

Laura Ellen Jones

Affiliation:
Section of Ecology
and Evolutionary Biology
Cornell University
Ithaca, NY 14853
lej4@cornell.edu

Home:
507 Cayuga Heights Road
Ithaca, NY 14850
lejones@twcny.rr.com
(607)257-6674

Education

Ph.D., Geophysics February, 1995

California Institute of Technology, Pasadena, California

Thesis title: I. Modeling of aftershocks from the Landers, Joshua Tree and Big Bear sequences, Southern California; II. Analysis of records from the June 28, 1992 Big Bear, Southern California earthquake: evidence of a multiple-event source

Advisor: Donald V. Helmberger

M.S., Geophysics, Emphasis in Applied Mathematics June, 1990

California Institute of Technology, Pasadena, California

B.S., Geophysics, *magna cum laude* March, 1988

Emphasis in Applied Mathematics

University of California, Riverside, California

Thesis title: Geophysical Investigations of an Ancient Landslide

Positions held

Senior Research Associate January 2008 -

Ecology and Evolutionary Biology
Cornell University

Research Associate April 2004 to December 2007

Ecology and Evolutionary Biology
Cornell University

Scientific Affiliate August 2003 to present

Biophysics and Theoretical Biology
Los Alamos National Laboratory

Postdoctoral researcher April 2002 to April 2004

Ecology and Evolutionary Biology
Cornell University

Contact: Prof. Stephen P. Ellner

Postdoctoral research in March 2001 to January 2002

Biophysics and Theoretical Biology
Los Alamos National Laboratory

Contact: Dr. Alan S. Perelson

Professional and Departmental Service

Instructor: Mathematical and Theoretical Biology Institute (MTBI) summer school, Cornell University, June-August 2002.

Instructor: Spatial Population Ecology (with Saskya van Nouhuys), Winter 2007.

Professional and Departmental Service

Journal peer reviews:

Limnology and Oceanography (L&O), *American Naturalist*, *Journal of Theoretical Biology*, *Journal of Mathematical Biology*, *Bulletin of Mathematical Biology*, *Geophysical Research Letters*, *Bulletin of the Seismological Society of America*, *Journal of Geophysical Research*.

Professional Societies

American Geophysical Union

Society for Mathematical Biology

Ecological Society of America

Union of Concerned Scientists (UCS)

Selected Fellowships and Academic Honors

National Science Foundation Graduate Fellowship 1988 - 1991

Phi Beta Kappa, junior year electee, 1987

Sigma Xi, senior year electee, 1988

Peer-reviewed publications in biology

N. Gasper-Smith, D. M. Crossman, ... Laura E. Jones and B. F. Haynes (and 13 others), "Elevations in Plasma TRAIL, TNFR-2, Fas ligand and plasma microparticles occur in a bimodal peak at the time of peak HIV-1 viral load expansion after HIV-1 transmission: Implications For HIV-1 vaccine efficacy", submitted to *Nature Medicine*, January 2008.

T. Yoshida, S. P. Ellner, Laura E. Jones, B. J. Bohannan, R. Lenski, and N. G. Hairston, Jr.: "Cryptic population dynamics: rapid contemporary evolution masks trophic interactions". *PLOS Biology*, Vol. 5, No. 9, e235 doi:10.1371/journal.pbio.0050235 (2007)

S. P. Ellner, Laura E. Jones, L. D. Mydlarz and C. D. Harvell, "Within-colony immunodynamics in a coral host-pathogen interaction: modeling the cellular response of the seafan *G. ventalina* to the fungal pathogen *A. sydowii*". *American Naturalist* 170 (6), December 2007.

Laura E. Jones and A. S. Perelson, "Transient viremia and reservoir replenishment in HIV infected patients on antiretroviral therapy". *JAIDS* 45(5) 483-493 (2007).

- Laura E. Jones and S. P. Ellner, “Effects of rapid evolution on predator-prey cycles”, *Journal of Mathematical Biology* (55) 541-573 (2007). See also <http://arXiv.org/list/q-bio/0609> [q-bio.PE/0609032]
- P. B. McIntyre, Laura E. Jones, A. S. Flecker and M. J. Vanni, “Fish extinctions threaten nutrient cycling in tropical freshwaters”, *PNAS* (104) 4461-4466 (2007). <http://www.pnas.org/cgi/doi/10.1073/pnas.0608148104>
- L. D. Mydlarz, Laura E. Jones, and C. D. Harvell, “Innate immunity, environmental drivers and disease ecology of marine and freshwater invertebrates.” *Annual Reviews of Ecology, Evolution and Systematics* (37) 251–288, 2006.
- J. Meyer, S. P. Ellner, N. G. Hairston, Jr., Laura E. Jones and T. Yoshida, “Prey evolution on the time scale of predator-prey dynamics, revealed by allele-specific quantitative PCR”. *PNAS* (103) 10690-10695, 2006.
- T. Yoshida, Laura E. Jones, S. P. Ellner, and N. G. Hairston, Jr., “Maintenance of genetic diversity in a consumer-resource system: an alternative interpretation of Nelson et al.’s experimental results”, brief communication arising, *Nature*, online supplement pp E1-E2, 6 January 2006.
- Laura E. Jones and A. S. Perelson, “Opportunistic infection as a cause of transient viremia in chronically infected HIV patients under treatment with HAART”, *Bulletin of Mathematical Biology* (67), 1227–1252, 2005.
- G. Fussmann, S. P. Ellner, N. G. Hairston, Jr., Laura E. Jones, K. Schertzer and T. Yoshida, “Ecological and evolutionary dynamics of experimental plankton communities” in *Advances in Ecological Research* (37), 221–241, 2005.
- Laura E. Jones and S. P. Ellner, “Evolutionary tradeoff and equilibrium in an aquatic predator-prey system”, *Bulletin of Mathematical Biology* (66), 1547–1573, 2004.
- A. Y. Yakubu, R. Saenz, J. Stein, and Laura E. Jones, “Monarch butterfly spatially discrete advection model”, *Mathematical Biosciences* (190)183–202, 2004.
- T. Yoshida, Laura E. Jones, S. P. Ellner, and N. G. Hairston, Jr., “Rapid evolution drives ecological dynamics in a predator-prey system”, *Nature* (424)303–306, 2003.
- Laura E. Jones and A. S. Perelson, “Modeling the effects of tetanus vaccination on chronically infected HIV patients”, *JAIDS: Journal of Acquired Immune Deficiency Syndromes*, (31) 369-377, 2002.

