

DANIEL K. SEWELL

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EDUCATION

2010-2015	University of Illinois at Urbana-Champaign PhD, Statistics Advisor: Professor Yuguo Chen Dissertation Title: Statistical Models and Inference for Dynamic Networks
2008-2010	University of Arkansas MS, Statistics
2002-2006	Harding University, Searcy, AR BA, Education

RESEARCH INTERESTS

Social network analysis	Statistical computing	Machine learning
Clustering	Monte Carlo methodology	Applied scientific problems
Bayesian methodology	Data visualization	

METHODOLOGICAL PUBLICATIONS

Sewell, Daniel K. Heterogeneity in social influence models. *Social Networks*, 2017+. In press

Sewell, Daniel K. Network autocorrelation models with egocentric data. *Social Networks*, 49:113–123, 2017

Sewell, Daniel K, Yuguo Chen, et al. Latent space approaches to community detection in dynamic networks. *Bayesian Analysis*, 12(2):351–377, 2017

Sewell, Daniel K, Yuguo Chen, William Bernhard, and Tracy Sulkin. Model-based longitudinal clustering with varying cluster assignments. *Statistica Sinica*, 26(1):205–233, 2016

Sewell, Daniel K and Yuguo Chen. Latent space models for dynamic networks with weighted edges. *Social Networks*, 44:105–116, 2016

Sewell, Daniel K and Yuguo Chen. Latent space models for dynamic networks. *Journal of the American Statistical Association*, 110(512):1646–1657, 2015

Sewell, Daniel K and Yuguo Chen. Analysis of the formation of the structure of social networks by using latent space models for ranked dynamic networks. *Journal of the Royal Statistical Society: Series C (Applied Statistics)*, 64(4):611–633, 2015

Sewell, Daniel K, Hajin Kim, Taekjip Ha, and Ping Ma. A parameter estimation method for fluorescence lifetime data. *BMC Research Notes*, 8(1):230, 2015

–SUBMITTED OR UNDER REVISION–

Sewell, Daniel K. Simultaneous and temporal autoregressive network models. *Network Science*, 2017+. Invited minor revision

Sewell, Daniel K. Inferring the data generating process of cognitive social structures. *Sociological Methodology*, 2017+. Invited major revision

–WORKING PAPERS–

Sewell, Daniel K and Philip M Polgreen. Inferring hospital patient sharing networks from a non-random or biased subsample. 2017+

Amy Hahn, Philip M Polgreen, and **Sewell, Daniel K.** Understanding the effects of network boundaries imposed by geopolitical regions on hospital patient-sharing networks. 2017+

Xi Zhu, Shin-Ping Tu, **Sewell, Daniel K**, Nengliang Yao, Vimal K Mishra, Alan Dow, and Colin Banas. Measuring electronic communication networks in virtual healthcare teams using electronic health records access-log data. 2017+

–TECHNICAL REPORTS–

Sewell, Daniel K. On-line bayesian estimation of static parameters within sequential monte carlo. 2016. Technical manuscript

Sewell, Daniel K. Deriving the harmonic mean estimator via discrete approximation of the parameter space. 2014. Technical manuscript

COLLABORATIVE PUBLICATIONS

Chris Anthony, Ryan Peterson, Linnea A Polgreen, **Sewell, Daniel K**, and Philip M Polgreen. The seasonal variability in surgical site infections and association with warmer weather: a population-based investigation. *Infection Control & Hospital Epidemiology*, 2017. In press

William Bernhard, **Sewell, Daniel K**, and Tracy Sulking. A clustering approach to legislative styles. *Legislative Studies Quarterly*, 2017+. In press

–SUBMITTED OR UNDER REVISION–

Kristen Metcalf, Barbara Baquero, Helena Laroche, Mayra Coronado Garcia, Shelby Francis, Kathleen Janz, and **Sewell, Daniel K.** Calibration of the global physical activity questionnaire to accelerometry measured physical activity and sedentary behavior in a random sample of rural iowans. *International Journal of Behavioral Nutrition and Physical Activity*, 2017+. Under review

Ryan Peterson, Linnea A Polgreen, **Sewell, Daniel K**, and Philip M Polgreen. Warmer weather as a risk factor for cellulitis: a population-based investigation. 2017+. Invited revision

Jacob E Simmering, Linnea A Polgreen, Douglas B Hornick, **Sewell, Daniel K**, and Philip M Polgreen. Legionnaires’ disease risk is strongly dependent on temperature, humidity, and latitude. 2017+. Invited revision

