borderlands from Geodetic and Geologic Data to Evaluate the Permanent and Recoverable Components
Tucker, Robert	Collaborative Research: Neoproterozoic vergence in the east African orogen: A structural and geochronological analysis of the polydeformed Itremo Group, central Madagascar
Vernon, Ronald	Do Porphyroblast Inclusion Trails Provide Information About Regional Tectonism?
West, David	Collaborative Research: The Tectonothermal Evolution of a Convergent Orogen
Willett, Sean	Collaborative Research: Thermomechanical Models of Forearc Deformation at the Cascadia Subduction Zone
Williams, Michael	Collaborative Research: Mesoproterozoic Tectonics of Inboard Laurentia: Insight Into Assembly and Configuration of Rodinia
Wojtal, Steven	Collaborative Research: Comparing Deformation Rates in Wrench Borderlands from Geodetic and Geologic Data to Evaluate the Permanent and Recoverable Components

Attention students

Free $$$$

Student members of the SG&T Division are eligible to apply for grants to supplement the cost of field trips and short courses.

Applications for grants to participate in activities at the upcoming annual meeting in Denver should be sent to **Laurel Goodwin** (**lgoodwin@nmt.edu**). Indicate what trip or short course you would like to attend, and include a brief note indicating why it is important to your research/professional development.

See you in the mile-high city!

Denver 2002: Science at the Highest Level

GSA Annual Meeting & Exposition
October 27 – 30, 2002

Listed below are sessions, symposia, and short courses of possible interest to members of the SG&T Division. For a full listing of the meeting's events and activities, see the GSA website or the April and June issues of GSA Today.

Following the meeting, organizers of symposia or theme sessions can submit summaries to the newsletter co-editors for inclusion in the Spring Newsletter (deadline January 15, 2003).

Pardee Keynote Sessions

K1 **Earth Sciences Challenges in the National Problem of High-Level Radioactive Waste Disposal** John S. Stuckless, William W. Dudley

K5 **The Role of the Earth Sciences in Fostering Global Equity and Stability** Eldridge M. Moores, W.G. Ernst, Grant H. Heiken, Susan M. Landon, P. Patrick Leahy

K6 **There and Back Again: Terrestrial Approaches to Extraterrestrial Problems** Tracy K.P. Gregg, Louise Prockter

K7 **Toward a Better Understanding of the Complicated Earth: Insights from Geologic Research, Education, and Cognitive Science** Cathryn A. Manduca, David W. Mogk

Topical Sessions

T11 **Society of Economic Geologists Special Session: The Global Tectonic Setting of Ore Deposits—Present Understanding and New Advances** Richard J. Goldfarb, Carol Finn

T23 **Working with Geological Chaos: Characterization, Design, and Construction Problems of Fault Rocks, Melanges, Saprolites, and other Block-in-Matrix Rocks (Bimrocks)** Edmund Medley, Elizabeth L. Mathieson, Gunter Riedmueller

T32 **Magnetic Mapping of North American Geology** Mark Pilkington, Carol Finn, Israel Hernandez

T33 **New Views of Extensional Basins and Related Volcanic Fields Using Geophysics and Remote Sensing** V.J.S. Grauch, G. Randy Keller

T34 **The Anisotropy of Magnetic Susceptibility of Granitic Rocks: New Methodological Development, Interpretations, and Challenges** Eric C. Ferre, Michel de Saint-Blanquat, R.D. Law

T46 **Contributions of American Geologists to Theoretical Tectonics on the Basis of Research Done West of the 100th W Meridian in the Latter Half of the 19th Century** A.M. Celal Sengor, Michele L. Aldrich

T57 **Hydrogeologic Framework and Basin Hydrology of the Desert Southwestern United States** Donald S. Sweetkind, Keith A. Howard

T72 **Geologic Records of Paleoelevation** Henry Fricke

T81 **Paleobiogeography: Integrating Plate Tectonics and Evolution** Bruce S. Lieberman

T85 **Microprobe Monazite Geochronology: New Developments and Applications** Robert J. Tracy, Michael L. Williams

T88 **Early Mars** Herbert Frey

T90 **Terrestrial Approaches to Extraterrestrial Problems and Vice Versa** Louise M. Prockter, Tracy K.P. Gregg

T91 **A-Type Plutons and Convergent Margins: Orogenic Links to Anorogenic Magmatism?** W.R. Van Schmus, O. Tapani Ramo, Jorge S. Bettencourt

