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EDUCATION

- 2002 - 2007 University of California San Diego.
Ph.D. in Earth Sciences
- 2002 - 2004 University of California San Diego.
M.S. in Earth Sciences
- 1997 - 2002 Universidad Nacional (Bogotá, Colombia)
B.S. in Geology

WORK EXPERIENCE

- 2017-Present *Associate Professor of Geophysics*
Departamento de Geociencias
Universidad Nacional de Colombia
- 2016-2017 *Associate Professor of Geophysics*
Facultad de Ciencias Naturales y Matematicas Universidad del Rosario
- 2013-2016 *Cecil & Ida Green Career Development Assistant Professor*
Earth, Atmospheric, and Planetary Sciences, MIT.
- 2009-2013 *Assistant Professor of Geophysics*, Physics Department
Universidad de los Andes
- 2007-2009 *Postdoctoral Scholar*, Department of Geophysics, Stanford University
Visiting Appointments
- 2016-Present *Guest Investigator*, Woods Hole Oceanographic Institution, WHOI.
- 2016-Present *Visiting Professor*, Earth, Atmospheric, and Planetary Sciences, MIT.
- 2012 *Visiting Professor*, IPG, Paris, Univ. Paris 7 - Diderot

HONORS AND AWARDS

- 2014-2016 Cecil & Ida Green Career Development Chair, MIT
2011 Editors Citation for Excellence in Refereeing, JGR-Solid Earth, AGU.
2010 Keiiti Aki Young Scientist Award, AGU - Seismology Section
2007-2008 Thompson Postdoctoral Fellowship, Stanford University

PUBLICATIONS

* for advised students, † for advised postdoctoral scholars

41. Chang, Y., L.M. Warren, **G.A. Prieto** (2017) Precise locations for intermediate-depth earthquakes in the Cauca cluster, Colombia. In review at *Bull. Seism. Soc. Am.*
40. A. Mordret[†], H. Sun, **G.A. Prieto**, M.N. Toksöz O. Büyüköztürk, (2017) Continuous monitoring of high-rise buildings using seismic interferometry. Submitted to *Bull. Seism. Soc. Am.*
39. Gu, C.[†], **G.A. Prieto**, F. Al-Jeri, S. Kuleli, A. Mordret[†], A Al-Enezi, O. Büyüköztürk, M.N. Toksöz (2017) Ground motion in Kuwait from regional and local earthquakes: Potential Effects on Tall Buildings. In preparation for *PAAG*
38. Florez, M.* , **G. A. Prieto** (2017), Precise Relative Earthquake Depth Determination Using Array Processing Techniques, *J. Geophys. Res: Solid Earth*. Vol. 122, doi:10.1002/2017JB014132.
37. **Prieto, G.A.**, Froment, B. C. Yu, Poli, P.[†], R. Abercrombie (2017), Earthquake rupture below the brittle-ductile transition in continental lithospheric mantle. *Science Advances* 3, e1602642.
36. H. Agurto-Detzel[†], M. Bianchi, **G.A. Prieto**, M. Assumpção. (2017) Earthquake source properties of a shallow induced seismic sequence in SE Brazil. *J. Geophys. Res. Solid Earth*. 122, 2784-2797 doi:10.1002/2016JB013623.
35. Sun, H. A. Mordret[†], **G.A. Prieto**, N. Toksöz O. Büyüköztürk (2017) Bayesian characterization of buildings using seismic interferometry on ambient vibrations.

