

Date: Dec 18, 2016

PERSONAL

Name: **Falk Amelung**
Office Phone: 304 421 4949
Home Address: 15645 SW 77 Ct, Miami FL 33157
Current Acad. Rank: Professor
Department: Marine Geology and Geophysics/RSMAS
Citizenship: Germany, U.S.

HIGHER EDUCATION

Institutional: Université Louis-Pasteur, Strasbourg, France, PhD., 1996
University of Muenster, Germany, M. Sc., 1991

EXPERIENCE

Academic: University of Miami, Professor, 2011-
University of Miami, Associate Professor, 2007-2011
University of Miami, Assistant Professor, 2002-2007
University of Hawaii, Ass. Researcher, 1999-2002
Stanford University, PostDoc. Res. Associate, 1997-1999

PUBLICATIONS

* Graduate student lead author, ** Postdoc lead author

Refereed journal articles:

In review:

F. Albino**, F. Amelung, P. Gregg: The role of pore-fluid pressure on the failure of magma reservoirs: insights from Indonesian and Aleutian arc volcanoes, *Submitted to Journal of Geophysical Research*.

Published:

1. Morales Rivera^{*}, A. M., F. Amelung, and P. Mothes (2016), Volcano deformation survey over the Northern and Central Andes with ALOS InSAR time series, *Geochem. Geophys. Geosyst.*, 17, 2869–2883, doi:[10.1002/2016GC006393](https://doi.org/10.1002/2016GC006393).
2. Fattahi^{*}, H., and F. Amelung (2016), InSAR observations of strain accumulation and fault creep along the Chaman Fault system, Pakistan and Afghanistan, *Geophys. Res. Lett.*, 43, doi:[10.1002/2016GL070121](https://doi.org/10.1002/2016GL070121).
3. Zhao^{*}, W., Amelung, F., Doin, M. P., Dixon, T. H., Wdowinski, S., & Lin, G. (2016). InSAR observations of lake loading at Yangzhuoyong Lake, Tibet: Constraints on crustal elasticity. *Earth and Planetary Science Letters*, 449, 240-245, doi:[10.1016/j.epsl.2016.05.044](https://doi.org/10.1016/j.epsl.2016.05.044)
4. Fattahi^{*}, H., and F. Amelung (2015), InSAR bias and uncertainty due to the systematic and stochastic tropospheric delay, *J. Geophys. Res. Solid Earth*, 120, 8758–8773, doi:[10.1002/2015JB012419](https://doi.org/10.1002/2015JB012419).
5. Lin, G., F. Amelung, P. M. Shearer, and P. G. Okubo (2015), Location and size of the shallow magma reservoir beneath Kilauea caldera, constraints from near-source V_p/V_s ratios, *Geophys. Res. Lett.*, 42, doi:[10.1002/2015GL065802](https://doi.org/10.1002/2015GL065802).

6. Yang, Q., Zhao, W., Dixon, T. H., Amelung, F., Han, W. S., & Li, P. (2015). InSAR monitoring of ground deformation due to CO₂ injection at an enhanced oil recovery site, West Texas. *International Journal of Greenhouse Gas Control*, 41, 20-28.
7. Plattner^{**}, C., Amelung, F., Baker, S., Govers, R., & Poland, M. (2013). The role of viscous magma mush spreading in volcanic flank motion at Kīlauea Volcano, Hawai‘i. *Journal of Geophysical Research: Solid Earth*, 118(5), 2474-2487.
8. Fattahi^{*}, H., F. Amelung, E. Chaussard and S. Wdowinski (2015), Coseismic and postseismic deformation due to the 2007 M5.5 Ghazaband earthquake, Balochistan, Pakistan, *Geophys. Res. Lett.*, 42, doi: 10.1002/2015GL063686.
9. Lin, G., P. M. Shearer, F. Amelung, and P. G. Okubo (2015), Seismic tomography of compressional wave attenuation structure for Kīlauea Volcano, Hawai‘i, *J. Geophys. Res. Solid Earth*, 120, doi: 10.1002/2014JB011594.
10. Baker^{*}, S., and F. Amelung (2015), Pressurized magma reservoir within the east rift zone of Kīlauea Volcano, Hawai‘i: Evidence for relaxed stress changes from the 1975 Kalapana earthquake, *Geophys. Res. Lett.*, 42, doi:10.1002/2015GL063161.
11. Bagnardi^{*}, M., Poland, M. P., Carbone, D., Baker, S., Battaglia, M., & Amelung, F. (2014). Gravity changes and deformation at Kīlauea Volcano, Hawai‘i, associated with summit eruptive activity, 2009–2012. *Journal of Geophysical Research: Solid Earth*.
12. Fattahi^{*}, H., & Amelung, F. (2014). InSAR uncertainty due to orbital errors. *Geophysical Journal International*, 199(1), 549-560.
13. Jackson, K. L., Eberli, G. P., Amelung, F., McFadden, M. A., Moore, A. L., Rankey, E. C., & Jayasena, H. A. H. (2014). Holocene Indian Ocean tsunami history in Sri Lanka. *Geology*, G35796-1.
14. Lin, G., Shearer, P. M., Matoza, R. S., Okubo, P. G., & Amelung, F. (2014). Three-dimensional seismic velocity structure of Mauna Loa and Kīlauea volcanoes in Hawaii from local seismic tomography. *Journal of Geophysical Research: Solid Earth*, doi: 10.1002/2013JB010820
15. E. Chaussard^{*}, and F. Amelung (2014), Regional controls on magma ascent and storage in volcanic arcs, *Geochem. Geophys. Geosyst.*, 15, doi:10.1002/2013GC005216
16. Lin, G., Amelung, F., Lavallée, Y., & Okubo, P. G. (2014). Seismic evidence for a crustal magma reservoir beneath the upper east rift zone of Kīlauea volcano, Hawaii. *Geology*, G35001-1.
17. Zhao^{*}, W., Amelung F., Dixon, T.H., Wdowinski, S. and Malservisi, R. (2014) A method for estimating ice loss from relative InSAR observations: Application to the Vatnajökull ice cap, Iceland, *Geochemistry, Geophysics, Geosystems*, DOI: 10.1002/2013GC004936.
18. Kim, S-W, S. Wdowinski, F. Amelung, T. H. Dixon, and J-S Won, Interferometric coherence analysis of the Everglades wetlands, South Florida (2013) *IEEE Transactions on Geoscience and Remote Sensing*.
19. Chaussard^{*}, E. and F. Amelung, Characterization of Geological Hazards Using a Globally Observing Spaceborne SAR, *Photogrammetric Engineering and Remote Sensing*, 79, 11, 982-986, 2013
20. Chaussard^{*}, E., Wdowinski, S., Cabral-Cano, E., & Amelung, F. (2014). Land subsidence in central Mexico detected by ALOS InSAR time-series. *Remote Sensing of Environment*, 140, 94-106
21. Bagnardi^{*}, M., Amelung, F., & Poland, M. P. (2013). A new model for the growth of basaltic shields based on deformation of Fernandina volcano, Galápagos Islands. *Earth and Planetary Science Letters*, 377, 358-366, doi:10.1016/j.epsl.2013.07.016

