MALCOLM C. A. WHITE

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PERSONAL STATEMENT

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

Computer Languages	Python, C/C++, Fortran, Mathematica, Bash
Software & Tools	Antelope, GnuCash, LaTeX, Excel

EDUCATION

University of Southern California — *August 2016 - Present*
PhD in Earth Sciences — Overall GPA: 3.45/4.0
Department of Earth Sciences

Carleton University — *September 2007 - May 2013*
BSc in Computational Geophysics — Honours
Department of Earth Sciences

EMPLOYMENT

Scripps Institution of Oceanography — **August 2013 - June 2016**
Seismic Analyst — *La Jolla, California, USA*

Pacific Geoscience Center — **June 2012 - June 2013**
Research Assistant — *Sidney, British Columbia, Canada*

Pacific Geoscience Center — **May 2011 - August 2011**
Research Assistant — *Sidney, British Columbia, Canada*

Geological Survey of Canada — **May 2010 - August 2010**
Research Assistant — *Ottawa, Ontario, Canada*

TEACHING

2018 **The Nature of Scientific Inquiry**
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 **Earthquakes**
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.

The Nature of Scientific Inquiry
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.

SOCIETIES

American Geophysical Union
Seismological Society of America

PUBLICATIONS

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