
BIOGRAPHICAL SKETCH

NAME Brent A. Coull	POSITION TITLE Assistant Professor of Biostatistics
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EDUCATION/TRAINING

EDUCATION AND LOCATION	DEGREE	YEAR	FIELD OF STUDY
Furman University	B.S.	1992	Mathematics
University of Florida	M.S.	1994	Statistics
University of Florida	Ph.D.	1997	Statistics

A Positions and Honors.

Professional Experience:

1992-1993	Teaching Assistant, Department of Statistics, University of Florida
1993-1994	Statistical Consultant, Center for Instructional Resources and Computing Activity, University of Florida
1994-1997	Research Assistant, Department of Statistics, University of Florida
1997-2000	Research Fellow, Department of Biostatistics, Harvard School of Public Health
2000-Present	Assistant Professor, Department of Biostatistics, Harvard School of Public Health

Honors:

1992	Elected to Phi Beta Kappa, Furman University
1992-1995	Grinter Fellowship, Department of Statistics, University of Florida
1993	William Mendenhall Award, Department of Statistics, University of Florida
1998	Statistics Faculty Award, Department of Statistics, University of Florida
1998-2000	NIH National Research Service Award Postdoctoral Fellowship

B Selected peer-reviewed publications (in chronological order). Do not include publications submitted or in preparation.

- Coull BA** and Agresti A. The use of mixed logit models to reflect heterogeneity in capture-recapture studies. *Biometrics*, 1999; 55:294-301.
- Clarke RW, Catalano PJ, Koutrakis P, Krishna Murthy GG, Sioutas C, Paulauskis J, **Coull BA**, Ferguson S, Godleski JJ. Urban air particulate inhalation alters pulmonary function and induces pulmonary inflammation in a rodent model of chronic bronchitis. *Inhal Tox*, 1999; 11:637-656.
- Coull BA** and Agresti A. Random effects modeling of multiple binomial responses using the multivariate binomial logit-normal distribution. *Biometrics*, 2000; 56:73-80.
- Clarke RW, Catalano P, **Coull BA**, Koutrakis P, Krishna Murthy GG, Rice T, Godleski JJ. Age-related responses to concentrated urban air particles (CAPs). *Inhal Tox*, 2000; 12:73-84.
- Godleski JJ, Verrier RL, Koutrakis P, Catalano P, **Coull BA**, Reinisch U, Lovett EG, Lawrence J, Krishna Murthy GG, Wolfson JM, Clarke RW, Nearing BD. Mechanisms of morbidity and mortality from exposure to ambient air particulate. Research Report # 91. *Health Effects Inst*, Cambridge, MA 2000.
- Coull BA**, Catalano PJ, Godleski JJ. Semiparametric analyses of cross-over data with repeated measures. *J Agric Biol Env Stat*, 2000; 5:417-429.
- Clarke RW, **Coull BA**, Reinisch U, Catalano PJ, Killingsworth CR, Koutrakis P, Kavouras I, Lawrence J, Lovett EG, Wolfson JM, Verrier RL, Godleski JJ. Inhaled concentrated ambient particles are associated with hematologic and bronchoalveolar lavage changes in canines. *Env Health Persp*, 2000; 108(12):1179-1187.
- Coull BA**, Mezzetti M, Ryan LM. Discussion of "Combining evidence on air pollution and daily mortality from the 20 largest US cities: a hierarchical modelling strategy" by F Dominici, JM Samet, and SL Zeger. *J Roy Stat Soc, A*, 2000; 163:293.
- Holmes LH, Harvey EA, **Coull BA**, Huntington KB, Khoshbin S, Hayes AM, Ryan LM. The teratogenicity of antiepileptic drugs. *New Engl J Med*, 2001; 344(15):1132-1138.