22. Chaussard*, E., Amelung, F., & Aoki, Y. (2013). Characterization of open and closed volcanic systems in Indonesia and Mexico using InSAR time-series. *Journal of Geophysical Research: Solid Earth*, DOI: 10.1002/jgrb.50288
23. Plattner**, C., Amelung, F., Baker, S., Govers, R., & Poland, M. (2013). The role of viscous magma mush spreading in volcanic flank motion at Kīlauea Volcano, Hawai‘i. *Journal of Geophysical Research: Solid Earth*, DOI: 10.1002/jgrb.50194
24. Ebmeier, S. K., Biggs, J., Mather, T. A., & Amelung, F. (2013). On the lack of InSAR observations of magmatic deformation at Central American volcanoes. *Journal of Geophysical Research: Solid Earth*, DOI: 10.1002/jgrb.50195
25. Ebmeier, S. K., Biggs, J., Mather, T. A., & Amelung, F. (2013). Applicability of InSAR to tropical volcanoes: insights from Central America. *Geological Society, London, Special Publications*, 380.
26. Fattahi*, H. and F. Amelung (2013) DEM-error correction in InSAR time-series analysis, *IEEE Transactions on Geoscience and Remote Sensing*, vol. no.99, doi: 10.1109/TGRS.2012.2227761
27. Acocella, V., Puglisi, G., & Amelung, F. (2013). Flank instability at Mt. Etna. *Journal of Volcanology and Geothermal Research*, 251, 1-4.
28. Chaussard*, E. Amelung, F. Abidin, H. Hong, S.-H. (2013), Sinking Cities in Indonesia: ALOS-PALSAR detects rapid subsidence due to groundwater and gas extraction, *Remote Sensing of Environment*, 128, doi:10.1016/j.rse.2012.10.015.
29. Chaussard*, E. and F. Amelung (2012), Precursory inflation of shallow magma reservoirs at west Sunda volcanoes detected by InSAR, *Geophys. Res. Lett.*, doi:10.1029/2012GL053817.
30. Baker*, S. and F. Amelung (2012), Top-down inflation and deflation at the summit of Kīlauea Volcano, Hawaii observed with InSAR, *J. Geophys. Res.*, doi:10.1029/2011JB009123
31. Bagnardi*, M., and F. Amelung (2012), Space-geodetic evidence for multiple magma reservoirs and subvolcanic lateral intrusions at Fernandina Volcano, Galápagos Islands, *J. Geophys. Res.*, 117, B10406, doi:10.1029/2012JB009465.
32. S.K. Ebmeier, J. Biggs, T.A. Mather, J.R. Elliott, G. Wadge and F. Amelung, Measuring large topographic change with InSAR: lava thicknesses, extrusion rate and subsidence rate at Santiaguito Volcano, Guatemala, *Earth and Planetary Science Letters*, 335-336, 216-225, 2012. (doi:10.1016/j.epsl.2012.04.027)
33. Bell, J. W., F. Amelung, and C. D. Henry (2012), InSAR analysis of the 2008 Reno-Mogul earthquake swarm: Evidence for westward migration of Walker Lane style dextral faulting, *Geophys. Res. Lett.*, 39, L18306, doi:10.1029/2012GL052795.
34. Parks, M.M., J. Biggs, T.A. Mather, D.M. Pyle, F. Amelung, M. L. Monsalve, L. Narvaez Medina (2011): Co-eruptive subsidence at Galeras identified during an InSAR survey of Colombian volcanoes (2006–2009). *Journal of Volcanology and Geothermal Research* 202, 228–240.
35. Gourmelen*, N. Dixon, F. Amelung, Schmalzle (2011). Acceleration and Evolution of Faults: An Example from the Hunter Mountain Fault, Eastern California, *EPSL*, 301 (1-2): 337-344,2
36. Gourmelen*, N., F. Amelung, and R. Lanari (2010), Interferometric synthetic aperture radar–GPS integration: Interseismic strain accumulation across the Hunter Mountain fault in the eastern California shear zone, *J. Geophys. Res.*, 115, B09408, doi:10.1029/2009JB007064.
37. Biggs**, J., Mothes, P, Ruiz, M., Baker, S., Amelung, F., Dixon, T., and Hong, S-H . Stratovolcano growth by co-eruptive intrusion: 2008 eruption of Tungurahua, Ecuador, *Geophysical Research Letters*, doi:10.1029/2010GL044942 (2010)

