

Curriculum Vitae

PAUL R. LUNDGREN

Jet Propulsion Laboratory, MS 300-233, California Institute of Technology, Pasadena, CA 91109

Tel: (818) 354-1795 Fax: (818) 354-9476 E-mail: Paul.R.Lundgren@jpl.nasa.gov

Relevant Experience: Over 25 years experience in earthquake and plate boundary deformation research. Led GPS study of interseismic coupling of the Middle America subduction zone in Costa Rica. Has over 20 years experience applying SAR interferometry to earthquake and volcano source studies. Has extensive experience in integrating seismic waveforms and geophysical observations through inverse and forward numerical models to understand source processes of earthquakes, volcanoes, and crustal deformation. Current research focuses on combining numerical modeling of surface deformation of volcanoes, and fault systems on Earth. Current or former science investigator for ERS, ENVISAT, TerraSAR-X, TanDEM-X, COSMO-SkyMed, UAVSAR, and ALOS-2 SAR missions (ESA, DLR, ASI, NASA, JAXA respectively).

Education

Ph.D., Geophysics, Northwestern University, Evanston, IL, USA 1988

B.A., Physics, Gustavus Adolphus College, St. Peter, MN, USA 1983

Professional Experience

1989-present Research Scientist, Jet Propulsion Laboratory
 2016-present Earth Surface and Interior group supervisor, JPL
 2009-2011 Mentor: Caltech Postdoctoral Research Scholars at JPL J. Pearse.
 2008 NASA PGGURP mentor for summer intern S. Nag
 2006-2008 Mentor: two Caltech Postdoctoral Research Scholars at JPL (R. Lohman, Z. Liu)
 2001-2002 Deputy Project Scientist, Global Earthquake Satellite System (GESS)
 2001-2002 NASA Solid Earth Science Working Group
 1992-1996 NASA Dynamics of the Solid Earth (DOSE) Center Scientist, JPL
 1988-1989 NATO Postdoctoral Research Fellow, Istituto Nazionale di Geofisica, Rome

Professional Activities

American Geophysical Union; Seismological Society of America

NASA Mars Fundamental Research Program panel 2007; Organized 2005 AGU Fall Meeting session: G09 - Lessons Learned From a Decade of SAR Interferometry; ESA FRINGE Sci. Prog. Com. 2003-2015; ESA Living Planet Symposium sci. com. 2010, 2013

Other Publications

Lundgren, P. (2014), Fertile fields for seismicity, News & Views, *Nature*, 509, 436-437, doi:10.1038/nature13338.

Journal Publications

Lundgren, P., M. Nikkhoo, S. V. Samsonov, P. Milillo, F. Gil-Cruz, and J. Lazo (2017), Source model for the Copahue volcano magma plumbing system constrained by InSAR surface deformation observations, *J. Geophys. Res.*, submitted.
 Nikkhoo, M., T. R. Walter, P. R. Lundgren, and P. Prats-Iraola (2017), Compound dislocation models (CDMs) for volcano deformation analysis, *Geophys. J. Int.*, 208, 877-894, doi: 10.1093/gji/ggw427.
 Milillo, P., R. Bürgmann, P. Lundgren, J. Salzer, D. Perissin, E. Fielding, F. Biondi, and G. Milillo (2016). Space geodetic monitoring of engineered structures: The ongoing destabilization of the Mosul dam, Iraq, *Sci. Rep.*, 6, 37408, doi:10.1038/srep37408.
 Ebmeier, S. K., J. R. Elliott, J.-M. Nocquet, J. Biggs, O. Mothes, P. Jarrín, M. Yépez, S. Aguaiza, P. Lundgren, S. Samsonov (2016), Shallow earthquake inhibits unrest near Chiles–Cerro Negro volcanoes, Ecuador–Colombian border, *Earth Planet. Sci. Lett.*, 450, 283-291, doi:10.1016/j.epsl.2016.06.046.

- Milillo, P., B. Riel, B. Minchew, S.-H. Yun, M. Simons, and P. Lundgren (2016), On the synergistic use of SAR constellations' data exploitation for Earth science and natural hazard response, *IEEE, J. Select. Topics Appl. Earth Obs Remote Sens.*, *9*, 1095-1100, doi:10.1109/JSTARS.2015.2465166.
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- Lundgren, P., S. V. Samsonov, C. M. López Velez, and M. Ordoñez (2015), Deep source model for Nevado del Ruiz Volcano, Colombia, constrained by interferometric synthetic aperture radar observations, *Geophys. Res. Lett.*, *42*, doi:10.1002/2015GL063858.
- Jo, M.-J., H.-S. Jung, J.-S. Won, and P. Lundgren (2015), Measurement of three-dimensional surface deformation by COSMO-SkyMed X-band radar interferometry: Application to the March 2011 Kamoamo fissure eruption, Kilauea Volcano, Hawai'i, *Remote Sens. Environ.*, *169*, 176-191, doi:10.1016/j.rse.2015.08.003.
- Riel, B., P. Milillo, M. Simons, P. Lundgren, H. Kanamori, and S. Samsonov (2015), The collapse of Bárðarbunga caldera, Iceland, *Geophys. J. Int.*, *202*, 446-453, doi:10.1093/gji/ggv157.
- Lundgren, P., M. Poland, A. Miklius, T. Orr, S.-H. Yun, E. Fielding, Z. Liu, A. Tanaka, W. Szeliga, S. Hensley, and S. Owen (2013), Evolution of dike opening during the March 2011 Kamoamo fissure eruption, Kilauea Volcano, Hawai'i, *J. Geophys. Res. Solid Earth*, *118*, doi:10.1002/jgrb.50108.
- Pearse, J., and P. Lundgren (2013), Source model of deformation at Lazufre volcanic center, central Andes, constrained by InSAR time series, *Geophys. Res. Lett.*, *40*, 1059-1064, doi:10.1002/grl.50276.
- Fielding, Eric J., P. R. Lundgren, T. Taymaz, et al. (2013), Fault-slip source models for the 2011 M 7.1 Van earthquake in Turkey from SAR interferometry, pixel offset tracking, GPS, and seismic waveform analysis, *Seismol. Res. Lett.*, *84*, 579-593, doi:10.1785/0220120164.
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