

Colin B. Amos

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1. Background**a. Education**

Ph.D., Geological Sciences, University of California, Santa Barbara, 2007

B.S., Geology, University of California, Davis, 2002

b. Appointments

Associate Professor, *2016 – present*

Geology Department, Western Washington University

Erskine Visiting Fellow, *January – April 2019*

Department of Geological Sciences, University of Canterbury, Christchurch, NZ

Assistant Professor, *2012 – 2016*

Geology Department, Western Washington University

Postdoctoral Fellow, *2011 – 2012*

University of California, Berkeley

NSF Earth Sciences Postdoctoral Fellow, *2009 – 2011*

University of California, Berkeley

Senior Staff Geologist, *2007 – 2009*

William Lettis & Associates, Inc., Walnut Creek, CA

2. Teaching**a. Courses taught (Western Washington University)**

GEOL 101 – Introduction to Geology (S13, W14, W15, W16, W18, W20)

GEOL 318 – Structural Geology (F12, W13, W14, S14, W15, S15, W16, W17, W18, F19, W20)

GEOL 409/410 – Spring Field Camp (S16, S17, S18, S20)

GEOL 412/512 – Tectonic Geomorphology (S13, S14, F14, F15, F17)

GEOL 451/551 – Active Tectonics Seminar (S15, S17, S18, S20)

b. Advising

Graduate (Primary and co-advisor):

1. Elizabeth Haddon (MS, 2015) – *Surface slip during large Owens Valley earthquakes*

2. Adrian Bender (MS, 2015) – *Differential uplift and incision of the Yakima River terraces*

3. Jaime Delano (MS, 2016) – *Comparing short and long-term deformation in the Wynoochee River valley, southern Olympic Mountains, WA*
4. Benjamin Carlson, co-advised with Liz Schermer (MS, 2017) – *Late Pleistocene to recent tectonic deformation along the Entiat Fault, Washington*
5. Gunnar Speth (MS, 2017) – *Testing the time-dependence of slip along the Western Klamath Fault Zone, Oregon*
6. Cody Duckworth, co-advised with Liz Schermer (MS, 2019) – *Slip and crustal strain accumulation along the Sadie Creek fault, Northern Olympic Mountains, WA*
7. Katherine Alexander (2017 – present) *Rates and kinematics of active faults in the central Oregon Cascades*
8. Chantel Jensen (2019 – present) *Geomorphic evolution of the Hikurangi forearc*
9. Malinda Zuckerman, co-advised with Jackie Caplan-Auerbach (MS, 2019 – present) *Displaced rocks in the 2019 Ridgecrest Earthquake*

Graduate (Committee member):

1. Cassidy Dmitroff (MS, 2014)
2. Will Cary (MS, 2015 – 2018)
3. Sarah Francis (MS 2016 – 2019)

Undergraduate:

1. Skyler J. Sorsby (2012 – 2013)
2. Tabor Reedy (2014 – 2015)
3. Kylie Esselström (2016 – 2017)
4. Michaela Bonenburger (2019 – present)

External:

1. Sharon Hornblow, University of Canterbury (BSc Hons, 2010)
2. Timothy Stahl, University of Canterbury (PhD, 2014)

3. Scholarship

a. Research interests

I am a field geologist specializing in active tectonics and geomorphology. I am broadly interested in linkages between crustal deformation and surface processes. I use a variety of research tools in the field and laboratory, including geologic and structural mapping, topographic surveying, lidar, paleoseismic trenching, geodesy, GIS, and geochronology. My current work follows three general research threads: 1) understanding the evolution of permanent strain and topography in subduction zone forearcs, 2) characterizing the rates and kinematics of active faulting in the Cascadia backarc, and 3) reconstructing paleoearthquake records within deforming continental interiors. My work is also regionally focused, with continuing projects in the eastern Sierra Nevada of California, the Pacific Northwest, and New Zealand.

b. External funding

12. U.S. Geological Survey EdMap - \$17,500 (submitted) *New surficial geologic map of the Western Sadie Creek fault system, Olympic Peninsula, Washington*