38. Calais, E. , A. Freed, G. Mattioli, S. Jonsson , F. Amelung, P. Jansma, S.-H. Hong, T. Dixon, C. Prepetit, and R. Momplaisir (2010), Transpressional rupture of an unmapped fault during the 2010 Haiti earthquake, doi 10.1038/NGEO992, *Nature Geosciences*.
39. Ebmeier, S. K., J. Biggs, T. A. Mather, G. Wadge, and F. Amelung (2010), Steady downslope movement on the western flank of Arenal volcano, Costa Rica, *Geochem. Geophys. Geosyst.*, *11*, Q12004, doi:10.1029/2010GC003263.
40. S.-W. Kim, S. Wdowinski, T. H. Dixon, F. Amelung, J.-W. Kim, and J.-S. Won. Measurements and predictions of subsidence induced by soil consolidation using persistent scatterer InSAR and a hyperbolic model, *Geophys. Res. Lett.*, Vol. 37, L05304, doi:10.1029/2009GL041644 (2010).
41. Biggs^{**}, J., F. Amelung, N. Gourmelen, T. Dixon: InSAR Observations of 2007 Tanzania Seismic Swarm Reveals Mixed Fault and Dyke Extension in an Immature Continental Rift, *Geophysical Journal International*. Volume 179 Issue 1, Pages 549 – 558, 2009
42. Bell, J. W., F. Amelung, A. Ferretti, M. Bianchi, and F. Novali (2008), Permanent Scatterer InSAR Reveals Seasonal and Long-Term Aquifer-System Response to Groundwater Pumping and Artificial Recharge, *Water Resour. Res.*, doi:10.1029/2007WR006152.
43. S. Wdowinski, Kim, S.W., F. Amelung, T. Dixon, F. Miralles-Wilhelm, R. Sonnenschein (2008). Space-based detection of surface water level changes in south Florida from L-band SAR interferometry. *Remote Sensing of Environment* 112, 681 – 696.
44. Kim^{**}, S-W, S. Wdowinski, T.H. Dixon, F. Amelung, J-S. Won, J-W. Ki (2008), InSAR -based mapping of surface subsidence in Mokpo City, Korea, using JERS-1 and ENVISAT SAR data, *Earth Planets Space*, v.60, p. 453-461.
45. Manconi, A., T.R. Walter and F. Amelung (2007) Effects of mechanical layering on volcano deformation. *Geophysical Journal International*. doi: 10.1111/j.1365-246X.2007.03449.x
46. Walter^{**} T.R., Amelung F. (2007) Volcanic eruptions following M \geq 9 megathrust earthquakes: Implications for the Sumatra-Andaman volcanoes. *Geology*, 35(6), 539–542, DOI: 10.1130/G23429A.1.
47. Amelung, F., S.H. Yun, T. Walter, Paul Segall and S.-W. Kim. Stress control of deep rift intrusion at Mauna Loa volcano, Hawaii. *Science* 316: 1026-1030 [DOI: 10.1126/science.1140035], 2007.
48. Gourmelen^{*}, N., F. Amelung, F. Casu, M. Manzo, and R. Lanari (2007), Mining-related ground deformation in Crescent Valley, Nevada: Implications for sparse GPS networks, *Geophys. Res. Lett.*, 34, L09309, doi:10.1029/2007GL029427/
49. Walter^{**} T. R., F. Amelung, Volcano-earthquake interaction at Mauna Loa volcano, Hawaii, *J. Geophys. Res.*, 111, B05204, doi:10.1029/2005JB003861, 2006.
50. T. H. Dixon, F. Amelung, A. Ferretti, F. Novali, F. Rocca, R. Dokka, G. Sella, S.-W. Kim, S. Wdowinski, D. Whitman: Subsidence and flooding in New Orleans, *Nature*, 441, 587-588 [doi:10.1038/441587a], 2006
51. Gourmelen^{*}, N. and F. Amelung, Post-seismic mantle relaxation in the Central Nevada Seismic., *Science* 310: 1473-1476 [DOI: 10.1126/science.1119798], 2005
52. Walter T. R., V. Acocella, M. Neri, F. Amelung, Feedback processes between magmatic events and flank movement at Mount Etna (Italy) during the 2002–2003 eruption, *J. Geophys. Res.*, 110, B10205, doi:10.1029/2005JB003688, 2005
53. Jonsson S. P. Zebker, H., Amelung, F.: Trapdoor faulting of the Caldera Floor of Sierra Negra volcano, Galapagos Islands, *Jour. Volcan. Geotherm. Res.*, V144, pp 59-71, 2005