T102 **Post-Laramide Uplift and Erosion of the Rocky Mountains and Colorado Plateau** Joel L. Pederson, Frank J. Pazzaglia

T110 **Tectonics, Climate Change, and the Late Cenozoic Evolution of the Rocky Mountains, Colorado Plateau, and Western Great Plains** Margaret E. McMillan, Catherine Riihimaki

T111 **Detrital Thermochronology—Dating of Exhumation and Landscape Evolution in Mountain Belts** Matthias Bernet, Cornelia Spiegel

T112 **EarthScope Town Hall Meeting** Basil Tikoff, Tracy Rushmer

T113 **Extensional Tectonics in the Southern Basins and Ranges, United States, and in Western Turkey** Ibrahim Cemen, John Bartley

T114 **Forward Modeling in Tectonics and Structural Geology** Bruno C. Vendeville, Martha O. Withjack, Joel H. LeCalvez

T115 **Geometry, Kinematics, and Vorticity of High-Strain Zones** Christopher M. Bailey, Dazhi Jiang, Andy Bobyarchick

T116 **Kinematics of the Himalayan-Tibetan Orogen—Comparing the Present with the Past** Michael Murphy, Paul Kapp

T117 **Lithospheric Structure and Evolution of Rocky Mountain Region, from Deep Mantle to Mountain Tops** Karl E. Karlstrom, Michael L. Williams

T118 **New Constraints on Mesoproterozoic-Early Neoproterozoic Supercontinent Assembly and Dispersal** Richard E. Hanson, Samuel Bowring

T119 **Nonconventional Fold-Thrust Belts: Assessing the Spectrum of Variation in a Structural Style** Oscar E. Gilbert, Dietrich Roeder

T120 **Structure and Tectonics of the Midcontinent, North America** Gregory C. Ohlmacher, Pieter Berendsen

T121 **Tackling Transpression and Transtension in Orogenesis: Tools of Structural Geology from Microfabric to Tectonic Reconstruction** M.A. Edwards, Nicholas W. Hayman, John Dewey

T122 **Tectonic Evolution of the Middle East and Adjacent Regions: The Confluence of the Alpine and Himalayan Orogenic Systems and a Window into Processes of Continental Dynamics** Bernard Guest, Jahan Ramezani

T123 **Tectonic Modeling Applied to the Characterization and Evaluation of Yucca Mountain as a National Nuclear Waste Repository Site: Concepts, Methods, and Hazard Analyses at Local and Regional Scales** Dennis O'Leary

T124 **Thermal and Mechanical Significance of Gneiss Domes in the Evolution of Orogens** Donna L. Whitney, Christian Teyssier, Kip V. Hodges

T125 **Thrust Belt Curvature: Integrating Paleomagnetic and Structural Analyses** Aviva J. Sussman, Arlo B. Weil

Short Courses & Workshops

1. **Anisotropy of Magnetic Susceptibility and Applications to Granitic Rocks**
   Friday and Saturday, Oct. 25-26, Eric C. Ferre, University of Wisconsin; Mike Jackson, University of Minnesota. Limit 30. Fee: $320, students $300.

Field Trips

Pre-Meeting

6 -- Active Incision-Driven Evaporite Tectonism, Glenwood Springs, Colorado

7 -- Formation, Reactivation, and Evolution of Proterozoic Shear Zones in the Colorado Rocky Mountains: From Continental Assembly to Intracontinental Orogeny

8 -- Neotectonics of the Rio Grande Rift in Colorado

9 -- Structure and Stratigraphy of the Southern Colorado Front Range–Cañon City Syncline, Colorado

16 -- Laramide Structure and Synorogenic Sedimentation of the Colorado Front Range

Concurrent

Tour of U.S. Geological Survey Mapping and Geologic Facilities, Denver Federal Center

Post-Meeting

24 -- Structural Geometry and Thermal History of Pseudotachylyte from the Homestake Shear Zone, Sawatch Range, Colorado

Special Meeting Announcements

SG&T WORKSHOP & WHITE PAPER: New Departures in Structural Geology and Tectonics
Announcement and call for input

New opportunities for research in structural geology and tectonics, brought into focus by recent technological developments, new quantitative data sets, along with conceptual, experimental and theoretical advances, have motivated a workshop to consider the future directions of Structural Geology and Tectonics. These recent developments and advances also bring into focus long standing questions about the way we formulate problems, the methods we adopt to solve them, and how we teach students to practice this discipline. Twenty representatives of the SG&T community will meet in Denver in late September for a workshop sponsored by the Tectonics Program of the NSF to grapple with these issues and provide commentary and guidelines in a white paper about the most promising avenues for future research.

