

Cheng Wang

CONTACT INFORMATION

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EDUCATION

Ph.D. in Sociology, University of Notre Dame, August 2012

Dissertation: "Three Essays on Triadic Evolution in a Large-scale Mobile Phone Network"
(David S. Hachen, Chair)

M.A. in Sociology, University of Notre Dame, January 2009

Thesis: "Multi-Dimensional Urbanization Processes and its Effects on the Extent and
Character of Social Ties: A Case Study" (David S. Hachen, Chair)

B.A. in Sociology, Nanjing University, China, July 1998

PROFESSIONAL DEVELOPMENT

Assistant Professor, Wayne State University, 08/2019 – Present

Research Assistant Professor, University of Notre Dame, 02/2016 – 06/2019

Post-doctoral Research Associate, Cornell University, 10/2014 – 01/2016

Post-doctoral Scholar, University of California, Irvine, 10/2012 – 09/2014

PEER-REVIEWED PUBLICATIONS

- (27) Sepulvado, Brandon, Omar Lizardo, Michael L. Wood, **Cheng Wang**, and David S. Hachen. 2021. "Examining the Association Between Behavioral Trajectory Similarity Clusters in Social Networks." *Computational Social Sciences* (Accepted).
- (26) **Wang, Cheng**. 2021. "Smoking Prevalence, Core/Periphery Network Positions, and Peer Influence: Findings from Five Datasets on Us Adolescents and Young Adults." *PLoS ONE*, 16(3): e0248990.
- (25) **Wang, Cheng**, John R. Hipp, Carter T. Butts, and Cynthia M. Lakon. 2021. "Insight into Selecting Adolescents for Drinking Intervention Programs: A Simulation Based on Stochastic Actor-Oriented Models." *Prevention Science*, DOI: 10.1007/s11121-021-01261-4.
- (24) **Wang, Cheng**, Omar Lizardo, and David S. Hachen. 2021. "Using Big Data to Examine the Effect of Urbanism on Social Networks." *Journal of Urban Affairs*, 43(1): 40-56.
- (23) Hipp, John R., Rupa Jose, Carter T. Butts, **Cheng Wang**, and Cynthia M. Lakon. 2021. "A Multi-Contextual Examination of Non-School Friendships and their Impact on Adolescent Deviance and Alcohol Use." *PLoS ONE*, 16(2): e0245837.
- (22) **Wang, Cheng**, Omar Lizardo, and David S. Hachen. 2021. "Using Fitbit Data to Examine Factors that Affect Daily Activity Levels of College Students." *PLoS ONE*, 16(1): e0244747.

- (21) **Wang, Cheng**, Carter T. Butts, John R. Hipp, and Cynthia M. Lakon. 2020. "Model Adequacy Checking/Goodness-of-fit Testing for Behavior in Joint Dynamic Network/Behavior Models, with an Extension to Two-mode Networks." *Sociological Methods and Research*, DOI: 10.1177/0049124120914933.
- (20) **Wang, Cheng**, Omar Lizardo, and David S. Hachen. 2020. "Using Fitbit Data to Monitor the Heart Rate Evolution Patterns of College Students." *Journal of American College Health*, DOI: 10.1080/07448481.2020.1775610.
- (19) **Wang, Cheng**, Omar Lizardo, and David S. Hachen. 2020. "Neither Influence nor Selection: Examining Co-Evolution of Political Orientation and Social Networks in the NetSense and NetHealth Studies." *PLoS ONE*, 15(5): e0233458.
- (18) Sepulvado, Brandon, Michael L. Wood, Ethan Fridmanski, **Cheng Wang**, and Matthew J. Chandler, Omar Lizardo, and David S. Hachen. 2020. "Behavioral Trajectory Similarity in Social Networks and Its Correlates." *Social Science Computer Review*, DOI: 10.1177/0894439320923123.
- (17) Faust, Louis, **Cheng Wang**, David S. Hachen, Omar Lizardo, and Nitesh V. Chawla. 2019. "Physical Activity Trend eXtraction: A Framework for Extracting Moderate-Vigorous Physical Activity Trends from Wearable Fitness Tracker Data." *JMIR mHealth and uHealth*, 7(3): e11075.
- (16) Genkin, Michael, **Cheng Wang**, George Berry, and Matthew E. Brashears. 2018. "Blaunet: An R-based graphical user interface package to analyze Blau space." *PLoS ONE*, 13(10): e0204990.
- (15) **Wang, Cheng**, John R. Hipp, Carter T. Butts, and Cynthia M. Lakon. 2018. "The Interdependence of Cigarette, Alcohol, and Marijuana Use in the Context of School-Based Social Networks." *PLoS ONE*, 13(7): e0200904.
- (14) **Wang, Cheng**, John R. Hipp, Carter T. Butts, Rupa Jose, and Cynthia M. Lakon. 2017. "Peer Influence, Peer Selection and Adolescent Alcohol Use: A Simulation Study Using a Dynamic Network Model of Friendship Ties and Alcohol Use." *Prevention Science*, 18(4), 382-393.
- (13) Lakon, Cynthia M., **Cheng Wang**, Carter T. Butts, Rupa Jose, and John R. Hipp. 2017. "Cascades of Emotional Support in Friendship Networks and Adolescent Smoking." *PLoS ONE*, 12(6): e0180204.
- (12) **Wang, Cheng**, Carter T. Butts, John R. Hipp, Rupa Jose, and Cynthia M. Lakon. 2016. "Multiple Imputation for Missing Edge Data: A Predictive Evaluation Method with Application to Add Health." *Social Networks*, 45, 89-98.
- (11) **Wang, Cheng**, John R. Hipp, Carter T. Butts, Rupa Jose, and Cynthia M. Lakon. 2016. "Coevolution of Adolescent Friendship Networks and Smoking and Drinking Behaviors with Consideration of Parental Influence." *Psychology of Addictive Behaviors*, 30(3), 312-324.
- (10) Lakon, Cynthia M., Cornelia Pechmann, **Cheng Wang**, Li (Sunny) Pan, Kevin Delucchi, and Judith J. Prochaska. 2016. "Mapping Engagement in Twitter-Based Support Networks for Adult Smoking Cessation." *American Journal of Public Health*, 106(8), 1374-1380.
- (9) Jose, Rupa, John R. Hipp, Carter T. Butts, **Cheng Wang**, and Cynthia M. Lakon. 2016. "Network Structure, Influence, Selection and Adolescent Delinquent Behavior: Unpacking a Dynamic Process." *Criminal Justice and Behavior*, 43(2), 264-284.

