

CURRICULUM VITAE

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Updated May 14, 2012

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CURRENT POSITION

2011 - Present Assistant Professor. Division of Biostatistics,
Department of Preventive Medicine, Keck School of Medicine,
University of Southern California. Los Angeles, CA.

EDUCATION

2009 – 2011 Postdoctoral Research Associate. Division of Biostatistics,
Department of Preventive Medicine, Keck School of Medicine,
University of Southern California. Los Angeles, CA.

2004 – 2009 Ph.D. in [Biostatistics](#).
Johns Hopkins Bloomberg School of Public Health. Baltimore, MD
Thesis title: *Quantifying individual and city level modification of the health
effects of air pollution in older adults*
Thesis advisor: [Thomas A. Louis](#)

2000 – 2004 B.A. in Mathematics and French. Vassar College. Poughkeepsie, NY
General honors and honors in both Mathematics and French

Spring 2003 Internships in Francophone Europe.
Department of Biostatistics, Hôpital Necker. Paris, France

Fall 2002 Vassar-Wesleyan Program for study abroad. Paris, France

1996 – 2000 Valedictorian, Bainbridge High School. Bainbridge Island, WA

HONORS

2010 Section on Statistics and the Environment (ENVR) JSM Presentation Award

2010 ASA Statistics In Epidemiology Section's Young Investigator Award

2009 Louis I. and Thomas D. Dublin Award
for the Advancement of Epidemiology and Biostatistics

2009 ASA Health Policy & Statistics Section's student paper competition

2008 Helen Abbey Award. Honors a Biostatistics student for excellence in teaching

2008 Nominated by JHSPH students for the Teaching Assistant Recognition Award

2004 – 2009 NIA Johns Hopkins Training Program
in the Epidemiology and Biostatistics of Aging

2004 Phi Beta Kappa

2004 College Squash Association Scholar Athlete Award

HONORS, continued

2002	Florence Donnell White Prize for Study Abroad in France
2000	Ann Robertson Corn Scholarship
2000	National Merit Scholar

SERVICE

2011	Chair of the contributed papers session: <i>Biomarkers, Sampling, and Measurement Issues</i> . Joint Statistical Meetings
2009 – 2011	USC Division of Biostatistics seminar organizer
2008	Chair of the contributed papers session: <i>Methodological Issues in Spatial Epidemiology</i> . Joint Statistical Meetings
2007 – 2008	JHSPH Student Assembly Vice-President for Communications
2006 – 2008	Biostatistics TA Training co-organizer
2006 – 2007	Biostatistics Student Journal Club co-organizer
2005 – 2007	Biostatistics Student Representative to the Faculty

Editorial review

Atmospheric Pollution Research; Biostatistics; Cardiovascular Health Study Publications and Presentations Committee; Clinical Epidemiology; Clinical Gerontologist; Journal of Agricultural, Biological, and Environmental Statistics; PLoS ONE; Scandinavian Journal of Statistics

PUBLICATIONS

Peer Reviewed

1. Hudda N, **Eckel SP**, Knibbs LD, Sioutas C, Delfino RJ, and Fruin SA. Linking in-vehicle ultrafine particle exposures to on-road concentrations. *Atmospheric Environment*, *accepted*.
2. **Eckel SP**, Louis TA, Chaves P, Fried LP, and Margolis, HG. Modification by frailty status of the association between ambient air pollution and lung function in older adults in the Cardiovascular Health Study. *American Journal of Epidemiology*, *in press*.
<http://www.bepress.com/jhubiostat/paper228>.
3. Salam MT, Byun HM, Lurmann F, Breton CV, Wang X, **Eckel SP**, Gilliland FD. Genetic and epigenetic variations in inducible nitric oxide synthase promoter, particulate pollution and exhaled nitric oxide in children. *Journal of Allergy and Clinical Immunology* 2012; 129(1) 232-239.
4. **Eckel SP**, Berhane K, Salam MT, Rappaport EB, Linn WS, Bastain TM, Zhang Y, Lurmann F, Avol EL, and Gilliland FD (2011). Residential traffic-related pollution exposures and exhaled nitric oxide in the Children's Health Study. *Environmental Health Perspectives*. 119:1472-1477, Online: 27 June 2011. DOI: 10.1289/ehp.1103516
5. **Eckel SP**, Bandeen-Roche K, Chaves P, Fried LP, and Louis TA (2011). Surrogate screening models for the low physical activity criterion of frailty. *Aging Clinical and Experimental Research*, 23 (3): 209–216.
6. Peng R and **Eckel SP** (2009). Distributed reproducible research using cached computations. *Computing in Science & Engineering*, 11(1): 28–34.

