

Vita

Christopher L. Andronicos

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1. EDUCATION

Ph.D. Princeton University, Geology degree received December 1999, Advisor L. S. Hollister; Ph.D. dissertation, *Tectonic Evolution of the Coast Plutonic Complex*; emphasis in process of ductile deformation, pluton emplacement, structural geology, and tectonics.

B.S. University of New Mexico, Geology degree received May 1995, emphasis in structural geology and petrology.

2. PURDUE ACADEMIC APPOINTMENTS

Assoc. Professor, January 2012 to present. Teaching structural geology, general geology and metamorphic petrology courses at graduate and undergraduate levels.

3. PROFESSIONAL EMPLOYMENT PRIOR TO PURDUE UNIVERSITY

Assoc. Professor, 2005-2011, Cornell University, Associate Professor. Teaching structural geology, petrology and general geology.

Asst. Professor, Sept. 1999 to July 2005 -- University of Texas at El Paso. Teaching structural geology, general geology and metamorphic petrology courses at graduate and undergraduate levels.

Harold W. Dodds Honorable Fellow, Princeton University, Princeton, New Jersey, September 1998 - May 1999: Field and laboratory study of the structural geology and tectonics of western British Columbia. Directed Undergraduate Senior Thesis project by Benjamin Farrow, Thesis topic focused on remote sensing investigation of Ice Stream B, Ross Ice Shelf, Antarctica. Taught undergraduate laboratories focused on igneous and metamorphic petrology.

National Science Foundation Minority Graduate Research Fellow, Princeton University, Princeton, New Jersey, September 1995 - August 1998: Field and Laboratory research on the structural geology and tectonics of western British Columbia and high grade gneisses of the Italian Alps. Co-directed Undergraduate Senior Thesis project by Robert Klee focused on development of migmatite gneiss, Italian Alps.

Geotechnical Engineer, Vineyard and Associates, Albuquerque, New Mexico, January 1995 - July 1995. Conducted Phase I and Phase II environmental site assessments, produced soil engineering reports, geologic maps, and provided recommendations for foundation design and remediation of damaged buildings and structures.

Field Geologist, New Mexico Bureau of Mines and Mineral Resources, State Map Program, May 1994 - August 1994. Produced 1:24,000 scale geological maps of the bedrock geology of the Placitas and Sandia Crest Quadrangles, New Mexico.

Field Assistant, University of New Mexico, Albuquerque, New Mexico, May 1992 - April 1994 (non-continuous basis) assisted Dr. Jeffery Grambling and Dr. Karl Karlstrom in field based research in the southern Rocky mountains of Colorado and New Mexico. Assisted in the

production of geological maps, production of petrographic thin sections, and the collection of samples for $^{40}\text{Ar}/^{39}\text{Ar}$ geochronology.

Assistant Curator, University of New Mexico Geology Museum, October 1992 - December 1993. Preserved and catalogued extensive collection of rocks, minerals, invertebrate fossils and thesis collections. Maintained Dbase data base information for all geology department mineral and rock collections.