11. U.S. Geological Survey EdMap - \$17,500 (funded, June 2018 – May 2019) *New surficial geologic map of the Sadie Creek fault system, Olympic Peninsula, Washington*
10. U.S. Geological Survey IPA - \$36,024, PI Portion (funded, October 2017 – September 2018) *Collaborative Research: Paleoseismology of the Lake Creek – Boundary Creek fault zone, Olympic Peninsula, WA*
9. NSF Tectonics - \$241,075, WWU Portion (not funded, June 2016) *Collaborative Research: The role of inherited faults in localizing crustal strain in northern Cascadia*
8. U.S. Geological Survey EdMap - \$17,499 (funded, June 2016 – May 2017) *New surficial geologic map of the Western Klamath graben fault system, Klamath County, Oregon*
7. NSF Tectonics - \$170,496, WWU Portion (not funded, June 2015) *Collaborative Research: Testing the influence of Cascadia subduction earthquake cycle processes on Quaternary deformation of the Olympic Peninsula*
6. U.S. Geological Survey NEHRP – \$43,541, WWU portion (funded, June 2014 – May 2015) *Differential Uplift and Incision of the Yakima River Terraces: Collaborative Research with Western Washington University, University of Vermont and State Agricultural College, and University of California at Santa Barbara*
5. U.S. Geological Survey NEHRP – \$50,961, WWU portion (not funded, April 2015) *Comparing Short- and Long-Term Deformation Rates Along the Washington Coastline: Collaborative Research with Western Washington University and Smith College*
4. Pacific Northwest National Laboratory – \$39,097 (funded, February 2013 – May 2014) *Fluvial Analysis of Active Deformation in the Yakima Fold and Thrust Belt*
3. Southern California Earthquake Center – \$25,000 (funded, February 2012 – January 2013) *Surface Slip during Large Owens Valley Earthquakes: Compilation and Characterization of Geomorphic Offsets using GeoEarthscope Lidar Data*
2. NSF Earth Science Postdoctoral Fellowship – \$160,000 (funded, September 2009 – August 2011) *Evaluating temporal variations in fault slip-rate and fault interaction in the eastern California shear zone*
1. U.S. Geological Survey NEHRP – \$50,034 (funded, September 2009 – May 2011) *Refining the southern extent of the 1872 Owens Valley earthquake rupture – Paleoseismic investigations at Sage Flat and Haiwee Meadows, California (received by William Lettis & Associates, Inc.)*

3. External funding

1. WWU Faculty Summer Research Grant - \$6,000 (funded, 2020) *Do short-term mega-earthquake processes reflect longer-term geologic hazard over millennia?*

d. Publications (*graduate advisee, †undergraduate advisee)

Citation statistics as of December 10th, 2019, **Google Scholar**: 619 citations, h-index = 11

Papers in review:

20. Blisniuk, K., K. Scharer, W. Sharp, R. Burgmann, P. Williams, **C. Amos**, S. Zimmerman, M. Rymer (in revision, 2019) A revised position for the primary strand of the Pleistocene-Holocene San Andreas Fault in Southern California, *Science Advances*.
19. Stahl, T.A., J. Kears, A. Howell, A. Nicol, **C.B. Amos**, J.R. Pettinga, P. Villamor, and K.J. Clark (in review, 2019) Extreme surface rupture complexity of the 2016 Kaikōura, New Zealand earthquake, *Geology*.

Published papers:

18. Morell, K.D., C. Regalla, **C.B. Amos**, S.E.K. Bennett, L. Leonard, A. Graham, T. Reedy†, V. Levson, and A. Tekla (2018) Holocene surface rupture history of an active forearc fault redefines seismic hazard in southwestern British Columbia, Canada, *Geophysical Research Letters*, doi: 10.1029/2018GL078711.
17. *Speth, G., **C.B. Amos**, W. Amidon, G. Balco, A. Meigs (2018) Testing the time dependence of slip on the Western Klamath Lake fault zone, *Geological Society of America Bulletin*, doi: 10.1130/B31961.1.
16. *Carlson, B.M., E.R. Schermer, **C.B. Amos**, B.L. Sherrod, W.J. Stephenson, S.A. Mahan (2018) Holocene fault reactivation in the eastern Cascades, WA, submitted to *Bulletin of the Seismological Society of America*, 108 (5A): 2614-2633, doi: 10.1785/0120170228.
15. *Delano, J.E., **C.B. Amos**, J.P. Loveless, T. Rittenour, B. Sherrod, E. Lynch (2017) Influence of the megathrust earthquake cycle on active upper plate deformation in the Cascadia forearc of Washington State, *Geology*, doi: 10.1130/G39070.1.
14. Morell, K.D., C. Regalla, L. Leonard, **C.B. Amos**, and V. Levson, (2017) Late Quaternary rupture of a crustal fault system beneath Victoria, British Columbia, *GSA Today*, v. 27, doi: 10.1130/GSATG291A.1.
13. *Haddon, E.K., **C.B. Amos**, O. Zielke, A.S. Jayko, and R. Bürgmann (2016) Surface slip during large Owens Valley earthquakes, *Geochemistry, Geophysics, Geosystems*, doi: 10.1002/2015GC006033.
12. *Bender, A.M., **C.B. Amos**, P.R. Bierman, D.H. Rood, L. Staisch, H.M. Kelsey, and B.L. Sherrod (2016) Differential uplift and incision of the Yakima River terraces, *Journal of Geophysical Research - Solid Earth*, doi: 10.1002/2015JB012303.
11. **Amos, C.B.**, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt (2014) Uplift and seismicity driven by groundwater depletion in central California, *Nature*, v. 509, p. 483-486 doi: 10.1038/nature13275.
10. **Amos, C.B.**, S.J. Brownlee, D.H. Rood, G.B. Fisher, R. Bürgmann, P.R. Renne, and A.S. Jayko

