

Kenneth E. Shirley

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POSITIONS

2007- Postdoctoral Fellow, Earth Institute, Columbia University (advisor Andrew Gelman)

EDUCATION

2007 The Wharton School, University of Pennsylvania, Ph.D., Statistics
Dissertation: "Hidden Markov models for Alcoholism Treatment Trial Data," (advisor Dylan Small)
2003 Harvard College, A.B. with honors, Mathematics.

PAPERS

- [1] "Hidden Markov Models for Alcoholism Treatment Trial Data"
Shirley, K., Small, D., Lynch, K., Maisto, S., Oslin, D.
(revised and resubmitted, *Annals of Applied Statistics*)
- [2] "Bayesball: A Bayesian Hierarchical Model for Evaluating Fielding in Major League Baseball"
Jensen, S.T., **Shirley, K.**, Wyner, A.
(to appear, *Annals of Applied Statistics*)
- [3] "On the Sensitivity of Inferences Made From Value-Added Models to Missing Data"
Shirley, K., Braun, H., Wainer, H.
(under revision, *Journal of Educational and Behavioral Statistics*)
- [4] "Modeling and Simulating Rainfall"
Shirley, K., Osgood, D.E., Robertson, A., Block, P., Lall, U., Hansen, J., Kirshner, S., Moron, V., Ines, A., Turvey, C., Norton, M., Dinku, T.
(to appear in non-refereed IRI publication *Climate and Society*, Vol. 2)

TALKS

- [1] "Modeling and Simulating Rainfall"
IRI Workshop on Technical Issues in Index Insurance, New York, NY, October 2008
- [2] "Modeling time series of death penalty public opinion"
JSM, Denver, CO, August 2008
- [3] "Bayesian hidden Markov models for alcoholism treatment trial data"
Statistics in Psychiatry Symposium, New York, NY, May 2008
- [4] "A Bayesian hidden Markov model for alcoholism treatment trial data"
JSM, Salt Lake City, UT, August 2007
- [5] "Hidden Markov models for alcoholism treatment trial data"
ENAR Annual Meeting, Atlanta, GA, March 2007
- [6] "Hidden Markov models for ordinal longitudinal data"
JSM, Seattle, WA, August, 2006

- [7] "The effects of missing data on Value-Added Model (VAM) estimates"
AERA Annual Meeting, San Francisco, CA, April, 2006 (Joint with Henry Braun)

POSTERS

- [1] "Modeling weather-within-climate for index insurance contract design"
Robertson, A., Baethgen, W., Block, P., Dinku, T., McLaurin, M., Osgood, D., **Shirley, K.**,
Ward, N.
8th Annual Meeting of the European Meteorological Society, Amsterdam, The Netherlands,
September, 2008.
- [2] "A hierarchical Bayes model for rainfall with applications to index insurance"
Shirley, K., Osgood, D., Robertson, A.
ISBA, Hamilton Island, Australia, July 2008
- [3] "Community-Based Interventions in Kenya: Impact on Malaria and Anaemia"
Wariero, J.O., Mutuo, P.K., Lelera, E., Nemser, B.E., Bates, L.M., **Shirley, K.**, Akinyi, B.O.,
Palm, C.A., Sachs, S.E.
Global Health Council Annual International Conference, Washington, D.C., May 2008
- [4] "A Markov Model for Basketball"
Shirley, K.
New England Symposium for Statistics in Sports, Boston, MA, September 2007

AWARDS

- 2007 Statistics in Epidemiology (Section of the ASA) Travel Award for JSM, Salt Lake City, UT.
2004 Murray Award for Excellence in Teaching, Department of Statistics, Wharton School

WORKING PAPERS

- [1] "Modeling time series of death penalty public opinion in the United States"
Shirley, K., Gelman, A.
- [2] "Hierarchical Bayes models for daily rainfall time series with applications to index insurance"
Shirley, K., Osgood, D., and Robertson, A.

TEACHING

- [1] Instructor, Statistics 111 (Introductory Statistics)
Summer 2006, Wharton School, University of Pennsylvania.
- [2] Teaching Assistant, Stat 111 (Undergraduate Introductory Stats, 3 times), Stat 430
(Undergraduate Probability, 2 times), Stat 621 (MBA Statistics, once), Stat 112 (Undergraduate
Regression, once)
Fall 2003 – Spring 2007, Wharton School, University of Pennsylvania

SERVICE, MEMBERSHIPS, AND OTHER PROFESSIONAL ACTIVITIES

- Session Chair, IRI Workshop on Technical Issues in Index Insurance, October, 2008, Columbia
University
- Speaker (10/07, 4/08, 11/08) and co-organizer (4/08, 11/08) of Earth Institute Postdoctoral Fellows
semiannual Symposium
- Organizer, Earth Institute postdoc fellows seminars, 2008 - present
- JSM session chair, Salt Lake City, UT, 2007
- ASA member, 2006 - present