If you would like to contribute to the preparation of the white paper please contact one of workshop attendees (see names and email contacts below) who will act as your representative at the workshop and serve as a conduit for your ideas and suggestions for the white paper. Although attendance at the workshop is limited to facilitate a productive meeting, we urge everyone in the SG&T community to participate through one of these representatives.

The workshop will bring together scientists whose research objectives are to understand the tectonic history of the lithosphere through geologic time, and to elucidate the tectonic processes leading to the development of geologic structures in Earth's crust using field, laboratory, and theoretical studies of the deformation at plate boundaries and in plate interiors. The participants will endeavor to provide some guidelines for the most productive roles of the sub-disciplines of the earth sciences (including structural geology, tectonics, geochronology, petrology, paleomagnetism, rock mechanics, etc.) that contribute to this research area.

It is anticipated that the white paper will: 1) help to set the course of research in structural geology and tectonics in the next decade; 2) provide criteria to help evaluate the intellectual merits of proposed research in this area; 3) help identify areas of investigation, new data sets and technologies, and methodologies ripe for the most rapid advances and scientific breakthroughs; 4) consider and suggest what major facilities could be proposed to support this research agenda; and 5) provide guidance to instructors for the selection of topics and the discussion of research results and methodologies in the classroom.

The current director of the Tectonics Program at the NSF (**Arthur Goldstein, agoldste@nsf.gov**) will participate in the workshop, as will the new director if he/she is hired by that time. **Tracy Rushmer** (**trushmer@zoo.uvm.edu**) will participate as a representative of the organizing committee for the workshop on "Priorities in Solid Earth Sciences" (to be held preceding the GSA Meeting in October). **David Pollard** will report on the results of the SG&T workshop at the October meeting.

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April 23-25, 2003 **USArray and the Great Plains: an Earthscope Planning Workshop.** This workshop will bring together geologists and geophysicists with interests in the Great Plains region in order to develop collaborative project ideas that will interface with the USArray component of Earthscope for this region. Funding is available for participant expenses. For further information contact **Mary Hubbard**, Department of Geology, Kansas State University, Manhattan, KS 66506, **mhub@ksu.edu**.

August 20-28, 2004 **32nd International Geological Congress, Topical Symposium: Accretionary Wedges and Melanges (T01)** Florence, Italy Session 1 (T01.1), Olistostromes and tectonosomes in mélange of accretionary wedges; Session 2 (T01.2), Transport of continental material toward the mantle at subduction zones: Evidence from modern and ancient convergent margins. Conveners: **D.S. Cowan**, University of Washington, Seattle WA 98195 (**darrel@u.washington.edu**); **G.A. Pini**, Università di Bologna, Bologna, Italy (**pini@geomin.unibo.it**)

We are looking for a wide participation with oral and poster presentations from people around the world. Our goal is to have an overview on the state of the art about the genetic mechanisms of melanges, stressing the relationships among tectonics, mud diapirism, gravitational deformations and sedimentation in accretionary wedges, foreland basins and trenches. Also, a 4-day, pre-congress Field Trip has been scheduled on the geology of the melanges of the northern Apennines (B13). Some of the classic argille scagliose melanges and olistostromes will be shown in relationship with the tectonic and sedimentary Cretaceous-Tertiary evolution of the northern Apenninic chain.

For information and a Preliminary Questionnaire (due Aug. 31, 2002): **http://www.32igc.org**.

SPECIAL SESSION AT 2002 FALL AGU MEETING: Fluids and Faulting: Cause and Effect
(T04--joint listed in Tectonophysics, Seismology, and Hydrology)

We invite abstract submissions on the topic of the relationship and interaction between fluids and faulting in the Earth's crust. Relevant issues include: the hydraulic impact of fault heterogeneity at all scales; the effect of fault zone architecture and fault rock properties on fluid flow; the hydraulic contribution to seismic and aseismic behavior of faults including earthquake triggering and rupture dynamics; the effect of mineral reactions on mechanical and hydraulic healing and sealing of faults; and the effects of artificially produced fluid pressure changes on fault behavior. We particularly encourage submissions that present an integrated approach combining any of the following methods: geological field investigations; geophysical or petrophysical field and laboratory measurements; mechanical analyses; hydrologic observations; and geochemical techniques.