- (2013) Chronology of Quaternary tectonic, geomorphic, and volcanic interactions and the tempo of fault slip near Little Lake, CA, *Geological Society of America Bulletin*, doi: 10.1130/B30803.1
9. Fisher, G.B., B. Bookhagen, and **C.B. Amos** (2013) Channel planform geometry and slopes from freely available high-spatial resolution imagery and DEM fusion: Implications for channel width scalings, erosion proxies, and fluvial signatures in tectonically active landscapes, *Geomorphology*, v. 194, p. 46-56, doi: 10.1016/j.geomorph.2013.04.011.
 8. **Amos, C.B.**, A.T. Lutz, A.S. Jayko, S. Mahan, G.B. Fisher, and J.R. Unruh (2013) Refining the southern extent of the 1872 Owens Valley Earthquake rupture through paleoseismic investigations in the Haiwee Area, California, *Bulletin of the Seismological Society of America*, v. 103, No. 2A, p. 1022-1037, doi: 10.1785/0120120024.
 7. Fisher, G.B., **Amos, C.B.**, Bookhagen, B., Burbank, D.W., and Godard, V., 2012, Channel widths, landslides, faults, and beyond: The new world order of high spatial resolution Google Earth imagery in the study of earth surface processes, in Whitmeyer, S.J., Bailey, J.E., De Paor, D.G., and Ornduff, T., eds., *Google Earth and Virtual Visualizations in Geoscience Education and Research: Geological Society of America Special Paper 492*, p. 1–22, doi:10.1130/2012.2492(01).
 6. C.C. Brossy, K.I. Kelson, **C.B. Amos**, J.N. Baldwin, B. Kozlowicz, D. Simpson, M.G. Ticci, A.T. Lutz, O. Kozaci, A. Streig, R. Turner, and R. Rose (2012) Map of the late Quaternary active Kern Canyon and Breckenridge faults, Southern Sierra Nevada, California, *Geosphere*, v. 8, doi:10.1130/GES00663.1.
 5. **Amos, C.B.**, J.J. Lapwood, D.C. Nobes, D.W. Burbank, U. Rieser, and A. Wade (2011) Palaeoseismic constraints on Holocene surface ruptures along the Ostler Fault, southern New Zealand, *New Zealand Journal of Geology and Geophysics*, v. 54, no. 4, p. 367-378, doi: 10.1080/00288306.2011.601746.
 4. **Amos, C.B.**, K.I. Kelson, D.H. Rood, D.T. Simpson, and R.S. Rose (2010) Late Quaternary slip rate on the Kern Canyon Fault at Soda Spring, Tulare County, California, *Lithosphere*, v. 2, no. 6, p. 411-417, doi: 10.1130/L100.1.
 3. **Amos, C.B.**, D.W. Burbank, and S.A.L. Read (2010) Along-strike growth of the Ostler fault, New Zealand, and consequences for drainage deflection above a non-propagating thrust, *Tectonics*, 112, doi:10.1029/2009TC002613.
 2. **Amos, C.B.**, and D.W. Burbank (2007) Channel-width response to differential uplift, *Journal of Geophysical Research – Earth Surface*, 112, F2010, doi:10.1029/2006JF000672.
 1. **Amos, C.B.**, D.W. Burbank, D.C. Nobes, and S.A.L. Read (2007) Geomorphic constraints on listric thrust faulting: Implications for active deformation in the Mackenzie Basin, South Island, New Zealand, *Journal of Geophysical Research – Solid Earth*, 112, B03S11, doi:10.1029/2006JB004291.

Technical reports:

7. *Bender, A.M., **C.B. Amos**, P.R. Bierman, D.H. Rood, L. Staisch, H.M. Kelsey, and B.L. Sherrod (2015) Differential uplift and incision of the Yakima River terraces: Collaborative Research with

Western Washington University, University of Vermont and State Agricultural College, and University of California Santa Barbara, Award G14AP00050, 61 p. ([pdf](#)).

6. **Amos, C.B.**, and S.J. Sorsby[†] (2013) Fluvial response to active deformation in the Yakima fold and thrust belt, WA, in Hanford Site-wide Probabilistic Seismic Hazard Analysis, Appendix E.2, Final Technical Report to Pacific Northwest National Laboratory, Award 201275, 44 p. ([pdf](#)).
5. *Haddon, E.K., **C.B. Amos**, R. Bürgmann (2013) Surface Slip during Large Owens Valley Earthquakes: Compilation and Characterization of Geomorphic Offsets using GeoEarthscope Lidar Data, SCEC Report, Award 12140, 9 p. ([pdf](#)).
4. **Amos, C.B.**, A.T. Lutz, A.S. Jayko, S.A. Mahan, G.B. Fisher, and J.R. Unruh, (2012) Refining the southern extent of the 1872 Owens Valley earthquake rupture – Paleoseismic investigations at Sage Flat and Haiwee Meadows, California, Final Technical Report to the U.S. Geological Survey National Earthquake Hazards Reduction Program, Award Number G09AP00133, 50 p. ([pdf](#)).
3. Ticci, M., K. Kelson, C. Brossy, and **C. Amos** (2011) Applications of LiDAR data analysis for geomorphic study, *Proceedings, Geomorphometry 2011*, Redlands, CA, September 7 – 11, 2011, 4 p. ([pdf](#)).
2. Givler, R., R. Witter, I. Madin, and **C. Amos** (2009) Paleoseismology of the Mount Angel fault in the Willamette Valley Oregon: Collaborative research with William Lettis & Associates, Inc., and the Oregon Department of Geology and Mineral Industries, Final Technical Report to the U.S. Geological Survey National Earthquake Hazards Reduction Program, Award Numbers 06-HQ-GR0147 and 06-HQ-GR0148 51 p. ([pdf](#)).
1. Sabin, A.E., J.R. Unruh, J.D. Walker, F.C. Monastero, J. Lovekin, A. Robertson-Tait, H. Ross, M. Sorenson, R. Leong, C.T. Holte, **C. Amos**, and D. Blackwell (2004) Geothermal resource assessment on military lands, *Proceedings, Twenty-Ninth Workshop on Geothermal Reservoir Engineering*, SGP-TR-175, 10 p. ([pdf](#)).

