Robert M. Negrini, Ph.D.
Professor Emeritus
Geological Sciences
CV

EDUCATION AND ACADEMIC EXPERIENCE updated: 4/20

California State University, Bakersfield
Director, California Energy Research Center: 2014-2016
Director, CSUB/National Science Foundation CREST: 2011-2015
Emeritus Professor: 2017-present
Professor: 1991-2016
Associate Professor: 1988-1991
Assistant Professor: 1985-1988

University of California, Davis
Ph.D.in Geology: 1986
Graduate Research Assistant: 1980-1985
Graduate Teaching Assistant: 1980-1984

Amherst College
B.A. cum Laude in Geology: 1979

PEER-REVIEWED PAPERS (*grad student coauthor; **undergraduate, ***high school student coauthor)

Lund, S., L. Benson, R. Negrini, in review. Timing of Sierra Nevadan stadial/interstadial variations from 15-56 ka, *Quaternary Sciences Review*, submitted, December 7, 2019.

Rhodes, D.D., **R.M. Negrini**, J.R. Arrowsmith, P.E. Wigand, M.R. Palacios-Fest, O.K. Davis, 2019, Geomorphic and sedimentologic evidence for Pluvial Lake Carrizo, San Luis Obispo County, California, *GSA Special Paper 536*, From Saline to Freshwater: The Diversity of Western Lakes in Space and Time, DOI.org/10.1130/2019.2536(16).

Knott, J.R., J.C. Liddicoat, R.S. Coe, R.M. Negrini, 2019. Radiocarbon and paleomagnetic chronology of the Searles Lake Formation, *GSA Special Paper 536*, From Saline to Freshwater: The Diversity of Western Lakes in Space and Time, DOI.org/10.1130/2018(06).

Heaton*, E., G. Thompson*, D. Fetzer*, **R. Negrini**, P.E. Wigand, M.R. Palacios-Fest, R. LaFever, A.L. Jacobsen, C. Trigos***, 2019. A Great Basin lake-level response to 38-34 ka Dansgaard-Oeschger oscillations, *Journal of Paleolimnology*, v. 68, p. 263-278. DOI.org/10.1007/s10933-018-0057-5.

Tiner*, R.J., R.M. Negrini, J.L. Antinao, E. McDonald, A. Maldonado, 2018, Geophysical and geochemical constraints on the age and paleoclimate implications of Holocene lacustrine cores from the Andes of central Chile, *Journal of Quaternary Science, v. 33,* p. 150-165.

Lund, S., L. Benson, R. Negrini, J. Liddicoat, S. Mensing, 2017, A full-vector paleomagnetic secular variation record (PSV) from Pyramid Lake (Nevada) from 47-17 ka: Evidence for the successive Mono Lake and Laschamp Excursions, *Earth and Planetary Science Letters*, *v. 458*, p. 120-129

Roza*, J., B. Jackson*, E. Heaton**, L. Prosser*, **R. Negrini**, 2016, Paleomagnetic secular variation and environmental magnetism of Holocene-aged sediments from Tulare Lake, CA, *Quaternary Research*, *v. 85*, p. 391-398.

Adams, K., R. Negrini, E. Cook, S. Rajagopa, 2015. Annually-resolved late Holocene paleohydrology of the southern Sierra Nevada and Tulare Lake, California, *Water Resources Research*, *v. 51*, doi:10.1002/2015WR017850.

Blunt*, A., **R. Negrini**, 2015, Latest Pleistocene through Holocene lake levels from the TL05-4 cores, Tulare Lake, CA, USA: Geophysical and geochemical proxies, *Quaternary International, v. 387,* p. 122-130, *dx.doi.org/10.1016/j.quaint.2015.07.001.*

Negrini, R.M., D.T. McCuan*, R.A. Horton, J.D. Lopez**, W.S. Cassata, J.E.T. Channell, K.L. Verosub, J.R. Knott, R.S. Coe, J.C. Liddicoat, S.P. Lund, L.V. Benson, A.M. Sarna-Wojcicki, 2014. Nongeocentric axial dipole field behavior, during the Mono Lake excursion, Jour. Geophys. Res., DOI: 10.1002/2013JB010846.

