

Dr. Timothy A. Stahl

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Education

2015 Ph.D., Geological Sciences, University of Canterbury
2009 B.S., Geology, summa cum laude, Stockton University

Professional Positions

2019– Senior Lecturer in Tectonics, University of Canterbury
2017–2019 Lecturer in Tectonics, University of Canterbury
2015–2017 NSF Postdoctoral Fellow, University of Michigan
2014 Environmental Sciences Teacher, Lenape High School, NJ
2014 Research Assistant, Frontiers Abroad, University of Canterbury
2013 Research Assistant, University of Canterbury
2012 Senior Tutor, University of Canterbury
2012 Science Outreach Tutor, University of Canterbury
2011–2012 Field Technician, Southern Geophysical Ltd., Christchurch
2008–2009 Writing Tutor, Writing Center, Stockton University
2005 Geology Intern, Remington and Vernick Engineers, NJ

Honors and Awards

2018 UC College of Science Innovation in Teaching Award
2016–2017 Science Communication Fellow, University of Michigan Museum of Natural History
2012–2014 University of Canterbury International Doctoral Scholarship
2010–2012 University of Canterbury Doctoral Scholarship
2009 Certificate of Distinction in Honors, Stockton University
2005–2009 Stockton University Presidential Scholarship
2005–2009 Dean's List, Stockton University

Research Grants

2020-2023 EQC University: Next generation seismic hazard analysis for NZ. **NZ\$375,000 (co-PI)**
2020–2023 EQC University: Building resilience through earthquake and landslide multi-hazard research in New Zealand. **NZ\$375,000 (PI)**
2020 EQC Biennial: A fuzzy approach to understanding multifault earthquakes. **NZ\$49,020 (PI)**
2018 Natural Hazards Research Platform: Paleoseismicity of Kaikōura Earthquake faults and implications for seismic hazard. **NZ\$419,900 (AI)**
2018 Ako Aotearoa: Bring Your Own Device (BYOD) to field class: digital mapping in the field sciences **\$20,000 (PI)**
2018 NZ Earthquake Commission: Can concepts of the seismic cycle be used to forecast future large-magnitude earthquakes in New Zealand? **NZ\$70,000 (AI)**
2018 MBIE Endeavour: Earthquake-induced landscape dynamics. **NZ\$294,000 (co-PI)**
2017 Otago Regional Council Discretionary Funding: Landslide dam hazard assessment and sediment impacts on the lower Shotover River. **NZ\$5000 (AI)**
2015–2017 NSF EAR Postdoctoral Fellowship: Late Quaternary slip rates and paleoseismicity of the Sevier Desert Detachment: earthquake hazards of a low-angle normal fault. **\$184,000. (PI)**
2015 PRIME Lab SEED Grant: Cosmogenic ¹⁰Be ages of alluvial fans in the Eastern Basin and Range, Utah: slip rates and earthquake chronology of a low-angle normal fault. **\$8200 (AI)**

- 2011–2013 Royal Institution of Chartered Surveyors (RICS) Education Trust Award: Quantifying glacio-isostatic rebound and post-glacial level changes of Lake Wakatipu, New Zealand. **£5,000. (AI)**
- 2012 GeoEye Foundation Imagery Grant (PI)
- 2010–2012 Mason Trust Grant, Dept. of Geological Sciences, University of Canterbury. Tectonic Geomorphology and Paleoseismology of the Fox Peak Fault. **NZ\$ 6,000.**

Publications [773 citations, h-index=12, i10-index=12, g-index=27 on Google Scholar]

