Curriculum Vitae

Immanuel J. Williams Ph.D.
Lecturer
California Polytechnic State University
Statistics Department
1 Grand Avenue
San Luis Obispo CA. 93407-0405
(732) 207-7321
imwillia@calpoly.edu

Education

Ph.D. Rutgers University, May 2017
Major: Education
Major focus: Psychometrics & Statistics
M.S. Rutgers University, January 2013
Major: Statistics
Major focus: Psychometrics
B.S. University of Maryland, Baltimore County, May 2011
Major: Mathematics
Major focus: Statistics

Teaching experience

2018-Present *Lecturer*: California Polytechnic State University
Courses: Statistical Inference for Management I/II
2017-2018 *Lecturer*: University California Santa Cruz
Courses: Statistical Methods For The Biological, Environmental, And Health Sciences, Gambling And Gaming, & The Art of Data Visualization
2015-2017 *Lecturer*: California State University Monterey Bay
Courses: Pre-calculus, Calculus II, & Applied Statistics

Publications

DeLiema D., Flood V. J. , Dahn M., **Williams I. J.**, Abrahamson D., Enyedy N., & Steen F. (in preparation). Debugging Failure: A Multi-dimensional Framework for Documenting Newcomers' Experiences with Obstacles.

Langer-Osuna J. M., Munson J., Gargroetzi E. C., **Williams I. J.,** Chavez R. (2020) So What Are We Working On? Examining Student Authority Relations During Collaborative Mathematics Activity in a Fourth Grade Classroom. *Educational Studies in Mathematics*

Battey, D., Leyva L. A., **Williams, I. J.**, Belizario, V., Greco, R., Shah, R. (2019). Racial (Mis)Match in Middle School Mathematics Classrooms: Relational Interactions as a Racialized Mechanism. *Harvard Educational Review*, 89(1)

Williams, I. J., & Williams, K. K. (2018). Using R Shiny to Enhance the Learning Experience of Confidence Intervals using National Basketball Association (NBA) Data. *Teaching Statistics.*

Williams, I. J., & Culpepper, S., A. (2017). Gain scores, analysis of. In Frey, B.B. (ed). *Encyclopedia of Educational Research, Measurement and Evaluation.* Thousand Oaks, CA: Sage.

Williams, I. J., & Williams, K. K. (2016). Understanding Summary Statistics and Graphical Techniques to compare Michael Jordan versus Lebron James. *Teaching Statistics.*

Presentations

Refereed Conference Presentations:

Williams I. J. (2019, November) Plots For Shots: Implementing R Shiny and Culturally Relevant Data in the Classroom to Enhance Student Learning and Engagement. Poster presented at the annual meeting of the Math Alliance, St. Louis, CA.

Langer-Osuna J. M., Munson J., Gargroetzi E. C., Chavez R., **Williams I. J.** (2019, April) Interactional Pathways to Shared Intellectual Authority During Group Work. Poster presented at the annual meeting of the National Council of Teachers of Mathematics, San Diego, CA.

Battey D., Leyva L., Belizario V., **Williams I. J.**, Greco R., Shah R. (2017, April) Racial Mis-Match: Racialized Effects on Relational Interactions in Mathematics Classrooms. Poster presented at the annual meeting of the National Council of Teachers of Mathematics, San Antonio, TX.

Williams, I. J., Williams K. (2015, May). Michael Jordan's Shoes: Bridging the Gap between Teachers and Urban Students. Poster presented at the biannual meeting of the United States Conference on Teaching Statistics, State College, PA.

Oluwalana, O., **Williams, I. J.**, Chiu, C. (2015, April). Evaluating the use of Factor Analysis in Q-Matrix Estimation. Poster presented at the annual meeting of the National Council of Measurement in Education, Chicago, IL.

Williams, I., Brown, T., Li, S., & Suh, Y. (2014, October). Investigating the impact of speededness on item calibration of a mixed format assessment. Paper presented at the annual meeting of the Northeastern Educational Research Association, Trumbull, CT.

Williams I. J., Iaconangelo, C., de la Torre, J. (2014, April). Inclusion of Covariates in Higher-Order Attribute Structure. Poster presented at the annual meeting of the National Council of Measurement in Education, Philadelphia, PA.

Williams, I., & Suh, Y. (2014, June). Evaluating the impact of item biasedness in confidence intervals of equated ability estimation. Poster presented at the Conference for African-American Researchers in the Mathematical Sciences (CAARMS 20), Princeton, NJ.