Benson, L.V., S.P. Lund, J.P. Smoot, D.E. Rhode, R.J. Spencer, K.L. Verosub, L.A. Louderback, C.A. Johnson, R.O. Rye, **R.M. Negrini**, 2012, The rise and fall of Lake Bonneville between 45 and 10.5 ka, *Quaternary International*, *v. 235*, p. 57-69.

Negrini, R., 2011. Bits and Pieces: Kern River sediments below the modern fan apex, *In*, ed. A. Lutz, Seismic Hazard, Tectonics, and Geomorphology of the Southern Sierra Nevada Range and Southern Walker Lane Belt, California, *Friends of the Pleistocene, Pacific Cell Fieldtrip*, Fall 2011, 35-43.

Kuehn, S.C., **R.M. Negrini**, 2010. A 250 k.y. record of Cascade arc pyroclastic volcanism from late Pleistocene lacustrine sediments near Summer Lake, Oregon, USA, *Geosphere*, v. 6, p. 1-33.

Negrini, R., D. Baron, J. Gillespie, R. Horton, A. Draucker*, N. Durham**, J. Huff*, P. Philley**, C. Register**, J. Parker, T. Haslebacher., 2009. A middle Pleistocene lacustrine delta in the Kern River depositional system: Structural control, regional stratigraphic context and impact on groundwater quality, submitted to Knauer, L., ed., Contributions to the Geology of the San Joaquin Basin, California, *Pac. Sect. AAPG, v. MP 48*, p. 95-111.

Langenheim, V., S. Biehler, **R. Negrini**, K. Mickus , D.M. Miller, R.J. Miller, 2009. Gravity and magnetic investigations of the Mojave National Preserve and adjacent areas, California and Nevada, *US Geol. Surv. Open File Report #2009-1117*, 28 p.

Baron D., **R.M**. **Negrini** , E.M. Golob*, D. Miller , A. Sarna-Wojcicki , R. Fleck , B. Hacker , A. Erendi, 2008, Geochemical correlation and 40Ar/39Ar dating of the Kern River Ash and related tephra: Implications for petroleum-bearing formations in the San Joaquin Valley, California. *Quaternary International*, v. 178, p. 246-260.

Negrini, R.M., Wigand, P.E, Draucker**, S., Gobalet, K., Gardner, J.K., Sutton, M.Q., Yohe II., R.M., 2006. The Rambla Highstand Shoreline and the Holocene lake level history of Tulare Lake, California. *Quaternary Science Reviews,* v. 25, p. 1599-1618.

Gardner, J.K., **Negrini, R.M**., Sutton, M.Q., Wigand, P.E., Yohe II, R., 2005. A Middle Holocene radiocarbon date and the geologic context of human occupation in the Tulare Lake Basin of California, *Journal of California Great Basin Anthropology*, v. 25, p. 80-88.

Benson, L., S. Lund, **R. Negrini,** B. Linsley, M. Zic*, 2003, Response of North American Great Basin lakes to Dansgaard-Oeschger oscillations. *Quaternary Science Reviews,* v. 22, pp. 2239-2251.

Benson, L., J. Liddicoat, J. Smoot, A. Sarna-Wojcicki, **R. Negrini,** S. Lund, 2003, Age of the Mono Lake excursion and associated tephra. *Quaternary Science Reviews,* v. 22, pp. 135-140.

Reheis, M., Redwine, J., Adams, K., Stine, S., Parker*, K., **Negrini R**., Burke, R., Kurth, G., McGeehin, J., Paces, J., Phillips, R., Sarna-Wojcicki, A., and Smoot, J., 2003. Pliocene to Holocene lakes in the western Great Basin: New perspecitves on paleoclimate, landscape dynamics, tectonics, and paleodistribution oof aquatic species; *in* Easterbrook, D.J., ed., Quaternary Geology of the United States, INQUA 2003 Field Guide Volume, Desert Research Institute, Reno, NV, p. 155-194.