- (8) **Wang, Cheng**, John R. Hipp, Carter T. Butts, Rupa Jose, and Cynthia M. Lakon. 2015. "Alcohol Use among Adolescent Youth: The Role of Friendship Networks and Family Factors in Multiple School Studies." *PLoS ONE*, 10(3): e0119965.
- (7) Hipp, John R., **Cheng Wang**, Carter T. Butts, Rupa Jose, Cynthia M. Lakon. 2015. "Research Note: The Consequences of Different Methods for Handling Missing Network Data in Stochastic Actor Based Models." *Social networks*, 41, 56-71.
- (6) Lakon, Cynthia M., John R. Hipp, **Cheng Wang**, Carter T. Butts, and Rupa Jose. 2015. "Simulating Dynamic Network Models and Adolescent Smoking: The Impact of Varying Peer Influence and Peer Selection." *American Journal of Public Health*, 105(12), 2438-2448.
- (5) **Wang, Cheng**, Omar Lizardo, and David S. Hachen. 2014. "Algorithms for Generating Large-scale Clustered Random Graphs." *Network Science*, 2(3): 403-415.
- (4) **Wang, Cheng**, Omar Lizardo, and David Hachen. 2014. "Triadic Evolution in a Large-scale Mobile Phone Network." *Journal of Complex Networks*, 3(2): 264-290.
- (3) Lakon, Cynthia M., **Cheng Wang**, Carter T. Butts, Rupa Jose, David S. Timberlake, and John R. Hipp. 2014. "A Dynamic Model of Adolescent Friendship Networks, Parental Influences, and Smoking." *Journal of Youth and Adolescence*, 44(9): 1767-1786.
- (2) **Wang, Cheng**, David S. Hachen, and Omar Lizardo. 2013. "The Co-evolution of Communication Networks and Drinking Behaviors." *AAAI Fall Symposium Series 2013, Social Networks and Social Contagion*: 30-36.
- (1) **Wang, Cheng**, Omar Lizardo, David S. Hachen, Anthony Strathman, Zoltán Toroczkai, and Nitesh V. Chawla. 2013. "A Dyadic Reciprocity Index for Repeated Interaction Networks." *Network Science*, 1(1): 31-48.

BOOK CHAPTER

Warnell, Jessica M., Maria C. C. de Arruda, and **Cheng Wang**. 2016. "Moral Reasoning and Learning Outcomes in Undergraduate Business Education: A Cross-Cultural Exploration." In M. C. C. de Arruda, & B. Rok (eds.), *Understanding Ethics and Responsibilities in a Globalizing World* (pp. 257-281). Switzerland: Springer.