- Mechanical Systems and Signal Processing.* v85, 468-486. doi:10.1016/j.ymssp.2016.08.038
34. Poli, P.[†], **G.A. Prieto** (2016), Global rupture parameters for deep and intermediate-depth earthquakes, *J. Geophys. Res. Solid Earth.* 121. 8871-8887. doi:10.1002/2016JB013521
 33. Mordret, A.[†], D. Mikesell, C. Harig, B. P. Lipovsky, **G. A. Prieto**.(2016) Monitoring South-West Greenland's ice sheet melt with ambient seismic noise. *Science Advances.* v2. n5. e1501538
 32. Poli, P.[†], **G. A. Prieto**, C. Yu, Florez, M.* , Chen, G., Mykesell, D., H.A. Denzel (2016), Complex rupture of the M6.3 March 10, 2015 Bucaramanga earthquake: evidence of strong weakening process, Published Online *Geophys. J. Int.:* ggw065.
 31. P. Poli[†], **G.A. Prieto**, E. Rivera, S. Ruiz (2016) Earthquake nucleation and thermal shear instability in the Hindu-Kush intermediate-depth nest. *Geophys. Res. Lett.* v43. doi:10.1002/2015GL067529
 30. Syracuse, E. M., Maceira, M., **Prieto, G. A.**, Zhang, H., Ammon, C. J. (2016). Multiple plates subducting beneath Colombia, as illuminated by seismicity and velocity from the joint inversion of seismic and gravity data. *Earth and Planetary Science Letters*, 444, 139-149.
 29. Chiarabba, C, P. De Gori, C. Faccenna, F. Speranza, D. Seccia, V. Dionicio, **G. A. Prieto**, (2015), Subduction system and flat slab beneath the Eastern Cordillera of Colombia, *Geochemistry, Geophysics, Geosystems.* v16 doi:10.1002/2015GC006048.
 28. Poli, P.[†], **G. A. Prieto** (2014). Global and along-strike variations of source duration and scaling for intermediate-depth and deep focus earthquakes. *Geophys. Res. Lett.* 41. doi:10.1002/2014GL061916
 27. Denolle, M.A., E.M. Dunham, **G. A. Prieto**, G.C. Beroza. (2014). Strong Ground Motion Prediction Using Virtual Earthquakes. *Science.* 343, 399-403. doi:10.1126/science.1245678
 26. **Prieto, G.A.**, M. Florez*, S.A. Barrett, G.C. Beroza, et al. (2013) Seismic evidence for thermal runaway during intermediate-depth earthquake rupture. *Geophys. Res. Lett.*, 40. 1-5. doi: 10.1002/2013GL058109 (PDF)

25. Frank, W., N. Shapiro, V. Kostoglodov, A. Husker, J. Payero, M. Campillo, **G. A. Prieto** (2013). Low-frequency earthquakes in the Mexican Sweet Spot. *Geophys. Res. Lett.* doi:10.1002/grl.50561.
24. Lawrence, J.F., M.A. Denolle, K.J. Seats, **G. A. Prieto**. (2013). A numeric evaluation of attenuation from ambient noise correlation functions. *J. Geophys. Res.* 118 (12), 6134-6145. doi:10.1002/2012JB009513
23. Denolle, M. A., E. M. Dunham, **G. A. Prieto**, and G. C. Beroza (2013), Ground motion prediction of realistic earthquake sources using the ambient seismic field, *J. Geophys. Res. Solid Earth*, 118, doi:10.1029 /2012JB009603.
22. **Prieto, G. A.** (2012), Imaging the Deep Earth. *Science*. 338, 1037. doi: 10.1126/science.1231290.
21. **Prieto, G. A.** G.C. Beroza, S.A. Barrett, G.A. Lopez*, M. Florez* (2012), Earthquake nests as natural laboratories for the study of intermediate-depth earthquake mechanics. *Tectonophysics* 570-571, 4256. doi: 10.1016/j.tecto.2012.07.019
20. K. Seats, J. F. Lawrence, **G. A. Prieto** (2012) Improved Ambient Noise Correlation Functions using Welch's Method. *Geophys. J. Int.* 188, 5135-523. doi: 10.1111/ j.1365- 246X.2011.05263.x
19. **Prieto, G. A.** M. Denolle, J. F. Lawrence, G. C. Beroza. (2011), On amplitude information carried by the ambient seismic field. In Press *Comptes rendus geoscience. Thematic Issue: Imaging and Monitoring with Seismic Noise*. 343, 600-614.
18. Lawrence, J. F., **G. A. Prieto**. (2011), Attenuation tomography of the western United States from Ambient Seismic Noise. *J. Geophys. Res.* 116, B06302.
17. Kane, D. L., **G. A. Prieto**, F. L. Vernon, P. M. Shearer (2011) Quantifying Seismic Source Parameter Uncertainties. *Bull. Seism. Soc. Am.* 101 (2), pp. 535-543.
16. Baltay, A., S. Ide, **G. A. Prieto**, G. C. Beroza (2011) Variability in Earthquake Stress Drop and Apparent Stress. *Geophys. Res. Lett.* 38, L06303.
15. **Prieto, G. A.**, J. F. Lawrence, A. I. Chung, M. D. Kohler. (2010), *Impulse Response of Civil Structures from Ambient Noise Analysis*. *Bull. Seism. Soc. Am.*, 100 (5A), pp. 2322-2328.