Refereed Journal Articles

- 2020 Olsen, T., **Stahl, T.**, Borella, J. 2020. Clast transport history influences Schmidt Hammer rebound values. *Earth Surface Processes and Landforms*.
<https://doi.org/10.1002/esp.4809>.
- 2020 Wolfe, F., **Stahl, T.**, Villamor, P., Lukovic, B. 2020. A semi-automated method for rapid fault slip analysis from topographic profiles. *Earth Surface Dynamics* 8, 211–219, <https://doi.org/10.5194/esurf-8-211-2020>.
- 2020 Howell, A., Nissen, E., **Stahl, T.**, Clark, K., Kears, J., Van Dissen, R., Villamor, P., Langridge, R.M., Jones, K. 2020. 3D surface displacements during the 2016 MW 7.8 Kaikōura earthquake (New Zealand) from photogrammetry-derived point clouds. *JGR Solid Earth*. DOI.org/10.1029/2019JB018739.
- 2019 McColl, S.T., Cook, S.C., **Stahl, T.**, Davies, T. Origin of The Hillocks and implications for post-glacial landscape development in the Dart Catchment, New Zealand. *Journal of Quaternary Science*, 1-12. DOI: 10.1002/jqs.3168.
- 2019 **Stahl, T.**, Tye, A. Schmidt hammer and terrestrial laser scanning (TLS) used to detect single event displacements on the Pleasant Valley fault (Nevada, USA). *Earth Surface Processes and Landforms*.
- 2019 **Stahl, T.**, Niemi, N., Bunds, M., Andreini, J., Wells, J., Paleoseismic patterns of Quaternary tectonic and magmatic surface deformation in the Sevier Desert, Utah: implications for spatially variable strain accommodation at the eastern margin of the Basin and Range. *Geosphere*
- 2019 Van Dissen, R. **Stahl, T.**, King, A., Pettinga, J., Fenton, C., Little, T., Litchfield N.J., Stirling, M.W., Langridge, R.M., Nicol, A., Kears, J., Barrell D.J.A., Villamor, P. Impacts of the surface fault rupture on residential structures and rural infrastructure during the 2015 Mw 7.8 Kaikōura earthquake, New Zealand. *Bulletin of the New Zealand Society for Earthquake Engineering*.
- 2018 Berryman, K., Hamling, I., Kaiser, A., **Stahl, T.** 2018. Introduction to the Special Issue on the 2016 Kaikōura Earthquake. *BSSA Special Issue*. 108 (3B): 1491-1495.
- 2018 Litchfield **et al.** Surface Rupture of Multiple Crustal Faults in the Mw 7.8 2016 Kaikōura Earthquake, New Zealand. *BSSA Special Issue* 108 (3B): 1496-1520.
- 2018 Zekkos, D., Clark, M., Willis, M., Athanasopoulos-Zekkos, A., Manousakis, J., Knoper, L., **Stahl, T.**, Massey, C., Archibald, G., Greenwood, W., and Medwedeff, W. 2018. 3D Models of the Leader Valley using satellite & UAV imagery following the 2016 Kaikōura earthquake. Eleventh U.S. National Conference on Earthquake Engineering
- 2018 Van Dissen, R., **Stahl, T.**, King, A., Fenton, C., Stirling, M., Litchfield, N., Little, T., Pettinga, J., Langridge, R., Nicol, A., Barrell, D., Kears, J., Khajavi, N., Villamor, P., Ries, W. Impacts of surface fault rupture on residential structures and rural infrastructure during the 14 November 2016 Mw 7.8 Kaikōura earthquake, New Zealand. *New Zealand Society for Earthquake Engineering Conference 2018*.
- 2018 Nicol, A., Khajavi, N., Pettinga, J., Fenton, C., **Stahl, T.**, Bannister, S., Pedley, K., Hyland, N., Bushell, T., Hamling, I., Ristau, J., Noble, D., McColl, S. Preliminary geometry, slip and kinematics of fault ruptures during the 2016 MW 7.8 Kaikōura Earthquake in the North Canterbury region of New Zealand. *BSSA Special Issue*. 108 (3B): 1521-1539.
- 2018 Tye, A, **Stahl, T.**, Field estimate of paleoseismic slip on a normal fault using the Schmidt hammer: methods and application to the Hebgen fault (Montana, USA). *Earth Surface Processes and Landforms*.
- 2017 **Stahl, T.**, Clark, M.K., Zekkos, D., Athanasopoulos-Zekkos, A., Willis, M., Medwedeff, W., Knoper, L., Townsend, K. Jin, J. Earthquake science in resilient societies. *Tectonics* (Commentary) 36: 749-753.
- 2017 Khajavi, N. Nicol, A., Fenton, C., Pettinga, J., Stahl, T., Hyland, N., Bushell, T., Pedley, K.L., McColl, S., Noble, D. INQUA Paleoseismology Archaeoseismology Active Tectonics Proceedings. 12-19 Nov. 2017 Blenheim, New Zealand.
- 2017 **Stahl, T.**, Niemi, N.A., Bunds, M., Andreini, J., Wells, J. Tectono-magmatic domains of the eastern Basin and Range, Utah, determined from paleoseismic investigations of