SOFTWARE

Wang, Cheng*, Michael Genkin*, George Berry, Liyuan Chen, and Matthew Brashears. (2014-Present). *Blaunet: Calculate and Analyze Blau Status for Measuring Social Distance*. Online at <https://cran.r-project.org/web/packages/Blaunet/index.html>. *Both authors contributed equally to this work and their names are randomly ordered.

SUBMITTED PAPERS

- Wang, Cheng**, Carter T. Butts, John R. Hipp, and Cynthia M. Lakon. "The Moderating Role of Context: Relationships between Individual Behaviors and Social Networks." *Sociological Focus* (1st round R&R).
- Wang, Cheng**. "The Vicious Cycle between Suspension and Academic Performance: A Longitudinal Study of Students Moving from 6th to 8th Grade in IDOE Data, 2009-2016." *American Journal of Sociology* (under review).

WORKING PAPERS

- Wang, Cheng**, David S. Hachen, and Omar Lizardo. "Dynamics of Local Clustering in Temporal Social Networks."
- Lakon, Cynthia M., **Cheng Wang**, John R. Hipp, Carter T. Butts, and Rupa Jose. "Generalized Expectancies, Dynamics Networks, and Adolescent Smoking Behavior."

WORKSHOP AND LECTURES

- "Conducting Survey Online." Summer School Program, University of Notre Dame, Notre Dame, IN. May 2017 – July 2017.
- "Blaunet: An R package to Construct Blau Spaces and Analyze the 'Blau Statuses' of Social Entities and Individuals in Conjunction with their Networks." *The Sunbelt Conference Workshop of the International Network for Social Network Analysis (INSNA)*, Newport Beach, CA. April 2016.

CONFERENCE PRESENTATIONS & INVITED TALKS (PAST 5 YEARS)

- Wang, Cheng**, John R. Hipp, Carter T. Butts, and Cynthia M. Lakon. "The Moderating Role of Context: Relationships between Individual Behaviors and Social Networks." *The 2020 American Sociological Association (ASA) Annual meeting*. San Francisco, CA (Zoom video conference). August 2020.
- Wang, Cheng**, Richard Smith, Shawn McElmurry, and Paul Kilgore. "A Data Science Approach for Integrating Water-Related Social Media, Population, and Administrative Data to Reduce Health Disparities." *The 2020 Meeting of the International Society for Data Science and Analytics (ISDSA)*. Notre Dame, IN (Zoom video conference). May 2020.
- Lakon, Cynthia M., John R. Hipp, **Cheng Wang**, and Carter T. Butts. "Keep it Outside: A Simulation of the Impact of Altering Access to Cigarettes in the Home and Peer Influence on Adolescent Cigarette Smoking." *Society for Prevention Research (SPR) 27th Annual Meeting*. San Francisco, CA. May 2019.
- Wang, Cheng**, Omar Lizardo, and David S. Hachen. "Dynamics of Local Clustering in Temporal Social Networks." *2nd North American Social Networks (NASN) Conference 2018*. Washington, D.C. November 2018.
- Wang, Cheng**. "Leveraging Network Science to Address Human Behaviors in the Real World." *School of Psychological Sciences Colloquium, University of Melbourne*. Melbourne, Australia. July 2018.
- Lizardo, Omar, David S. Hachen, Matthew Chandler, and **Cheng Wang**. "Examining the Empirical Linkages between Different Kinds of Ties in Dynamic Ego Networks." *The Sunbelt Conference of the International Network for Social Network Analysis (INSNA)*. Utrecht, Netherland. July 2018.
- Wang, Cheng**, Carter T. Butts, John R. Hipp, Rupa Jose, and Cynthia M. Lakon. "Goodness-of-Fit Testing for Behavior in Joint Dynamic Network/Behavior Models with an Extension to Two-Mode Networks." *1st North American Social Networks (NASN) Conference 2017*. Washington, D.C. July 2017.
- Andrew, Megan, and **Cheng Wang**. "Peer Influence on Academic Achievement: Mean, Variance, and Network Effects Under School Choice." *Society for Research on Educational Effectiveness (SREE) Spring 2017 Conference*. Washington, D.C. March 2017.

- Andrew, Megan, and **Cheng Wang**. "Peer Influence on Academic Achievement: Mean, Variance, and Network Effects Under School Choice." *The Politics, Economy, and Culture (PEC) Workshop, Indiana University*. Bloomington, IN. February 2017.
- Hachen, Davis S., Omar Lizardo, Carlene Gundy, **Cheng Wang**. "The Dynamic Coupling of Two-Mode Social Foci Networks and One-Mode Social Networks." *Networks in the Global World (NetGloW)*. Saint Petersburg, Russia. July 2016.
- Wang, Cheng**, John R. Hipp, Carter T. Butts, Rupa Jose, and Cynthia M. Lakon. "Siena Models of Interdependent Use of Cigarettes, Alcohol, and Marijuana." *The Sunbelt Conference of the International Network for Social Network Analysis (INSNA)*. Newport Beach, CA. April 2016.
- Lakon, Cynthia M., Rupa Jose, John R. Hipp, **Cheng Wang**, and Carter T. Butts. "Social Integration in Friendship Networks and Adolescent Smoking: The Role of Ties Outside of School." *The Sunbelt Conference of the International Network for Social Network Analysis (INSNA)*. Newport Beach, CA. April 2016.