4. REVIEWED PUBLICATIONS

Journal Articles, Special Papers and Monograph Chapters

- Stewart-Maddox, N.*[‡], Frisbee, M. D., **Andronicos, C. L.**, Genereux, D. P., and Meyers, Z. P.*[‡], (2018), Identifying the regional extent and geochemical evolution of interbasin groundwater flow using geochemical inverse modeling and 87Sr/86Sr ratios in a complex conglomeratic aquifer, *Chemical Geology*, 500, 20-29.
- Andronicos, C. L.***, Bindi, L., Distler, V. V., Hollister, L. S. M, Lin, C., MacPherson, G.J., Steinhardt, P. J., and Yudovskaya, M., (2018), Comment on “Composition and origin of holotype Al-Cu-Zn minerals in relation to quasicrystals in the Khatyrka meteorite” by M. Ivanova et al. (2018), *Meteoritics and Planetary Science*, 53, 2430-2440.
- Dickinson-Lovell, H. , Huang, M.-H., Freed, A.M., Eric Fielding, Bürgmann, B., **Andronicos, C.**, (2018), Inferred rheological structure and mantle conditions from postseismic deformation following the 2010 Mw 7.2 El Mayor-Cucapah Earthquake, *Geophysical Journal International*, ggx546, <https://doi.org/10.1093/gji/ggx546>.
- Lin, C. , Hollister, L. S. , MacPherson, G. J., Bindi, L., Ma, C., **Andronicos, C. L.**, and Steinhardt, P. J., (2017), Evidence of cross-cutting and redox reaction in Khatyrka meteorite reveals metallic-Al minerals formed prior to impact 250 Ma, *Nature Scientific Reports*.
- Chen, C. , Gilbert, H., Fischer, K.M., **Andronicos, C.L.**, Pavlis, G. L., Hamburger, M. W., Marshak, S., Larson, T., Yang, X., (2018), Lithospheric discontinuities beneath the US Midcontinent—signatures of Proterozoic terrane accretion and failed rifting, *Earth and Planetary Science Letters*, 481, 223-235.
- Chen, C., Gilbert, H., **Andronicos, C. L.**, Hamburger, M., Larson, T., Marshak, S., Pavalis, G., and Yang, X., (2016), Shear velocity structure beneath the central United States: Implications for the origin of the Illinois Basin and intraplate seismicity, *Geochemistry, Geophysics, Geosystems*, 17, 1020-1041.
- Dickinson, H.[‡], Freed, A. M.* , and **Andronicos, C. L.**, (2016), Inference of the viscosity structure and mantle conditions beneath the Central Nevada Seismic Belt from combined postseismic and lake unloading studies, *Geochemistry, Geophysics, Geosystems*, 17, 1740-1757.
- Aronoff, R. F.* , **Andronicos, C. L.**, Vervoort, J., and Hunter, R., Redefining the Metamorphic History of the Oldest Rocks in the Southern Rocky Mountains, *Geological Society of America Bulletin*, in press.
- Chen, C.* , Gilbert, H., **Andronicos, C. L.**, Hamberger, M., Larson, T., Marshak, S., Pavlis, G., and Yang, X., Shear velocity structure beneath the central United States: implications for the origin of the Illinois Basin and intraplate seismicity, *Geochemistry, Geophysics, Geosystems*, in press.