The abstract submission deadlines are 29 August for submissions by mail and 5 September for online submissions. For more information on the Fall 2002 AGU Meeting, visit: **http://agu.org/meetings/fm02top.html**

Conveners: **Dr. Simon Kattenhorn (simkat@uidaho.edu); Dr. Stephen Martel (smartel@Hawaii.edu); Dr. Juliet Crider (criderj@cc.wwu.edu); Dr. Peter Eichhubl (eichhubl@pangea.Stanford.edu)**

R E S O U R C E B I N

Billion-year Earth History of Australia

John Veevers' billion-year earth history of Australia & neighbours in Gondwanaland (BYEHA) is almost sold out and the supplementary coloured ATLAS is selling well. To avoid disappointment, check: **www.es.mq.edu.au/GEMOC/BYEHA/page1.htm** for reviews by John Crowell, Bill Dickinson, & Dick Selley, and use the order forms for payment by credit card or cheque.

CD-Rom: Introduction to Structural Methods

Tasa Graphic Arts announces the release of the CD-Rom "Introduction to Structural Methods", written and narrated by H. Robert Burger (Smith College) and Tekla A. Harms (Amherst College). This product offers an innovative approach for teaching and understanding structural concepts. Designed to supplement structural geology courses, this program utilizes full color animations, illustrations, and photographs along with interactive activities and quizzes to promote student understanding of this dynamic subject.

For further information about this program:

Tasa Graphic Arts, Inc.
Gusdorf Road, Suite O
Taos, NM 87571-6298
505.758.5535 (fax: 505.758.5536)
http://www.tasagraphicarts.com

OR

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leslie@tasagraphicarts.com

Colorado Late Cenozoic Fault and Fold Database

The Colorado Geological Survey has posted its first interactive online publication, "Colorado Late Cenozoic Fault and Fold Database" at **http://geosurvey.state.co.us/** The database contains information compiled from available literature about more than 300 faults and folds that are known or suspected to have moved during the late Cenozoic (approximately the last 23.7 million years) i.e., that cut Miocene or younger rocks. The Map Server displays a zoomable map of faults color-coded by age within Colorado. This interactive map allows quick identification of structures by displaying a maptip box containing the name, identification, and age of the structure, when resting a cursor over any of the faults. Other layers in the map also contain maptips. For example, resting the cursor over a city area (shaded in purple) will show the city name and when resting on the background the name of the county appears. The map legend shows the data layers and how each feature is symbolized. Zooming in to the map displays different information layers. For instance, highways appear when the map is zoomed to 1:500,000.

The map server is linked to a Microsoft Access database. The database contains a variety of information about each structure such as length, sense of movement, geomorphic expression, age of faulted deposits and references. To see a report from the database, simply double-click the mouse on the structure in the map frame and the report for that particular fault appears in a separate window. The report you see lists all the information contained in the Access database. The entire database is downloadable. For more information contact:

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Sr. Science Advisor
Colorado Geological Survey
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Denver, CO 80120
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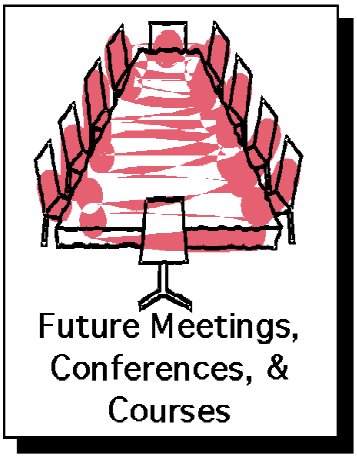
FAX 303-866-2461



AUGUST 2002

August 8-11, **American Quaternary Association (AMQUA) 17th Biennial Meeting**, Anchorage, Alaska, USA. Information: David R. Yesner, Local Arrangements Chair, c/o the Department of Anthroplogy, University of Alaska, 3211 Providence Drive, Anchorage, AK 99508, (907) 786-6845, fax 907-786-6850.