54. Wdowinski S., F. Amelung, F. Miralles-Wilhelm, T. H. Dixon, R. Carande (2004), Space-based measurements of sheet-flow characteristics in the Everglades wetland, Florida, *Geophys. Res. Lett.*, 31, L15503, doi:10.1029/2004GL020383.
55. Walter** T.R., Troll V, Cailleau B, Belousov A, Schmincke H.U, Bogaard P, Amelung F (2004) Rift zone reorganization through flank instability on ocean island volcanoes: Tenerife, Canary Islands. *Bulletin of Volcanology*, DOI: 10.1007/s00445-004-0352-z, 2004
56. T.R. Walter** and F. Amelung: Influence of volcanic activity at Mauna Loa, Hawaii, on earthquake occurrence in the Koaiki fault zone, Hawaii. *Geophys. Res. Lett.*, Vol. 31, L07622, doi:10.1029/2003GL019131, 2004
57. Rowland S.K., Harris A.J.L., Wooster M.J., Amelung F., Garbeil H., Wilson L., and Mouginiis-Mark P.J. Volumetric characteristics of lava flows from interferometric radar and multispectral satellite data: The 1995 Fernandina and 1998 Cerro Azul eruptions in the Western Galapagos. *Bulletin of Volcanology.*, 65:311-330, doi 10.1007/s00445-002-0262-x, 2003..
58. Amelung F., J. W. Bell, Interferometric synthetic aperture radar observations of the 1994 Double Spring Flat, Nevada, earthquake (M 5.9): Main shock accompanied by triggered slip on a conjugate fault, *J. Geophys. Res.*, 108 (B9), 2433, doi:10.1029/2002JB001953, 2003.
59. S. Jonsson, H. Zebker. P. Segall and F. Amelung: Fault slip distribution of the 1999 M7.2 Hector Mine earthquake, California, estimated from satellite radar and GPS measurements , *Bull. Seism. Soc. Amer.*, Vol. 92, No. 4, pp. 1377-1389, 2002
60. Amelung F. and S. Day InSAR observations of the 1995 Fogo, Cape Verde, eruption: Implications for the effects of collapse events upon island volcanoes, *Geophysical Research Letters*, 10.1029/2001GL013760, 2002
61. Bell, John W., F. Amelung, Alan R. Ramelli, Geoff Blewitt, Land Subsidence in Las Vegas, Nevada, 1935-2000: New Geodetic Data Show Evolution, Revised Spatial Patterns, and Reduced Rates. *Environmental & Engineering Geoscience*, Vol. VIII, No. 3, pp. 155-174, 2002.
62. Cervelli, P., P. Segall, F. Amelung, H. Garbeil, C. Meertens, S. Owen, A. Miklius, and M. Lisowski. The 12 September 1999 Upper East Rift Zone dike intrusion at Kilauea Volcano, Hawaii, *J. Geophys. Res.*, 10.1029/2001JB000602, 2002
63. J. Hoffmann, H. Zebker, D. Galloway and F. Amelung: Seasonal subsidence in Las Vegas observed with synthetic aperture radar interferometry , *Water Resources Research*, Vol. 37, No. 6, p. 1551-1566, 2001
64. Amelung, F., S. Jonsson, H. Zebker and P. Segall, Widespread uplift and trap door faulting on Galápagos volcanoes observed with radar interferometry. *Nature*, Volume 407 No. 6807, p. 993-996, 2000.
65. Amelung, F., Oppenheimer, Clive, Segall, P., Zebker, H., Ground deformation near Gada 'Ale Volcano, Afar, observed by Radar Interferometry, *Geophys. Res. Lett.* Vol. 27, No. 19, p. 3093, 2000.
66. Zebker, H., Amelung, F., and Jonsson, S, Remote Sensing of Volcano Surface and Internal Processes using radar interferometry, *Geophysical Monograph 116, Remote Sensing of Active Volcanoes*, Ed: P. Mouginiis-Mark, J. Crisp and J. Fink., p. 179-205, 2000.
67. Kaufmann, G. and Amelung, F., Reservoir-induced deformation and continental rheology in vicinity of Lake Mead, Nevada , *J. Geophys. Res.* Vol. 105 , No. B7 , p. 16,341, 2000.

68. Amelung, F., D. Galloway, J. Bell, H. Zebker and R. Laczniak, Sensing the ups and downs of Las Vegas: InSAR reveals structural control of land subsidence and aquifer-system deformation. *Geology*, Volume 27, No. 6, p. 483–486, June 1999
69. Amelung, F. and G. King, Large-scale tectonic deformation inferred from small earthquakes, *Nature*, 386, 702-705, 1997.
70. Amelung, F. and G. King, Earthquake scaling laws for creeping and non-creeping faults., *Geophys. Res. Lett.*, 24, 507-510, 1997.
71. Bell, J.W, F. Amelung, and G.C.P. King, Preliminary late quaternary slip history of the Carboneras fault, Southeastern Spain, *J. Geodynamics*, Vol. 24, Nos 1-4, pp. 51-66, 1997.
72. Dorbath, C., D. Oppenheimer, F. Amelung and G. King, Seismic tomography and deformation modeling of the junction of the San Andreas and Calaveras faults, *J. Geophys. Res.*, 101, 27917-27942, 1996.
73. King, G., D. Oppenheimer and F. Amelung, Block versus continuum deformation in the Western United States, *Earth Planet. Sci. Lett.*, 128, 55-64, 1994.
74. Amelung, F. and D. Wolf, Viscoelastic perturbations of the earth: significance of the incremental gravitational force in models of glacial isostasy, *Geophys. J. Int.*, 117, 864-879, 1994.

No-peer reviewed publications:

75. Mead Allison, B. Yuill, T. Törnqvist, F. Amelung, T. H. Dixon, G. Erkens, R. Stuurman, C. Jones, G. Milne, M. Steckler, J. Syvitski, and P. Teatini (2016), Global risks and research priorities for coastal subsidence, *Eos*, 97, doi:10.1029/2016EO055013.
76. Amelung, F., E. J. Fielding and S. Sigmundsson (2015), EO for the mitigation of Geological Disasters, The Earth Observation Handbook, Special Edition for the 3rd UN World Conference on Disaster Risk Reduction, Committee on Earth Observation Satellites (CEOS).
77. Contributing author to: Scientific and Technical Memorandum of The International Forum on Satellite EO and Geohazards, 21-23 May, Ph. Bally Ed. (2012), 2012, Santorini Greece. doi:10.5270/esa-geo-hzrd-2012

USGS Open file reports:

78. Michelle Sneed, M. E. Ikehara, S. V. Stork, F. Amelung, and D. L. Galloway: Detection and Measurement of Land Subsidence Using Interferometric Synthetic Aperture Radar and Global Positioning System, San Bernardino County, Mojave Desert, California. Water-Resources Investigations Report 03-4015. U.S. GEOLOGICAL SURVEY, Sacramento, California 2002
79. Sneed, Michelle, Ikehara, M. E., Galloway, D.L., and Amelung, F.: Detection and measurement of land subsidence using global positioning system and interferometric synthetic aperture radar, Coachella Valley, California, 1996–98, U.S. Geological Survey Water-Resources Investigations Report 01-4193, 26 p., 2001
80. David W. Valentine¹, Jill N. Densmore, Devin L. Galloway and Amelung, F.: Use of InSAR to Identify Land-Surface Displacements Caused by Aquifer-System: Compaction in the Paso Robles Area, San Luis Obispo County, California, March to August 1997. Open-File Report 00-447, 2001