- Bindi, L., Yao, N., Lin, C., Hollister, L. S., **Andronicos, C. L.**, Distler, V.V., Eddy, M. P., Kostin, A., Krychko, V., MacPherson, G., Steinhardt, W. M., Yudovskaya, Y., and Steinhardt, P. J., Natural quasicrystal with decagonal symmetry, *Nature Scientific Reports*, vol. 5, DOI: 10.1038/srep09111.
- Bindi, L., Yao, N., Lin, C., Hollister, L. S., **Andronicos, C. L.**, Distler, V.V., Eddy, M. P., Kostin, A., Krychko, V., MacPherson, G., Steinhardt, W. M., Yudovskaya, Y., and Steinhardt, P. J., Decagonite, Al₇₁Ni₂₄Fe₅, a quasicrystal with decagonal symmetry from the Khatyrka CV3 carbonaceous chondrite, *American Mineralogist*, vol. 100, p. 2340-2343.
- Vannucchi, P., Morgan, J. P., Lunga, D. D., **Andronicos, C. L.**, and Morgan, W. J., (2015) Direct evidence of ancient shock metamorphism at the site of the 1908 Tunguska event, *Earth and Planetary Science Letters*, vol. 409, p. 168-174.
- Bindi, L., Yao, N., Lin, C., Hollister, L. S., MacPherson, G., Poirier, G., **Andronicos, C. L.**, Distler, V.V., Eddy, M. P., Guan, Y., Kostin, A., Krychko, V., Steinhardt, W. M., and Yudovskaya, M., (2014), Steinhardtite, a new body-centered-cubic allotropic form of aluminum from the Khatyrka CV3 carbonaceous chondrite, *American Mineralogist*, vol. 99, p. 2433-2436.
- Hollister, L. S., Bindi, L., Yao, N., Poirier, G., **Andronicos, C. L.**, MacPherson, G., Distler, V.V., Eddy, M. P., Guan, Y., Kostin, A., Krychko, V., Steinhardt, W. M., Yudovskaya, M., Eiler, J. M., Guan, Y., Clark, J. J., and Steinhardt, P. J., (2014), Impact-induced shock and the formation of natural quasicrystals in the early solar system, *Nature Communications*, vol. 5, doi:10.1038/ncomms5040.
- MacPherson G. J., **Andronicos C. L.**, Bindi, L., Distler, V. V., Eddy M. P., Eiler J. M., Guan Y., Hollister L. S., Kostin A., Kryachko V., Steinhardt W. M., Yudovskaya M., and Steinhardt, P. J., in review, Khatyrka, a new CV3 find from the Koryak Mountains, Eastern Russia, *Meteoritics and Planetary Science*.
- Hunter, R. A., and **Andronicos, C. L.**, (2012), Deformation assisted phase transformation: an example from the sillimanite-in isograd, Eolus batholith, Needle Mountains, Colorado, USA, *Terra Nova*, DOI: 10.1111/ter.12004.
- Barnhart, K. R.*, Walsh, P., Hollister, L. S., Daniel, C. G., and **Andronicos, C. L.**, (2012), Decompression during late Proterozoic "triple point" metamorphism at Cerro Colorado, New Mexico, *Journal of Geology*, 120, p. 385-404.
- Depine, G. V.*, **Andronicos, C. L.**, and Hollister, L. S., (2011) Response of continental magmatic arcs to regional tectonic changes recorded by synorogenic plutons in the middle crust: an example from the Coast Mountains of British Columbia, *Journal of Structural Geology*, 33, p. 1089-1104.
- Amato, J. M., Heizler, M. T., Boullion, A. O., Sanders, A. E., Toro, J., Mclemore, V. T., and **Andronicos, C. L.**, (2011), Mesoproterozoic (1.46 Ga) magmatism, metamorphism, and deformation in an extensional setting within the southern Mazatzal Province: The Burro Mountains, New Mexico, *Geological Society of America Bulletin*, 33, 1720-1744.
- Wolf, D. E.*, **Andronicos, C. L.**, Vervort, J., Mansfield, M.*, and Chardon, D., (2010), Application of Lu/Hf garnet dating to unravel the relationships between deformation, metamorphism and plutonism: An example from the Prince Rupert area, British Columbia, *Tectonophysics*, 485, 62-77.
- Chang, J. M.*, and **Andronicos, C. L.**, (2009), Constraints on the depth of generation and emplacement of a magmatic epidote-bearing quartz diorite pluton in the Coast Plutonic Complex, British Columbia, *Terra Nova*, 21, 480-488.