August 18-24, **GSA Penrose Conference: Three-Dimensional Flow, Fabric Development, and Strain in Deformed Rocks and the Significance for Mountain Building Processes: New Approaches**, Ascona, Switzerland. Conveners: Hermann Lebit (hlebit@westga.edu), Catalina Lüneburg, Peter Hudleston, John Ramsay.

August 25-30, **Gondwana 11: Correlations and Connections, Gateway Antarctica**, University of Canterbury, Christchurch, New Zealand. Information: +64-3-364 2136, fax +64-3-364 2197, s.hawtin@anta.canterbury.ac.nz.

Aug. 26-Sept. 3, **4th International Workshop on Orogenic Lherzolites and Mantle Processes**, Samani, Hokkaidö, Japan. Information: http://earth.s.kanazawa-u.ac.jp/LherzoliteWorkshop2002/.

SEPTEMBER 2002

September 2-3, **Transport and Flow Processes in Shear Zones**, Geological Society of London, Geological Society of America, Geological Society of Australia Meeting. Information: Laurel Goodwin (lgoodwin@nmt.edu) or http://www.st-and.ac.uk/academic/gg/schoolpage.html

September 1-5, **17th World Petroleum Congress**, Rio de Janeiro, Brazil. Information: Malu Fernandes, Rio de Janeiro Tel: +55 21 2282-2002, ext. 163; or Edouard de Guitaut, London Tel. Mobile: + 44 771 858 9090.

September 8-11, **American Association of Petroleum Geologists 2002 Rocky Mountain Section Meeting**, Laramie, Wyoming. Information: Randi S. Martinsen, Institute for Energy Research, Department of Geology & Geophysics, University of Wyoming, Laramie, WY 82071-4068, 307-766-4858, fax 307-766-2737. Note: There will be a joint session on Earth Systems Science to be offered at this meeting in recognition and celebration of the newly-approved associated status of GSA and AAPG.

September 10-11, **AAPG Rocky Mountain Section Student Expo**, Laramie, Wyoming. Information: studentexpo@uwyo.edu.

September 10-11, **Oil and Gas in Compressional Belts**, Joint meeting of Tectonic Studies Group with Petroleum Group at the Geological Society, Burlington House, London. Information: Dr. Tim Needham (tim@rdr.leeds.ac.uk).

September 16-18, **5th International Symposium on Andean Geodynamics**, Universite P. Sabatier Toulouse France. Deadline for abstracts and registration is April 1, 2002. Information: ISAG@cict.fr

September 23-29, **GSA Penrose Conference: Precambrian High-Pressure-High-Temperature Metamorphism: A Key to Understanding the Lower Crust and Reconstruction of Precambrian Plate Tectonics**, Hengshan-Wutaishan and Beijing, China. Conveners: M. Brown (mbrown@geol.umd.edu), A. Kröner, P.J. O'Brien, C.W. Passchier, Li Jianghai, Zhai Mingguo.

September 23-25, **Tectonics of Eastern Turkey and Northern Arabian Plate**, Erzurum, Eastern Turkey. Information: Niyazi Turkelli, Bogazici University, 90-216-308-2711, fax 90-216-332-2681; or Muawia Barazangi, Cornell University.

September 25-27, **Minerals Engineering '02**, Perth, Australia. Information:www.min-eng.com/me02.html.

OCTOBER 2002

October 2-4, REALMOD 2002—"Modelling Reality: The Reality of Modelling Tectonics and Exploration Geophysics versus Analogue and Numerical Models", San Donato Milanese, Italy.

October 20-21, **AAPG / SEG Student Expo**, Houston, Texas. Information: Leslie Seawright, Society of Exploration Geophysicists, 8801 S. Yale #500, Tulsa, OK 74135.

October 27-30, **Science at the Highest Level, GSA 2002 Annual Meeting and Exhibition**, Denver, Colorado, USA. Information: GSA Meetings, PO Box 9140, Boulder, CO 80301-9140, (303) 447-2020, fax 303-357-1070. (Abstracts due July 16, 2002.)

DECEMBER 2002

December 6-10, **AGU 2002 Fall Meeting**, San Francisco, California. Information: AGU Meetings Department, 2000 Florida Avenue, NW, Washington, D.C. 20009, USA, (202) 462-6900, toll-free in North America 800-966-2481, fax: 202-328-0566. (Abstract deadline: September 5, 2002)

FEBRUARY 2003

February 10-12, **TRANSALP Conference: A Crustal Section through the Eastern Alps**, Trieste, Italy. Pre-registration deadline is April 15, 2002.

