Schedule of Events

Thursday, April 1

8:00  Coffee and Pastries

8:15  GeoDaze Welcome  Karl Flessa

SESSION I:  Economic Geology

8:30  Geological diversity of intense acid (“advanced argillic”) hydrothermal alteration  
      Douglas C. Kreiner and Mark D. Barton

8:45  Sericitic and advanced argillic mineral assemblages and their relationship to  
      copper mineralization, Resolution Porphyry Cu-(Mo) Deposit, Superior District,  
      Pinal County, Arizona  
      Alexander R. Winant

9:00  Geology of the Noche Buena Gold Deposit, Sonora, Mexico  
      Andrew T. Olson

9:15  Aspects of the geology and mineralogy of the Proterozoic mines series, Tenke-Fungurume, D. R. Congo  
      Isabel Fay, Mark D. Barton, and Frank D. Mazdab

9:30  Developing a genetic sequence for Buffalo Valley Gold Deposit, north-central Nevada  
      Kathryn Sechrist

9:45  Mineralogical and petrological studies of tourmaline group minerals near  
      Copiapó, Chile  
      Ana Collins, Mark D. Barton, and Frank D. Mazdab

10:00  Coffee Break

SESSION II:  Tectonics, Structure, and Sedimentology

10:15  Recalculating the pre-extensional geothermal gradient of the northern Tortilla Mountains, Pinal County, Arizona  
      Phillip Nickerson
10:30  Structural reconstructions of Basin and Range extension: Contrasting domains of extension in the vicinity of the Ruby Mountains Metamorphic Core Complex, NE Nevada

James R. Pape

10:45  Basin evolution along the western edge of the central Andes, northern Chile

Kelly Umlauf, Paul Kapp, and Peter DeCelles

11:00  Andes retroarc decollement parameter estimation from the Puna Andes GPS network

Katrina Gressett and Richard Bennett

11:15  SLABVEL: Towards the development of a subducting slab reference frame

Joshua Spinler and Richard Bennett

11:30  Lunch Break

SESSION III: Economic Geology, Environmental Geochemistry, Geophysics, Geoscience Education, and Planetary Geology Posters

12:45  Poster Presentations

Economic Geology and Environmental Geochemistry

Jurassic igneous-related metallogeny of southwestern North America

Douglas C. Kreiner, Mark D. Barton, James P. Girardi, Lukas Zurcher, and Eric Seedorf

Petrographic characterization of two gold-rich Banded Iron Formations (BIFs) in the Foxe Fold Belt, Baffin Island, Canada

Germán González Garzón

Igenous petrology of the Colosa Porphyry Gold Deposit, Tolima, Colombia

Javier Gil-Rodriguez

Influence of inoculated arbuscular mycorrhizal fungi on Prosopis juliflora (mesquite) rhizosphere microbial community structure in acidic desert mine tailings

Fernando A. Solís-Dominguez, Alexis Valentin-Vargas, Antje Legatzki, and Raina M. Maier

Use of instrumented plant-soil columns to analyze the efficacy of mine tailings phytostabilization

Richard Rushforth and Jon Chorover

Geophysics, Planetary Geology, and Geoscience Education
Analysis of shear wave splitting beneath Wyoming

Justin Wood, Hande Tok, C. Berk Biryol, Christine Gans, Susan Beck, and George Zandt

3-D seismic interpretation of a submarine landslide caused by salt-controlled deformation

Melissa M. McMillian and Roy J. Johnson

Characterization of temporal change due to geological processes on Mars

Lujendra Ojha, Alfred McEwen, Colin Dundas, and Sarah Mattson

Systematic search of remotely triggered earthquakes and non-volcanic tremor along the Himalaya/southern Tibet and northern California

Lujendra Ojha and Zhigang Peng

Investigation of the San Andreas Fault: GPS monitoring from San Gorgonio Peak and San Jacinto Peak