- active faults. 2017. INQUA Paleoseismology Archaeoseismology Active Tectonics Proceedings. 12-19 Nov. 2017 Blenheim, New Zealand.
- 2017 **Stahl, T.**, Niemi, N. Late Quaternary faulting in the Sevier Desert driven by magmatism. *Nature Scientific Reports* 7: doi:10.1038/srep44372.
- 2017 Stirling, M., Litchfield, N.J., Villamor, P., Van Dissen, R.J., Nicol, A., Pettinga, J.R., Barnes, P.M., Langridge, R., Little, T., Barrell, D.J.A., Mountjoy, J.J., Ries, W.F., Rowland, J., Fenton, C., Hamling, I.J., Asher, C., Barrier, A., Benson, A., Bischoff, A., Borella, J., Carne, R., Cochran, U.A., Cockroft, M., Cox, S.C., Duke, G., Fenton, F., Gasston, C., Grimshaw, C., Hale, D., Hall, B., Hao, K.X., Hatem, A., Hemphill-Haley, M., Heron, D.W., Howarth, J., Juniper, Z., Kane, T., Kearse, J., Khajavi, N., Lamarche, G., Lawson, S., Lukovic, B., Madugo, C., Manousakis, I., McColl, S., Noble, D., Pedley, K., Sauer, K., **Stahl, T.**, Strong, D.T., Townsend, D.B., Toy, V., Villeneuve, M., Wandres, A., Williams, J., Woelz, S., Zinke, R. The Mw7.8 2016 Kaikoura earthquake: Surface fault rupture and seismic hazard context. *Bulletin of the New Zealand Society for Earthquake Engineering* 50(2): 73–84.
- 2016 Litchfield, N. **et al.** 2016. 14th November 2016 M 7.8 Kaikoura earthquake. Preliminary surface fault displacement measurements, version 2, GNS Sciences, doi:10.21420/G2J01F.
- 2016 **Stahl, T.**, Quigley, M.C., Bebbington, M.S., McGill, A. Modeling the maximum moment magnitudes of earthquakes on imbricate reverse faults: results from a paleoseismic study of the Fox Peak and Forest Creek faults, South Island, New Zealand. *Bulletin of the Seismological Society of America* 106 (5): 2345-2363.
- 2016 **Stahl, T.**, Quigley, M.C., Bebbington M.S. Tectonic geomorphology of the Fox Peak and Forest Creek Faults: slip rates, segmentation, and earthquake magnitudes. *New Zealand Journal of Geology and Geophysics*. doi: 10.1080/00288306.2016.1212908.
- 2014 **Stahl, T.**, Bilderback, E.L., Quigley, M.C., Nobes, D.C., Massey, C. Coseismic landsliding during the Mw 7.1 Darfield (Canterbury) Earthquake: Implications for paleoseismic studies of landslides. *Geomorphology* 214: p. 114–127
- 2013 Cook, S.J., McColl, S.T., **Stahl, T.** Surveying and dating post-glacial lake shorelines in New Zealand. *RICS Research Trust Report*. November 2013.