14. Elipot, S., R. Lumpkin, **G. A. Prieto**, *Inertial Oscillation modification by mesoscale vorticity*, (2010), *J. Geophys. Res.*, 115, C09010.
13. Baltay, A., **G. A. Prieto**, G. C. Beroza. (2010), *Radiated Seismic Energy from coda measurements indicates no scaling in apparent stress with seismic moment*. *J. Geophys. Res.*, 15, B08314.
12. **Prieto, G. A.**, , J. F. Lawrence, G. C. Beroza. (2009) *Anelastic Earth Structure from the Coherency of the Ambient Seismic Field*. *J. Geophys. Res.*. 114. B07303.
11. **Prieto, G. A.**, , R. L. Parker, F. L. Vernon., (2009) *A Fortran 90 library for multitaper spectrum analysis*, *Computers and Geosciences*, 35, pp. 1701-1710.
10. **Prieto, G. A.**, G. C. Beroza. (2008), *Earthquake Ground Motion Prediction Using the Ambient Seismic Field*. *Geophys. Res. Lett.*. 35. L14304.
9. Ma, S., **G. A. Prieto**, and G. C. Beroza, (2008), *Testing community velocity models of southern California using ambient seismic noise*, *Bull. Seismol. Soc. Am.*, 98, (6), pp. 2694-2714.
8. **Prieto, G. A.**, R. L. Parker, D. J. Thomson, F. L. Vernon. R. L. Graham. (2007), *Reducing the bias of multitaper spectrum estimates*. *Geophys. J. Int.*, 171, 1269-1281.
7. **Prieto, G. A.**, D. J. Thomson, F. L. Vernon, P. M. Shearer and R. L. Parker. (2007), *Confidence intervals of earthquake source parameters*. *Geophys. J. Int.*, 168, 1227-1234.
6. **Prieto, G. A.**, R. L. Parker, F. L. Vernon, P. M. Shearer and D.J. Thomson. (2006), *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.
5. Shearer, P. M., **G. A. Prieto**, E. Hauksson. (2006), *Comprehensive Analysis of Earthquake Source Spectra in Southern California*. *J. Geophys. Res.* 111, B06303.
4. **Prieto, G. A.**, P. M. Shearer, F. L. Vernon, and D. Kilb. (2004), *Earthquake source scaling and self-similarity estimation from stacking P and S spectra*. *J. Geophys. Res.*, 109, B08310.

Conference Papers

3. Chao, K., **G.A. Prieto**, J. Du (2016), Source parameters of repeating microseismic events during hydraulic fracturing operations, Annual Meeting of the Society of Petroleum Engineers (SPE), Dubai, UAE, 26-28, Sept.
2. Fincke, J.R., M. Feigin, **G.A. Prieto**, X. Zhang, B. Anthony (2016), Towards ultrasound travel time tomography for quantifying human limb geometry and material properties. In *Medical Imaging 2016: Ultrasonic Imaging and Tomography* Ed. Neb Duric, Brecht Heyde, Proceedings of SPIE Vol. 9790 (SPIE, Bellingham, WA, 2016). 90901S.
1. **Prieto, G. A.**, F. L. Vernon, T. G. Masters, and D. J. Thomson. (2005), *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.

