

# Nicholas J. Clark

*Lieutenant Colonel, U.S. Army*

## Personal Information

Department of Mathematical Sciences - USMA  
West Point, NY 10996

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Family: Spouse (Sarah),  
Two Daughters (Piper -9, Raegan - 7)

## Education

Ph.D. Statistics, Iowa State University, 2018.

M.S. Statistics, George Mason University, 2011.

B.S. Mathematical Sciences, United States Military Academy, 2002.

## Academic Honors and Awards

Recipient, Outstanding Academic Development, Department of Statistics, Iowa State University, 2017.

Designee, Graduate College Emerging Leader, Iowa State University, 2017-2018.

Recipient, Best Paper, Young Researcher Paper Competition, Section for Statistics in National Defense and Security, American Statistical Association, 2017.

GEN Omar N. Bradley Research Fellowship in Mathematics, 2017.

Recipient, Distinguished Academic Achievement awarded to top Master's Student in the Statistics Department, George Mason University, 2011 .

Designee, Distinguished Cadet, USMA 2002.

Phi Kappa Phi Honor Society, 2002.

## Professional History/Teaching Experience

2018 - Current. Assistant Professor, Department of Mathematical Sciences, United States Military Academy

Courses taught:

MA376 Applied Statistics

MA476 Mathematical Statistics

MA206Y Data Analysis

MA 489 Bayesian Statistics

Course Director

MA376 Applied Statistics

2015 - May 2018. Ph. D. Student, Iowa State University, Ames, Iowa.

2013 - 2015. Commander of Analytical Support Troop, United States Army Special Operations Command, Fort Bragg, North Carolina

2012-2013. Assistant Professor, Department of Mathematical Sciences, United States Military Academy.

2011-2012. Instructor, Department of Mathematical Sciences, United States Military Academy.

Courses taught:

MA205 Calculus II

MA206 Probability and Statistics for Scientists and Engineers

MX400 Officership

MA489 Advanced Independent Study - Bayesian Statistics

Director: Center for Data Analysis and Statistics responsible for providing statistical consultation and faculty education for the United States Military Academy.

2007-2009. Intelligence Officer, SOCOM, Military District of Washington.

2004-2007. Intelligence Officer 3-75<sup>th</sup> Ranger Regiment, Fort Benning, Georgia.

2003-2004. Platoon Leader 102<sup>nd</sup> Military Intelligence Battalion, Camp Essayons, South Korea.

## Professional Affiliations

American Statistical Association (2010- )

Institute of Mathematical Statistics (2018-)

## Publications

### *Refereed Journal Articles*

**Clark, N.**, Macdonald, B. , Kloo, I. "A Bayesian Adjusted Plus-Minus Analysis for the Esport Dota 2", *Journal for Quantitative Analysis in Sports* ,2020.

Thomas, D., Sturdivant, R., Dhurandhar, N., Debroy, S., **Clark, N.** "A primer on COVID-19 Mathematical Models", *Obesity* ,2020.

Cummiskey, K., Adams, B., Pleuss, J., Turner, D., **Clark, N.**, Watts, K. "Causal Inference in Introductory Statistics Courses", *Journal of Statistical Education* 28(1), 22-8, 2020.

Thomas, D., **Clark, N.**, Turner, D., Siu, C., Halliday, T., Hannon, B., Kahathuduwa, C., Kroeger, C., Zoh, R., Allison, D., "Best (but oft-forgotten) practices: Identifying and accounting for regression to the mean in nutrition and obesity research", *American Journal of Clinical Nutrition*, 24 September, 2019.

Blanchong, J., Anderson, C., **Clark, N.**, Klaver, R., Plummer, P., Cox, M., McAdoo, C., Wolff, P. "Respiratory Disease, Behavior, and Survival of Mountain Goat Kids" *Journal of Wildlife Management and Wildlife Monographs* 82(6), 1243-1251, 2018.

**Clark, N.**, Dixon, P. "Modeling and Estimation for Self-Exciting Spatio-Temporal Models of Terrorist Activity" *The Annals of Applied Statistics* 12(1), 633-653, 2018.

Winner of Student Paper Competition sponsored by the Section for Statistics in National Defense and Security (SNSD) of the American Statistical Association, 2017.

Rovira, R., Mackie, R., **Clark, N.**, Squire, P., Hendricks, M., Pulido, A., Greenwood, P. "A Role for Attention During Wilderness Navigation: Comparing Effects of BDNF, KIBRA, and CHRNA4." *Neuropsychology*. **30**(6), 2016.

Waterman B., Cameron K., Hsiao M., Langston J., **Clark, N.**, Owens, B., "Trends in the Diagnosis of SLAP Lesions in the US Military," *Knee Surgical Sports Trauma Arthrosc.* December 2013.