- 2013 Duffy, B., Quigley, M., Barrell, D., Van Dissen, R., **Stahl, T.**, Leprince, S., McInnes, C., Bilderback, E. Fault kinematics and surface deformation across a releasing bend during the 2010 Mw7.1 Darfield, New Zealand, earthquake revealed by differential LiDAR and cadastral surveying. *GSA Bulletin* 125 (3–4): p. 420–431.
- 2013 **Stahl, T.**, Winkler, S., Bebbington, M., Quigley, M., Duffy, B., Duke, D. Schmidt hammer exposure age dating (SHD) of late Quaternary fluvial terraces in New Zealand. *Earth Surface Processes and Landforms* 38 (15): p. 1838–1850.
- 2012 Quigley, M., Van Dissen, R., Litchfield, N., Villamor, P., Duffy, B., Barrell, D., Furlong, K., **Stahl, T.**, Bilderback, E., Noble, D. Surface rupture during the 2010 Mw 7.1 Darfield (Canterbury, New Zealand) earthquake: implications for fault rupture dynamics and seismic-hazard analysis. *Geology*, v. 40, n. 1.
- 2012 Villamor, P., Barrell, D., Van Dissen, R., Hornblow, S., Quigley, M., Levick, S., Ries, W., Duffy, B., Begg, J., Townsend, D., **Stahl, T.**, Bilderback, E., Noble, D., Furlong, K., Grant, H. Map of the 2010 Greendale Fault surface rupture, Canterbury, New Zealand: application to land use planning. *New Zealand Journal of Geology and Geophysics*, 55 (3): pp. 223–230.
- 2011 Barrell, D., Litchfield, N., Townsend, D., Quigley, M., Van Dissen, R., Cosgrove, R., Cox, S., Furlong, K., Villamor, P., Begg, J., Hemmings-Sykes, S., Jongens, R., Mackenzie, H., Nobel, D., **Stahl, T.**, Bilderback, E., Duffy, B., Henham, H., Klahn, A., Lang, E., Moody, L., Nicol, R., Pedley, K., Smith, A. Strike-slip ground-surface rupture (Greendale Fault) associated with the 4 September 2010 Darfield earthquake, Canterbury, New Zealand: *Quarterly Journal of Engineering Geology and Hydrology*, v. 44, p. 283–291.
- 2011 Van Dissen, R., Barrell, D., Litchfield, N., King, A., Quigley, M., Villamor, P., Furlong, K., Mackenzie, H., Klahn, A., Begg, J., Townsend, D., **Stahl, T.**, Noble, D., Duffy, B., Bilderback, E., Jongens, R., Cox, S., Langridge, R., Ries, W., Dhakal, R., Smith, A., Nicol, R., Pedley, K., Henham, H., Hunter, R. Surface rupture displacement on the Greendale Fault during the Mw 7.1 Darfield (Canterbury) Earthquake, New Zealand, and its impact on man-made structures. *Proceedings of the Ninth Pacific Conference on Earthquake Engineering: Building an Earthquake-Resilient Society*, Auckland, New Zealand, Paper 186.
- 2010 Quigley, M., Villamor, P., Furlong, K., Beavan, J., Van Dissen, R., Litchfield, N., **Stahl, T.**, Duffy, B., Bilderback, E., Noble, D., Barrell, D., Jongens, R., Cox, S.