7. **Eckel SP** and Peng R (2009). Interacting with local and remote data repositories using the 'stashR' package. *Computational Statistics*, 24 (2): 247–254. DOI: 10.1007/s00180-008-0124-x
8. Betz R, **Eckel SP**, Pappas P, and Uyanik J (2006). Cyclic structures with lag-time generators. *Contemporary Mathematics: Groups, Rings and Algebras, Proceedings of a Conference in Honor of Donald S. Passman*, 420: 59-74.

Submitted

1. **Eckel SP**, Linn WS, Berhane K, Rappaport EB, Salam MT, Zhang Y, and Gilliland FD. Estimation of exhaled nitric oxide parameters in the two-compartment model. *Submitted to American Journal of Epidemiology*.
2. Linn WS, Rappaport EB, **Eckel SP**, Berhane K, Zhang Y, Salam MT, Bastain TM, and Gilliland FD. Multiple-flow exhaled nitric oxide, allergy, and asthma in a population of older children. *Submitted to Pediatric Pulmonology*.

In Preparation

1. **Eckel SP** Gauderman WJ and Berhane K. On scaling regression coefficients by interquartile ranges for comparison. *Under revision*.
2. **Eckel SP**, Berhane K, Thomas DC. Latent variable modeling to include biomarker information in a study of air pollution health effects.
3. **Eckel SP** and Louis TA. Identifying effect modifiers in air pollution time-series studies using a two-stage analysis. *Johns Hopkins University, Dept. of Biostatistics Working Papers*. <http://www.bepress.com/jhubiostat/paper148>.

TALKS

Invited

- *Modeling multiple flow exhaled nitric oxide data to investigate localized air pollution health effects*. NIEHS Core Centers meeting. March, 2012. Boston, MA.
- *Statistics in public health: Quantifying the health effects of air pollution in children*. USC Marshall School of Business. September, 2011. Los Angeles, CA
- *Life after Vassar: Investigating the health effects of air pollution on older adults*. Vassar College Department of Mathematics Colloquium. November, 2008. Poughkeepsie, NY
- *How physically active are you?* Women's Health and Aging Study Participant Luncheon. October, 2008. Baltimore, MD

Contributed

- *Non-linear models for multiple flow exhaled nitric oxide data*. Spring Meeting of the Eastern North American Region of the International Biometric Society. March, 2012. Washington, D.C.
- *Integrated latent variable modeling of air pollution effects on respiratory health in the Children's Health Study*. Joint Statistical Meetings. August, 2011. Miami Beach, FL.

- *On scaling regression coefficients by interquartile ranges for comparison.* Spring Meeting of the Eastern North American Region of the International Biometric Society. March, 2011. Miami, FL.
- *Modification by Frailty Status of the Respiratory Health Effects of Air Pollution in Older Adults.* Joint Statistical Meetings. August, 2010. Vancouver, B.C.
- *Modification by frailty status of the association between air pollution and lung function in older adults.* Spring Meeting of the Eastern North American Region of the International Biometric Society. March, 2010. New Orleans, LA.
- *Surrogate screening models for determining low physical activity in the Cardiovascular Health Study.* Joint Statistical Meetings. August, 2009. Washington, D.C.
- *Imputation of the physical activity component of gerontologic frailty for use in modeling the health effects of air pollution on older adults in the Cardiovascular Health Study.* Joint Statistical Meetings. August, 2008. Denver, CO.
- *Identifying effect modifiers in air pollution time-series studies using a two-stage analysis.* Spring Meeting of the Eastern North American Region of the International Biometric Society. March, 2008. Arlington, VA.
- *Exploring the relation between frailty and negative health outcomes associated with air pollution in an older population.* Joint Statistical Meetings. July, 2007. Salt Lake City, UT.
- *Interacting with local and remote data repositories using the 'stashR' package for R.* Directions in Statistical Computing. February, 2007. Auckland, New Zealand.
- *Identifying effect modifiers in air pollution studies.* Joint Statistical Meetings. August, 2006. Seattle, WA.
- *Identifying effect modifiers in air pollution time-series studies using a two-stage analysis.* Spring Meeting of the Eastern North American Region of the International Biometric Society. March, 2006. Tampa, FL.