- Gehrels, G. E., Russmore, M. E., Woodsworth, G. J., Crawford, M., **Andronicos, C.L.**, and 11 others, (2009), U-Th-Pb geochronology of the Coast Mountains Batholith in north-coastal British Columbia: constraints on age, petrogenesis, and tectonic evolution, *Geological Society of America Bulletin*, 121, p. 1341-1361.
- Andronicos, C. L.**, Phipps Morgan, J., Chang-Hamblock, J. M.*, and Wolf, D. E.*, (2008), Melt-filled hybrid fractures in the oceanic mantle: Melt enhanced deformation during along-axis flow beneath a propagating spreading ridge axis, doi:10.1016/j.epsl.2008.06.035.
- Depine, G. V.*, **Andronicos, C. L.**, and Phipps Morgan, J., (2008), Near-isothermal conditions in the middle and lower crust induced by melt migration, *Nature*, 425, doi:10.1038/nature06689.
- Hamblock, J. M.*, **Andronicos, C. L.**, Miller, K. C., Barnes, C. G., Ren, M-H., Averill, M. G., and Anthony, E. Y., (2007), A composite geologic and seismic profile beneath the southern Rio Grande rift, New Mexico, based on xenolith mineralogy, temperature, and pressure, *Tectonophysics*, 442, 14-48.
- Andronicos, C. L.**, Velasco, A. A., and Hurtado, J. M., (2007), Large-scale deformation in the India-Asia collision constrained by earthquakes, *Terra Nova* 9, 105-120, doi: 10.1111/j.1365-3121.2006.00714.x.
- Miller, K. C., Carrick, T. M., Martínez-Sussmann, C., Levine, R., **Andronicos, C. L.**, and Langford, R. P., (2007). Effectiveness of a Summer Experience for Inspiring Interest in Geoscience Among Hispanic-American High School Students, *Journal of Geoscience Education*, v. 55, p. 596-603.
- Hollister, L. S., and **Andronicos, C. L.**, (2006), Formation of new continental crust in Western British Columbia during transpression and transtension, *Earth and Planetary Science Letters*, 249, 29-38.
- Keller, G. R., Karlstrom, K. E., Williams, M. L., Miller, K. C., **Andronicos, C. L.**, Lavander, A., Snelson, C.*, and Prodehl, C., (2005), *The Dynamic Nature of the Continental Moho: Crustal Evolution in the Southern Rocky Mountain Region as an Example*, Geophysical Monograph Series, Volume 154, 482 pages, hardbound, 2005, ISBN 0-87590-419-X.
- Quezada, O. A.*, G. R. Keller, and **Andronicos, C. L.**, (2005), A seismic reflection, gravity and remote sensing study of the southeastern Sangre de Cristo Mountains, New Mexico, *Geophysical Monograph Series, Volume 154*, 482 pages, hardbound, 2005, ISBN 0-87590-419-X.
- Andronicos, C.L.**, Chardon, D., Gehrels, G., Hollister, L.S., and Woodsworth, G.J., (2003), Strain partitioning in an obliquely convergent orogen, plutonism, and synorogenic collapse: the Coast Mountains Batholith, British Columbia, Canada, *Tectonics*, 22, doi:10.1029/2001TC001312.
- Hollister, L. S. and **Andronicos, C. L.** (2000) The central gneiss complex, Coast orogen, British Columbia, *GSA Special Paper* 343, 45-59.
- Andronicos, C.L.**, Hollister, L.S., Davidson, C., and Chardon, D., (1999), Kinematics and tectonic significance of transpressive structures within the Coast Plutonic Complex, British Columbia, *Jour. Struct. Geol.*, 21, p. 229-243.
- Chardon, D. H., and **Andronicos, C. L.**, and Hollister, L. S., (1999), Large-scale transpressive shear zone patterns and displacements within magmatic arcs: The Coast Plutonic Complex, British Columbia, *Tectonics*, 18, 278-292.

- Hollister, L.S. and **Andronicos, C. L.**, (1997), A Candidate for the Baja British Columbia Fault System in the Coast Plutonic Complex, *GSA Today*, 7, 1-7.
- Kirby, E. K., Karlstrom, K.E., **Andronicos, C. L.**, Dallmeyer, R.D., (1995), Tectonic Setting of the Sandia Pluton: An orogenic 1.4 Ga granite in New Mexico, *Tectonics*, 14, no. 1, p. 185-201.

