

Matthew Robert Miller

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EDUCATION University of Cambridge, United Kingdom
PhD in Earth Sciences 2003 – 2008
The Seismic Structure beneath the Aysén Region of Chile: Constraints on the Subduction of Young (< 6 Ma) Oceanic Plates.
BA and MSci in Natural Sciences Tripos 1999 – 2003
1st Class, Experimental and Theoretical Physics. Exchange year at Massachusetts Institute of Technology.

CURRENT POSITION Department of Geophysics, University of Concepción, Chile
Academic 2008 – 2012
Assistant Professor 2012 – present
Head of Studies 2012 – 2014

TEACHING **Undergraduate** - Bachelors in Geophysics: *Introduction to Geophysics; Solid Earth Geophysics; Geomagnetism; Applied and Exploration Seismology; Generic Mapping Tools (GMT); Analysis of Seismological Data; Topics in Geophysics; Thesis Supervisor and Evaluator.*
Postgraduate - Doctorate in Geological Sciences: *Thesis Evaluator.*

RESEARCH INTERESTS **Subduction Zones:** Plate geometry, seismic segmentation, triple junctions, slab windows.
Seismology: Tomography, attenuation, seismic networks and OBS, 2010 Chile earthquake.
Tsunamis: Generation, propagation and mitigation.

JOURNAL PUBLICATIONS Calisto, I., Miller, M., Constanzo, I.: *Comparison Between Tsunami Signals Generated by Different Source Models and the Observed Data of the Illapel 2015 Earthquake.* Pure and Applied Geophysics **2016**; 173:1051–1061
Calisto, I., Ortega, M., Miller, M.: *Observed and modeled tsunami signals compared by using different rupture models of the April 1, 2014, Iquique earthquake.* Natural Hazards **2015**; 79:397–408
Neighbors, C., Liao, E., Cochran, E., Funning, G., Chung, A., Lawrence, J., Christensen, C., Belmonte, A., Miller, M., Sepulveda, H.H.: *Investigation of the high-frequency attenuation parameter, κ (kappa), from aftershocks of the 2010 M_W 8.8 Maule, Chile earthquake.* Geophysical Journal International **2015**; 200:200–215
Hicks, S., Rietbrock, A., Ryder, I., Lee, C-S., Miller, M.: *Anatomy of a megathrust: The 2010 $M_{8.8}$ Maule, Chile earthquake rupture zone imaged using seismic tomography.* Earth and Planetary Science Letters **2014**; 405:142–155
Agurto, H., Rietbrock, A., Bataille, K., Miller, M., Iwamori, H., Priestley, K.: *Seismicity distribution in the vicinity of the Chile Triple Junction, Aysén Region, southern Chile.* Journal of South American Earth Sciences **2014**; 51:1–11
Agurto, H., Rietbrock, A., Ryder, I., Miller M.: *Seismic-afterslip characterization of the 2010 M_W 8.8 Maule, Chile, earthquake based on moment tensor inversion.* Geophysical Research Letters **2012**; 39:L20303
Collings, R., Lange, D., Rietbrock, A., Tilmann, F., Natawidjaja, D., Suwargadi, B., Miller,

M., Saul, J.: *Structure and seismogenic properties of the Mentawai segment of the Sumatra subduction zone revealed by local earthquake travel time tomography*. Journal of Geophysical Research **2012**; 117:B01312

Chung, A., Neighbors, C., Belmonte, A., Miller, M., Sepúlveda, H.H., Christensen, C., Jakka, R., Cochran, E., Lawrence, J.: *The Quake-Catcher Network Rapid Aftershock Mobilization Program Following the 2010 M 8.8 Maule, Chile Earthquake*. Seismological Research Letters **2011**; 82:526–532

PROJECTS	FONDECYT 11130355 (Chile) 2013 – 2016 Principal Investigator: <i>Aftershock analysis of the 2010 Maule earthquake in the vicinity of Arauco peninsula.</i>
	NERC RES21816 (UK) 2010 – 2012 Collaborating Investigator: <i>Postseismic investigation of the February 2010 Chile earthquake: Relaxation processes and the relationship of seismic and aseismic activity.</i>
	NSF EAR-0952376 (USA) 2010 – 2011 Collaborating Investigator: <i>Innovative Seismic Sensing for Earthquake Analysis and Seismic Hazard Assessment.</i>
	MOI-CSSP-002 (Taiwan) 2010 – 2015 Collaborating Investigator: <i>The Continental Shelf Survey Project.</i>
	JAMSTEC MR08-06 (Japan) 2009 – 2009 Collaborating Investigator: <i>Studies on geophysics and paleoceanography in the South Pacific: Evolution of climate changes and biogeochemical cycles in the Chilean continental marginal area.</i>
	JSPS 13373004 (Japan) 2001 – 2004 Collaborating Investigator: <i>From Chile Ridge Subduction To Magma Supply System (CHRIST-MASSY) project.</i>
CONSULTANCY WORK	Valhalla Energía, Chile 2014 <i>Tsunami risk study and inundation maps.</i>
PROGRAMMING	Bash, SEED, SAC, GMT, Octave, Fortran, Python, L ^A T _E X.
PERSONAL INFORMATION	Date of Birth: January 15, 1981 Nationality: United Kingdom Languages: English (native tongue), Spanish (fluent), French/German/Japanese (basic) Family: Married with 2 children Interests: Outdoors, hiking (DoE Gold Award holder), reading