Andrew V. Zuza, Ph.D.

Assistant Professor
Nevada Bureau of Mines and Geology
Mackay School of Earth Sciences and Engineering
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EDUCATION

Ph.D. University of California, Los Angeles 2016
Geology
Dissertation: "Tectonic Evolution of the Northeastern Tibetan Plateau"
Committee: An Yin, Craig Manning, T. Mark Harrison, and Yongwei Sheng

B.S. Cornell University, Ithaca, NY 2011
Science of Earth Systems - Geologic Sciences,
magna cum laude with Distinction in Research
Honors Thesis: "Late Cenozoic Volcanism in the Hövsgöl Rift Basin: Source, Genesis, and Evolution of Intraplate Volcanism in Mongolia"
Adviser: Christopher Andronicos

Field Camps: Field Mapping and Geology of the Central Andes (Argentina); Frontiers Abroad New Zealand Field Mapping

Research interests: Structural geology, continental deformation, geologic mapping, regional tectonics with emphasis on Asia and Cordillera, geochronology, thermochronology, metamorphic petrology, active tectonics, and analogue modeling.

PROFESSIONAL APPOINTMENTS

2016-present	Assistant Professor, Nevada Bureau of Mines and Geology and Mackay School of Earth Sciences and Engineering, University of Nevada, Reno
2016	Instructor, Black Hills Natural Science Field Station, South Dakota School of Mines and Technology
2011-2016	Research/Teaching Assistant, University of California, Los Angeles

TEACHING EXPERIENCE

GEOL 451: Summer Field Camp (UNR) – Summer 2017
GEOL 260: Introductory Field Geology (UNR) – Spring 2017
GEOL 410: Field geology (SDSMT) – Summer 2016
EPS 121: Summer field camp (UCLA; TA) – Summer 2012, 2014, and 2015
EPS 16: Major Events in the History of Life (UCLA; TA) – Winter 2014 and 2015
EPS 112: Structural Geology (UCLA; TA) – Fall 2013, Spring 2013, and Fall 2014
ESS 13: Natural Disasters (UCLA; Grader) – Winter 2012
EAS 3050: Climate Dynamics (Cornell; Grader) – Fall 2010
Naturalist Outreach Practicum: Local fossils and geology (Cornell; Lecturer) – 2009

RESEARCH GRANTS/AWARDS

2017 New Scholarly Endeavor Grant: "What Can a Tilted Pluton Tell Us about Basin and Range Extension?" (UNR)
2017 Structural Mapping around Wells, NV, and Implications for Geothermal Exploration (Lawrence Berkeley National Laboratory)
2015 Dissertation Year Fellowship (UCLA)
2014 Office of Instructional Development Mini-Grant (UCLA)
2014 Graduate Division (AGEP) Professional Development Award (UCLA)
2013 East Asia and Pacific Summer Institutes China Fellow (NSF)
2013 Office of Instructional Development Mini-Grant (UCLA)
2011 Chancellor's Prize (UCLA)
2011 Chester Buchanan Memorial Award (Cornell)
2011 Academic Excellence Award in the Science of Earth Systems major (Cornell)
2010 Engineering Learning Initiatives (Cornell)
2010 Keck-ExxonMobil Enhanced grant (Keck)
2010 Keck Geology Undergraduate Research (Keck)

SERVICE AND OTHER PROFESSIONAL ACTIVITIES

Primary convener for AGU Fall Meeting session "Linking crustal deformation at multiple temporal and spatial scales in the Himalayan-Tibetan collisional orogen" (2017)
Early Career Geoscience Faculty workshop - Association of Geoscience Teachers (2017)
Nevada Petroleum and Geothermal Society Student Research Grant Committee (2017)
Reviewer and editor of NBMG Report 56: "Geology and Geophysics of White Pine and Lincoln Counties, Nevada, and Adjacent Parts of Nevada and Utah: The Geologic Framework of Regional Groundwater Flow Systems." 146 pp., 4 plates (2017)
UNR Graduate Student Association Fall Poster Symposium judge (2016)
Earth Science Week Open House and Fieldtrip leader (2016)
Field Conference: Tectonic Evolution of the North American Cordillera organizer (2015-2016)
Fiat lux seminars (UCLA) organizer (2012-2015)
Reviewer for Tectonophysics and EPSL (since 2013), Nature Scientific Reports (since 2016), Geology (since 2016), Marine and Petroleum Geology (since 2016), Journal of Geophysical Research (2017), and Tectonics (2017)
Earth, Planetary, and Space Sciences Colloquium (UCLA) coordinator (2013)