Reviewed Conference Papers

- Kirby, E. K., Karlstrom, K. E., and **Andronicos, C. L.**, (1995), Structural and thermal setting during emplacement of the Sandia Pluton, *New Mexico Geological Society Guidebook*, 46th Field Conference, p. 219-225.
- Tervino, L.* , Keller, G. R., and **Andronicos, C. L.**, (2004), Rootless Mountains and Gravity Lows in the Sangre De Cristo Mountains, Southern Colorado-Northern New Mexico, *New Mexico Geological Society Guidebook*, 55th Field Conference.
- Quezada, O. A. * , **Andronicos, C. L.**, and Keller, G. R., 2004, Structure of the Sangre De Cristo Mountains between Taos and Mora based on an integrated Geophysical analysis, *New Mexico Geological Society Guidebook*, 55th Field Conference.

* Indicates Student Co-author

5. CONFERENCE ABSTRACTS

- 20) **Andronicos, C. L.**, and Dumond, G., (2015), Bulk Composition Of Continental Crust In The Rio Grande Rift Based On Rift Flank Uplifts And Crustal Xenoliths, *GSA Abstracts with Programs*, vol., 47, p.462.
- 19) Link, B. J.* , **Andronicos, C. L.**, and Ridgway, K. D., (2015), Detrital Zircon Constraints On The Timing Of Prograde Metamorphism Within The Maclaren Glacier Metamorphic Belt, Alaska Range Suture Zone, *GSA Abstracts with Programs*, vol. 47, p. 160.
- 18.) Hernandez Montenegro, J. D.* , **Andronicos, C. L.**, Aronoff, R. F.*G, and Zuluaga Castrillion, C. A., (2015), Geochemical and Petrological Characterization of Migmatite and Restite in the Wet Mountains, Colorado, *GSA Abstracts with Programs*, vol. 47, p. 545.
- 17.) Dumond, G., and **Andronicos, C. L.**, Field Analog For The North American 7.Xx Km/S Layer In The Canadian Shield, *GSA Abstracts with Programs*, vol. 47, p. 617.
- 16.) Aronoff, R. F.G* , **Andronicos, C. L.**, Vervoort, J.D., and Hunter, R. A., 2014, Lu-Hf Garnet Geochronology Reveals the Tectonic History of Precambrian Rocks in the Southern Rocky Mountains, *AGU Fall Meeting*, V43B-4877.
- 15.) Lovell, T. R.* , Bowen, B. B. and **Andronicos, C. L.**, 2014, Constraining The Phanerozoic Time-Temperature History Of The Illinois Basin Using Detrital Apatite U-Th/He Thermochronology, *GSA Abstracts with Programs*. vol. 46, No. 6, p. 787.
- 14.) Lovell, T. R.* , **Andronicos, C. L.**, And Bowen, B. B., 2014, The Role Of An Intracratonic Basin In Transcontinental Sediment Dispersal And Recycling Systems, *GSA Abstracts with Programs*. vol. 46, No. 6, p. 787.
- 13.) Hole, J. A., Wang, K., Spence, G. D., Stephenson, A. L., Miller, K. C., Clowes, R. M., Hollister, L. S., and **Andronicos, C. L.**, 2014, Seismic Refraction Evidence