VOTE FOR OFFICERS ON_LINE

If you haven't already voted please visit the web site (**http://rock.geosociety.org/balloting/sgt.asp**) or use the paper ballot to vote for the 2nd Vice-Chair. Brief biographies are presented below.

Candidates for 2nd Vice-Chair:

Michele Cooke (cooke@geo.umass.edu)
Michele Cooke is currently an Assistant Professor in the Geosciences Department at the University of Massachusetts. She received her BSE from Princeton University and her MS and PhD degrees from Stanford University. Michele's research utilizes field observations and numerical models to examine deformational processes within the upper levels of the crust. Michele and her students have investigated the contribution of bedding-plane slip to folding and the mechanisms responsible for fracture termination at bedding planes. Current projects include fault interaction within the Los Angeles Basin, California, role of mechanical stratigraphy on partitioning strain within Sheep Mountain Anticline, Wyoming and fracture misorientation due to the lateral growth of folds. Michele has worked to improve accessibility of geology courses and was a 2000-2001 NAGT distinguished speaker.

David R. Lageson (lageson@montana.edu)
Dave is a Professor of Geology in the Department of Earth Sciences at Montana State University. He completed a B.A. in geology in 1973 at Western State College of Colorado and was subsequently employed in the petroleum industry in Wyoming as a well-site geologist and exploration geologist. Dave attended graduate school at the University of Wyoming, completing his M.S. in 1977 and his Ph.D. in structural geology in 1980. During graduate school, he was also employed full-time as a staff geologist with the Wyoming State Geological Survey. Dave has been at Montana State University since 1980, including five years as department head in the early 1990s. He teaches a variety of undergraduate and graduate courses in structural geology and tectonics. Dave's research is largely field-based and focuses on the structural analysis of superimposed tectonic regimes through time, as well as the analysis of active, earthquake-generating fault systems in the northern Intermountain Seismic Belt. He has also investigated fault-controlled pluton emplacement in the Sevier fold-and-thrust belt of western Montana. Current research projects include: 1) regional tectonic controls on the track of the Yellowstone hotspot – i.e., non-deep-mantle "hotspot" hypothesis; 2) structural evolution of the east-west trending Centennial Mountains seismotectonic zone, southwest Montana; and 3) compilation of a regional tectonic map of the Northern Rockies and Pacific Northwest. In addition, Dave is currently director of the new USGS-MSU Earthquake Science Laboratory. Dave was co-convener of a GSA Penrose Conference on Laramide structure/tectonics in the early 1980s and he has been actively involved with many service activities to the profession and public throughout his career. Dave was elected Fellow of the Geological Society of America in 1994 and he is currently the Science Editor of the GSA Field Guide Series. If elected as "Second Vice-Chair," Dave would like to facilitate more visibility and activities of the SG&T Division at all levels.

Tracy Rushmer (trushmer@zoo.uvm.edu)
Tracy Rushmer is an Assistant Professor at the University of Vermont. She returned to the United States after attending the Swiss Federal Institute of Technology (ETH) in Zürich, Switzerland where she received her Ph.D and spent four years on a post-doctoral position held jointly at the ETH and the USGS in Menlo Park, California. She is by training an experimental petrologist who has a strong interest in both experimental rock deformation and field studies. Her interests lie in the broad field of the growth and evolution of the Earth's continental crust and are expanding into the early evolution of the Earth and terrestrial bodies in general. She uses both hydrostatic experimental techniques and rock deformation experiments as well as field studies to address melting and melt segregation questions. Tracy is also investigating the role of deformation in core formation. These studies require understanding of liquid metal-silicate system behavior under applied differential stress.

Tracy has co-convened a Penrose conference, was one of two MSA Distinguished Lecturers in 1999-2000, served as a one-time member on the NSF Petrology/Geochemistry panel and was an associate editor of Geology from 1999-2001. Currently, Tracy is active in the community and sees the great importance of enhancing communication across disciplines and hopes to foster that by helping to provide a strong framework within our established associations.

BALLOT

Election of Officers for the Structural Geology & Tectonics Division

There is an online ballot available at: http://rock.geosociety.org/balloting/sgt.asp

To Fellows and Members of the Division:

The slate of nominees for Division office 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 page. This ballot or the electronic version must be received no later than September 15, 2002. The election results will be announced at the business meeting of the Division in Denver, CO, in October.

