

Germán A. Prieto

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Education

Ph.D. in Earth Sciences. University of California San Diego. 2002 - 2007
M.S. in Earth Sciences. University of California San Diego. 2002 - 2004
B.S. in Geosciences. Universidad Nacional de Colombia 1997 - 2002

Honors and Awards

Thompson Postdoctoral Fellowship, Stanford University 2007 - Present

Research Experience

Assistant Profesor Starting 2009
Physics Department, Universidad de los Andes Bogotá, Colombia

Postdoctoral Scholar 2007 - Present
Ground motion prediction with ambient field; Non-volcanic tremor.
Advisor: Greg Beroza, Department of Geophysics, Stanford University, Stanford, CA

Graduate Student Researcher 2002 - 2007
Improving earthquake source spectrum estimation using multitaper techniques. Institute of Geophysics and Planetary Physics, University of California San Diego, La Jolla, CA

Research Interests

Earthquake source physics
Earthquake Hazards
Subduction zone earthquakes
Wave propagation and Scattering
Time series analysis

Teaching Experience

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| <i>Teaching Assistant - University of California San Diego</i> | Fall 2005/2006 |
| Natural Disasters Earth Sciences Department | |
| <i>Guest Lecturer - UC San Diego</i> | |
| Natural Disasters: Volcanoes Lecture | Fall 2006 |
| Introduction to Computing: Latex lecture | Winter 2007 |
| <i>Guest Lecturer - Stanford University</i> | |
| Inverse Theory | Fall 2008 |

Teaching Interests

Seismology
 Natural Hazards (Undergraduate level)
 Earth's Interior
 Inverse Theory
 Data and time series analysis

Academic Service

Peer Reviewer for: National Science Foundation, Journal of Geophysical Research, Bulletin Seismological Society, Geophysical Journal International, Seismological Research Letters, and Digital Signal Processing

I Int. Workshop on Rotational Seismology and Engineering Applications
 Participated in the development of the Proceedings DVD, including bibliography, references and literature related to the workshop

Professional Societies

American Geophysical Union (AGU)
 European Geosciences Union (EGU)
 Seismological Society of America (SSA)

Publications

2008 **Prieto, G. A.**, G. C. Beroza *Earthquake Ground Motion Prediction Using the Ambient Seismic Field. Geophys. Res. Lett.* 35. L14304, doi: 10.1029/2008GL034428

Ma, S., **G. A. Prieto**, and G. C. Beroza, *Testing community velocity models of southern California using ambient seismic noise, Bull. Seismol. Soc. Am.*, 98, (6), pp. 2694-2714, doi:10.1785/0120080947

- 2008** **Prieto, G. A.**, R. L. Parker, F. L. Vernon *A Fortran 90 library for multitaper spectrum analysis*. Accepted in *Computers & Geosciences*, June 2008.
- Prieto, G. A.**, J. F. Lawrence, G. C. Beroza *Anelastic Earth Structure from the Coherency of the Ambient Seismic Field*. Submitted to *Journal of Geophysical Research*. September 2008
- 2007** **Prieto, G. A.**, R. L. Parker, D. J. Thomson, F. L. Vernon, R. L. Graham *Reducing the bias of multitaper spectrum estimates*. *Geophys. J. Int.*, 171, 1269-1281, doi: 10.1111/j.1365-246X.2007.03592.x.
- Prieto, G. A.**, D. J. Thomson, F. L. Vernon, P. M. Shearer and R. L. Parker. *Confidence intervals of earthquake source parameters*. *Geophys. J. Int.*, 168, 1227-1234, doi:10.1111/j.1365-246X.2006.03257.x
- 2006** **Prieto, G. A.**, R. L. Parker, F. L. Vernon, P. M. Shearer and D. J. Thomson. Uncertainties in earthquake source spectrum estimation using empirical Green functions. *Earthquakes: Radiated Energy and the Physics of Faulting*. Abercrombie, McGarr, Kanamori, and di Toro eds. *AGU Geophys. Monograph* 170. pp 69-74.
- Shearer, P. M., **G. A. Prieto**, E. Hauksson. *Comprehensive Analysis of Earthquake Source Spectra in Southern California*. *J. Geophys. Res.* 111, B06303, doi:10.1029/2005JB003979.
- 2005** **Prieto, G. A.**, F. L. Vernon, T. G. Masters, and D. J. Thomson. *Multitaper Wigner-Ville Spectrum for Detecting Dispersive Signals from Earthquake Records*. Proceedings of the Thirty-Ninth Asilomar Conference on Signals, Systems, and Computers, pp 938-941, Pacific Grove, CA.
- 2004** **Prieto, G. A.**, P. M. Shearer, F. L. Vernon, and D. Kilb. *Earthquake source scaling and self-similarity estimation from stacking P and S spectra*. *J. Geophys. Res.*, 109, B08310, doi:10.1029/2004JB003084.

