Mena Whalen

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EDUCATION

Northwestern University Evanston, Illinois

- Ph.D. candidate in Department of Statistics   September 2016– August 2021
  - Dissertation: Statistical Methods for Policy-Relevant Questions in Health and Criminology
  - Committee: Prof. Noelle I. Samia, Prof. Bruce Spencer and Prof. Joseph Feinglass
- M.S. in Statistics from Department of Statistics   2020

Missouri State University Springfield, Missouri

- B.S. in Mathematics emphasis in Statistics   August 2013 – May 2016
  - Minor in Computer Science

PROFESSIONAL

Loyola University Chicago Chicago, Illinois

- Assistant Professor   August 2021 – Present
  Mathematics and Statistics Department

Northwestern University Evanston, Illinois

- Teaching Assistant   September 2017 – June 2020
  Classes: Introductory Statistics, Survey Sampling, and Data Visualization

- Curriculum Developer   January 2018 – June 2020
  Develop and code course material on an online platform for Introductory
  Statistics, Survey Sampling, and Data Visualization

- Athletics Department Tutor   September 2018 – June 2019
  Topics: Statistics and R

Cook County Department of Corrections Chicago, Illinois

- Volunteer Instructor   Summer 2019
  Designed, developed curriculum for, and taught Intro to Social Statistics
  and Data Literacy at CCDOC as part of the Northwestern Prison Education Program

IES Summer Training Institute: Cluster Randomized Trials Evanston, Illinois

- Consultant/ Facilitator   Summer 2019

Ozark Technical Community College Springfield, Missouri

- Speckman Tutoring and Learning Center Tutor   August 2013 – May 2016
  Subjects: Mathematics, Online, Study Skills, and Mentoring

- Disabled Support Services Assistant   August 2014 – May 2016
  Worked with visually impaired student in their math or physics classes

RESEARCH

- **Change Point Analysis Methods**- Using a multidimensional time series to understand the impact of the Affordable Care Act implementation on emergency department visits by locations in Illinois.
  Topics: Change Point Analysis, Clustering

- **Networks of Metabolites**- Studying the network of metabolites to better measure untargeted metabolites.
  Topics: Bayesian Networks

- **Chicago Crimes**- Understanding the changes in crime based on a time series and neighborhood location using change point analysis and clustering methodology that incorporates spatial measures.
  Topics: Change Point Analysis, Clustering, Spatial Clustering

- **Previous Research**- *Dynamics and Bifurcations of a Cholera Epidemiology Model*
  •Use of partial differential equations to study points of Cholera outbreak in a simple system.
  •Presented at Kappa Mu Epsilon 40th National Biennial Convention 2015 and MSU College of Natural and Applied Sciences Undergraduate Research Day 2015.

PUBLICATIONS	Jacob M. Schauer, Kaitlyn G. Fitzgerald, Sarah Peko-Spicer, Mena C. R. Whalen, Rrita Zejnullahi, Larry V. Hedges. "An evaluation of statistical methods for aggregate patterns of replication failure." The Annals of Applied Statistics, 15(1) 208-229 March 2021. https://doi.org/10.1214/20-AOAS1387

CONFERENCE PRESENTATIONS

Whalen, M.C.R Change Point Analysis on Affordable Care Act Through Emergency Department Visits at Joint Statistical Meetings (JSM) annual meeting in Health Policy Statistics Section: Novel Statistical Methods for Current Health Policy Issues.   August 2020

Whalen, M.C.R Change Point Analysis on Affordable Care Act Through Emergency Department Visits at Women in Statistics and Data Science (WSDS) annual Conference in CS6c - Concurrent Session. October 2020

Invited Talk **Whalen, M.C.R** Change Point Analysis and Clustering Examined Through Chicago Crime During COIVD-19 (ICSTA) International Conference on Statistics: Theory and Applications *Winner of Best Paper Award*   July 2021

LEADERSHIP

Women in Statistics at Northwestern
- President - Founder   2018 – 2021
  Goal of the group is to develop a space for women in statistics through seminar speakers, discussions, and collaborations with other female statisticians. Event topics include female mentorship, academic research, work - life balance, and other topics.

Women in Data Science (WiDS)
- Regional Ambassador Chicago   2018 – 2021
  This group aims to inspire and educate data scientists worldwide, regardless of gender, and to support women in the field. The conference in hosted annually at Stanford with regional conferences planned locally by regional ambassadors.

Kappa Mu Epsilon – Mathematics Honor Society
- President   2015- 2016
  Organized meetings that promote further education in mathematics between the math department and the larger math community.
- Public Relations Chair   2014- 2015
  Informed the public about seminars, while developing a social media presence.

PROFESSIONAL AFFILIATIONS

American Statistical Association

Institute for Policy Research at Northwestern

COMPUTING SKILLS
- Proficient in statistical software R and RStudio suite
- Familiarity with Python, Stata, SAS, and MATLAB

VOLUNTEER WORK
- **Northwestern Prison Education Program**
- **Big Brothers Big Sisters Chicago**
- **Hacking 4 Justice**