SECOND VICE-CHAIR

Michele Cooke ☐

Dave Lageson ☐

Tracy Rushmer ☐

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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Geological Society of America

Structural Geology and Tectonics Division

CAREER CONTRIBUTION AWARD NOMINATION

This award will be given for the fifteenth time in 2002. 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. The deadline for nominations is February 15, 2003. 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	1993: Benjamin M. Page	1998: Albert W. Bally
1989: John Rodgers	1994: Richard P. Nickelsen	1999: Hans Laubscher
1990: John G. Ramsay	1995: B. Clark Burchfiel	2000: S. Warren Carey
1991: Clint D. A. Dahlstrom	1996: Winthrop D. Means	2001: Don Wise
1992: John C. Crowell	1997: Hans Ramberg	2002: Robert Wallace

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 if necessary):

Name and address of nominator:

Mail (or fax) to: Jan Tullis
Dept. of Geological Sciences
Box 1846, 324 Brook St.
Brown University
Providence, RI 02912
FAX: 401-863-2058
e-mail: Jan_Tullis@brown.edu

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Address:_____
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Our column is unusually short this newsletter: our apologies for sending out the call for news on such short notice, and in July when many are out in the field. There will be more advance notice next time!

Walt Snyder (Boise State) has joined the National Science Foundation as the Head of the Research Grants Section of EAR.

Carol Ormand will be teaching at Wittenberg University, in Springfield OH, starting this fall. **Anke Friedrich** (post-doc, Brian Wernicke) will be leaving Caltech for Germany, where she accepted an Assistant professorship in Geology at the University of Potsdam. At Caltech, she worked on paleoseismology and Basin and Range GPS (BARGEN); she will continue to do research in the western U.S. **Michael A. Murphy** (Ph.D., UCLA 2000) has joined the faculty at the University of Houston. **Annia Fayon** has been promoted to research associate at the University of Minnesota where she has been working with **Donna Whitney** and **Christian Teyssier**.

In industry, **Jim Tucker** just began a position as a Geological Specialist at Saudi Aramco in Dhahran, Saudi Arabia. He was previously Chief Geologist of Computational Geology with ARCO.

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, 2003.

2001-2002 Structural Geology and Tectonics Division

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Addendum
to the Structural Geology and Tectonics Division Fall Newsletter
Have you heard?

Eric Nelson at the Colorado School of Mines has recently hired two post-doctoral associates to pursue research on structural controls on ore deposition and hydrothermal fluid flow. **Dr. John McLeod Miller**, based at Monash University in Melbourne, is studying MVT-type Zn-Pb deposits in the Canning basin of Western Australia, and **Dr. Leandro Echavarria** is studying volcanic-hosted epithermal Ag-Au vein systems in the Andes of southern Peru.

Anne Egger will start teaching geology at San Juan College in Farmington, New Mexico, a community college with a large Navajo and Hispanic population about forty miles east of Shiprock. She joins several adjunct professors but is the only fulltime geology professor.

Bill Bosworth has been assigned to the Marathon London office for the past year, and should be there for another year.

Jonathan Imber has recently moved from the Fault Analysis Group in Dublin to join the Reactivation Research Group as a PDRA working on quantifying onshore-offshore fault reactivation along the NE Atlantic continental margin as part of the NERC/Industry Ocean Margins LINK Programme.

Jonathan C. Lewis has moved to an adjunct affiliation and graduate faculty member position in Geosciences at the University of Massachusetts at Amherst. He was previously an Earth Sciences Postdoctoral Fellow (NSF) at UC Davis, hosted by **Rob Twiss**.

Mike Edwards, formerly with Lothar Ratschbacher at Freiberg [not Freiburg) Germany, is starting an EU fellowship in the structure group of **Bernhard Grassemann** at the Univerisy of Vienna in the fall.

John Goodge and **Vicki L. Hansen** are moving to the University of Minnesota, Duluth, where John will be Associate Professor of Geology and Vicki will be McKnight Presidential Professor of Planetary Geology.

Alan Whittington, who just finished a term as post-doc and visiting assistant professor with **Steve Marshak** at the University of Illinois will start as assistant professor of geology at the University of Missouri, Columbia.

Sandra Wyld was promoted to Associate Professor with tenure in the spring (2002) at the University of Georgia.