Christine Kava, Barbara Baquero, Jason Daniel-Ulloa, Yazmin Juarez, **Sewell, Daniel K**, and Edith Parker. The relationship between unemployment type and smoking status among us adults living in a rural context. *Preventing Chronic Disease*, 2017+. Invited revision

A Schumacher, CM Morris, EO Foster, E Parker, **Sewell, Daniel K**, G Zamba, Jason Daniel-Ulloa, and Barbara Baquero. Residents’ neighborhood perceptions and their relation to health behaviors and general health: Evidence from a micropolitan community in iowa. *Preventing Chronic Disease*, 2017+. Under review

KM Dore, **Sewell, Daniel K**, E Mattenet, and TR Turner. Gis and gps techniques in an ethnoprimateological investigation of st. kitts vervet monkey (*chlorocebus aethiops sabaeus*) crop-raiding behavior. 2017+. Under review

Sato Ashida, **Sewell, Daniel K**, Elen Schafter, A Schroer, and J Friberg. Social benefits older adults receive from participating in social and daily activities with their social network members. 2017+. Under review

–WORKING PAPERS–

Denise Devotta and **Sewell, Daniel K**. Spatial and temporal controls on alnus-derived nutrients and streams stoichiometry: Implications for aquatic ecosystem productivity. 2017+

AWARDS

2017	Junior Faculty Research Opportunity Award, College of Public Health, University of Iowa
2015	New Faculty Research Award, College of Public Health, University of Iowa
2015	University of Illinois nomination for CGS/ProQuest Distinguished Dissertation Award (limit 1 nomination per university)
2014	Patrick J. Fett award for the best paper on the scientific study of Congress and the presidency
2014	Finalist for the Norton Prize for Outstanding Doctoral Thesis in Statistics
2014	University of Illinois Graduate College Travel Award
2007	Outstanding Calculus Award, Harding University

SOFTWARE

Author of R package ‘dnc’ and ‘STAR’

TEACHING EXPERIENCE

–INSTRUCTOR–

		<i>TERMS</i>
		<i>INSTRUCTED</i>
University of Iowa	BIOS 5710: Biostatistical Methods I	1
	BIOS 5720: Biostatistical Methods II	1
	BIOS 6810: Bayesian Methods and Design	1
University of Illinois	STAT 200: Statistical Analysis	1
University of Arkansas	STAT 2303: Principles of Statistics	1
	MATH 2043: Survey of Calculus	1
	MATH 1203: College Algebra	2

–LON-CAPA PROGRAMMER–

University of Illinois | Stat 100: Statistics

–TUTOR–

Arkansas State University, Searcy	Career Pathways
Harding University	Academic Resource Center

ADVISING

PhD Advisor	Lauren Sager	Biostatistics
Committee member	Michael Seerdorff	Biostatistics
	Christine Morris	Community and Behavioral Health

GRANT SUPPORT

Centers for Disease Control and Prevention, “Contact Network Transmission Modeling of Healthcare Associated Infections.” PI: Alberto Segre. Role: Co-Investigator

University of Iowa College of Public Health Opportunity Award

University of Iowa College of Public Health New Faculty Research Award

Centers for Disease Control and Prevention, “Prevention Research Center for Rural Health.” PI: Edith Parker. Role: Biostatistician.

University of Iowa Health Care “eHealth.” PI: Philip Polgreen. Role: Biostatistician.

National Institutes of Health, “Iowa Summer Institute in Biostatistics.” PI: Gideon Zamba. Role: Biostatistician.