Poster

- *Residential traffic-related pollution exposures and exhaled nitric oxide in the Children's Health Study.* International Conference of the American Thoracic Society. May, 2011. Denver, CO.

TEACHING

Primary Instructor

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| Fall 2011 | <i>Data analysis (USC PM511a)</i> , with Jim Gauderman |
| June 27 –
July 1, 2011 | <i>Multilevel Models (140.607.11)</i>
JHSPH Graduate Summer Institute of Epidemiology and Biostatistics |
| April 21 –
May 21, 2008 | <i>Biostatistics II: Biostatistical Modeling.</i>
5 week required course for the MQI and DQI masters degree program.
Department of General Practice and Primary Healthcare,
University of Helsinki, Finland |

Co-Instructor

January
6 – 10, 2008 *Innovative approaches to quantitative research on future health systems:
Multi-level modeling and the analysis of longitudinal data.*
Developed and co-taught this short course with Dr. Michael Griswold.
ICDDR-B in Dhaka, Bangladesh

Guest Lecture

June 23,
2011 *Time-series analyses and panel studies*
USC PM599, Environmental Epidemiology: Concepts and Methods
January 19,
2010 *Getting your degree and beyond: Insights from a recent graduate*
USC Preventive Medicine Graduate Student Seminar

Teaching Assistant

Biostatistics in Public Health. (JHU Undergraduate course, AS 280.345)

Gave course lectures when instructor was not available, wrote homework solutions, graded homework, and gave weekly lab lectures.
Fall 2005, 2006 & 2007.

Statistical Methods in Public Health I-IV. (JHSPH 140.621–624)

Lectured in lab twice a week and assisted in quiz and exam development (as Lead TA).
Conducted STATA lab, held office hours, and graded assignments and exams.
Spring 2006, Fall 2008, Spring 2009 (Lead TA)

Analysis of Longitudinal Data. (JHSPH 140.655)

Wrote homework assignments, prepared and presented lab materials, created (2007) and maintained the course website and graded exams.
Term 3 Spring 2007 & 2008.

Multilevel Statistical Models in Public Health. (JHSPH 140.656)

Wrote midterm (2008) and final (2007) exam, prepared and presented lab materials, and created (2007) and maintained the course website.
Term 4 Spring 2007 & 2008.

Statistical Reasoning in Public Health I & II. (JHSPH 140.611–612)

Johns Hopkins Biostatistics and Epidemiology Summer Institute. Lectured on quiz solutions, held office hours, and graded homework and exams.
Summer 2006, 2007 & 2008

Data Analysis Workshop I & II. (JHSPH 140.613–614.)

Johns Hopkins Winter Institute. Answered student questions during 2–3 hour lab sessions and prepared detailed quiz solutions.
Winter 2007

Data Visualization and its Role in the Practice of Statistics. (UCLA)

Summer Program in Statistics for Undergraduates. Assisted Francesca Dominici and Roger Peng in teaching a 2 day lab on air pollution and health. Helped to prepare course materials and assisted students.
June 2006

SOFTWARE (R packages, available at [CRAN](http://CRAN.R-project.org))

stashR: A Set of Tools for Administering SHared Repositories
scaleCoef: Tools for post-hoc scaling of regression coefficients

PROFESSIONAL MEMBERSHIPS

American Public Health Association, American Statistical Association,
American Thoracic Society, International Biometric Society (ENAR),
R Foundation for Statistical Computing