Negrini, R.M., 2002, Pluvial lake sizes in the northwestern Great Basin throughout the Quaternary Period. *In*: Eds. D. Currey, D. Madsen, and R. Hershler*,* Great Basin Aquatics Systems History*, Smithson. Contr. Earth Sci., 31,* Smithsonian Press, pp. 17-59.

Zic*, M., **R. Negrini,** P. Wigand, 2002, Evidence of synchronous climate change across the Northern Hemisphere between the North Atlantic and the northwestern Great Basin, United States. *Geology,* v. 30, pp. 635-638.

Negrini, R.M., D.B. Erbes*, K.Faber**, A. M. Herrera**, A.P. Roberts, A. Cohen, M. Palacios-Fest, P. Wigand, F. Foit, 2000, A Paleoclimate record for the last 250,000 years from Summer Lake, Oregon, U.S.A.: I. Age control and magnetic lake level proxies. *Journal of Paleolimnology,* v. 24, pp. 125-149.

Cohen, A., M. Palacios-Fest, P. Wigand, **R. Negrini**, D.B. Erbes*, 2000, A Paleoclimate record for the last 250,000 years from Summer Lake, Oregon, U.S.A.: II. Lithostratigraphy, ostracodes, and pollen. *Journal of Paleolimnology*. v. 24, pp. 150-181.

Negrini, R.M., D.B. Erbes*, A.P. Roberts, K.L. Verosub, and A.M. Sarna-Wojcicki, C. Meyer, 1994, Repeating waveforms initiated by a 100-200 ka excursion in western North America: Implications for geomagnetic field behavior during polarity transitions and subsequent secular variation, *Journal of Geophysical Research,* v. 99, pp. 24,105-24,119.

Herrero-Bervera, E., C. Helsely, A. Sarna-Wojcicki,K. Lajoie, C. Meyer, B. Turin, J. Donnely-Nolan, M. McWilliams, **R.M. Negrini**, and J. Liddicoat, 1994, Age and correlation of a paleomagnetic episode in the western United States by 40Ar/39Ar dating and tephrochronology: The Jamaica, Blake, or a new polarity episode?, *Journal of Geophysical Research,* v. 99, pp. 24,091-24,103.

Roberts, A. P., K.L Verosub, and **R.M. Negrini**, 1994. Relative paleointensity studies of lacustrine sediments, Lake Chewaucan, western United States, *Geophysical Journal International,* 118, 101.

Darke, R., and **R.M. Negrini**, 1993. Recognition and analysis of precessing elliptical motion in paleomagnetic records, *Journal of Geophysical Research,* v. 98, pp. 1751-1757.

Negrini, R. **M.**, and J.O. Davis, 1992. Dating late Pleistocene pluvial events and tephras by correlating paleomagnetic secular variation records from the western Great Basin, U.S.A., *Quaternary Research*., v. 38, pp. 46-59.

Gobalet, K.W. and **R.M. Negrini**, 1992. Evidence for endemism in fossil tui chub (Gila bicolor) from Pleistocene Lake Chewaucan, Oregon, *Copeia*, v.1992, pp. 539-544.

Negrini, R. **M.**, K.L. Verosub, and J.O. Davis, 1988. The middle to late Pleistocene geomagnetic field recorded in fine-grained sediments from Summer Lake, Oregon, and Double Hot Springs, Nevada, U.S.A., *Earth and Planetary Science Letters*, v. 87, pp. 173-192.

Negrini, R.M., K.L. Verosub, and J.O. Davis, 1987. Long-term nongeocentric axial dipole directions and a geomagnetic excursion from the middle Pleistocene sediments of the Humboldt River Canyon, Pershing County, Nevada. *Journal of Geophysical Research*, v. 92, p. 10,617-10,627.