Fieldtrip guides:

2. Kelsey, H., S. Bennett, L. Staisch, B. Sherrod, R. Blakely, A. Bender, T. Ladinsky, **C. Amos**, B. Carlson, E. Schermer, and J. Lasher (2017) Structure, neotectonics, geophysics, and geomorphology of the Yakima folds: New research on Miocene-present deformation within the backarc of the Cascadia Subduction Zone, unpublished field guide for the GSA Annual Meeting, (Fieldtrip #22), October 26 – 28, 2017, 58 p.
1. Lutz, A., K.I. Kelson, **C. Amos**, D. Simpson, A. Jayko, and B. Kozlowicz (2011) Seismic hazard, tectonics, and geomorphology of the southern Sierra Nevada range and southern Walker Lane belt, California, *Friends of the Pleistocene Pacific Cell Annual Fieldtrip Guidebook*, September 15 – 18, 2011, 158 p. ([pdf](#)).

Theses:

2. **Amos, C.B.** (2007) The Geomorphic and Structural Evolution of the Ostler Fault Zone, New Zealand, Ph.D. Dissertation, University of California, Santa Barbara.

1. **Amos, C.B.** (2002) Experimental eclogite melting and implications for ocean island basalt petrogenesis, Senior Thesis, University of California, Davis.

Conference abstracts:

49. Stahl, T., J. Kearse, A. Howell, K. Clark, A. Nicol, J. Pettinga, P. Villamor, Pilar, and **C. Amos** (2019) Extreme surface Rupture Complexity and Fault Kinematics Revealed By Differential Photogrammetry Of The 2016 Kaikōura, New Zealand Earthquake, GSA Annual Meeting 2019, Phoenix, AZ.
48. *Duckworth, W.C., **C. Amos**, E.R. Schermer, J.P. Loveless, and T.M. Rittenour (2019) Slip and Strain Accumulation Along the Sadie Creek Fault, Northern Olympic Mountains, WA, GSA Annual Meeting 2019, Phoenix, AZ.
47. *K. Alexander, **C. Amos**, G. Balco, W. Amidon, R. Lesnau, and D. Clark (2019) Rates and Kinematics of Active Crustal Faults in the central Oregon Cascades, GSA Cordilleran Section Meeting 2019, Portland, OR. (*Award winner for best student poster presentation*).
46. *Francis, S., D. Clark, K. Farley, **C. Amos**, and P. Bierman (2019) Quantifying the Magnitude and Spatial Variability of Bedrock Erosion Beneath the Sisters Glacier, Washington, Using Cosmogenic ³He Concentrations, GSA Cordilleran Section Meeting 2019, Portland, OR.
45. **C.B. Amos**, E.R. Schermer, S. Angster, J. Delano, *W.C. Duckworth, A.R. Nelson, and B.L. Sherrod (2019) A Post-Glacial Record of Large, Strike-Slip Earthquakes on the Sadie Creek Fault, Northern Olympic Peninsula, WA, SSA Annual Meeting 2019, Seattle WA.
44. *Duckworth, W.C., **C. Amos**, E.R. Schermer, J.P. Loveless, T.M. Rittenour, and †Y.E. Perez (2019) Slip and Strain Accumulation Along the Sadie Creek Fault, Northern Olympic Mountains, WA, SSA Annual Meeting 2019, Seattle WA.
43. Leonard, L., A. Graham, K. Morell, C. Regalla, N. Harrichhausen, J. Elliott, Y. Jiang, **C. Amos**, and E. Lynch (2019) Evidence for a Quaternary-Active Fault Network in the Forearc of Southwestern British Columbia, SSA Annual Meeting 2019, Seattle WA.
42. Morell, K., C. Regalla, S. Bennett, L. Leonard, **C. Amos**, E. Lynch, N. Harrichhausen, and A. Graham (2019) Near-Surface Geophysical, Geological and Geodetic Constraints on the Seismic Hazard of the Leech River Fault in the Northern Cascadia Forearc, SSA Annual Meeting 2019, Seattle WA.
41. Loveless, J.P., E.R. Schermer, **C.B. Amos**, C. Duckworth, and O. George (2017) Relationship between slip on the Lake Creek – Boundary Creek fault system, Northern Olympic Peninsula, and the underlying Cascadia subduction zone, GSA Annual Meeting *Abstracts with Programs*, Vol. 49, No. 6, 10.1130/abs/2017AM-306604.
40. Morell, K., C. Regalla, **C.B. Amos**, S.E.K. Bennett, A. Graham, L. Leonard, E. Lynch, N. Harrichhausen (2017) Lidar data, geologic mapping, and paleoseismic trenching reveal late Quaternary fault ruptures in the Cascadia forearc of southwestern British Columbia, GSA Annual Meeting *Abstracts with Programs*, Vol. 49, No. 6, doi: 10.1130/abs/2017AM-301683.
39. *Francis, S., D. Clark, K.A. Farley, **C.B. Amos**, and P.R. Bierman (2017) Quantifying the magnitude

