

NSF Biographical Sketch of John N. Louie

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(a) Professional Preparation

Occidental College, Los Angeles, Calif.	Geophysics	B.A. 1982
California Institute of Technology, Pasadena, Calif.	Geophysics	M.S. 1983
California Institute of Technology, Pasadena, Calif.	Geophysics	Ph.D. 1987

(b) Appointments

Professor of Geophysics, Nevada Seismological Lab. and Dept. Geological Sciences and Engineering, University of Nevada, Reno; 6/2006 to present. Responsibilities: undergraduate and graduate instruction; supervision of graduate degree candidates; conduct geophysical research.

Associate Director, Nevada Seismological Laboratory, University of Nevada, Reno; 1/2007-6/2008. Responsibilities: facilitate research and service at the Laboratory; day-to-day personnel and fiscal management; annual performance review of all faculty and staff; strategic planning.

Fulbright Senior Scholar, Fulbright New Zealand with the Victoria Univ. of Wellington and GNS Science; 2/2006-7/2006. Responsibilities: facilitate international collaboration in earthquake-scenario modeling and crustal imaging.

Associate Professor of Geophysics, Nevada Seismological Lab. and Dept. Geological Sciences and Engineering, University of Nevada, Reno; 1/1992-6/2006.

Assistant Professor of Geosciences, Dept. of Geosciences, The Pennsylvania State University, University Park, Penna.; 9/1987 to 1/1992.

Assistant Scientist, Seismological Lab., California Institute of Technology; 5/1987-8/1987.

Louie students advised for the works below marked with “*”.

(c.i) Closely Related Publications

- T. A. Stern, S. H. Henrys, D. A. Okaya, J. Louie, M. K. Savage, S. H. Lamb, H. Sato, R. Sutherland, and T. Iwassaki, 2015 in press, A seismic reflection image for the base of a tectonic plate: accepted for publication in *Nature*, 5 Dec. 2014.
- W. J. Stephenson, R. N. Frary*, J. N. Louie, and J. K. Odum, 2013, Quaternary extensional growth folding beneath Reno, Nevada, imaged by urban seismic profiling: *Bull. Seismol. Soc. Amer.*, **103**, doi: 10.1785/0120120311, 2921-2927.
- S. Shani-Kadmiel*, M. Tsesarsky, J. N. Louie, and Z. Gvirtzman, 2012, Simulation of seismic-wave propagation through geometrically complex basins: The Dead Sea basin: *Bull. Seismol. Soc. Amer.*, **102**, 1729-1739, doi: 10.1785/0120110254.
- P. H. Cashman, Trexler, J.H., Jr., Muntean, T.W., Faulds, J., Louie, J., and Oppliger, G., 2009, Neogene tectonic evolution of the Sierra Nevada - Basin and Range transition zone at the latitude of Carson City, Nevada: in Geological Society of America Special Paper **447**, *Late Cenozoic Structure and Evolution of the Great Basin-Sierra Nevada Transition*, 171-188, doi:10.1130/2009.2447(10).
- R. E. Abbott*, J. N. Louie, S. J. Caskey, and S. Pullammanappallil, 2001, Geophysical confirmation of low-angle normal slip on the historically active Dixie Valley fault, Nevada: *Jour. Geophys. Res.*, **106**, 4169-4181.

(c.ii) Other Significant Publications

- B. A. Flinchum*, J. N. Louie, K. D. Smith, W. H. Savran*, S. K. Pullammanappallil, and A. Pancha, 2014, Validating Nevada ShakeZoning predictions of Las Vegas basin response against 1992 Little Skull Mtn. earthquake records: *Bulletin of the Seismological Society of America*, 104, no. 1 (Feb.), 439-450; doi: 10.1785/0120130059. (12.4 Mb preprint with color figures at crack.seismo.unr.edu/NSZ/validation/Flinchum-et-al-BSSA-preprint-color.pdf)
- Z. Gvirtsman and J. N. Louie, 2010, 2D analysis of earthquake ground motion in Haifa Bay, Israel: *Bull. Seismol. Soc. Amer.*, **100**, 733-750, DOI: 10.1785/0120090019.
- W. A. Thelen*, M. Clark*, C. T. Lopez*, C. Loughner*, H. Park*, J. B. Scott*, S. B. Smith*, B. Greschke, and J. N. Louie, 2006, A transect of 200 shallow shear velocity profiles across the Los Angeles Basin: *Bull. Seismol. Soc. Amer.*, **96**, no. 3 (June), 1055-1067, doi: 10.1785/0120040093.
- J. N. Louie, W. Thelen*, S. B. Smith*, J. B. Scott*, M. Clark*, 2004, The northern Walker Lane refraction experiment: Pn arrivals and the northern Sierra Nevada root: *Tectonophysics*, **388**, no. 1-4, 253-269.
- J. N. Louie, S. Chavez-Perez*, S. Henrys, and S. Bannister, 2002, Multimode migration of scattered and converted waves for the structure of the Hikurangi slab interface, New Zealand: *Tectonophysics*, **355** (1-4), 227-246.

(d) Synergistic Activities

1. *JRG* software, an open-source seismic processing package: crack.seismo.unr.edu/jrg .
2. *ModelAssembler* software, velocity gridding for Community Velocity Models: crack.seismo.unr.edu/ma .
3. *W. Basin & Range Community Velocity Model Working Group*: crack.seismo.unr.edu/wbrcvm .
4. *Assoc. Editor for The Electronic Seismologist, Seismological Research Letters*, 2010–2013.
5. *General Chair for the 2012 Society of Exploration Geophysicists Annual Meeting*, 2011-2012.

(e) Collaborators and Other Affiliations: J. G. Anderson (UNR), S. Bannister (GNS Sci.), P. Cashman (UNR), A. Dorsey (Utah), C. Dudley (CSM), J. Faulds (UNR), B. Flinchum (Wyoming), Z. Gvirtsman (Geol. Surv. Israel), B. Honjas (Optim), G. Kent (UNR), T. Kent (Noble), A. Pancha (VUW), S. Pullammanappallil (Optim), W. Savran (SDSU), S. Shani-Kadmiel (BGU), K. D. Smith (UNR), W. Stephenson (USGS), C. Thurber (UW Madison), I. Tibuleac (UNR), M. Tsesarsky (BGU), S. Wesnousky (UNR).

Graduate Advisor and Postdoctoral Sponsor: Robert W. Clayton, Calif. Inst. of Technology.

Graduate Students Advised: Robert Abbott (Sandia NL), Abu M. Asad (CGG), Kyle Basler-Reeder (ExxonMobil), Sergio Chavez-Pérez (IMP), Matthew Clark (EPA), Mahesh Dhar (Memphis), Joe Dierkhising (BP), Amy Eisses (Anadarko), Roxanna Frary (Noble), Kyle Gray (Noble), Michelle Heimgartner (Shell), Bill Honjas (Optim), Zakir Kanbur (Sule. Demirel U.), Annie Kell (UNR), Tyler Kent (Noble), Ken Mela (TMCC), Elijah Mlawsky (UNR), Donghong Pei (Halliburton), Satish Pullammanappallil (Optim), Jizeng Qin (U. Ariz.), Gretchen Schmauder (Geometrics), James B. Scott, Shane B. Smith (Fugro), Mayo Thompson (Zonge Geosci), L. Travis West (UNR).

Total Number of Graduate Students Advised: 25.