Negrini, R.M., J.O. Davis, and K.L. Verosub, 1984. Mono Lake geomagnetic excursion found at Summer Lake, Oregon. *Geology*, v. 12, p. 643-646.

PAPERS IN PREPARATION (*grad student coauthor; **undergraduate, ***high school student coauthor)

Reagan, J., K. Padilla, R. LaFever, A. Jacobsen, **R. Negrini**, in review, N-alkanes and grass phytoliths used to test a paleoclimate record from a lake with poor pollen preservation and low organic matter, *in Eds.* S. Starratt, M. Rosen, From Saline to Freshwater: The Diversity of Western Lakes in Space and Time, *Geological Society of America Special Paper* 23-IX-15

Van Grinsven*, M., **R. Negrini**, in review, Glaciogenic, Geomorphic, and Insolation effects during MIS 2 on the lacustrine sediment flux of Tulare Lake, CA, *Quaternary International.*

EXTERNALLY FUNDED GRANTS AND CONTRACTS (total funding=**$11.9M;** >$250k/yr**)**

2015: $4,832,291 funded by the National Science Foundation for a five-year project entitled "CSUB CREST Phase II: Climate Change and Natural Resource Solutions for Water-Limited, Paired Mountain/Valley Systems" (w/ Gillespie, Krugh, Pratt, Saini, Montoya, Baron, Andrews, Jacobsen).

2015: $103,417 funded by CALFlows consortium project entitled "A Potential Opportunity Forecast on the Beneficial Use of Oil Field Water in the State of California" (w/ Cabrales, Ampatzidis, Gillespie, Saini, Michieka, and Paggi).

2014: $90,293 funded by the National Science Foundation for a one-year project entitled "The extended – unextended transition in the Sierra Madre Occidental volcanic province, Mexico: Developing collaborative research and research training in volcanology and tectonics (w/ Andrews).

2013: $53,663 funded by the National Science Foundation Geomorphology and Land Use Dynamics Program for a two-year project entitled "Collaborative research: Millennial variability of hillslope dynamics and alluvial aggradation in semiarid regions: a view from the southern hemisphere (w/ Antinao and McDonald).

2013: $99,902 funded by the National Science Foundation for a one-year project entitled "Linking precipitation and runoff models to lake water balance models to improve stream discharge estimates and interdisciplinatry (w/ K. Adams).

2011: $5,000,367 funded by the National Science Foundation CREST program for a five-year project entitled "CSUB Center for Climate Change and Carbon Sequestration" (with Horton, Loewy, Gillespie, Baron, Mickler, Montoya)

2010: $183,440 funded by the National Science Foundation Geophysics Program for a two-year project entitled "The Laschamp and Mono Lake Excursions in High Deposition Rate Sediments from Summer Lake, Oregon, USA" (with R. Horton)

2009: $54,354 funded by Occidental Petroleum Elk Hills, Inc. for "Identification and datings of volcanic ashes from an unspecified well, Kern County, CA (with S. Loewy, D. Baron)

2008: $38,225 funded by Chevron, USA, Inc. for "Identification and Dating of Volcanic Ashes from the Kern River Formation, Kern County, CA"

2004: $121,000 funded by the Kern Water Bank Authority through CA AB303 for the Hydrogeology of the Kern Fan Element and Implications on Local Groundwater Management of the Kern Water Bank. (with D. Baron, J. Gillespie, and R. Horton)

2003: $400,000 funded by the National Science Foundation Geodiversity Program for the paleoclimate and flooding history to of the southern San Joaquin Valley. (with D. Baron, M. Palacios-Fest)

2003: $115,000 funded by the Kern Water Bank Authority through CA AB303 for the 3-D characterization and monitoring of aquifer attributes in the Kern Water Bank. (with D. Baron, J. Gillespie, and R. Horton)

2001: $151,000 funded by the US Dept. Agriculture for geologic processes governing the aquifer characteristics of the Kern Water Bank.