- and spatial variability of bedrock erosion beneath the Sisters glacier, Washington, using cosmogenic ^3He concentrations, GSA Annual Meeting *Abstracts with Programs*, Vol. 49, No. 6, doi: 10.1130/abs/2017AM-306123.
38. *Speth, G., **C.B. Amos**, W. Amidon, G. Balco, and A. Meigs (2016) Testing the time-dependence of slip on the Western Klamath Lake Fault Zone, Oregon, *Eos Trans. AGU*, Fall Meet. Suppl.
 37. Morell, K., C. Regalla, **C.B. Amos**, S.E.K. Bennett, L. Leonard, A. Graham (2016) Lidar and paleoseismic trenching reveal first documentation of late Quaternary onshore faulting in the forearc of southwestern British Columbia, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract T33D-02.
 36. Regalla, C., K. Morell, **C.B. Amos**, S.E.K. Bennett, L. Leonard, V. Levson (2016) Evidence for latest Quaternary surface rupture along the Leech River fault near Victoria, British Columbia, Canada, GSA Annual Meeting *Abstracts with Programs*, Vol. 48, No. 7, Abstract 117-11.
 35. *Carlson, B.M. E.R. Schermer, **C.B., Amos** (2016) Holocene reactivation of an Eocene bedrock fault in the eastern Cascade Mountains, Washington, GSA Rocky Mountain Section Meeting *Abstracts with Programs*, Vol. 48, No. 6, Abstract 20-4.
 34. *Haddon, E.K., **C.B. Amos**, O. Zielke, A.S. Jayko, and R. Bürgmann (2016) Surface slip during large Owens Valley fault earthquakes, SSA 2016 Annual Meeting, Reno, NV,
 33. **Amos, C.B.**, *E.K. Haddon, R. Bürgmann, and A.S. Jayko (2015) Steady, modest slip over multiple earthquake cycles on the Owens Valley and Little Lake fault zones, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract T43E-04 (Invited).
 32. *Delano, J., **C.B. Amos**, J. Loveless, and T. Rittenour (2015) Fluvial record of active deformation along the Canyon River fault in the Wynoochee River valley, WA, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract T33C-2944.
 31. **Amos, C.B.** and J. Loveless (2015) Does the megathrust earthquake cycle influence long-term uplift and incision in the Cascadia forearc of Washington?, NSF FACET (*Feedbacks Among Climate Erosion and Tectonics*) Workshop, Taipei, Taiwan.
 30. *Bender, A.M., **C.B. Amos**, P.R. Bierman, D.H. Rood, †S.J. Sorsby, H.M. Kelsey, and T.C. Ladinsky (2014) Differential uplift and incision of the Yakima River Terraces, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract T41C-1669.
 29. **Amos, C.B.**, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt (2014) Uplift and seismicity driven by groundwater depletion in central California, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract G54A-02 (Invited).
 28. *Haddon, E.K., **C.B. Amos**, O. Zielke, A.S. Jayko, and R. Bürgmann (2014) Surface slip during large Owens Valley fault earthquakes, Geological Society of America Annual Meeting *Abstracts with Programs*, Vol. 46, No. 6, p. 661.
 27. **Amos, C.B.**, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt (2014) Uplift and seismicity driven by groundwater depletion in central California, Geological Society of America Annual Meeting *Abstracts with Programs*, Vol. 46, No. 6, p. 594 (Invited).
 26. Blewitt, G, **C.B. Amos**, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, Regional Variation

in Near-Surface Mass and Coulomb Stress inferred by GPS, *Wegener General Assembly*, University of Leeds, UK.

