

# Wenna Xi

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## RESEARCH INTERESTS

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Co-Location Networks, Social Networks, Human Activity Space/Patterns, Spatial Statistics, Longitudinal Data, Bayesian Modeling and Computation, Correlated Data, Mixture Models.

## EDUCATION

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### The Ohio State University, Columbus OH

- Ph.D., Biostatistics Expected: Aug 2019
  - *Advisor*: Catherine A. (Kate) Calder
  - *Dissertation*: Bayesian Non-Negative Matrix Factorization for Analyzing Co-Location Networks
- M.S., Statistics Dec 2018
- M.S., Public Health Aug 2014
  - *Advisor*: Michael L. Pennell
  - *Thesis*: Comparing the Statistical Power of Analysis of Covariance after Multiple Imputation and the Mixed Model in Testing the Treatment Effect for Pre-Post Studies with Loss to Follow-up

### University of Science and Technology of China, Hefei China

- M.S., Biomathematics Jun 2012
  - *Advisor*: Yi Wang
  - *Thesis*: Principle of Competitive Exclusion in Chemostat with Almost Periodic/Quasiperiodic Nutrient Input

### Northwest Normal University, Lanzhou China

- B.S., Mathematics Jun 2010
  - *Thesis*: Some Problems of Modern Intraclass Correlation Coefficients in the Sight of the Original Definition

## WORK EXPERIENCE

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### The Ohio State University

*Research Associate*, Center of Excellence in Regulatory Tobacco Science (OSU-CERTS) Sep 2015 – Aug 2018  
*Research Associate*, College of Public Health May 2015 – Aug 2015  
*Teaching Associate*, College of Public Health Aug 2014 – May 2015  
*Research Intern*, Department of Otolaryngology May 2013 – Aug 2013

### University of Science and Technology of China

*Research Assistant*, Department of Mathematics Feb 2012 – Jun 2013  
*Teaching Assistant*, Department of Mathematics Feb 2011 – Jan 2012

## PUBLICATIONS

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### Methodology

1. Xi, W., Pennell, M. L., Andridge, R. R., and Paskett, E. D. (2018). Comparison of intent-to-treat analysis strategies for pre-post studies with loss to follow-up. *Contemporary Clinical Trials Communications*, 11:20–29.

### Applications

7. Burgoon, M. L., Albani, T., Keller-Hamilton, B., Lu, B., Roberts, M. E., Craigmile, P. F., Browning, C. R., **Xi, W.**, and Ferketich, A. K. Between home and school: Exposures to the tobacco retail environment among adolescent boys. *In Press at The American Journal of Drug and Alcohol Abuse*.
6. Sweet, L., Brasky, T. M., Cooper, S., Doogan, N., Hinton, A., Klein, E. G., Nagaraja, H., Quisenberry, A., **Xi, W.**, and Wewers, M. E. (2018). Quitting behaviors among dual cigarette/e-cigarette users and cigarette smokers enrolled in the tobacco user adult cohort (TUAC). *Nicotine & Tobacco Research*.
5. Roberts, M. E., Keller-Hamilton, B., Hinton, A., Browning, C. R., Slater, M. D., **Xi, W.**, and Ferketich, A. K. (2019). The magnitude and impact of tobacco marketing exposure in adolescents' day-to-day lives: An ecological momentary assessment (EMA) study. *Addictive behaviors*, 88:144–149.
4. Quisenberry, A. J., Klein, E. G., Hinton, A., Doogan, N. J., Brasky, T. M., **Xi, W.**, Cooper, S., Nagaraja, H. N., and Wewers, M. E. (2018). E-cigarette and combustible tobacco use motivations among exclusive and dual e-cigarette users. *Tobacco Regulatory Science*, 4(4):63–72.
3. Doogan, N. J., Cooper, S., Quisenberry, A. J., Brasky, T. M., Browning, C. R., Klein, E. G., Hinton, A., Nagaraja, H. N., **Xi, W.**, and Wewers, M. E. (2018). The role of travel distance and price promotions in tobacco product purchase quantity. *Health & place*, 51:151–157.
2. Brasky, T. M., Hinton, A., Doogan, N. J., Cooper, S. E., Nagaraja, H. N., **Xi, W.**, Shields, P. G., and Wewers, M. E. (2018). Characteristics of the tobacco user adult cohort in urban and rural ohio. *Tobacco regulatory science*, 4(1):614–630.
1. Wong, P., Wang, X., **Xi, W.**, Li, L., and Yu, X. (2014). Mothers do not enhance phonemic contrasts of mandarin lexical tones in child-directed speech. *The Journal of the Acoustical Society of America*, 135(4):2316–2316.

### Manuscripts under Review

2. Quisenberry, A. J., Hinton, A., **Xi, W.**, Klein, E. G., Brasky, T. M., Cooper, S. E., Nagaraja, H. N., and Wewers, M. E. The association between ENDS flavor and tobacco product reduction and cessation in dual cigarettes/ENDS and ENDS only users. *Under Review at Tobacco Regulatory Science*.
1. **Xi, W.**, Hinton, A., Sukasih, A., Krotki, K., Keller-Hamilton, B., Ferketich, A. K., and Lu, B. Analysis of combined probability and non-probability samples: A simulation evaluation and application to a teen smoking behavior survey *Under Review at Journal of Survey Statistics and Methodology*.

### Manuscripts in Preparation

2. **Xi, W.**, Calder, C. A., and Browning, C. R. Community detection in co-location networks.
1. **Xi, W.**, Calder, C. A., and Browning, C. R. Bayesian non-negative matrix factorization for analyzing co-location networks.