- Previously Unknown Fault Shakes New Zealand's South Island. *Eos*, Transactions, American Geophysical Union, v. 91, n. 49, p. 469–471.
- 2010 Quigley, M., Van Dissen, R., Villamor, P., Litchfield, N., Barrell, D., Furlong, K., **Stahl, T.**, Duffy, B., Bilderback, E., Noble, D., Townsend, D., Begg, J., Jongens, R., Ries, W., Claridge, J., Klahn, A., Mackenzie, H., Smith, A., Hornblow, S., Nicol, R., Cox, S., Langridge, R., Pedley, K. Surface rupture of the Greendale Fault during the Darfield (Canterbury) Earthquake, New Zealand: initial findings. *Bulletin of the New Zealand Society for Earthquake Engineering*, 43(4): 236–242.

Reports, Articles, Essays, Field Guides, and Theses

- 2020 **Stahl, T.**, Purdie, H., Banerjee, D., Pedley, K., Brogt, E., Hampton S., Kennedy, B., Bring Your Own Device (BYOD) to field class – integrating digital and community mapping in field-based coursework: Final teaching framework for Tertiary Educators.
- 2019 **Stahl, T.**, Purdie, H., Thyne, J., Hampton, S., Pedley, K., Brogt, E., Kennedy, B., Bring Your Own Device (BYOD) to field class – integrating digital and community mapping in field-based coursework: Preliminary teaching framework for Tertiary educators. 14 p. 2019.
- 2018 Jolley, A., Kennedy, B., Reyna, N., **Stahl, T.**, Hampton, S., Sommerville, P., Wilson, T., Brogt, E., Pedley, K., Davidson, J., Dawood, M., Ashwell, P., Hersey, S., Davies, A. Virtual fieldtrips in tertiary science. Ako Aotearoa Project Report. 17 p.
- 2017 Upton, P., Clark, K., Langridge, R., **Stahl, T.** Paleoseismology, Active Tectonics, Archaeoseismology Post-Conference Field Trip Guide.
- 2014 **Stahl, T.** Active Tectonics and Geomorphology of the central South Island, New Zealand: Earthquake Hazards of Reverse Faults.
- 2012 **Stahl, T.** Canterbury quakes: Tectonic geomorphology, sedimentary processes, and engineering geology. Monash University Field Trip Guide.
- 2011 **Stahl, T.** Shaky prospects: Anecdotal outlooks on the future of geosciences. *IUGS Episodes 50th Anniversary Edition* v. 34 (2): p. 75–77.
- 2011 **Stahl, T.** Lunar eclipse prompts lunatic quips but is not going to rock your world. *The Conversation*. <http://theconversation.edu.au/lunar-eclipse-prompts-lunatic-quips-but-is-not-going-to-rock-your-world-556>.
- 2009 **Stahl, T.** Investigation of Along-Strike Deformation on the Hurricane Fault, Southwest Utah. Stockton University Honors Thesis.

Select Conference Presentations

- 2019 **Stahl, T.**, Purdie, H., Hampton, S., Pedley, K., Kennedy, B., Brogt, E. BYOD to field class: Integrating digital and community mapping in field-based coursework. Ako Aotearoa Southern Hub Colloquium. Christchurch 1 October 2019.
- 2019 **Stahl, T.**, Kearse, J., Howell, A., Nicol, A., Clark, K., Amos, C., Pettinga, J., Villamor, P. Extreme surface rupture complexity and fault kinematics revealed by differential photogrammetry of the 2016 Kaikōura, New Zealand earthquake. GSA Annual Meeting 2019 Phoenix AZ.
- 2019 Howell, A., Nissen, E., Clark, K., Kearse, J., Villamor, P., **Stahl T.**, Jones, K. 3D co-seismic offsets during the 2016 MW 7.8 Kaikoura earthquake (New Zealand) from aerial photogrammetry. *EGU 2019*.
- 2018 Wolfe, F., **Stahl, T.**, Villamor, P., Lukovic, B. A semi-automated method for rapid, bulk fault displacement analysis. *AGU Fall Meeting 2018, Washington D.C.*
- 2017 **Stahl, T.**, Niemi, N.A. Variable modes of rifting in the eastern Basin and Range, USA from on-fault geological evidence. Oral presentation. *AGU Fall Meeting, 2017, New Orleans*.
- 2016 **Stahl, T.**, Niemi, N.A. Geodetic and neotectonic signal of magmatic rifting in the Sevier Desert, eastern Basin and Range, Utah. *AGU Fall Meeting 2016, San Francisco, CA*.
- 2016 Niemi, N.A., **Stahl, T.**, Andreini, J., Wells, J., Bunds, M. Late Pleistocene to Holocene paleoseismicity of the House Range fault from UAV photogrammetry and exposure-age dating. *AGU Fall Meeting 2016, San Francisco, CA*.
- 2016 Boichenko, G., Cowgill, E., **Stahl, T.**, Trexler, C., Tsiskarishvili, L., Sukhishvili, L., Sokhadze, G., Akhalaia, Godoladze, T., Elashvili, M., Gogoladze, S. A paleoseismic investigation of a frontal foreland thrust in the Greater Caucasus. *AGU Fall Meeting 2016, San Francisco, CA*.
- 2015 **Stahl, T.**, Quigley, M. Paleoseismicity and maximum moment magnitudes of imbricate reverse faults, South Island, New Zealand. Oral. *GSA Annual Meeting 2015, Baltimore, MD*.