PROFESSIONAL SERVICES

Journal reviewer: Addictive Behaviors, American Journal of Drug & Alcohol Abuse, American Journal of Sociology, Applied Network Science, Applied Sciences, Archivos de Bronconeumología, Asia Pacific Journal of Public Health, Big Data & Cognitive Computing, Cyberpsychology, Developmental Science, Du Bois Review, Entropy, European Child & Adolescent Psychiatry, Future Internet, Global Health Research & Policy, International Journal of Environmental Research & Public Health, International Journal of Family Business & Management, International Journal of Psychology, International Journal of Swarm Intelligence & Evolutionary Computation, Journal of Adolescence, Journal of Child & Adolescent Mental Health, Journal of Information Technology & Software Engineering, Journal of Psychoactive Drugs, Journal of Research on Adolescence, Journal of Substance Abuse & Alcoholism, Mathematics, MethodsX, Nature: Scientific Reports, Network Science, Neurocomputing, PeerJ, Revista Brasileira de Psiquiatria, PLoS ONE, Psychology Research & Behavior Management, Psychology of Addictive Behaviors, Research Square, Rubriq, Sage Open, Self & Identity, Social Network Analysis & Mining, Social Networks, Social Science & Medicine: Population Health, Societies, Sociological Spectrum, Sociology of Development, Substance Use & Misuse, Sustainability, The Open Psychology Journal, The Open Public Health Journal, Tobacco Induced Diseases

Article editor: Sage Open

Evaluation of manuscript for book publisher:

Lazzari, Carlo. "Psychological Assessment of Individuals Linked to Radicalization and Lone Wolf Terrorism." Bentham Science Publishers. 2020.

Grant reviewer: European Research Council Consolidator Grant, National Science Foundation

Judge: 10th Annual Graduate and Postdoctoral Research Symposium (GPRS) of Wayne State University 2020; Annual Graduate Research Symposium of Wayne State University 2021-2023

Mentor for HON 4998 - Senior thesis: Alexander Turner, Irvin D. Reid Honors College, Wayne State University, 2020

Conference abstract reviewer: American Public Health Association's (APHA) Annual Meeting and Expo 2020, 2021

Conference committee member: The Association for the Advancement of Artificial Intelligence, Fall Symposium Series 2013

RESEARCH SUPPORTS

Sub-recipient [with Carter T. Butts (Lead-PI)] (pending), National Science Foundation, "Leveraging In Silico Models and Machine Learning to Identify Adolescent Substance Use Trajectories." \$153,681, 2021-2026.

Principal Investigator, Interdisciplinary Research Seed Grant || Wayne State University: "Trends and Issues in Computer Science Education: Data Mining from Twitter." \$15,499, 2019-2021.

Principal Investigator, Big Data Seed Grant || Wayne State University: "A Data Science Approach for Integrating Social Media, Population, and Administrative Data to Reduce Health Disparities." \$10,000, 2019-2020.

Co-Investigator [with Omar Lizardo (Lead-PI)], National Institutes of Health (grant #1 R01 HL117757-01A1): "NetHealth: Modelling the Co-evolution of Social Networks and Health Behaviors." \$2,913,061, 2014-2019.

Principal Investigator [with Megan Andrew (Lead-PI)], William T Grant Foundation: "Peer Influence in an Era of School Choice: The Importance of Institutional Ecology (Supplement)." \$50,000, 2017-2018.

Principal Investigator [with Megan Andrew (Lead-PI)], Institute for Scholarship in the Liberal Arts || University of Notre Dame: "Stuck in the Middle? The Heterogeneous Effects and Mechanisms of Middle Grade Transitions across Indianapolis Schools." \$12,500, 2017-2018.

Principal Investigator [with Megan Andrew (Lead-PI)], William T Grant Foundation: "The Dynamics of Peer Influence and Student Decision Making in an Era of School Choice." \$600,000, 2015-2017.

PROFESSIONAL AFFILIATIONS

American Sociological Association, 2006-present

Midwest Sociological Society, 2006-present

International Network for Social Network Analysis (INSNA), 2007-present

Michigan Sociological Association, 2019-present

REFERENCES

- Available on request

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