Invited Talks:

Williams I. J. (August, 2019) Data Science and The Real World. Talk was given at California State University Monterey Bay Seaside, California.

Williams I. J. (August, 2018) Data Science and The Real World. Talk was given at California State University Monterey Bay Seaside, California.

Williams I. J. (August, 2017) Data Science and The Real World. Talk was given at California State University Monterey Bay Seaside, California.

Williams I. J. (May, 2016) Data Science and The Real World. Talk was given at California State University Monterey Bay Seaside, California.

Williams I. J. (May, 2015) Data Science and The Real World. Talk was given at Montclair University Newark, New Jersey.

Williams I. J. (May, 2015) Data Science and The Real World. Talk was given at NJ SEEDS Newark, New Jersey.

Williams I. J. (April, 2015) Data Science and The Real World. Talk was given at University of Maryland Baltimore County, Baltimore Maryland.

Williams I. J. (April, 2015) Data Science and The Real World. Talk was given at First Baptist Church of Lincoln Garden (Academic Excellence) Somerset, New Jersey.

Williams I. J. (April, 2015) Data Science and The Real World. Talk was given at Rutgers Future Scholars Program Camden, New Jersey.

Williams I. J. (February, 2015) Data Science and The Real World. Talk was given at Program for Acceleration in Careers of Engineering Brookdale Community College, Lincroft, New Jersey.

Williams I. J. (August, 2013). Bring Statistics to the Black and Latino Community. Talk was given at the Joint Statistical Meetings, Montreal, Canada.

Professional Experience

April 2018 – August 2018 *Data Analyst:* Used various database tools to manipulate and recover data, Paul Johnson Ed.D. at University of Tennessee of Knoxville

June 2015 – August 2015 *Researcher:* Utilized data analysis tools to collect of longitudinal data collected on individuals with respect to organizational resilience, Edward Poley Ph.D. at Naval Postgraduate School

June 2014 – August 2014 *Researcher:* Examined the impact of test anxiety on assessments, Terran Brown Ph.D. & Shuhong Li Ph.D. at Educational Testing Services (ETS)

June 2011 – May 2012 *Researcher:* Implemented statistical and various graphical techniques to verify results, Joanna Burger Ph.D. at Rutgers University

February 2015 – May 2011 *Researcher:* Implemented Detection method to recognize outliers in longitudinal data, Christopher Motsiopoulos at Social Security Administration

February 2015 – May 2011 *Researcher:* Determined if the amount of energy used in poverty-stricken households in Baltimore, Maryland, would decrease after a new source of energy was supplied, Elizabeth Stanwyck Ph.D. at University of Maryland Baltimore County

June 2010 – August 2010 *Researcher:* Simulations were ran within a complicated transporter model (cellular diffusion) for the purpose of making generalizations and simplifications to the model, James Polli Ph.D.

June 2009 – August 2009 *Researcher:* Utilized difference equations to represent human immunodeficiency virus (HIV) spreads within a poverty-stricken development, Nina Fefferman Ph.D. & Tamra Carpenter Ph.D. at Rutgers University

January 2009 – May 2010 *Researcher:* A mathematical model was derived and analyzed to represent gangs within a closed area, Jinglai Shen Ph.D. at University of Maryland Baltimore County

January 2008 – August 2008 *Researcher:* Implemented differential equations to represent biological mechanisms with respect to drug therapy within the human body, Jonathan Bell Ph.D.

Awards & Honors

Post-Doctoral Poster Award	2019
Graduate Assistance in Areas of National Need	2012
National Minority Stem Fellow	2011
MARC*U STAR	2007
Meyerhoff Scholar	2008
McNair Scholar	2008

Service Positions

CRU Advisor	2021-
ETS Rater for AP Exam	2021-
Teaching Statistics Journal Reviewer	2020-
Frost Scholar Mentor	2020-
Black Faculty Staff Association	2019-
Co-chair	
Institute for Advanced Technology and Public Policy, Cal Poly	
Faculty Scholar	2019-
College of Science and Mathematics Committee for Inclusion and Equity, Cal Poly	
Member	2018-
GATO365	
Content Creator & Author	2017-
Bright Futures Program, CSU Monterey Bay	
Selection Committee, Member for Senior Data Analyst	2016
Program for Acceleration in Careers of Engineering (PACE), Lincroft, New Jersey	
Calculus Instructor, Brookdale Community College	2013 - 2015
Computer Science Instructor, Brookdale Community College	2014 - 2015
South Africa Initiative (SAI), Johannesburg, South Africa	
Algebra and Geometry Instructor, Teboho Trust	2014