Poster and Presentations

- 2008** SSA Meeting - Santa Fe, NM
Prieto, G. A., G. C. Beroza *Earthquake Ground Motion Prediction Using the Ambient Seismic Field*.
- Baltay, A. S., **G. A. Prieto**, G. C. Beroza *Revisiting Energy Estimates Using the Seismic Coda and Empirical Green's Function Corrections*.

Ma, S., **G. A. Prieto**, G. C. Beroza *Testing Community Velocity Models of Southern California Using Ambient Seismic Noise.*

Kane, D. L., **G. A. Prieto**, F. L. Vernon, P. M. Shearer *Source Parameter Estimates: Using a Small Aperture Array to Determine Error.*

2007 AGU Fall Meeting - San Francisco, CA
Prieto, G. A., G. C. Beroza *Earthquake Ground Motion Prediction Using the Ambient Seismic Field.*

Baltay, A. S., **G. A. Prieto**, G. C. Beroza *Revisiting Energy Estimates Using the Seismic Coda.*

Ma, S., **G. A. Prieto**, G. C. Beroza *Testing Community Velocity Models of Southern California Using Ambient Seismic Noise.*

Kane, D. L., **G. A. Prieto**, F. L. Vernon, P. M. Shearer *Estimating source parameters and uncertainties using a small aperture array.*

SSA Meeting - Hilo, Hawai'i
Prieto, G. A., D. L. Kane, F. L. Vernon, and P. M. Shearer *Quantifying the uncertainties and resolving power of surface stations for earthquake source parameter estimation using a small aperture array.*

2006 AGU Fall Meeting - San Francisco, CA
Prieto, G. A., R. L. Parker, D. J. Thomson, F. L. Vernon, and P. M. Shearer *Unbiased Spectrum Estimation: Improved Multiple Taper Spectral Analysis.*

SSA Meeting - San Francisco, CA
Prieto, G. A., D. J. Thomson, F. L. Vernon, P. M. Shearer. *How much does P-wave coda bias S-wave spectral estimates?.*

2005 AGU Fall Meeting - San Francisco, CA
Prieto, G. A., D. J. Thomson, F. L. Vernon. *Time derivatives of the spectrum: Relaxing the stationarity assumption.*

Chapman Conference on Radiated Energy and the Physics of Earthquakes
 - Portland, MN
Prieto, G. A., F. L. Vernon, and P. M. Shearer. *Estimating Radiated Energy and its Uncertainties for $M = 5$ Earthquakes in Southern California*

2004 AGU Fall Meeting - San Francisco, CA
Prieto, G. A., F. L. Vernon, and R. L. Parker. *Time-Frequency analysis of seismic signals using the Wigner-Ville Spectrum.*

Shearer, P. M., E. Hauksson, and **G.A. Prieto** *Earthquake source properties in southern California from stacking P-wave spectra.*

SSA Meeting - Palm Springs, CA
Prieto, G. A., P. M. Shearer, F. L. Vernon, and D. Kilb. *Source scaling and self-similarity estimation by stacking P and S spectra.*