25. **Amos, C.B.**, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt (2014) Uplift and seismicity driven by groundwater depletion in central California, National Association of Geoscience Teachers, *2014 Structure and Tectonics Forum*, Golden, CO.
24. [†]Sorsby, S., **Amos, C.**, Bierman, P.R., Hanson, K., Rood, D.H., Fisher, G.B., and H.M. Kelsey, (2014) Uplift and incision of the Yakima River canyon from channel planform mapping and cosmogenic ²⁶Al/¹⁰Be isochron dating, Geological Society of America Cordilleran Section Meeting, *Abstracts with Programs*, Vol. 46, No. 5, p. 28.
23. **Amos, C.B.**, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt (2014) Human-induced uplift of the Sierra Nevada Mountains and seismicity modulation on the San Andreas Fault, *Geophysical Research Abstracts*, Vol. 16, EGU2014-8130.
22. **Amos, C.B.**, P. Audet, W.C. Hammond, R. Bürgmann, I.A. Johanson, and G. Blewitt (2013) Contemporary vertical uplift and modulation of seismicity due to groundwater removal in the southern San Joaquin Valley of California, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract G43A-0955.
21. Haddon, E.K. *, **C.B. Amos**, and R. Burgmann (2012) Surface slip during large Owens Valley fault earthquakes, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract T31B-2342
20. Haddon, E.K. *, **C.B. Amos**, and R. Burgmann (2012) Surface slip during large Owens Valley fault earthquakes, Southern California Earthquake Center Annual Meeting, Palm Springs, CA, Poster 105.
19. **Amos, C.B.**, J.R. Unruh, A. Lutz, G.B. Fisher, K.I. Kelson, D.H. Rood, and A.S. Jayko (2011) Lithospheric control on spatial patterns of active faulting in the southeastern Sierra Nevada, California, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract T31B-2342.
18. **Amos, C.B.**, R. Bürgmann, A.S. Jayko, G.B. Fisher III, and D.H. Rood (2010) Temporal patterns of slip rate on the Little Lake fault, eastern California shear zone, from terrestrial lidar, cosmogenic radionuclides, and InSAR analysis (Invited), *Eos Trans. AGU*, Fall Meet. Suppl., Abstract T44A-03.
17. Kelson, K.I., **C.B. Amos**, D.T. Simpson, J.N. Baldwin, R. Rose, M. Ticci, J. Kelson, E. Salesky, and J.W. Chipman (2010) Structural and Geomorphic Control on Landscape Evolution by the Kern Canyon Fault, Southern Sierra Nevada, California, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract EP53B-0611.
16. Lutz, A., O. Kozaci, K.I. Kelson, D. Simpson, J.N. Baldwin, **C.B. Amos**, R. Turner, and R. Rose (2010) A Record of Late Pleistocene and Holocene Surface-rupturing Earthquakes Along the Lake Isabella Section of the Kern Canyon Fault, California, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract EP53B-0613.
15. Brossy, C.C., J.N. Baldwin, K.I. Kelson, D.H. Rood, B. Kozlowicz, D. Simpson, M. Ticci, **C.B. Amos**, O. Kozaci, and A. Lutz (2010) Late Pleistocene displacement and slip rate for the Breckenridge fault, Walker Basin, southern Sierra Nevada, California, *Eos Trans. AGU*, Fall Meet. Suppl., Abstract EP53B-0612.

14. **Amos, C.B.**, G.B. Fisher III, D.H. Rood, A.S. Jayko, and R. Bürgmann (2010) New terrestrial lidar and cosmogenic radionuclide constraints on the Little Lake fault, eastern California shear zone, Geological Society of America Annual Meeting, *Abstracts with Programs*, Vol. 42, No. 5, p. 134.
13. **Amos, C.B.**, K. Kelson, D. Simpson, D. Rood, A. Lutz, O. Kozaci, B. Kozlowicz, A. Streig, R. Turner Jr., J. Sowers, M. Ticci, R. Rose (2010) Late-Quaternary slip-rate on the northern Kern Canyon fault from lidar topography and cosmogenic radionuclide dating, Geological Society of America Penrose Conference, *Origin and Uplift of the Sierra Nevada, California*, August 2010.
12. **Amos, C.B.**, K.I. Kelson, D.H. Rood, D.T. Simpson, R.S. Rose (2010) Active Internal Deformation of the Sierra Nevada Microplate on the Kern Canyon Fault at Soda Spring, Tulare County, California, Geological Society of America Cordilleran Section Meeting, *Abstracts with Programs*, Vol. 42, No. 4, p. 68.
11. Ticci, M., K. Kelson, **C. Amos**, A. Streig, and C. Brossy (2009) Applications of LiDAR data and GIS derivatives for fault analysis and evaluation: Examples from three studies in California, Geologic Society of America Annual Meeting, *Abstracts with Programs*, Vol. 41, No. 7, p. 676
10. Kelson, K., O. Kozaci, A. Lutz, R.W. Turner, **C. Amos**, J. Baldwin, J. Unruh, C. Brossy, D. Simpson, B. Kozlowicz, and R. Rose (2009) Recent advancements in understanding seismic source characteristics of the Kern Canyon fault, southern Sierra Nevada, AEG News 52 – Annual Meeting Program with Abstracts.
9. Kozaci, O., A. Lutz, R.W. Turner, **C. Amos**, K. Kelson, J. Baldwin, D. Simpson, P. Maat, B. Kozlowicz, R. Rose, C. Slack, and J. Sowers (2009) Characterization of the Kern Canyon fault Holocene activity, South of Lake Isabella Dam, California, AEG News 52 – Annual Meeting Program with Abstracts.
8. **Amos, C.B.**, K.I. Kelson, D.H. Rood, D.T. Simpson, J.N. Baldwin, and R.S. Rose (2009), Preliminary late Quaternary slip-rate estimate for the northern Kern Canyon fault zone, Tulare and Kern Counties, California, Seismological Society of America Annual Meeting.
7. Kelson, K.I., **C.B. Amos**, J.N. Baldwin, D.T. Simpson, and R.S. Rose (2009), Geomorphic analysis of the Kern Canyon fault using LiDAR data from Walker Basin to the Kings-Kern divide, Tulare and Kern Counties, CA, Seismological Society of America Annual Meeting.
6. Kozaci, O., A. Lutz, R. Turner, **C. Amos**, R. Rose, K. Kelson, J. Baldwin, D. Simpson, P. Maat, B. Kozlowicz, C. Slack, S. Rugg, J. Sowers, C. Brossy, R. Ortiz, and T. Glidden (2009), Evidence for Holocene surface ruptures on the Kern Canyon fault: A former Mesozoic structure of the southern Sierra Nevada, Kern County, California, Seismological Society of America Annual Meeting.
5. **Amos, C.B.**, A. Jayko, and R. Bürgmann (2008) Evaluating temporal variations in fault slip-rate and fault interaction in the eastern California shear zone, *Eos Trans. AGU*, 89(53), Fall Meet. Suppl., Abstract T41A-1942
4. **Amos, C.B.**, D. W. Burbank, and S.A. Read (2006), Progressive wind gap development in response to fault displacement gradients, pulsed aggradation, and sediment flux variations, *Eos Trans. AGU*, 87(52), Fall Meet. Suppl., Abstract T13B-0513.
3. **Amos, C.B.**, D. W. Burbank, and S.A. Read (2005), Structural and geomorphic constraints on the