MEMBERSHIP OF SCIENTIFIC ASSOCIATIONS

Geological Society of America – 2010 to present
American Geophysical Union – 2011 to present
Geological Society of Nevada – 2016 to present
Nevada Petroleum and Geothermal Society – 2017

PUBLICATIONS AND MANUSCRIPTS

Published papers

9. Zuza, A. V., and Yin, A., accepted, Balkatach hypothesis: A new model for the evolution of the Pacific, Tethyan, and Paleo-Asian oceanic domains: Geosphere.
8. Wu, C., **Zuza, A. V.**, Yin, A., Liu, C., Reith, R. C., Zhang, J., Liu, W., and Zhou, Z., 2017, Geochronology and geochemistry of Neoproterozoic granitoids in the central Qilian Shan

of northern Tibet: Reconstructing the Amalgamation Processes and Tectonic History of Asia: Lithosphere, in press.

7. Wu, C., Wang, B., Zhou, Z., Wang, G., **Zuza, A. V.**, Liu, C., Jiang, T., Liu, W., and Ma, S., 2017, The relationship between magma and mineralization in Chaobuleng iron polymetallic deposit, Inner Mongolia: Gondwana Research, v. 45, p. 228-253.
6. **Zuza, A. V.**, Yin, A., Lin, J., Sun, M., 2017, Spacing and strength of active continental strike-slip faults: Earth and Planetary Science Letters, v. 457, p. 49-62.
5. **Zuza, A. V.**, Yin, A., 2016, Continental deformation accommodated by non-rigid passive bookshelf faulting: An example from the Cenozoic tectonic development of northern Tibet: Tectonophysics, v. 677-678, p. 227-240.
4. **Zuza, A. V.**, Cheng, X., Yin, A., 2016, Testing models of Tibetan Plateau formation with Cenozoic shortening estimates across the Qilian Shan-Nan Shan thrust belt: Geosphere, v. 12, no. 2, p. 501-532.
3. Yin, A., **Zuza, A. V.**, Pappalardo, R. T., 2016, Mechanics of evenly spaced strike-slip faults and its implications for the formation of tiger-stripe fractures on Saturn's moon Enceladus: Icarus, v. 266, p. 204-216.
2. Wu, C., Yin, A., **Zuza, A. V.**, Zhang, J., Liu, W., Ding, L., 2016, Pre-Cenozoic Geologic History of the Central and Northern Tibetan Plateau and the Role of Wilson Cycles in Constructing the Tethyan Orogenic System: Lithosphere, v. 8, no. 3, p. 254-292.
1. Gao, R., Wang, H., Yin, A., Kang, Z., **Zuza, A. V.**, Li, W., Xiong, X., 2013, Tectonic Development of the northeastern Tibetan Plateau as constrained by high-resolution deep seismic-reflection data: Lithosphere, v. 5, no. 6, p. 555-574.

Manuscripts in revision or review

4. Zhang, Y., Zhang, J., Chen, X., and **Zuza A. V.**, in review, Early Paleozoic Tectonic Setting of the Xiangshan Group in the eastern Hexi Corridor, NW China: Constraints from chert geochemistry and sedimentary analysis: Gondwana Research.
3. Li, B., Chen, X., **Zuza, A. V.**, Hu, D., Huang, P., and Xu, S., in review, Cenozoic cooling history of the North Qilian Shan, northern Tibetan Plateau, and middle Miocene initiation of the Haiyuan fault: Constraints from apatite- and zircon-fission track thermochronology: Lithosphere.
2. **Zuza, A. V.**, and Carlson, C. W., in revision, What can strike-slip fault spacing tell us about the plate boundary of western North America?: Geophysical Research Letters.
1. **Zuza, A. V.**, Wu. C., Reith R. C., Yin, A., Li, J., Zhang, J., Zhang, Y., Wu, L., and Liu, W., in revision, Tectonic evolution of the Qilian Shan: A Paleozoic orogen reactivated in the Cenozoic: Geological Society of America Bulletin.

