

# MALCOLM C. A. WHITE

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<https://sites.google.com/view/malcolm-white>

## PERSONAL STATEMENT

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My research interests span the spectrum of computational methods in seismology—from observational problems, like elastic-wave-phase detection; to forward problems, like modeling propagating wavefronts; and inverse problems, like locating earthquakes—and how to synthesize these to investigate structural and mechanical properties of the Earth's subsurface.

## TECHNICAL STRENGTHS

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<b>Computer Languages</b>	Python, C/C++, Fortran, Mathematica, Bash
<b>Software &amp; Tools</b>	Antelope, GnuCash, L <sup>A</sup> T <sub>E</sub> X, Excel

## EDUCATION

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<b>University of Southern California</b>	<i>August 2016 - Present</i>
PhD in Earth Sciences	Overall GPA: 3.45/4.0
Department of Earth Sciences	
<b>Carleton University</b>	<i>September 2007 - May 2013</i>
BSc in Computational Geophysics	Honours
Department of Earth Sciences	

## EMPLOYMENT

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2013	<b>Scripps Institution of Oceanography</b> — <i>La Jolla, California, USA</i> <i>Seismic Analyst</i> Job description.
2011	<b>Pacific Geoscience Center</b> — <i>Sidney, British Columbia, Canada</i> <i>Research Assistant</i> Job description.
2010	<b>Geological Survey of Canada</b> — <i>Ottawa, Ontario, Canada</i> <i>Research Assistant</i> Job description.

## TEACHING

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2018	<b>The Nature of Scientific Inquiry</b> Examination of the scientific process: what constitutes science; evolution of ideas about the nature of space, time, matter, and complexity; paradigm shifts in the biological and earth sciences. Lecture, 3 hours; laboratory, 2 hours.
2017	<b>Earthquakes</b> Causes of earthquakes and nature of large faults; earthquake hazard and risk; world's great earthquakes; understanding the Richter scale. Lecture, 3 hours; laboratory, 2 hours.
	<b>The Nature of Scientific Inquiry</b>

## PUBLICATIONS

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- 2019 **White, M. C. A.**, Ben-Zion, Y., & Vernon, F. L. (2019). A Detailed Earthquake Catalog for the San Jacinto Fault-Zone Region in Southern California. *Journal of Geophysical Research: Solid Earth*, 124, 6908–6930. <https://doi.org/10.1029/2019JB017641>
- 2017 Burdick, S., Vernon, F. L., Martynov, V., Eakins, J., Cox, T., Tytell, J., ... van der Hilst, R. D. (2017). Model Update May 2016: Upper-Mantle Heterogeneity beneath North America from Travel-Time Tomography with Global and USArray Data. *Seismological Research Letters*, 88(2A), 319–325. <https://doi.org/10.1785/0220160186>
- 2016 Ross, Z. E., Ben-Zion, Y., **White, M. C.**, & Vernon, F. L. (2016). Analysis of earthquake body wave spectra for potency and magnitude values: implications for magnitude scaling relations. *Geophysical Journal International*, 207(2), 1158–1164. <https://doi.org/10.1093/gji/ggw327>
- Ross, Z. E., **White, M. C.**, Vernon, F. L., & Ben-Zion, Y. (2016). An Improved Algorithm for Real-Time S -Wave Picking with Application to the (Augmented) ANZA Network in Southern California. *Bulletin of the Seismological Society of America*, 106(5), 2013–2022. <https://doi.org/10.1785/0120150230>
- 2015 Ben-Zion, Y., Vernon, F. L., Ozakin, Y., Zigone, D., Ross, Z. E., Meng, H., ... Barklage, M. (2015). Basic data features and results from a spatially dense seismic array on the San Jacinto fault zone. *Geophysical Journal International*, 202(1), 370–380. <https://doi.org/10.1093/gji/ggv142>
- 2014 Astiz, L., Eakins, J. A., Martynov, V. G., Cox, T. A., Tytell, J., Reyes, J. C., ... Vernon, F. L. (2014). The Array Network Facility Seismic Bulletin: Products and an Unbiased View of United States Seismicity. *Seismological Research Letters*, 85(3), 576–593. <https://doi.org/10.1785/0220130141>

## SOCIETIES

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American Geophysical Union  
Seismological Society of America