- 2013 **Stahl, T.**, Quigley, M., Bebbington, M., McGill, A. Paleoseismic evidence for long-term segmentation of a major range-bounding reverse fault, Southern Alps, New Zealand. Poster. *AGU Fall Meeting 2013, San Francisco, CA.*
- 2013 Cook, S., McColl, S., **Stahl, T.** Reconstructing level changes and assessing evidence for tectonic and glacial-rebound induced tilting of the Lake Wakatipu basin, New Zealand using novel techniques for correlating and dating paleoshorelines. Poster. *AGU Fall Meeting 2013, San Francisco, CA.*
- 2012 **Stahl, T.**, Winkler, S., Bebbington, M., Duke, D. Preliminary results of relative-age dating fluvial terraces and outwash plains using a Schmidt hammer. Oral. Australasian Quaternary Association Biennial Meeting. Tekapo, New Zealand.
- 2011 **Stahl, T.**, Quigley, M., McGill, A. Modes of range growth and faulting styles in the central Southern Alps, New Zealand. Poster. *AGU Fall Meeting 2011, San Francisco, CA.*
- 2011 Duffy, B., Van Dissen, R., Quigley, M., Litchfield, N., McInnes, C., Leprince, S., Barrell, D., **Stahl, T.**, Bilderback, E. Co-seismic displacements from differencing and sub-pixel correlation of multi-temporal LiDAR and cadastral surveys: application to the Greendale Fault, Canterbury, New Zealand. Invited Oral. *AGU Fall Meeting, San Francisco, CA.*
- 2011 Duffy, B., McInnes, C., Van Dissen, R., Litchfield, N., Barrell, D., Quigley, M., Bilderback, E., **Stahl, T.** Kinematics of the Greendale Fault releasing bend: Insights from cadastral and multi-temporal LiDAR surveys. Oral. *IUGG General Assembly - Earth on the Edge: Science for a Sustainable Planet, Melbourne, Australia.*
- 2010 **Stahl, T.**, Bilderback, E., McColl, S., Massey, C., Quigley, M., Nobes, D., Noble, D. Don't head for the hills: Coseismic landsliding during the September 4th Darfield Earthquake. Oral Australia New Zealand Geomorphology Group: 14th Biennial Conference Program and Abstracts.

Invited Lectures and Talks

- 2018 SciCon
- 2018 Christchurch City Council
- 2017 Geological and Nuclear Sciences (GNS)
- 2017 University of Michigan Smith Lecture
- 2016 Utah Quaternary Fault Parameters Working Group
- 2015 Brigham Young University
- 2015 Utah Valley University
- 2015 Snow College

Professional Service and Affiliations

- 2018 Special Guest Editor, Bulletin of the Seismological Society of America, Special Issue on the 2016 Kaikōura Earthquake, Landslides and Tsunami.
- 2017 Co-convener, *Complex fault ruptures on transpressional plate boundaries*, 8th International Workshop on Paleoseismology, Active Tectonics and Archeoseismology
- 2016 Geotechnical Extreme Event Reconnaissance (GEER) member, Kaikoura EQ
- 2015 Co-convener, *Estimating the timing and characteristics of continental earthquakes from geologic data*, GSA Annual Meeting
- 2012-2017 American Geophysical Union
- 2011-2012 Australasian Quaternary Association
- 2011-2012 Geological Sciences Postgraduate Committee Coordinator
- 2011 Associate Editor, New Zealand Natural Sciences
- 2010-2014 Australia and New Zealand Geomorphology Group
- 2010-2014 University of Canterbury Geological Society
- 2005-2015 Geological Society of America

Media Coverage and Outreach

- 2018 Science Media Centre. Media reports of increased earthquakes in 2018 – Expert reaction
- 2017 American Geophysical Union. *AGU journal commentaries highlight importance of earth and space science research.*
- 2016 Michigan News. *U-M researchers map New Zealand landslides with satellites, drones, helicopters, hiking boots*
- 2013 Radio New Zealand: Our Changing World. *Canterbury's Tectonic History*
- 2012 Monash University field trip leader

2011	UC Public Lecture Series Q&A session
2011	Discovery1 Primary School presentation
2011	Monash University field trip leader
2011	News Talk ZB radio interview
2010	Darfield Primary School presentation
2010	YouthQuake presentation
2010	St. Peter's School presentation
2010	Gifted Youth of Christchurch presentation
2010	Lecture for the Chinese Community of Christchurch
2010	<i>o Penina a Samoa</i> radio interview

Courses Taught (University of Michigan)

Year	Role	Format	Course	Title
2017	Coordinator	Field	EARTH434	New Zealand Field Trip

Courses Taught (University of Canterbury)