Non-peer reviewed works: theses and fieldtrip guides

4. Koehler, R. D., **Zuza, A. V.**, Faulds, J. E., 2016, A River Runs Through It—Geology along the Truckee River Valley from Reno to Pyramid Lake: Nevada Bureau of Mines and Geology Education Series Fieldtrip Guide, E-59, 19 pp.
3. **Zuza, A. V.**, 2016, Tectonic Evolution of the Northeastern Tibetan Plateau [Ph.D. Dissertation]: University of California, Los Angeles, 521 pp.
2. **Zuza, A. V.**, 2011, Late Cenozoic Volcanism in the Hövsgöl Rift Basin: Source, Genesis, and Evolution of Intraplate Volcanism in Mongolia [B.S. Honor Thesis]: Cornell University, 31 pp.

1. **Zuza, A.**, Bat-Erdence, A., 2011, Late Cenozoic Volcanism in the Hövsgöl Rift Basin: Source, Genesis, and Evolution of Intraplate Volcanism in Mongolia, in Keck Geology Consortium Proceedings of the Twenty-Fourth Annual Keck Research Symposium in Geology, edited by Varga, R. J., p. 272-280.

ABSTRACTS AND PRESENTATIONS

Oral Presentations

12. Zuza*, A. V., 2017, Tectonic evolution of the Qilian Shan, North Tibet: Some Paleozoic and Cenozoic perspectives: Seminar, Chinese Academy of Geological Sciences, Beijing, China, August 2017.

11. Zuza*, A. V., 2016, Testing Tibetan Plateau formation models: Insights from the Qilian Shan-Nan Shan thrust belt: University of Nevada, Reno, NV, March 2016.

10. Zuza, A. V., Yin, A., Wu, C., 2015, The Neoproterozoic-Paleozoic tectonic history of the Qilian Shan and its control on the development of the Tibetan Plateau's northern margin: GSA Abstracts with Programs, v.47, n. 7.

9. Yin, A., **Zuza, A. V.**, Lin, J., 2015, Strike-slip Fault Spacing and Insights into Continental Tectonics: Seismology-tectonics seminar, Department of Earth and Space Sciences, University of California, Los Angeles, CA, October 2015.

8. Zuza*, A. V., 2015, Cenozoic tectonic evolution of the northeastern Tibetan Plateau: Insights from the Qilian Shan thrust belt: Caltech Geology Club Seminar, Pasadena, CA.

7. Zuza, A. V., Yin, A., 2014, Initial and Boundary Conditions for the Evolution of the Central Asian Orogenic System (CAOS): The Balkatach Hypothesis: GSA Abstracts with Programs, v. 46, n. 6, p.789

6. Zuza, A. V., Yin, A., 2013, Ductile bookshelf faulting: A new kinematic model for Cenozoic deformation in northern Tibet: AGU Fall Meeting Abstracts, v. 1, p. 2.

5. Zuza, A. V., Yin, A., 2013, Testing the TWINS hypothesis: Were Greater North China and Laurentia linked in the Archean and Proterozoic?: GSA Abstracts with Programs, v. 45, n. 7, p. 463.

4. Zuza, A. V., Zhang, Y., Wu, C., Gao, R., Yin, A., Liu, W., 2013, Tectonic history of the Tibetan Plateau: Insights from the Qilian Shan-Nan Shan thrust belt: EAPSI ceremony, Beijing, China, August 2013.

3. Zuza, A. V., Yin, A., 2013, The Greater China: A Sequential Palinspastic Reconstruction through the Phanerozoic: GSC-GSA Joint Meeting, Chengdu, China, June 2013.

2. Zuza*, A. V., Reith, R. C., 2012, Tectonic Evolution of the Qilian Shan in Northern Tibet: A Paleozoic Orogen Reactivated in the Cenozoic: Seismology-tectonics seminar, Department of Earth and Space Sciences, University of California, Los Angeles, CA, October 2012.

1. Zuza, A., Andronicos, C. L., Kay, S. M., 2011, Late Cenozoic Volcanism in the Hövsgöl Rift Basin: Source, Genesis, and Evolution of Intraplate Volcanism in Mongolia: Keck Geology Consortium, Schenectady, New York, April 2011.