- Coull BA**, Ruppert D, Wand MP. Simple incorporation of interactions into additive models. *Biometrics*, 2001; 57:539-545.
- Coull BA**, Schwartz J, Wand MP. Respiratory health and air pollution: additive mixed model analyses. *Biostatistics*, 2001; 2:337-349.
- Coull BA**, Hobert JP, Ryan LM, Holmes LB. Crossed random effect models for multiple outcomes in a study of teratogenesis. *JASA*, 2001; 94: 1194-1204.
- Wellenius GA, Lovett EG, Verrier RL, **Coull BA**, Catalano PJ, Koutrakis P, Reinsch U, Godleski JJ. Exposure to concentrated air particles potentiates ischemic electrocardiographic changes during acute myocardial ischemia. *Toxicological Sciences*, 2002; 66: 327-345.
- Coull BA** and Schwartz J. Respiratory Epidemiol. In: El-Shaarawi AH, Piegorsch WW eds. *Encyclopedia of Environmetrics*, New York: Wiley, 2002; 1785-1788.
- Coull BA** and Holmes LB. Environmental Teratogenesis. In: El-Shaarawi AH, Piegorsch WW eds. *Encyclopedia of Environmetrics*, New York: Wiley, 2002; 2174-2176.
- Tsimikas JV, Bosch R, **Coull BA**, El Barmi H. A profile likelihood approach for comparing highly accurate diagnostic tests. *Biometrics*, 2002; 58: 946-956.
- Gurgueira SA, Lawrence J, **Coull BA**, Krishna Murthy GG, Gonzalez-Flecha B. Rapid increases in the steady-state concentration of reactive oxygen species in the lungs and heart after particulate air pollution inhalation. *Environmental Health Perspectives*, 2002; 110: 749-755.
- Batalha JRF, Saldiva PHN, Clarke RW, **Coull BA**, Stearns RC, Lawrence J, Krishna Murthy GG, Koutrakis P, Godleski JJ. Concentrated ambient air particles induce vasoconstriction on small pulmonary arteries in rats. *Environmental Health Perspectives*, 2002; 110: 191-197.
- Sarnat JA, Long CM, **Coull BA**, Suh, HH. Using sulfur-related particles to estimate indoor particle and elemental concentrations of outdoor origin. *Environ Sci & Technol*, 2002; 36:5305-5314.
- Schwartz J and **Coull BA**. Control for Confounding in the Presence of Measurement Error in Hierarchical Models. *Biostatistics*, 2003; 4: 539-553.
- Wellenius GA, **Coull BA**, Godleski JJ, Koutrakis P, Okabe K, Savage ST, Lawrence JE, Krishna Murthy K, Verrier RL. Inhalation of concentrated ambient air particles exacerbates myocardial ischemia in conscious dogs. *Environmental Health Perspectives*, 2003; 111: 402-408.
- Savage ST, Lawrence J, Katz T, Stearns R, **Coull BA**, Godleski JJ. Does the Harvard/US Environmental Protection Agency ambient particle concentrator change the toxic potential of particles? *J Air & Waste Management*, 2003; 53(9):1088-1097.
- Coull BA** and Agresti A. Generalized log-linear models with random effects, with application to smoothing contingency tables. *Stat Model*, 2003; 3(4):251-271.
- Coull BA**, Mezzetti M, Ryan LM. A Bayesian hierarchical model for risk assessment of methylmercury. *J Agr Bio & Environ Stat*, 2003; 8(3):253-270.
- Houseman EA, Ryan LM, **Coull BA**. Cholesky residuals for assessing normal errors in a linear model with correlated outcomes. *JASA*, 2004; 99:383-394.
- Wager CG, **Coull BA**, Lange N. Modelling spatial intensity for replicated inhomogeneous point patterns in brain imaging. *J Royal Stat Soc, Series B*, 2004; **66**: 429-446.
- Coull BA** and Staudenmayer J. Self-modeling regression for multivariate curve data. *Statistica Sinica*, 2004; In press.
- Liu, Y., Sarnat, J. A., **Coull, B. A.**, Koutrakis, P., and Jacob, D. J. Validation of MISR aerosol optical thickness measurements using AERONET observations over the contiguous United States. *Journal of Geophysical Research*, 2004; **109**.
- Koutrakis, P., Suh, H. H., Sarnat, J. A., Brown, K. W., **Coull, B. A.**, Schwartz, J. "Characterization of Particulate and Gas Exposures of Sensitive Subpopulations Living in Baltimore and Boston" *Health Effects Institute Research Report*, 2004; in press.
- DeMeo, D. L., Zanobetti, A., Litonjua, A. A., **Coull, B. A.**, Schwartz, J., and Gold, D. R. Ambient air pollution and oxygen saturation. *Journal of Respiratory and Critical Care Medicine*, 2004; in press.
- Sarnat, J. A., Brown, K. W., Schwartz, J., **Coull, B. A.**, and Koutrakis, P. (2004). Relationships among Personal Exposures and Ambient Concentrations of Particulate and Gaseous Pollutants and their Implications for Particle Health Effects Studies. *Epidemiology*, 2004; in press.