2001: $35,000 funded by the CA Dept. Water Resources for the Quaternary shorelines of Tulare Lake and implications on preferential locations of archeological sites.
1998: $84,705 from the American Association of Petroleum Geologists, its foundation, and the Western States Petroleum Association to establish a geotechnology center at California State University, Bakersfield (with J. Gillespie and R. Horton)
1995: $169,000 funded by the Kern Valley Hospital District for the characterization and monitoring of a water discharge plume (with R. Crewdson).
1995: $21,096 funded by the Kern Valley Hospital District for an electrical resistivity study of a water discharge plume.
1994: $13,040 funded by the Department of Water Resources of the State of California for electrical resistivity study of the Kern County Water Bank.
1994: $8,040 funded by Texaco Exploration and Production for electrical resistivity study of the Junction Water Plant.
1993: $3,500 funded as subcontract by Desert Research Institute for paleomagnetic correlation of pluvial lake sediments from the Black Rock Desert and Long Valley localities in northern Nevada.
1991: $195,000 funded by National Science Foundation for two-year project entitled "High-resolution paleoclimate and paleomagnetic records from the middle to late Pleistocene, nonmarine sediments in south-central Oregon."
1991: $15,000 funded by Texaco Philanthropic Incorporated for purchase of electrical resistivity equipment.
1990: $6,932 funded by Texaco Philanthropic Incorporated for purchase of earthquake seismometer and seismograph (with R Horton).
1988: $98,626 funded by National Science Foundation for two-year project entitled "Testing models of climate-induced geomagnetic field behavior with a record of Pleistocene paleomagnetic directions."
1987: $22,036 funded by American Chemical Society Petroleum Research Fund for two-year project entitled "Constraining the stratigraphic, paleogeographic, and geo-magnetic applications of paleomagnetism.

PROFESSIONAL FIELD TRIP GUIDEBOOK CONTRIBUTIONS

Negrini, R., D. Baron, J. Gillespie, R. Horton, J. Huff**, 2005. Final project report Phase II: 3-D characterization and monitoring of aquifer attributes in the Kern Water Bank, State of California AB303 program, CSU Bakersfield contributions, 37 p., 12 tables, 23 figures.

Negrini, R., D. Baron, J. Gillespie, R. Horton, P. Philley*, C. Register*, 2003. Final project report Phase I: 3-D characterization and monitoring of aquifer attributes in the Kern Water Bank, State of California AB303 program, CSU Bakersfield contributions, 37 p., 2 tables, 19 figures.

Negrini, R.M., S. Pezzopane, T. Badger, Eds., 2001, Quaternary Studies near Summer Lake, Oregon, Field Guidebook for 9th Ann. Pac. NW Cell Field Trip, Friends of the Pleistocene (not peer-reviewed).

Negrini, R.M., 2001, Introduction in Quaternary Studies near Summer Lake, Oregon, Negrini, R.M., S. Pezzopane, T. Badger, Eds., Field Guidebook for 9th Ann. Pac. NW Cell Field Trip, Friends of the Pleistocene (not peer-reviewed).

Negrini, R.M., S. Pezzopane, J. Licciardi, G. Simposon, G. Berger, T. Badger, 2001, Road Log in Quaternary Studies near Summer Lake, Oregon, Negrini, R.M., S. Pezzopane, T. Badger, Eds., Field Guidebook for 9th Ann. Pac. NW Cell Field Trip, Friends of the Pleistocene (not peer-reviewed).

Negrini, R.M., 2001, Magnetism of Chewaucan sediments: Implications for stratigraphy, paleolake-level, and the behavior fo the Earth's magnetic field, in Quaternary Studies near Summer Lake, Oregon, Negrini, R.M., S. Pezzopane, T. Badger, Eds., Field Guidebook for 9th Ann. Pac. NW Cell Field Trip, Friends of the Pleistocene (not peer-reviewed).