## PRESENTATIONS AND POSTERS

### Presentations

1. **Xi, W.**, Calder, C. A., and Browning, C. R. Detecting Communities in Co-location Networks Using Bayesian Non-Negative Matrix Factorization.
  - Seminar in Social Networks, OSU, Columbus OH, Oct 2018.

### Posters

3. **Xi, W.**, Calder, C. A., and Browning, C. R.. Bayesian Co-Location Networks: Construction, Privacy Concerns, and Latent Structure Identification.
  - Privacy in Graphs (PiG) Workshop at UC Santa Cruz, Santa Cruz CA, Nov 2018
2. **Xi, W.**, Calder, C. A., and Browning, C. R.. Bayesian Non-Negative Matrix Factorization for Analyzing Co-Location Networks.
  - ICMDs (International Conference on Mathematics of Data Science), Norfolk VA, Nov 2018.
    - Received the Best Presentation Award
  - OSU Statistics/Biostatistics Graduate Student Poster Session, Columbus OH, Sep 2017/2018.
  - Joint Statistical Meetings (JSM), Vancouver Canada, Aug 2018.
  - OSU/CCF/CWRU Joint Biostatistics Symposium, Columbus OH, Apr 2018.
  - OSU Statistics Program Graduate Information Day (For Prospective Students), Columbus OH, Feb 2018.
1. **Xi, W.**, Pennell, M. L., Andridge, R. R., and Paskett, E. D.. Comparing the Statistical Power of Analysis of Covariance after Multiple Imputation and the Mixed Model in Testing the Treatment Effect for Pre-Post Studies with Loss to Follow-Up.
  - OSU/CCF/CWRU Joint Biostatistics Symposium, Cleveland OH, Apr 2015.
  - ENAR Spring Meeting, Miami FL, Mar 2015.
  - OSU Statistics/Biostatistics Graduate Student Poster Session, Columbus OH, Sep 2014.

## TEACHING EXPERIENCE

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### **The Ohio State University**

- Summer 2015 (Grader w/ Office Hours)
  - PUBHBIO 7194 Group Studies in Biostatistics
- Spring 2015 (Grader w/ Office Hours)
  - PUBHBIO 6210 Design and Analysis of Studies in the Health Sciences I
  - PUBHBIO 7215 Design and Analysis of Clinical Trials
- Autumn 2014 (Grader w/ Office Hours)
  - PUBHBIO 6210 Design and Analysis of Studies in the Health Sciences I
  - PUBHBIO 6212 Regression Methods for the Health Sciences
  - PUBHBIO 7235 Applied Survival Analysis
  - PUBHBIO 7240 Applied Statistical Analysis with Missing Data

### **University of Science and Technology of China**

- Autumn 2011 (Grader w/ Recitation Classes & Office Hours)
  - Calculus I (for Undergraduates in Computer Sciences)
- Spring 2011 (Grader w/ Recitation Classes & Office Hours)
  - Calculus II (for Undergraduates in Computer Sciences)

### **Northwest Normal University**

- Autumn 2009 (Teaching Practicum)
  - High School Math in Chongqing, China

## HONORS AND AWARDS

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### **The Ohio State University**

- Travel Fund for the PiG Workshop 2018 (\$1,200) Nov 2018
- Best Poster Presentation at ICMDs 2018 Nov 2018
- Travel Fund for ICMDs 2018 (\$500) Nov 2018
- Dr. Gary G. Koch and Mrs. Carolyn J. Koch Fellowship Aug 2018 - Aug 2019
- Delta Omega Since May 2015

### **University of Science and Technology of China**

- Early Admission to USTC Graduate School with National Entrance Examination Waived

Oct 2009

**Northwest Normal University**

- Provincial “Three-Good” Student Honor Jun 2009
- National Encouragement Scholarship Nov 2008
- University “Three-Good” Student Honor Nov 2008
- University Learning Excellence Scholarship Nov 2008, 2009
- University Good Morality Scholarship Nov 2007, 2008

**SERVICES**

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**The Ohio State University**

- *Panelist*, Graduate School Survival Skills Autumn 2018
- *Member*, College of Public Health Excellence in Teaching Award Committee Spring 2018
- *Chair*, ENAR Contributed Papers: Statistical Methods for Genomics Spring 2015

**CERTIFICATES**

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- Suicide Prevention Program REACH<sup>®</sup> Training (OSU) Autumn 2018
- Diversity and Implicit Bias Training (OSU) Spring 2018
- Teaching Certificate (High School Math in China) Spring 2010
- Intel Future Oriented Teaching Diploma (China) Autumn 2007

**PROFESSIONAL SKILLS**

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|-----------------|---|
| <b>Software</b> | R (tidyverse, NIMBLE, Shiny, doParallel), SAS, Stata, JMP, Minitab, L <sup>A</sup> T <sub>E</sub> X |
| <b>System</b>   | UNIX/Linux, macOS, Windows  |

**PROFESSIONAL MEMBERSHIP**

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- Caucus for Women in Statistics (CWS) Since 2018
- American Statistical Association (ASA) Since 2017
- Delta Omega Since 2015

**REFERENCES**

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**Catherine A. (Kate) Calder, Ph.D.***Advisor*

Professor, Department of Statistics, The Ohio State University

Co-Director of the Mathematical Biosciences Institute (MBI), The Ohio State University

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E-mail: [calder.13@osu.edu](mailto:calder.13@osu.edu)**Bo Lu, Ph.D.***Committee Member/Supervisor*

Professor, Division of Biostatistics, College of Public Health, The Ohio State University

Member, Center of Excellence in Regulatory Tobacco Science, The Ohio State University

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E-mail: [lu.232@osu.edu](mailto:lu.232@osu.edu)**Haikady N. (Raj) Nagaraja, Ph.D.***Supervisor*

Professor Emeritus, Division of Biostatistics, College of Public Health, The Ohio State University

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