Other reports

81. F. Amelung, D. Sandwell. S. Buckley. Y. Fialko, R. Lohman: WinSAR Strategic Plan, 2008 (http://winsar.unavco.org/newsletters/WinSAR_Strategic_Plan_9-2008.pdf)

82. Y. Fialko, F. Amelung, B. Brooks, J. Freymuller, F. Gomez, T. Melbourne, K. Feigl, G. Peltzer, G. Bawden, C. Dobson, A. Donnellan, Z. Lu, GeoEarthScope InSAR working Group, Report of planning meeting. 2006.
83. Amelung, F., Kinematics of small earthquakes & Active tectonics and Topography in the San Francisco Bay area Thesis, Université Louis-Pasteur, Strasbourg, France, 1996
84. Amelung, F., Viskoelastische Perturbationen sphärischer Erdmodelle: Bedeutung der Selbstgravitation beim Modellieren glazial-induzierter Relaxationsvorgänge, Diplomarbeit (Masters), WWU Münster, 1991 (in German)

PROFESSIONAL

Funded Research

| | | | |
|------|--|-------------|----------------------|
| NASA | Volcano monitoring for the CEOS volcano pilot program (Co-PI, PI: Pritchard, Cornell) | 3/16-2/19 | \$150k UM share |
| NASA | Advanced corrections for InSAR using GPS, satellite hyperspectral observations, and numerical weather models: Application to the Hawaiian volcanoes (PI, J. Foster, U Hawaii). | 3/16-2/19 | \$180k UM share |
| NASA | Interactions and interconnectivity of neighboring volcanic systems (NNX16AL19G) | 9/16-8/18 | \$265k |
| NASA | Design of an atmospheric correction strategy for NISAR (NNX16AK52G) | 7/16-6/19 | \$356k |
| NASA | Correction of InSAR data using global ionospheric models. | 9/15-8/18 | \$90k |
| NSF | Precursory deformation at Southeast Asian volcanoes | 1/14-12/16 | \$323k |
| NASA | A new mass balance estimation method from Altimetry and InSAR: Application to the Greenland Ice Sheet and Arctic Ice Caps (PI, Co PIs: Wdowinski, Kirtman) | 10/13-9/17 | \$545k |
| NASA | Deformation monitoring of volcanoes in the Caribbean and Latin America using ALOS and Sentinel-1 interferometry | 09/14-8/17 | \$730k |
| NASA | Combining GPS and InSAR to study long-wavelength crustal deformation in Greenland (Co-PI, PI Dixon) | 1/13-12/15 | \$250k |
| NSF | The Strength of Strike-Slip Faults: Space-Geodetic Constraints for a Ridge-Transensional System in the Gulf of California, EAR-1019847 (PI) | 9/10-8/12 | \$115k |
| NSF | Acquisition of a Linux computer cluster for Space Geodetic Research at the University of Miami (PI) | 9/09-8/10 | \$75k |
| NSF | Collaborative research: An integrated seismic-geodetic study of active magmatic processes at Sierra Negra volcano, Galapagos Islands. (with Ebinger, Geist) EAR-0838467. | 01/09-12/11 | \$231k (UM share) |
| NASA | Integration of InSAR time series with continuous GPS (PI, Co-PI Wdowinski) | 4/09-3/12 | \$299k |
| NASA | Space-Geodetic Research in the Southeast Asia Natural Laboratory: The Sumatra Volcano-Triggering Experiment. | 5/09-5/12 | \$396,462 |
| DOE | Combining Space Geodesy, Seismology and Geochemistry for Monitoring, Verification and Accounting of CO ₂ in Sequestration of Energy (Co-PI). | 10/09-09/13 | \$1,708,545 |

| | | | |
|---|--|-------------|--------|
| NSF | The Sumatra volcano triggering experiment: Contribution from Space Geodesy. EAR-0810214 (PI) | 07/08-8/12 | \$300k |
| NSF | Elastic stress transfer at Mauna Loa volcano, Hawaii: Constraints from InSAR and gravity measurements EAR-0538237 (PI) | 01/06-12/09 | \$350k |
| NSF | A pre-EarthScope velocity field for the Western Basin and Range from InSAR, EAR-0454552 (PI) | 06/05-12/06 | \$78k |
| USGS | Wetland Hydrology from Space" (with Wdowinski, Dixon), | 03/05-02/07 | \$158k |
| NASA | Developing a method for InSAR measurements of subtle crustal movements: Application to the Western Basin and Range Province. | 11/03-10/06 | \$166k |
| NSF | Time dependent deformation of Galapagos shield volcanoes observed with radar interferometry. | 01/01-06/05 | \$140k |
| NASA | Monitoring Surface Deformation at Hawaiian and other basaltic shield volcanoes with RADARSAT interferometry | 10/00-12/04 | \$82k |
| NEHRP | InSAR studies in the Central Nevada Seismic Belt | 09/01-08/02 | \$40k |
| NASA Earth and Space Science Fellowships for Graduate students | | | |
| NASA | Correction of InSAR data using global ionospheric models (Y. Zhang). | 9/15-8/18 | \$90k |
| NASA | Multi-parameter studies of basaltic volcanoes (M. Bagnardi) | 9/11-8/14 | \$90k |
| NASA | Depth controls on magma accumulation (E. Chaussard) | 9/10-8/13 | \$90k |
| NASA | InSAR-measurements of continental-scale deformation (N. Gourmelen) | 9/05-8/08 | \$90k |

Explanation:

| | |
|-------|---|
| NASA | National Aeronautics and Space Administration, USA |
| NEHRP | National Earthquake Hazard Reduction Program, USGS, USA |
| NSF | National Science Foundation, USA |

PROFESSIONAL ORGANISATIONS

American Geophysical Union, since 1994.