- For A Large Volume Of Melt Residual Beneath The Coast Mountains Batholith Complex Near Bella Coola, British Columbia, GSA Abstracts with Programs. vol. 46, No. 6, p.174.
- 12.) [§]**Andronicos, C. L.**, 2013, Geophysical, Geochemical, and Geological Constraints on the tectonic evolution of the coast plutonic complex, British Columbia based on the Batholiths Continental Dynamics Project, GSA Abstracts with Programs, vol., 45 no. 7, p. 180. (Invited Pardee Keynote Talk)
 - 11.) Aronoff, R. F.*, Vervoort, J.D., **Andronicos, C. L.**, and Hunter, R. A.*, (2013), Lu-Hf Garnet geochronology constrains the boundaries of the Yavapai and Mazatzal and Picuris Orogenies, GSA Abstracts with Programs, vol. 45, no. 7, p. 462.
 - 10.) **Andronicos, C. L.**, Aronoff, R. F.*, Hunter, R. A.*, and Vervoort, J., A revised tectonic history for Proterozoic Rocks of the The Southern Rocky Mountains in northern New Mexico, GSA Abstracts with Programs, Vol. 45, no. 5, p. 37.
 - 9.) Baumgardt, E.*, and **Andronicos, C. L.**, Spatial Variation of Geochemistry along the margins of the Colorado Plateau during the last 5 Ma, GSA Abstracts with Programs, Vol. 45, No. 5, p.4.
 - 8.) Wang, K.G*, Hole, J. A., Spence, G., Miller, K.C., Clowes, R. M., and **Andronicos, C.L.**, (2012) Controlled-source shear-wave velocity model of the crust in the Coast Mountains batholith complex, western Canada, AGU Fall Meeting, T23A-2651.
 - 7.) **Andronicos, C. L.**, (2012) Transpression and Transtension during batholith construction, Coast Mountains, British Columbia, AGU Fall Meeting, T33-2728.
 - 6.) Aronoff, R. F.*, Vervoort, J. D., **Andronicos, C. L.**, and Hunter, R. A.*, (2012), Lu-Hf Garnet Geochronology and microstructural analysis constrain the timing of crustal assembly in southwestern North America, GSA Abstracts with Programs, Vol. 44, No. 7, p. 525.
 - 5.) Hunter, R. A.*, **Andronicos, C. L.**, Vervoort, J. D., and Aronoff, R. F., (2012), Refining the Proterozoic history of North America through combined use of Lu-Hf geochronology and petrologic analysis, GSA Abstracts with Programs, Vol. 44, No. 7, p. 526.
 - 4.) **Andronicos, C. L.**, Chen, C.*, Cathles, L. and White, W., (2012), Hydrothermal Alteration of the lower gabbros in the Oman Ophiolite controlled by tensile fracture, GeoArabia, Vol., 17, no. 3, p. 226.
 - 3.) **Andronicos, C. L.**, Aronoff, R.F.*, Daniel, C., Hunter, R.A., Jones, J.V., and Vervoort, J., (2012), Contrasting Precambrian tectonic histories in northern New Mexico and southern Colorado, GSA Rocky Mountain Section - 64th Annual Meeting.
 - 2.) Aronoff, R.F.*, Vervoort, J., **Andronicos, C. L.**, and Hunter, R.A. G, (2012), Evidence for a Circa 1.4 Ga Metamorphic Event From Lu-Hf Garnet Geochronology In The Tusas And Picuris Mountains, Northern New Mexico, USA, GSA Rocky Mountain Section - 64th Annual Meeting.
 - 1.) Hunter, R.A.*, **Andronicos, C. L.**, Aronoff, R.F. G, and Vervoort, J., (2012), A revised view of Proterozoic regional metamorphism in northern New Mexico as constrained by the petrologic and geochronologic interrogation of garnet growth, GSA Rocky Mountain Section - 64th Annual Meeting.

[§]Invited talks

*indicates student co-author

6. PUBLIC LECTURES (Since 2012)

Closing of the Alaska Range suture zone: Links between sedimentation, metamorphism, and plutonism during terrane accretion, University of Iowa, Department Colloquium.

Mesoproterozoic formation of the southern margin of North America viewed from the perspective of detrital and mineral growth ages, GSA Annual Meeting 2016, Denver Colorado, in session: Proterozoic Accretion Of The North American Continent – United Plates Of America Revisited

Forbidden crystals from Forbidden places: Naturally occurring quasicrystals from the Russian Far East, Bucknell University, October 2015.

Lu/Hf geochronology reveals the 1.4 Ga Picuris Orogeny in Northern New Mexico, University of Tennessee, Knoxville, February 2014.

Structural controls on melt and fluid flow within the upper mantle and lower crust of the Oman Ophiolite, Smith College, February 2013.

Fluid flow at mid-ocean ridges: Insights from studies of the Oman Ophiolite, UT San Antonio, April 2013.

Garnet Geochronology applied to the triple point terrane of the southwestern United States, Northwestern University, April 2013.

