Niloofar Ramezani, PhD

Assistant Professor, Department of Statistics

Education

PhD, Applied Statistics, University of Northern Colorado

Key Interests

Longitudinal Data | Missing Data | Multilevel Models | Predictive Models | Power Analysis | Survival Analysis | Data Visualization | Time Series Analysis | Biostatistics

CONTACT

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SELECT PUBLICATIONS

- M. E. Peffer & N. Ramezani, Assessing epistemological beliefs of experts and novices via practices in authentic science inquiry. *International Journal of STEM Education* (Accepted for publication).
- N. Ramezani & K. Gittner, Confirmatory factor analysis in SAS: application to public administration. *Proceedings of the SAS Global Forum Conference. Cary, NC: SAS Institute Inc.* (2018).
- N. Ramezani, Power and sample size calculation of longitudinal data in the presence of time-dependent covariates using generalized method of moments, PhD Dissertation. University of Northern Colorado, ProQuest Dissertations Publishing, 10618728 (2017).

Research Focus

I am a statistician and research methodologist actively involved in applied and collaborative research. My areas of expertise span both applied and theoretical statistics including optimal sample size estimation, missing data methods, longitudinal and multilevel modeling, time series, and survey research methodology.

I have developed and applied a variety of advanced statistical tools aimed at answering real world problems. My focus is on developing new methods and simplifying existing techniques in correlated and clustered data analysis in addition to categorical data analysis, data visualization, high-dimensional data modeling, and missing data strategies. My work focuses on developing innovative research tools to answer questions across different fields, especially biomedical and social science.

Current Projects

- Power and sample size calculation of longitudinal data in the presence of time-dependent covariates using generalized method of moments: I apply my methods to different data such as osteoarthritis initiative longitudinal data.
- Joint modeling of mean and dispersion that enable us to capture high response variation: I have applied such methods to various data such as longitudinal drug usage data in the Greater Rocky Mountain Region.
- Predicting spread of infectious diseases and ZIKA: Methods involve various time series, non-parametric, and generalized linear modeling techniques.
- Developing efficient predictive models for length of stay in mental health residential treatment facilities using different baseline mental measurements: Such methods can be applied to other length of stay and hospitalization studies.