Andrew McCallister, Richard Bennett, and Josh Spinler

Saturday Science Academy at the University of Arizona: An opportunity to assess the effects of earth science outreach on Tucson’s students

Nicole Saenz, Jeanine Ash, Phillip Stokes, Sarah Trube, Kendra Murray, and Ben Sternberg

2:15 Coffee Break

SESSION IV: Geophysics

2:30 The enigmatic subduction zone water cycle in the Chile-Argentina flat slab region

Lepolt Linkimer, Susan Beck, George Zandt, Patricia Alvarado, Christine Gans, and Ryan Porter

2:45 Forward modeling of geoid anomaly using spherical harmonics: applications in the Sierra Nevada

Alissa Scire and Clement Chase

3:00 Shear wave splitting in western Argentina

Elizabeth McDonald, Susan Beck, and George Zandt

3:15 Imaging the flat slab beneath the Sierras Pampeanas, Argentina using receiver function analysis: Evidence for overthickened, subducted oceanic crust
Christine Gans, Susan Beck, George Zandt, Hersh Gilbert, and Patricia Alvarado

3:30 Andean adventures with ambient noise: seismic structure of the crust in the Pampean flat slab region

Ryan Porter, George Zandt, Susan Beck, and Linda Warren

3:45 Coffee Break

4:00 Keynote Speaker: Dr. Brain Wernicke
The California River and its role in carving the Grand Canyon

5:00 Refreshments at Gentle Ben’s
Friday, April 4

8:00  Coffee and Pastries

8:15  Welcome and Announcements

SESSION V: Geochemistry and Geochronology

8:30  Diffusion kinetics of hafnium in garnet: Experimental determination and geochronological implications
  
  **Elias Bloch, Jibamitra Ganguly, and Richard Hervig**

8:45  Effects and implications of radiation damage and crystal anisotropy on He diffusion in zircon
  
  **William Guenthner and Peter Reiners**

9:00  Effects of external parent nuclides on apatite helium dates: Sources and solutions
  
  **Devon A. Orme and Peter W. Reiners**

9:15  Enigmatic provenance of Quaternary sediments in the San Pedro River valley, southeast Arizona
  
  **Courtney C. King, Devon A. Orme, Peter W. Reiners, and Abir Biswas**

9:30  New elemental and isotopic data from mafic lavas on the Puna Plateau (24°S - 27°S) reveal diverse sources of mantle melt in the central Andes
  
  **Kendra E. Murray and Mihai N. Ducea**

9:45  The Grenville-age “Putumayo Orogen” of northwestern South America and its implications for the role of Amazonia during the formation of Rodinia
  
  **Mauricio Ibanez-Mejia, Joaquin Ruiz, George Gehrels, Victor Valencia, Agustin Cardona, Andres Mora, and Peter DeCelles**

10:00 Coffee Break

SESSION VI: Paleoclimate

10:15 American drought: Red, white, or blue?
  
  **Toby R. Ault and Julia E. Cole**
10:30  Intercomparison of 20th century tropical climate model hindcasts and coral $\delta^{18}O$ data using a forward proxy model

Diane M. Thompson, Michael N. Evans, Toby R. Ault, Julia E. Cole, and Julien Emile-Geay

10:45  A scanning-XRF record of Lake Bosumtwi sediments: Implications for West African monsoon variability over the past 500 kyr

Nicholas McKay, Jonathan T. Overpeck, Erik T. Brown, Timothy M. Shanahan, John A. Peck, John W. King, Christopher A. Scholz, and C.W. Heil

11:00  Late Quaternary evolution of Baijian Hu, Inner Mongolia, and implications for paleo-precipitation

Adam M. Hudson, Jay Quade, Zhange Hucai, and Hai Cheng

11:15  Driving mechanisms for intense drought in the southwestern U.S.