Hydrothermal alteration of the lower gabbros in the Oman Ophiolite controlled by tensile fracture, International Conference on the Geology of the Arabrian Plate and Oman Mountains, Sultan Qaboos University, Muscat Oman, January, 2012.

7. EXTRAMURAL FUNDING

Past Support:

National Science Foundation

Collaborative Research: Constraining The Formation And Evolution Of The Proterozoic Orogenic Belt Of The SW USA Based On Geochronology Of Garnet And Accessory Minerals, Amount Requested, \$327,309, with Jeff Vervoort WSU

Past Support:

National Science Foundation

Collaborative Research: Batholiths Generation And Evolution Of Crust In Continental Magmatic Arcs

2003-2010

Principal Investigator

With Co-PIs Mihai Ducea, George Gehrels, George Zandt, Jon Patchett (University of Arizona), John Hole (Virginia Tech), Margi Russmore (Occidental College), Kate Miller, Jose Hurtado (University of Texas at El Paso), Ken Dueker (University of Wyoming), Kelly Russell, Ron Clowes, Lori Kennedy, (University of British Columbia), George Spence (University of Victoria)

Total award \$1,342,555, of which I directly supervised \$653,028.00

ITR Collaborative Research: GEON: A Research Project to Create Cyberinfrastructure for the Geosciences: G. R. Keller, (PI), Ann Q. Gates (Co-PI), V.Y. Kreinovich (Co-PI), and C.L. Andronicos (Co-PI), \$892,437

Collaborative Research: Lithospheric Structure and Evolution of the Rocky Mountains: Phase 2, K. C. Miller (PI), G.R. Keller (Co-PI) and C.L. Andronicos, (Co-PI), \$62,996

Building Pathways into the Geosciences for an Hispanic Community of Learners in El Paso, K. C. Miller (PI), C.L. Andronicos, (Co-PI), and R. P. Langford, (Co-PI), \$380,900

MRI: Acquisition of laser ablation for ICP-MS and electron microprobe upgrade, for geological and environmental research and research training, N. E. Pingitore (PI), C. L. Andronicos, (Co-PI), J. L. Gardea-Torresdey, (Co-PI), \$60,000

Deciphering the Tectonic History of Slowly Cooled Precambrian Polymetamorphic Terranes in the American Southwest, C. L. Andronicos, (PI), \$26,607

University Research Institute, University of Texas at El Paso
Testing models of Proterozoic Tectonics in Northern New Mexico, (PI) \$4,908

Institute for the Social Sciences at Cornell University
Beyond Diversity: Re-Situating Pluralism, \$5,000, co-PI, Karim-Ali Kasam PI

8. HONORS AND AWARDS

COS Diversity Award, Purdue University, 2014

Zellman Warhaft Commitment to Diversity Award, Cornell University, 2008

James and Mary Tien Excellence in Teaching Award, Cornell University, 2007

Center for Effective Teaching and Learning Fellow, University of Texas at El Paso, 2000-2003

Harold W. Dodds Honorific Fellowship, Princeton University, 1994-1995

National Science Foundation Minority Graduate Research Fellowship, Princeton University, 1995-1998

9. PROFESSIONAL ORGANIZATIONS

Geological Society of America

American Geophysical Union

Society for Advancement of Chicanos and Native Americans, Life Member

10. SERVICE AND OUTREACH

International

Scientific Committee, International Conference on the Geology of the Arabian Plate and Oman Mountains, January 2012

National Organizations Promoting Diversity

GSA Committee On Diversity

Member Society for Advancement of Chicanos and Native Americans Board of Directors, 2010-2012

Member Society for Advancement of Chicanos and Native Americans Visioning 2020 Taskforce

Society for Advancement of Chicanos and Native Americans Chair Geoscience
Taskforce
Society for Advancement of Chicanos and Native Americans, IT Committee Member
Society for Advancement of Chicanos and Native Americans, Native American
Affairs Committee