Peer-reviewed publications in geophysics

- Laura E. Jones and D. V. Helmberger, “Earthquake source parameters and fault kinematics in the Eastern California Shear Zone,” *Bulletin of the Seismological Society of America*, Vol. 88, pp. 1337–1352, December, 1998.
- Laura E. Jones, E. Muzyert and H. Paulssen, “S-Wave structure of Southwestern United States and Mexico from single-station broadband data,” *Geophysical Research Letters*, Vol. 24, pp 3053-3056, 1997.

Laura E. Jones and D. V. Helmberger, "Seismicity and stress-drop in the eastern Transverse ranges, Southern California," *Geophysical Research Letters*, Vol. 23, No. 3, pp. 233–236, 1996.

X. Song, Laura E. Jones and D. V. Helmberger, "Source characteristics of the January 17, 1994 Northridge, California earthquake from regional broadband modeling," *Bulletin of the Seismological Society of America*, Vol. 85, pp. 1591–1603, 1995.

Laura E. Jones and S. E. Hough, "Analysis of broadband records from the June 28, 1992 Big Bear earthquake: Evidence of a multiple-event source," *Bulletin of the Seismological Society of America*, Vol. 85, No. 3, pp. 688–704, 1995.

Laura E. Jones, S. E. Hough, and D. V. Helmberger, "Rupture process of the June 28, 1992 Big Bear earthquake," *Geophysical Research Letters*, Vol. 20, No. 18, pp. 1907–1910, 1993.

Laura E. Jones, J. Mori, and D. V. Helmberger, "Short period constraints on the proposed Transition Zone discontinuity," *Journal of Geophysical Research*, Vol. 97, No. B6, pp 8765–8774, 1992.

Laura E. Jones and S. K. Park, "Geophysical investigation of ancient landslides: an example from Saline valley, Southeastern California," in *Publications of the Inland Geological Society, Landslides in a Semi-Arid Environment*, Vol. 2, pp 52–60, 1989.

Selected Peer-reviewed Proceedings in Geophysics & Treaty Verification Science

C. R. Bradley and Laura E. Jones, "Waveform modeling of the effects of Q and structure over subregional paths in Western China," pp. 28–38, *Proceedings of the 21st Seismic Research Symposium: Technologies for Monitoring the Comprehensive Test Ban Treaty*; Las Vegas, Nevada, 21–24 September 1999 (peer reviewed).

H. J. Patton and Laura E. Jones, "Surface-wave calibration studies for improved monitoring of a CTBT," pp. 486–496, *Proceedings of the 20th Annual Seismic Research Symposium on Monitoring a Comprehensive Test Ban Treaty*, Santa Fe, New Mexico, 21–23 September, 1998 (peer reviewed).

Laura E. Jones and H. J. Patton, "High resolution surface-wave dispersion studies in China," pp 44–50, *Proceedings of the 19th Annual Research Symposium on Monitoring a Comprehensive Test Ban Treaty*; Orlando, Florida, 23–25 September, 1997 (peer reviewed).

H. J. Patton and Laura E. Jones, "Source and structural calibration studies in Central Asia using CMT Earthquakes," *The Ninth Annual IRIS Consortium Workshop*, Breckenridge, Colorado, 8–12 June, 1997.

Selected Presentations (Biology, last 5 years)

Laura E. Jones, N. Gaspar-Smith, L. Chavez, B. T. Korber, A. S. Perelson and B. Haynes, M.D.: “Analysis of apoptosis analyte and viral load dynamics from blood donors sampled during acute HIV-1 infection”, Oral Presentation, 3rd Annual CHAVI (Center for HIV-AIDS Vaccine Immunology) Retreat; Durham, North Carolina, September 30 - October 3, 2007

Laura E. Jones and S. P. Ellner, “Effects of genetic and phenotypic diversity on predator-prey cycles”. Oral presentation, Joint SIAM-SMB Conference on the Life Sciences, 31 July - 4 August 2006; Raleigh, North Carolina.

Laura E. Jones and A. S. Perelson, “Opportunistic infection as a cause of transient viremia in HIV infected patients”. Invited talk, 13th Annual HIV Dynamics and Evolution Meeting, 5-8 April 2006; Woods Hole, Massachusetts.

Laura E. Jones, S. P. Ellner and N. G. Hairston, Jr., “Top down, bottom up, or climate driven: explaining variability in the clear water phase of North American Lakes”. Oral presentation at the Ecological Society of America Meeting, 7-12 August 2005, Montréal, Canada.

Laura E. Jones and A. S. Perelson, “Opportunistic infection as a cause of transient viremia in chronically infected patients under treatment with HAART”. Poster, Ecology and Evolution of Infectious Diseases 2005 Meeting; 18-21 May 2005, Fort Collins, Colorado.