evolution of active thrusting in the Mackenzie Basin, South Island, New Zealand, *Eos Trans. AGU*, 86(52), Fall Meet. Suppl., Abstract T23C-0572.

2. Nobes, D., D. Burbank, C. Amos, and K. Davis (2005), 3D Imaging of the fore- and backthrusts of the Glen Lyon segment of the Ostler Fault., paper presented at 50th Annual Conference, Geological Society of New Zealand, Kaikoura, NZ.
1. Amos, C.B., and D.W. Burbank (2004), Reach-scale adjustments in alluvial channel morphology in response to active folding, *Eos Trans. AGU*, 85(47), Fall Meet. Suppl., Abstract T31B-1290.

e. Invited talks

20. University of Washington, Seattle, WA – November 14th, 2019
Terrace to trench - What drives permanent deformation in Cascadia?
19. University of Canterbury, Christchurch, NZ – April 2nd, 2019
Terrace to trench - What drives permanent deformation in Cascadia?
18. GNS Science, Lower Hutt, NZ – March 21st, 2019
Terrace to trench - What drives permanent deformation in Cascadia?
17. Portland State University, Portland, OR – October 24th, 2018
Sharing the load: Short and long-term crustal deformation in Cascadia
16. University of Victoria, Victoria, BC, Canada – October 10th, 2018
From trench to terrace: How do megathrust earthquakes influence crustal faulting in Cascadia?
15. Oregon State University, Corvallis, OR – March, 9th, 2017
Sharing the load: Active forearc faulting in northern Cascadia
14. University of Indiana, Bloomington, IN – October, 26th, 2015
Earthquakes, Groundwater, and Uplift in the California Sierra Nevada
13. Central Washington University, Ellensburg, WA – November 14, 2014
Earthquakes, Groundwater, and Uplift in the California Sierra Nevada
12. University of Oregon, Eugene, OR – May 29, 2013
Spatial and temporal patterns of fault slip along the eastern Sierra Nevada margin
11. U.S. Geological Survey, Earthquake Science Center, Menlo Park, CA – December 19, 2012
Temporal and kinematic patterns of fault slip along the southeastern Sierra Nevada block
10. Berkeley Seismological Laboratory – April 24, 2012
Spatial and temporal patterns of faulting and active deformation of the Sierra Nevada, CA
9. Western Washington University, Bellingham, WA – April 5, 2012
What can ancient rivers tell us about active faults?
8. California State University, Bakersfield, CA – February 8, 2012
Spatial and temporal patterns of faulting and active deformation of the Sierra Nevada, CA

7. San Jose State University, San Jose, CA – November 7, 2011
Active faulting and regional deformation of the southern Sierra Nevada block
6. U.S. Geological Survey, Alaska Science Center, Anchorage, AK – May 3, 2011
Active tectonics of the southern Sierra Nevada block, California
5. University of California White Mountain Research Station, Bishop, CA, public lecture – April 21, 2011
Active faulting and deformation of the southern Sierra Nevada, California
4. University of California, Davis – December 8, 2010
Geomorphic insights into active thrust faults: New Zealand examples
3. University of Nevada, Reno – March 23, 2010
Geomorphic insights into active thrust systems: Examples from New Zealand
2. California State University, Long Beach – April 12, 2007
Geomorphic insights into active thrust systems: Case studies from Southern New Zealand
1. University of Canterbury, Christchurch, New Zealand – February 27, 2006
Geomorphic constraints on listric thrust faulting: Implications for active deformation in the Mackenzie Basin, South Island, New Zealand

f. Synergistic activities

Workshops / Training:

HHMI Inclusive Excellence Faculty Development – Faculty Cohort member; Western Washington University, Bellingham, WA, 2020.

WWU Campus Equity and Inclusion Form – Cultural Awareness in STEM, Western Washington University, Bellingham, WA, 2017-2018

CIIA/ATUS Faculty Development Summer Workshop, Western Washington University, Bellingham, WA, June 13 – 17, 2016.

FACET (Feedbacks Among Climate, Erosion, and Tectonics during mountain building) Workshop, Academia Sinica, Taipei, Taiwan, May 26th – June 2nd, 2015.

SERC Workshop for Early Career Geoscience Faculty, University of Maryland, College Park, MD, June 22-26, 2014.

SoSAFE field workshop, Southern California Earthquake Center Meeting, Palm Springs, CA, September 7, 2012.