International Association of Volcanology and Chemistry of the Earth's Interior (IAVCE), since 2013.

International Association of Geodesy (IAG), since 2013

HONORS AND AWARDS

2004 E.B. Burwell Jr. Award, Geological Society of America, Engineering Geology Division, for the article "Land subsidence in Las Vegas, Nevada, 1935-2000: New geodetic data show evolution, revised spatial patterns", published in *Environmental & Engineering Geosciences*

2002 Association of Engineering Geologists Publication Award for "Land subsidence in Las Vegas, Nevada, 1935-2000: New geodetic data show evolution, revised spatial patterns, and reduced rates," published in *Environmental & Engineering Geosciences*.

1999 SOEST Young Investigator award, University of Hawaii.

1997 European Space Agency: External Research Program: Post-Doctoral Fellowships.

TEACHING

| | |
|-------------|--|
| Fall 2016 | MGS 686: Geological Hazards |
| Spring 2016 | MGG 622: Geophysical Inverse Theory |
| | MSC 424: Geology of the Galapagos volcanoes |
| Fall 2015 | MGS 686: Geological Hazards |
| Spring 2015 | MSC 424: Geology of the Galapagos volcanoes |
| Spring 2014 | MGG 620: Radar Interferometry in the Earth Sciences |
| Spring 2014 | MSC 424: Geology of the Galapagos volcanoes |
| Fall 2013 | MGG 622: Geophysical Inverse Theory |
| Spring 2013 | MSC 424: Origin and Geology of the Galapagos volcanoes |
| Fall 2012 | MGG 682: Crustal Deformation |
| Spring 2012 | MGG 677: Physical Volcanology |
| | MSC 424: Origin and Geology of the Galapagos volcanoes |
| Spring 2011 | MGG 620: Radar Interferometry in the Earth Sciences |
| | MSC 424: Origin and Geology of the Galapagos volcanoes |
| Spring 2010 | Crustal Deformation |
| Spring 2009 | Geophysical Inverse Theory |
| Spring 2008 | Radar Interferometry in the Earth Sciences |
| Spring 2007 | Geophysical Inverse Theory |
| Spring 2006 | Radar Interferometry in the Earth Sciences |
| Spring 2004 | Geophysical Inverse Theory |

Students:

PhD Graduate Student Bhuvan Varugu (8/2016-)
PhD Graduate Student Qianyun Lu (8/2015-)
PhD Graduate Student Yunjun Zhang (8/2014-)
PhD Graduate Student Anieri Morales Rivera (8/2012-)
PhD Graduate Student Yoangel Torres (2/2011-)
PhD Graduate Student Heresh Fattahi (2010 -2015)
PhD Graduate Student Wenliang (Kenny) Zhao (2010 -2016)
PhD Graduate Student Marco Bagnardi (2009-2014)
PhD Graduate Student Fernando Greene (2009-2014)
PhD Graduate Student Estelle Chaussard (2008-2013)

PhD Graduate Student Scott Baker (2006-2012)

PhD Graduate Student Noel Gourmelen (2003- 2009)

Postdoctoral research associates:

Elodie Brothelande (2016-)

Fabien Albino (2015-)

Christina Plattner (2009-2011)

Juliet Biggs (2007-2009) (joint advising with Dixon)

Sang-Hoon Hong (2007-2010) (joint advising with Wdowinski, Dixon)

Sang-Wan Kim (2004-2007) (joint advising with Wdowinski, Dixon)

Thomas Walter (2002-2005)

Student committees:

Committee Chair:

2016 Wenliang Zhao, PhD

2015 Heresh Fattahi, PhD

2014 Fernando Greene, PhD

2014 Marco Bagnardi, PhD

2013 Estelle Chaussard, PhD

2012 Scott Baker, PhD

2009 Noel Gourmelen, PhD.

Committee Member:

2015 Peng Li, PhD

2015 Emanuelle Feliciano, PhD

2014 Qiong Zhang, PhD

2012 Yan Jiang, PhD

2011 Batuhan Osmanaglu, PhD

2006 Peter La Femina, PhD

2008 Kelly L. Jackson, M.S.

SERVICE

Community Activities

2016- Board of Directors, Unavco

2016- Member, Science Definition Team, NISAR mission
2016 Panel, NASA Earth Science Division
2015 Panel, NASA Earth Science Division
2014 Panel, NSF EAR
2014 Panel, NASA Earth Science Division
2013 Panel, NSF EAR
2009-2011 Associate Editor, Geophysical Journal International
2009- Member, User Working Group of the Alaska Satellite Facility (NASA-appointed Visiting Committee)
2009-2011 Chair, Western U.S. InSAR consortium (WInSAR)
2008-2014 Chair, GEO's Geohazard Supersite initiative
2007 Member, International Association of Geodesy (IAG) special study group "InSAR for Tectonophysics".
2006- Secretary, Western U.S. InSAR consortium (WinSAR).
2006- Member, GeoEarthScope InSAR working group.
2005 Scientific committee, Conference on Ocean Island Volcanism, Sal, Cape Verde, April 1-9, 2005
2002 Organizing Special Session 'Magma Chamber Dynamics' at AGU Fall meeting, San Francisco,
1999-2003 Member of the Special Study Group of the International Association of Geodesy (IAG) "Spaceborne Interferometry Techniques"

Editorial:

2007-2009 Associate Editor: Geophysical Journal International

University Committees

2016- RSMAS IT committee
2014- RSMAS School Council
2014 Chair, Rosenstiel Award Committee
2011 Member, Administrative Efficiency Committee
2009 Member, Reorganization committee
2008 Rosenstiel Award committee.
2008- RSMAS facilities committee, MGG representative.
2007- MGG academic committee.
2007- RSMAS computer committee. MGG representative
2007 Rosenstiel Postdoc committee.
2006 Evaluation panel, General Research Support Award (GRSA), member.