*Indicates invited talk or colloquium seminar

Poster Presentations

13. Zuza, A. V., Li, B., Tremblay, M. M., Chen, X., Shuster, D. L., and Yin, A., 2016, Cenozoic Development of the Northern Tibetan Plateau and the Onset of Thrust and Strike-slip Faulting: Constraints from Apatite and Zircon (U-Th)/He and Fission-Track Thermochronometry: AGU Fall Meeting Abstracts.

12. Wu, C., Yin, A., **Zuza, A. V.**, Liu, W., 2015, U-Pb zircon geochronology from the basement of the Central Qilian Shan: Implications for tectonic evolution of northeastern Tibetan Plateau: AGU Fall Meeting Abstracts.
11. **Zuza, A. V.**, Yin, A., Lin, J., 2015, The stress shadow effect: a mechanical analysis of the evenly-spaced parallel strike-slip faults in the San Andreas fault system: AGU Fall Meeting Abstracts.
10. Yin, A., **Zuza, A. V.**, Pappalardo, R., 2015, The Stress Shadowing Effect of the Tiger-stripe Fractures on Saturn's Moon Enceladus: AGU Fall Meeting Abstracts.
9. Lin, J., **Zuza, A.V.**, Yin, A., 2015, Quantifying the Relationship between Strike-slip Fault Spacing and Brittle Crust Thickness in Continental Settings based on Sandbox Experiments: AGU Fall Meeting Abstracts.
8. Yin, A., **Zuza, A. V.**, 2015, Spacing of the Tiger-stripe Fractures on Saturn's Moon Enceladus: A Mechanical Model and its Implications for the Ice-shell Thickness of the South Polar Terrain: JPL-UCLA Planetary Science Workshop, Los Angeles, CA, May 2015.
7. **Zuza, A. V.**, Yin, A., Li, Jianhua, 2014, Deciphering the coupled Paleozoic and Cenozoic tectonic history of the Qilian Shan, northeastern Tibetan Plateau: AGU Fall Meeting Abstracts, v. 1, p. 4563.
6. **Zuza, A. V.**, Reith, R. C., Yin, A., Dong, S., Liu, W., Zhang, Y., Wu, C., 2013, Structural and tectonic framework of the Qilian Shan-Nan Shan thrust belt, northeastern Tibetan Plateau: Acta Geologica Sinica (English Edition), v. 87, n. s1, p. 1-3.
5. **Zuza, A. V.**, Yin, A., Reith, R. C., Dong, S., Liu, W., Wu, C., Wu, L., Gong, J., Zhang, J., 2012, Cenozoic tectonic development of the Qilian Shan-Nan Shan (northeastern Tibetan Plateau): A preliminary synthesis: AGU Fall Meeting Abstracts, v. 1, p. 2635.
4. Reith, R. C., Yin, A., **Zuza, A. V.**, Dong, S., Liu, W., Wu, C., Wu, L., Gong, J., Zhang, J., 2012, Structural framework of the Cenozoic Qilian Shan-Nan Shan thrust belt, northeastern Tibetan Plateau: AGU Fall Meeting Abstracts, v. 1, p. 2675.
3. **Zuza, A.**, Andronicos, C. L., Kay, S. M., 2011, Late Cenozoic Volcanism in the Hövsgöl Rift Basin: Source, Genesis, and Evolution of Intraplate Volcanism in Mongolia: Cornell Undergraduate Research Board Spring Forum, Ithaca, New York, April 2011.
2. **Zuza, A.**, Andronicos, C. L., Kay, S. M., 2011, Late Cenozoic Volcanism in the Hövsgöl Rift Basin: Source, Genesis, and Evolution of Intraplate Volcanism in Mongolia: Engineering Learning Initiatives, Ithaca, New York, April 2011.
1. Gravley, D. M., Wandres, A., Bova, S.C., House, B., Kravitz, K.A., Spera, S., Walsh, D., Windham, C.J., **Zuza, A.**, Dohaney, J., 2010, Undergraduate research projects on Mt. Doom in New Zealand: A new model for study abroad experiences: GSA Abstracts with Programs, v. 42, n. 5, p. 439.

STUDENTS ADVISED

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Michael Say – MS, msay@nevada.unr.edu
Angelica Rodriquez – MS, arod@nevada.unr.edu