8th Annual Northern California Earthquake Hazards Workshop, U.S. Geological Survey, Menlo Park, CA, January 24 – 25, 2012.

Origin and Uplift of the Sierra Nevada, California, GSA Penrose Conference, Bridgeport, CA, August 16 – 20, 2010.

2010 UNAVCO Science Workshop, Boulder, CO, March 9 – 11, 2010

Using GeoEarthScope and B4 LiDAR data to analyze Southern California's active faults, San Diego Supercomputer Center, San Diego, California, December 3 – 4, 2009.

Media Interviews:

2017 – NW Public Radio (NPR)

2014 –National NPR, KPCC – Southern CA Public Radio, KVPR - Valley Public Radio, KGMI Bellingham, KCBS San Francisco (Radio)
2014 – *LA Times*, *Slate*, *NewYorker.com*, *SF Chronicle*, *Christian Science Monitor*, *BBC*, *Weather Channel*, *Science News*, *Earth Magazine*, *Live Science*, *Nature Podcast*, *Der Tagesspiegel*, (Print/Online)
2013 – *Live Science*

g. Honors and awards

Ersine Fellowship – University of Canterbury, New Zealand, January – April, 2019
NSF Earth Science Postdoctoral Fellowship, September 2009
G.K. Gilbert Award for best departmental talk, UCSB, June 2007
Richard and Elanor Migue's Graduate Field Research Award, UCSB, June 2005
Geology Department Undergraduate Citation, UCD, June 2002
President's Undergraduate Fellowship Grant, UCD, December 2000
American Mineralogist Undergraduate Award, UCD, July 2000

4. Service

a. Professional

Editorial:

2014 – 2020, Associate Editor – *Geosphere* (handling an average of five manuscripts per year).

Journal Review:

2020 – *Geological Magazine*
2019 – *Lithosphere*; *Geophysical Research Letters*
2018 – *Geomorphology*; *GSA Bulletin*; *Geosphere*
2017 – *Nature Communications*; *Geosphere*; *BSSA*; *EPSL*
2016 – *JGR Earth Surface*; *Geophysical Research Letters*; *Geosphere*
2015 – *Basin Research*; *Geophysical Research Letters*; *JGR Earth Surface*
2014 – *Geology* (2), *JGR Solid Earth*, *Tectonophysics*
2013 – *Geology*, *Geomorphology*, *Geosphere*, *Geosciences*, *GSA Bulletin*, *GSA Today*, *BSSA*
2012 – *Geology*, *Journal of Structural Geology*, *Geophysical Research Letters*, *Geosphere*, *New Zealand Journal of Geology and Geophysics*
2011 – *Geology*, *Lithosphere*, *Geophysical Journal International*, *New Zealand Journal of Geology and Geophysics*
2010 – *EOS*
2007 – *Geology*

Proposal Review:

2019 – *Graduate Women in Science* (1)
2018 – *NSF Tectonics* (1)
2017 – *NSF Career* (1)
2016 – *NSF Tectonics* (2)
2015 – *NSF Tectonics* (2), *NSF Hydrology* (1), *NSF Geomorphology and Land Use Dynamics*
2014 – *USGS Earthquake Hazards – Panel Member for Pacific Northwest and Alaska*, *NSF Tectonics* (2)

2013 – *NSF Tectonics (2), USGS Earthquake Hazards – Panel Member for Intermountain West*
2012 – *NSF Tectonics (2), NSF EAR Postdoctoral Fellowship*

Meeting Session Chair:

2019 – SSA Annual Meeting, “Characterizing Active Faults and Folds in the Pacific Northwest,” Seattle, WA
2017 – GSA Annual Meeting, “Decadal to Millennial Strain Accumulation at Subduction Zones,” Seattle, WA.
2016 – AGU Annual Meeting, “Recent Advances in Tectonic Geomorphology: Dates, Rates, Models, and Beyond,” San Francisco, CA.
2014 – GSA Annual Meeting, “Landscape Records of Earthquake Deformation,” Vancouver, BC.
2014 – NAGT Structural Geology and Tectonics Forum, “Tectonics at the Earth's surface - geomorphic expressions and shallow deformation,” Golden, CO.

Judge – Outstanding Student Presentation Awards:

2014 – AGU Fall Meeting, Earth and Planetary Surface Processes
2012 – AGU Fall Meeting, Geodesy
2011 – AGU Fall Meeting, Geodesy and Tectonophysics
2010 – AGU Fall Meeting, Tectonophysics

b. University and Departmental

Departmental:

Geology Department Faculty Search Committee (Igneous Petrology, 2019)
Geology Department Faculty Search Committee (Surficial Dynamics, 2018)
Geology Department External Relations Committee (2017 - present)
Geology Department Graduate Admissions Committee (2014 – 2015)
Geology Department Faculty Search Committee (Metamorphic Geology, 2015)
Geology Department Seminar coordinator (2012 – 2014)
GIS Curriculum in Geology Subcommittee (2012 – present)

University / College:

Research Advisory Committee – Faculty Summer Research Grant Subcommittee (2019 – present)
CSE Personnel Committee (2019 – present)
Faculty Senate (2017 – 2018)
CSE Technical Operations Committee (2015 – 2016)