OTHER

Workshops attended:

- 2017 Fringe 2017, Radar Interferometry Workshop of the European Space Agency, Helsinki, Finland
- 2016 Cities on Volcanoes, Puerto Vargas, Chile
- 2016 Helmholtz Gesellschaft Alliance: Earth System Dynamics
- 2016 Living Planet Symposium, Prague
- 2015 NASA Earth Surface and the Interior (ESI) program workshop
- 2015 NASA-ISRO SAR Mission (NISAR) application workshop, Mountain View, California
- 2015 Korea Polar Research Institute, “Polar Region as a Key Observatory for the Changing Globe”
- 2015 Fringe 2015, Radar Interferometry workshop of the European Space Agency, Frascati, Italy.
- 2014 NASA-ISRO SAR Mission (NISAR) application workshop, Washington DC
- 2014 Unavco Science workshop 3/2014.
- 2013 Living Planet Symposium, Edinburgh
- 2013 Summer School on Satellite Radar Interferometry: Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy
- 2013 5th TerraSAR-X Team Meeting, Oberpfaffenhofen, Germany, 6/2013.
- 2012 Unavco Science workshop 3/2012.
- 2012 The International Forum on Satellite EO and Geohazards, 5/2012
- 2011 Fringe 2011, Radar Interferometry workshop of the European Space Agency, Frascati, Italy, 9/2011.
- 2010 ALOS-PI Symposium, Tokyo, November 2010
- 2011 Committee of Earth Observation (CEOS)-Plenary, Rio de Janeiro, October 2010
- 2011 Committee of Earth Observation (CEOS)-SIT meeting, Montreal, September 2010
- 2010 Globvolcano Final Meeting, La Reunion, 9/2010
- 2010 Pericolo Vulcani, La ricerca scientifica per la mitigazione del rischio vulcanico in Italia of the INGV, Rome, July 2
- 2010 ESA’s Living Planet Symposium, Bergen, Norway, June 2010.
- 2009 Unavco’s Science workshop, Boulder, Colorado, March 2010.
- 2009 Fringe 2009, Radar Interferometry workshop of the European Space Agency, Frascati, Italy, 11/2009.
- 2009 Alos PI-symposium, Kona, Hawaii, 11/2009.
- 2009 The Troposphere, Ionosphere, GPS, and Interferometric Radar Workshop (**TIGIR**), Pasadena, 9/2009
- 2009 Earthscope Science Planning workshop, Snowbird, Utah, 11/2009
- 2009 Geodesy Strategic Planning, Salt Lake City, Utah, 11/2009
- 2009 Globvolcano workshop of the European Space Agency, San Jose, Costa Rica, 7/2009
- 2008 ALOS Meeting, November 2008, Rhodes, Greece
- 2008 UseREST workshop, Napoli, November 2008
- 2008 PIXEL workshop, 15-16 January 2008, Kyoto, Japan.
- 2007 3rd International Geohazard conference, November 2007, Frascati, Italy.
- 2006 2nd International IGOS Geohazards workshop, organized by the International Committee of National Space Agencies, Malaysia Center of Remote Sensing, Kuala Lumpur, June 28-29.

- 2005 Use of Remote Sensing, Techniques for Monitoring Volcanoes and Seismogenic Areas, Organized by Vesuvius Volcano Observatory and the European Space Agency, Naples, Italy, June 23-24.
- 2005 Ocean Island Volcanism workshop, Sal, Cape Verde, April 1-9
- 2005 EarthScope National Meeting, Santa Ana Pueblo, New Mexico, March 29-31.
- 2004 Volcano monitoring and Remote Sensing. Istituto Nazionale de Geofisica e Vulcanologia (INGV), Catania, Italy, June 9-11
- 2004 2nd ALOS PI meeting, Sponsored by the Japan Aerospace Exploration Agency, Jan 19-23, Awajii Yumebutai, Hyogo, Japan.
- 2003 Fringe2003, Radar Interferometry in Earth Sciences, Frascati, Italy, Dec 1-5, Sponsored by the European Space Agency (ESA).
- 2002 EarthScope workshop on Active Magmatic Systems. Sponsored by NSF. Vancouver, Wa.. Oct 31–Nov 2
- 2000 Workshop on Scientific Applications of Synthetic Aperture Radar (SAR) Satellites. Sponsored by NASA, NSF, USGS and SCEC. USC, Los Angeles, June 26-28.
- 1999 UNAVCO Volcano Geodesy workshop, Jackson Hole, Wyoming, Sep 17-19
- 1999 Fringe1999, Radar Interferometry in Earth Sciences, Liege, Belgium, Nov 10-12,

Invited Talks:

1. Helmholtz Gesellschaft Alliance workshop, Garmisch, Germany, 6/2016. Keynote: “Applications of the InSAR technique to seismic hazard and cryospheric-geospheric interactions”.
2. GeoforschungsZentrum Potsdam, Germany, 6/2016. “Pushing the accuracy of the InSAR technique Application of Satellite Radar Interferometry for Tectonics, Volcanology and Climate Change”.
3. Sejong University, Korea, 5/2015. “Geophysical Application of Satellite Radar Interferometry for Tectonics, Volcanology and Climate Change”.
4. Korea Polar Research Institute, 5/2015. “Sensing the bedrock movements due to ice unloading from Space”.
5. AGU Fall meeting 2014: “Estimating ice sheet mass balance from InSAR and elastic loading”
6. Bandung Institute of Technology, 9/2014, “Geophysical Application of Radar Interferometry in Indonesia and elsewhere”.
7. UNAVCO Science Workshop, 3/2014, “Estimating ice sheet mass balance from InSAR and elastic loading”
8. Earthquake Research Institute, University of Tokyo, Dept. Seminar 7/2013 “Watching Volcanoes Change their Shape with Satellite Radar Interferometry”
9. Florida International University, Geology Department Seminar, 2/2013 “Watching Volcanoes Change their Shape with Satellite Radar Interferometry”
10. Rice University, Geophysics Department, 2/2013 “Watching Volcanoes Change their Shape with Satellite Radar Interferometry”.
11. Group on Earth Observation (GEO) Plenary, Istanbul, November 2011. “Geohazard Supersites and Natural Laboratories”
12. Committee of Earth Observation (CEOS) Plenary, Rio de Janeiro, October 2010. “Geohazard Supersites and Natural Laboratories”
13. Pericolo Vulcani, INGV, Rome, Italy, 7-9 July 2010. “Active processes in the Hawaiian and Galapagos volcanoes: Implications for Mt. Etna”
14. EGU, Vienna, April 2009. The shallow magmatic system of Kilauea volcano, Hawaii

15. ESA's Globvolcano workshop, San Jose, Costa Rica: Active processes at the Hawaiian volcanoes
16. AGU Fall meeting, San Francisco, December 2008: InSAR time series analysis: Application to Kilauea volcano
17. Unavco Science workshop, March 2008, Boulder, Co., Speaker: Hazards-Monitoring Applications of InSAR
18. USGS volcano hazard workshop, May 2008, Vancouver, Wa., Geodetic modeling with GeodMod.
19. PIXEL workshop, January 15-16 2008, Kyoto, Japan: "WinSAR and the Natural Laboratory Approach to Geohazards".
20. PIXEL workshop, January 15-16 2008, Kyoto, Japan: "The magmatic systems of the Hawaiian volcanoes".
21. 3rd International Geohazard Workshop, November 6-9 2007, ESA-ESRIN, Frascati, Italy: "The Natural Laboratory approach to geohazards".
22. Canadian Space Agency (CSA), Montreal, Canada, July 2006: Crustal deformation studies using Radarsat Interferometry.
23. Malaysia Center For Remote Sensing (MACRES), Kuala Lumpur, Malaysia: June 2006: Volcanoes triggered by megathrust earthquakes
24. Malaysia Center For Remote Sensing (MACRES), Kuala Lumpur, Malaysia: June 2006: The Western US InSAR consortium. An example for a for a Geohazard Natural Laboratory
25. Istituto Nazionale de Geofisica e Vulcanologia , Napoli, Italy, June, 2005: Volcano monitoring with InSAR. Lessons learned from Radarsat multi-beam modes.
26. Istituto Nazionale de Geofisica e Vulcanologia , Napoli, Italy, June, 2005: The WinSAR data consortiums.
27. Istituto Nazionale de Geofisica e Vulcanologia , Catania, Italy, June 2004: Advances in Volcano Geodesy with Satellite Radar interferometry.
28. Tele-Rilevamento Europa, Milano, Italy, June 2004: Advances in Volcano Geodesy with Satellite Radar interferometry
29. University of Hawaii, Honolulu, March 2002, Remote Sensing of Land Subsidence and Earthquakes.
30. University of Nevada, Reno, October 2001, The 1994, Double Flat Spring, Nevada earthquake.
31. University of Miami, October 2001, Remote Sensing of Land Subsidence and Earthquakes
32. University of Miami, October 2001, Volcano Geodesy with Spaceborne Radar Interferometry
33. University of Nice, France, "Watching volcanoes change in shape with spaceborne radar interferometry", April 2001.
34. Institut du Physique du Globe Paris, "Watching volcanoes change in shape with spaceborne radar interferometry", April 2001.
35. University of Montpellier, France, "Watching volcanoes change in shape with spaceborne radar interferometry, April, 2001
36. University of Hawaii, Geology and Geophysics Dept. Seminar, "Watching volcanoes change in shape with spaceborne radar interferometry", September 2000.
37. Mauna Loa Symposium, Hilo, Hawaii, organized by Center of Active Volcanoes, University of Hawaii Hilo, "Observing Hawaiian Volcanoes with Radar Interferometry", March 2000.
38. Hawaiian Volcano Observatory (HVO), Hawaii Volcano National Park, Hawaii, USA, "Volcano Geodesy with Radar Interferometry", February 2000

39. AGU Fall meeting, San Francisco, California, USA, « Prospects of volcano geodesy with radar interferometry », Invited Poster, Special Session on Imaging magmatic processes with Radar Interferometry, December 1999.
40. University of Strasbourg, France, Geophysics Department Seminar, « Volcano Geodesy with Radar Interferometry », November 1999.
41. University of Nevada, Reno, USA, Seismolab seminar series, « Surface Deformation Measurements on Volcanoes with Radar Interferometry », December 1998.
42. AGU Fall meeting, San Francisco, California, USA, « Sensing Las Vegas' Ups and Downs with Radar Interferometry », Invited, Special Session on Imaging Geodesy, December 1998.
43. United States Geological Survey, Menlo Park, California, USA, Earthquake Branch Seminar Series, « Surface Deformation Measurements on Volcanoes with Radar Interferometry », October 1998.
44. Las Vegas Valley Water District, Las Vegas, Nevada, USA, « Land Subsidence in Las Vegas Valley measured with Radar Interferometry », May, 1998.
45. University of Strasbourg, France, Geophysics Department Seminar, « Surface Deformation Measurements on Volcanoes with Radar Interferometry », April 1998.
46. University of Grenoble, France, Geophysics Department Seminar, « Kinematics of small earthquakes », November 1996.