Alena Kimbrough, Julia Cole, Michael Gagan, Toby Ault, and Heidi Barnett

11:30  Field Trip Preparation and Announcements

11:45  Lunch Break

SESSION VII: Environmental Science, Quaternary Geochronology, and Paleoclimate Posters

1:00  Poster Presentations

Environmental Science

Tides and time: Salinity in the Ciénega de Santa Clara, a Colorado Delta wetland – no influence from the Gulf of California

Leaandra Romero, Lourdes Mexicano, and Karl W. Flessa

Culturable fungal diversity from speleothem surfaces in Kartchner Caverns, Benson, Arizona

Michael Joe S. Vaughan, Barry M. Pryor, and Raina M. Maier

Intra- and inter-speleothem variability of bacterial communities in Kartchner Caverns

M. Ortiz, A. Legatzki, J.W. Neilson, Barry M. Pryor, L.S. Pierson III, and Raina M. Maier
Measuring and modeling in hydrodynamics in crushed basalt in support of constructed hillslopes in Biosphere2

**Pamela Gallo**

**Quaternary Geochronology**

Geoarchaeological dating of Holocene stream terraces along the San Pedro River, southeastern Arizona

*Jill Onken, Joseph P. Cook, and Ann Youberg*

Copper isotopes in archaeology: Case studies of archaeological metals and minerals in the southwestern U.S.

*Alyson Thibodeau, Joaquin Ruiz, John Chesley, Noah Thomas, Dave Killick, and Ryan Mathur*

Radiocarbon calibration from 22 to 30 k BP using $^{238}$U-$^{232}$Th dating of a stalagmite from cave 2-9, Son La Province, Vietnam

*Susanna E. Richter, J. Warren Beck, Chuan-Chou Shen, Nguyen Chi Dung, Yue-Gau Chen, Lin Yin, Hong-Wei Chiang, and Doan Dinh Lam*

**Paleoclimate**

False rings as a proxy for the North American Monsoon

*Seth Davis, Connie Woodhouse, and Daniel Griffin*

A search for better sea surface temperature records using Sr/Ca in *Siderastrea siderea*, coral off the coast of Venezuela

*Meghan Burris, Julia Cole, and Heidi Barnett*

Variability in ostracode geochemistry: A calibration study

*Jeanine L. Ash, Lisa E. Park, and Andy Michelson*

Non-marine ostracodes: Using minor elements as a potential paleothermometer for paleoclimate reconstruction

*Fariq S. Mustapha, Andrew S. Cohen, and Peter W. Reiners*

Precipitation variability in the Peruvian Amazon

*Sarah White, Jonathan Overpeck, Scott Saleska, and Mark Bush*

Paleoenvironmental reconstruction using ostracode assemblages from Lake Malawi core 1B: Initial results

*Margaret Whiting Blome and Andrew S. Cohen*
Exploration of Lake Malawi sediments through X-radiographic imagery

Erin Abel, Andrew Cohen, and Erik Brown

Playa-lake sedimentation and organic matter accumulation in an Andean piggyback basin: The recent record from the Cuenca de Pozuelos, NW Argentina

Michael M. McGlue, Geoffrey S. Ellis, Andrew S. Cohen, and Peter W. Swarzenski

2:30 Coffee Break

SESSION VIII: Surface Processes

2:45 Linking hinterland kinematics and climate change to the foreland stratigraphy

Todd M. Engelder and Jon D. Pelletier

3:00 Modeling of Titan’s surface processes constrained by shoreline fractal analysis

Priyanka Sharma and Shane Byrne

3:15 Predictive soil mapping in Arizona’s Basin and Range

Matthew R. Levi, Craig Rasmussen, and N. Starman

3:30 Coffee Break

4:00 Student Awards

4:30 Slide Show

4:45 Closing Remarks and Thank Yous

7:00 GeoDaze Party at the Beck-Zandt Residence

Saturday, April 5

GeoDaze Field Trip

8:30 am Coffee and Bagels at the Gould-Simpson loading dock

9:00 am Vans leave from loading dock