Year	Role	Format	Course	Title
2019-	Lecturer	Lecture	GEOL354	Geodynamics and Geohazards
2018	Lecturer	Field	GEOL240	Field Mapping
2018-	Lecturer*	Lecture/Field	GEOL479	Active Tectonics
2018-	Lecturer*	Field	GEOL352	Advanced Field Mapping
2017-	Lecturer*	Lecture / Laboratory	GEOL246	Earth Surface Dynamics
2017-	Lecturer*	Lecture	GEOL113	Environmental Geohazards
2014	Teaching Assistant	Field	GEOL240	Field Mapping
2014	Research Assistant	Field	FA ¹	Frontiers Abroad
2012	Senior Tutor ²	Lecture	GEOL113	Environmental Geohazards
2012	Senior Tutor ³	Lecture / Laboratory	GEOL245	Earth System Science
2012	Senior Tutor ^{4*}	Lecture / Field	GEOL354	Geodynamics and Geohazards
2011	Teaching Assistant	Laboratory	GEOL244	Structural Geology and Global Geophysics
2011	Teaching Assistant	Workshop	GEOL113	Environmental Geohazards
2011	Teaching Assistant	Field	GEOL479	Active Tectonics and Geomorphology
2011	Teaching Assistant	Field	GEOL352	Advanced Field Mapping
2011	Teaching Assistant	Field	GEOL240	Field Mapping
2010	Teaching Assistant	Field	GEOL240	Field Mapping

¹Frontiers Abroad project: Paleoseismology and Geochronology of the Springfield Fault

²Earthquake hazards section (9 lectures and 1-day workshop)

³Geochronology section (18 lectures and 3 labs)

⁴Geodynamics and earthquake section (6 lectures and 1-day field trip)

*Course Coordinator

Postgraduate Projects Supervised/Co-supervised

U. Canterbury PhD

Clare Wilkinson	2017-	<i>Fluvial system response to the Kaikoura earthquake</i>
Santosh Dhakal	2018-	<i>Paleoseismology of the Torlesse and Lake Heron faults</i>

	<i>Colin Bloom</i>	2019-	<i>Fault controls on coseismic landslides</i>
	<i>Corinne Singeisen</i>	2020-	<i>Physics-based landslide models from the Kaikoura EQ</i>
	<i>Jaime Delano</i>	2020-	<i>Fault rupture dynamics from legacy aerial photographs</i>
U. Canterbury MSc			
	Tim van Woerden	2018-2019	<i>Landslide dam hazard assessment and sediment impacts on the lower Shotover River.</i>
	Tom Brough	2018-2019	<i>Tectonic geomorphology and paleoseismology of the Humps Fault zone, North Culverden Basin</i>
U. Potsdam			
	Pablo Kaiser	2018-	<i>Sediment aggradation and storage in the Conway and Kahutara Rivers following the Kaikoura earthquake</i>
U. Michigan			
	Kirk Townsend	2018-	<i>Thermochronology of the Mt. Stewart block</i>

Undergraduate Projects Supervised/Co-supervised

U. Michigan Undergraduate Research Opportunities Project (UROP)

Jonson Jin	2016-2017	<i>Active faults and earthquake hazard in immersive 3D</i>
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U. Michigan/Utah Valley University Research Project

Jack D. Wells		
Jeremy Andreini	2016	<i>Fault slip rates from UAV photogrammetric DEM of the House Range fault, Utah</i>

Frontiers Abroad (term project at U. Canterbury):

Emma Tombaugh	2020	<i>Geomorphology of the Porter River area</i>
Cole Lombardo	2020	<i>Bedrock geology of the Porter River area</i>
Catalena Bent	2019	<i>Slip rate of the Torlesse fault at Whitewater Stream</i>
Telemak Olsen	2019	<i>Controls on Schmidt hammer rebound values of varying facies</i>
Kristin Ingraham	2018	<i>Establishing a correlation between surface exposure age and weathering rind depth for prehistoric rockfall boulders at Rapaki, New Zealand</i>
Rebecca Bland	2014	<i>Paleoseismology of a near-surface blind thrust</i>

Summer Scholarship Program (U. Canterbury):

Peter Scott	2019-2020	<i>Paleoseismology of the Torlesse fault</i>
Daniel Duke	2011–2012	<i>Developing NZ-specific procedures for Schmidt hammer exposure-age dating (SHD) to provide a reliable relative-age dating technique for the Southern Alps</i>