Gardner, C., **Negrini, R.M.**, 2001, Paleomagnetic corrleation of the Shevlin Park Tuff, central Oregon, with tephra layer SL-JJ at Summer Lake in south-central Oregon, in Quaternary Studies near Summer Lake, Oregon, Negrini, R.M., S. Pezzopane, T. Badger, Eds., Field Guidebook for 9th Ann. Pac. NW Cell Field Trip, Friends of the Pleistocene (not peer-reviewed).

Sarna-Wojcicki, **R.M. Negrini**, D.P. Adam, J.P. Walker, and E. Wan, 2001. The Ana River Core: Extending the record of the Ana River section back in time: An addendum to the 2001 Friends of the Pleistocene, Pacific Cell, Field Trip Guide to the Summer Lake, Oregon, Area, in Quaternary Studies near Summer Lake, Oregon, Negrini, R.M., S. Pezzopane, T. Badger, Eds., Field Guidebook for 9th Ann. Pac. NW Cell Field Trip, Friends of the Pleistocene (not peer-reviewed).

Miller, D., **R. Negrini**, M. McQuire, C. Huggins, *M. Minner, B. Hacker, A. M. Sarna-Wojcicki, C. Meyer, R. Fleck, S. Reid, 1998, New upper age constraint on the Kern River Formation, *in*, S.A. Reid, ed. *Outcrops of the Eastern San Joaquin Basin*, San Joaquin Geological Society (not peer-reviewed).

Blackwell**, M. and **R. Negrini**, 1992, Dating sediments at an archeological site in the Tulare Lake basin by correlating paleomagnetic secular variation records: Work in progress, published in the annual proceedings of the *California Society of Archeology*.

Negrini, R.M. and K.L. Verosub, 1987. Paleomagnetism and the Pleistocene geology of pluvial lakes in the northwestern region of the Great Basin: Work in progress. *In: Introduction to the Pleistocene Geology of Northwestern Lake Lahontan, Nevada: Field Guide for the 1987 Friends of the Pleistocene, Pacific Cell Outing*. Published by the Desert Research Institute of the University of Nevada, Reno, Nevada.

TECHNICAL REPORTS

Crewdson, R. A., **R.M. Negrini**, and *I. Ewing, 1995, Final Report: The nature and extent of a water discharge plume in Mountain Mesa, Ca determined from resistivity soundings, submitted to the *California Regional Water Quality Control Board*, 40 p.

Negrini, R.M., *I. Ewing, **C. Jamison, **M. Herd, **T. Dao, 1994, Electrical resistivity study of the Junction Water Plant, Bakersfield, California, submitted to the *California Regional Water Quality Board*, 32 p.

Negrini, R., R. Crewdson, *I. Ewing, **C. Jamison, **M. Herd, **T. Dao, 1994, A DC electrical resistivity study of a portion of the Kern Water Bank Region, Kern County, CA, submitted to *California Department of Water Resources*, 31 p.

ADMINISTRATIVE SERVICE

2014-15: Director, CSU Bakersfield California Energy Research Center (CERC)
2011-15: Director, NSF Center of Research Excellence in Science and Technology (CREST)
2012-14: Vice-Chair, CSU Bakersfield Academic Senate
2005-06: President, San Joaquin Geological Society
2000-01: Vice-President, San Joaquin Geological Society
1990-95: Chair, Department of Physics and Geology

HONORS AND AWARDS

2012-13: CSUB Outstanding Research Faculty Award
2008-09: Distinguished Educator Award, Pac. Sect., American Assoc. of Petrol. Geol.
1998: Kern County Alliance of Business "Hall of Fame" Award for Outstanding Teaching
1997-98: CSUB Outstanding Professor
1994-98: "Golden Apple" Certificate of Appreciation from Kern County School Administrators for leadership, support, and involvement in the Project SCALE science program at Stella Hills Elementary School.