RESEARCH INTERESTS

Earthquake source physics. Regional seismic tomography and Q-tomography based on the ambient seismic field. Wave propagation and Scattering. Structure of subduction zones and intermediate-depth earthquakes. Continuous monitoring of Earth and engineering structures. Observational seismology based on large data sets. Time series analysis and advanced signal processing tools. Inverse theory.

TEACHING EXPERIENCE

At Universidad Nacional de Colombia

2015499 Fundamentals of Geophysics, 2017-I

2015522 Geoinformatics, 2017-I

2018995 Special Topics of Geology, 2017-I

At EAPS, MIT

12.201/501 Mechanics of Faulting and Earthquakes, Spring 2016

12.S591 Special Seminar - Ambient Noise Tomography, Spring 2014

12.201/501 Essentials of Geophysics, Fall 2014

12.210/510 Introduction to Seismology, Spring 2015/2016

12.520 Mechanics of Faults and Earthquakes, Spring 2016

Previous Teaching

2013	Geophysics, <i>Universidad de los Andes</i>
2011	Seismology, <i>Universidad de los Andes</i>
2010	Introduction to Geophysics, <i>Universidad de los Andes</i>
2009-2010	Computational Physics, <i>Universidad de los Andes</i>
2009-2011	Natural Disasters, <i>Universidad de los Andes</i>
2010-2011	Physics for Future Presidents, <i>Universidad de los Andes</i>
2008	Inverse Theory, Guest Lecturer, <i>Stanford University</i>
2005-2006	Natural Disasters, Teaching Assistant, <i>UC San Diego</i>

FUNDING

2013-2014	MITs Charles E. Reed Faculty Initiatives Fund , <i>Constraining the Mechanics of Earthquake Rupture Deep inside the Earth using a Natural Laboratory.</i>
2014-2016	NSF-EAR 1415907 , <i>High-resolution attenuation structure from the ambient seismic field.</i>
2015-2017	NSF-EAR 1521534 , <i>Robust earthquake source scaling and seismic efficiency for intermediate-depth and deep earthquakes at global and regional scales.</i>
2016-2017	Colciencias 51658 , <i>Estudio de la física de los terremotos profundos en el territorio Colombiano y los procesos que los generan.</i>
2014-2017	TOTAL-MIT , <i>Multi-scale Shale Gas Collaboratory MSGC.</i> PI Brad Hager; Co-PI: Prieto
2017-2019	NSF-PLR 1643761 , <i>Collaborative Research: Monitoring Antarctic Ice Sheet Changes with Ambient Seismic Noise Methods.</i>

INVITED VISITS/TALKS

2017/07	Total Research Lab, Houston, TX, USA
2017/03	Geology Seminar, Universidad EAFIT, Colombia
2017/02	Faculty Seminar, Universidad del Rosario, Colombia
2015/09	Earth Science Seminar, Rice University
2014/12	AGU. <i>Regional and Telesismic Constraints on Intermediate-Depth and Deep focus Earthquake Mechanisms.</i>
2014/12	Earth, Environmental and Planetary Science Colloquia, Brown University

INVITED VISITS/TALKS (.. CONTINUED)