PRESENTATIONS

–INVITED–

- 2017 “Measuring electronic communication networks in virtual healthcare teams using electronic health records ccess-log data,” with Zhu X, Tu SP, Hall L, Mishra V, Yao A, Dow A, and Banas C., at *INSNA Sunbelt Conference*, Beijing, China
- 2017 “The effects of analyzing subsets of hospital patient transfer networks” at the University of Iowa, Department of Geographical and Sustainability Sciences
- 2016 “Clustering dynamic and evolving data” at the University of Iowa, Department of Biostatistics
- 2016 “Clustering dynamic and evolving data” at the University of Iowa, Department of Political Science
- 2016 “Simultaneous and temporal autoregressive network models,” at *INSNA Sunbelt Conference*, Newport Beach, CA
- 2016 “Social network analysis,” at the Center for Comprehensive Access And Delivery Research And Evaluation
- 2015 “Latent space models for dynamic networks,” at the University of Iowa, Department of Statistics and Actuarial Science
- 2015 “Latent space models for dynamic networks,” at the University of Iowa, Department of Computer Science
- 2015 “Analysis of the formation of the structure of social networks,” at *17th Meeting of New Researchers in Statistics and Probability*, Seattle, WA
- 2015 “Latent space models for dynamic networks,” at Texas A&M
- 2015 “Latent space models for dynamic networks,” at Duke University
- 2015 “Latent space models for dynamic networks,” at the University of Michigan
- 2015 “Latent space models for dynamic networks,” at the University of Missouri
- 2015 “Latent space models for dynamic networks,” at Notre Dame University
- 2015 “Latent space models for dynamic networks,” at the University of Alberta
- 2015 “Latent space models for dynamic networks,” at the University of Colorado, Denver
- 2015 “Latent space models for dynamic networks,” at Portland State University
- 2015 “Latent space models for dynamic networks,” at University of Iowa, Department of Biostatistics
- 2015 “Latent space models for dynamic networks,” at Binghamton University
- 2015 “Latent space models for dynamic networks,” at Miami University
- 2014 “Legislative style,” with W. Bernhardt and T. Sulkin, *Annual Meeting of the Midwest Political Science Association*, Chicago, IL
- 2014 “Latent space models for dynamic networks,” *Midwest Statistics Research Colloquium*, Chicago, IL

–CONTRIBUTED–

- 2016 | "Simultaneous and temporal autoregressive network models," at *Joint Statistical Meetings*, Chicago, IL
- 2015 | "Analysis of the formation of the structure of social networks," at *Joint Statistical Meetings*, Seattle, WA
- 2014 | "Detecting influence in dynamic networks," *Joint Statistical Meetings*, Boston, MA
- 2014 | "Community detection for dynamic networks," *Bohrer Workshop in Statistics*, Department of Statistics, University of Illinois at Urbana-Champaign
- 2013 | "Latent space models for dynamic networks," *Bohrer Workshop in Statistics*, Department of Statistics, University of Illinois at Urbana-Champaign
- 2011 | "A parameter estimation method for single molecule fluorescence lifetime data," *Bohrer Workshop in Statistics*, Department of Statistics, University of Illinois at Urbana-Champaign

–WORKSHOPS–

- 2017 | Short course "Networks in R" at *University of Iowa Data Science Institute* (Summer)
- 2017 | Short course "Introduction to R" at *University of Iowa Data Science Institute* (Winter)
- 2016 | Workshop on "Introduction to R," at *Informatics Showcase*, University of Iowa

REFEREED JOURNALS

Journal of the American Statistical Association T&M

Journal of the Royal Statistical Society, Series A

Journal of the Royal Statistical Society, Series B

Journal of the Royal Statistical Society, Series C

Statistics and Computing

Annals of Applied Statistics

Polish National Science Centre

Multivariate Behavioral Research

Statistics and Its Interface

Journal of Econometrics

Journal of Educational and Behavioral Statistics

PLOS One

Biometrics

BMJ Open (2)

PROFESSIONAL EXPERIENCE

Consultant: Illinois Consulting Office, University of Illinois, 2012-2015

Actuarial Examination: Successful passing score on SOA/CAS/CIA Exam P/1 (Probability)

PROFESSIONAL ACTIVITIES: INTERNAL

2016-present	Faculty mentor for the Iowa Summer Institute in Biostatistics at the University of Iowa
2016-2017	Member of faculty search committee for the Department of Biostatistics at the University of Iowa
2015-2017	Member of the advanced statistical computing course exploratory committee for the Department of Biostatistics at the University of Iowa
2015-present	Member of M.S. Exam Committee for the Department of Biostatistics at the University of Iowa
2015-present	Member of the computing committee for the Department of Biostatistics at the University of Iowa
2015-present	Member of graduate admissions committee for the Department of Biostatistics at the University of Iowa
2015-present	Member of the awards committee for the College of Public Health at the University of Iowa
2015-2016	Member of student paper award committee of the ASA nonparametric statistics section
2016	College of Public Health representative and member of the Hancher-Finkbine dinner medallion selection committee at the University of Iowa

PROFESSIONAL ASSOCIATIONS

International Network for Social Network Analysis

American Statistical Association

Institute of Mathematical Statistics

International Society for Bayesian Analysis