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

Daniel K Sewell. Simultaneous and temporal autoregressive network models. *Network Science*, 2018+. In press

Daniel K Sewell. Heterogeneous susceptibilities in social influence models. *Social Networks*, 52:135–144, 2017

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

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

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

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

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

Daniel K Sewell 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

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

–Technical Reports–

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

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

Collaborative Publications

Alan W. Dow, Xi Zhu, Daniel Sewell, Colin A. Banas, Vimal Mishra, and Shin-Ping Tu. Teamwork on the rocks: Rethinking interprofessional practice as networking. *Journal of Interprofessional Care*, 31(6):677–678, 2017. PMID: 28792251

Sato Ashida, Daniel K. Sewell, Ellen J. Schafer, Audrey Schroer, and Julia Friberg. Social network members who engage in activities with older adults: do they bring more social benefits than other members? *Ageing and Society*, pages 1–20, 2018

Jacob E Simmering, Linnea A Polgreen, Douglas B Hornick, Daniel K Sewell, and Philip M Polgreen. Weather-dependent risk for legionnaires' disease, united states. *Emerging Infectious Diseases*, 23(11):1843–1851, 2017

Chris Anthony, Ryan Peterson, Linnea A Polgreen, Daniel K Sewell, and Philip M Polgreen. The seasonal variability in surgical site infections and association with warmer weather: a population-based investigation. *Infection Control & Hospital Epidemiology*, 38(7):809–816, 2017

Ryan Peterson, Linnea A Polgreen, Daniel K. Sewell, and Philip M Polgreen. Warmer weather as a risk factor for cellulitis: a population-based investigation. *Clinical Infectious Diseases*, 65(7):1167–1173, 2017

William Bernhard, Daniel K. Sewell, and Tracy Sulking. A clustering approach to legislative styles. *Legislative Studies Quarterly*, 42(3):477–506, 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–

		Terms Instructed
University of Iowa	BIOS 5710: Biostatistical Methods I	2
	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

–Active–

Centers for Disease Control and Prevention, "Data-Driven Modeling and Simulation of Healthcare-Associated Infections." 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, "University of Iowa Prevention Research Center for Rural Health." Role: Co-Investigator

University of Iowa Health Care "e-Health Network." Role: Co-Investigator

National Institutes of Health, "Iowa Summer Institute for Research Education in Biostatistics." Role: Biostatistician.

–Pending–

National Institutes of Health, "Building a Bridge (between clinical and community care): Post diagnosis support of persons with dementia and their family." Role: Co-Investigator

Agency for Healthcare Research and Quality, "Cancer Care in a Human-Technological Ecosystem: EHR-based Communication Networks." Role: Co-Investigator

National Institutes of Health, "Connected Cancer Care: EHR Communication Networks in Virtual Cancer Care Team." Role: Co-Investigator

Agency for Healthcare Research and Quality, "Identifying patient populations susceptible to environmental risk factors for surgical site infections." Role: Co-Investigator

National Institutes of Health, "Functionally-tailored Oral Care Intervention for Community-dwelling Older Adults with Dementia and Their Caregivers." Role: Co-Investigator

National Institutes of Health, "Estimating the probability of Legionnaires disease using clinical and weather data to help inform community acquired pneumonia treatment decisions." Role: Co-Investigator

Presentations

–Invited–

2017	"Simultaneous and temporal autoregressive network models," at Iowa State University, Department of Statistics
2017	"Statistical analysis of networks in bioinformatics: Getting the right data," Informatics Showcase, University of Iowa
2017	"Measuring electronic communication networks in virtual healthcare teams using electronic health records cccess-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 17^{th} *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

Annals of Applied Statistics

Bayesian Statistics

Biometrics

BMJ Open

Computational Statistics and Data Analysis

Expert Systems with Applications

Journal of the American Statistical Association T&M

Journal of Econometrics

Journal of Educational and Behavioral Statistics

Journal of Allergy and Clinical Immunology

Journal of the Royal Statistical Society, Series A

Journal of the Royal Statistical Society, Series B

Journal of the Royal Statistical Society, Series C

Journal of Computational and Graphical Statistics

Multivariate Behavioral Research

Network Science

National Science Foundation

PLOS One

Polish National Science Centre

Statistics and Computing

Statistics and Its Interface

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-present	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