- 2014/07 Session Chair SEG/AGU Workshop: Advances in Active+Passive Full Wavefield Seismic Imaging: from Reservoirs to Plate Tectonics, Vancouver, Canada
- 2014/07 Discussion Leader SEG/AGU Workshop, Vancouver, Canada
- 2014/04 Solid Earth Physics Seminar, Harvard University
- 2014/03 Brown Bag Seminar, Geosciences Dept. Princeton University
- 2013/05 Cargese Summer School, Ambient Noise Imaging and Monitoring. *Advances & Challenges in understanding the amplitude in noise correlations*
- 2012/12 AGU. *Contrasting behavior between shallow and intermediate-depth earthquakes.*
- 2012/12 AGU. *Regional Tomography and Precise earthquake locations for intermediate-depth earthquake nests.*
- 2012/10 ECGS Workshop 2012. *Earthquake source physics at various depths.*
- 2012/06 U. Toulouse, France
- 2012/06 Geophysics Seminar, LMU, Munich, Germany
- 2012/06 ETH, Zurich, Switzerland
- 2012/05 IsTerre, U Joseph Fourier, Grenoble.
- 2012/05 3rd QUEST Workshop 2012. *Invited Panel on Source Characteristics.*
- 2012/05 Institute de Physique du Globe de Paris
- 2012/04 EGU. *Earthquake source scaling, stress drops and seismic efficiency of intermediate-depth earthquakes.*
- 2012/04 Institute de Physique du Globe de Paris
- 2012/03 Earth Sciences Department, UC Riverside
- 2011/08 Department of Geophysics, Colorado School of Mines
- 2011/06 Conferencia Divulgativa, Unión Geofísica Mexicana, Mexico
- 2011/05 Cargese Summer School, Passive Imaging in Wave Physics: from seismology to ultrasound. *On amplitude information carried by the ambient seismic field*
- 2011/03 Earth, Atmospheric and Planetary Sciences, MIT
- 2009/12 AGU Fall Meeting (San Francisco). *Earth's attenuation Structure from the ambient seismic field*
- 2008/11 Seismo Lab Seminar, Caltech
- 2008/10 Seismology Seminar, USC
- 2008/10 Seismo Lab Seminar, UC Berkeley
- 2008/07 US Geological Survey, Menlo Park

STUDENT ADVICING

POSTDOCTORAL SCHOLARS

Aurélien Mordret	2014 - Today
William Frank	2015 - Today
Kevin Chao	2014 - 2016
Piero Poli	2013 - 2017

GRADUATE STUDENTS

2013 -	Manuel Flórez. PhD.; Expected 2018
2012	Manuel Flórez. M. Sc.; Precise location of intermediate-depth earthquakes.
2011	Gabriel López. M. Sc.; Seismic source scaling in the Bucaramanga Nest

UNDERGRADUATE STUDENTS

2011	María del Mar Yepes. B.S.; Temporal behavior of intermediate depth earthquakes in the Bucaramanga Nest.
2011	Sergio Rodríguez. B.S.; Optimizing time-frequency spectra using bayesian methods.
2009	Gabriel López. B.s.; Non-stationary spectral estimation for improving the resolution of surface wave dispersion curves (in Spanish).

PROFESSIONAL SOCIETIES

American Geophysical Union (AGU)
European Geosciences Union (EGU)
Seismological Society of America (SSA)
European Association of Geoscientists and Engineers (EAGE)

ACADEMIC SERVICE

SERVICE AT UNAL

Department Advising Committee, 2017- today

Graduate Admissions Committee, 2017

SERVICE AT MIT

EAPS Solid Earth Search Committee, 2013-2014, 2014-2015, 2015-2016

EXTERNAL SERVICE

Kei Aki Award Committee Member *AGU Seismology Section* 2016-Present

Associate Editor *J. Geophysical Research* (Solid Earth) 2013-Present

Scientific Committee *Joint SEG/AGU Summer Research Workshop 2014: Advances in Active+Passive Full Wavefield Seismic Imaging*

Scientific Committee *ECGS Workshop '12: Earthquake Source Physics on various scales*

Peer Reviewer: *Science*, *Science Advances*, *Nature*, *Nature Geoscience*, *National Science Foundation*, *J. Geophysical Research*, *Bull. Seism. Soc. Am.*, *Geophys. J. Int.*, *Seismological Res. Let.*

POSTERS AND PRESENTATIONS

More than 120 posters and talks at AGU, SSA, EGU and other international meetings.