**Clark, N.**, Jackson, J., "Development of Nonlinear Mixed-Effects Models for Assessing Effectiveness of Spending in Iraq," *Military Operations Research* **18**(1), 2012.

## Presentations

### *Invited*

Clark, N., Macdonald, B., Kloo, I. *Analyzing Player Performance in eSports*, New England Symposium on Statistics in Sports, Harvard University, Sep 2019.

Clark, N. *Educating Data Literate Army Leaders*, DataWORKS Conference, Springfield, VA, March 2019.

Clark, N., Dixon, P. *Self-exciting spatio-temporal statistical models for count data with applications to modeling the spread of violence*, National Security Agency, Ft. Meade, MD, Feb 2018.

### *Contributed*

Clark, N., Kaiser, M., Dixon, P. *A Class of Spatially Correlated Auto-Regressive Models for Count Data*, Joint Statistical Meetings, Vancouver, Canada, 2018.

Clark, N., Dixon, P. *Modeling and Estimation for Self-Exciting Spatio-Temporal Models of Terrorist Activity*, Joint Statistical Meetings, Baltimore, MD 2017.

Clark, N., Jackson, J. *Using Hidden Markov Models to Assess Effectiveness of Reconstruction Spending in Iraq*, American Statistical Association Conference on Quantitative Methods in Defense and National Security, Boston, MA 2012.

Clark, N., Jackson, J. *Development of Non-Linear Mixed Effects Models for Assessing Spending in Iraq*, Institute for Operations Research and the Management Science Military Applications Section Conference, Monterey, CA 2012.

Eastburg, C., Thierry, B., Clark, N. *Assessing CERP Spending in Iraq*, 19<sup>th</sup> Army Conference on Applied Statistics, Annapolis, MD 2011.

Clark, N. *An Analysis of Highly Collinear Crime Data*, 19<sup>th</sup> Army Conference on Applied Statistics, Annapolis, MD 2011.

## Grants/External Funding

### *Current Research*

SOCOM, PI

Automated Feature Extraction

2020-2021: \$50,000.00

CCDC Armaments Center, PI

Machine Learning to Support Extended Range Cannon Artillery

2019-2020: \$60,000.00

Army Research Laboratory, PI

Predicting military performance and outcomes from 3D body shape imaging and accelerometry and detecting change points in performance based off of biomonitors

2019-2020: \$20,868.00

### *Completed Research*

GEN Omar N. Bradley Research Fellowship in Mathematics, 2017.

Spatio-Temporal Statistical Modeling of Violence, \$2,000.

## Cadets Advised

### *Current*

Trevor Parker (Honors Thesis).

Lead Advisor

Using Machine Learning to Conduct Automated Feature Extraction

2019-2020

Samuel Humphries (Honors Thesis).

Lead Advisor

Using Machine Learning to Conduct Automated Feature Extraction

2019-2020

### *Graduated*

James Pruneski (Honors Thesis).

Co-Advisor

Using Machine Learning to Predict Health Outcomes Following HSCT

2018-2019

Bridget Wilby (Honors Thesis).

Co-Advisor

Analysis of the Cadet Foreign Travel Medical Screening Process

2018-2019

*Hollis Award Winner*

Evan Szablowski (Honors Thesis).

Co-Advisor

Data Analytics of Cadet Academy Performance

2012-2013

## Service

Associate Editor, *Military Operations Research Journal*.

Member, Data Analytics Advisory Panel, West Point Association of Graduates, 2019 - Current

Member, Technical Program Committee, DATAWorks Conference, 2020.

Advisor, Distributed Computing Colloquium (2019-2020)

Resulted in 12 Officers designated as "Army Data Scientists"

Chair, Best Paper Competition, Statistics in Defense and National Security Student Paper Competition, 2019.

Peer Reviewer, *Journal of Quantitative Analysis in Sports*, *Public Health Nutrition*, *Bayesian Analysis*, *PLOS One*

Session Chair, Joint Statistics Meetings, Vancouver (2018).

Judge, Best Paper Competition, Statistics in Defense and National Security Student Paper Competition, 2018.

Established and Led Faculty Colloquium on Bayesian Statistics (2012, 2018).

Established and Led Faculty Colloquium on Data Mining (2013).

Session Chair, ARL-USMA Technical Symposium, Atlantic City (2011).

## Statistical Consulting

Director, Center for Data Analysis and Statistics (CDAS), 2012-2013, 2018-Current.

Clients: SOCOM, Army Future's Command, JIDO, USMA G-5, West Point academic departments (4), Director of Admissions (CEER Study), Keller Army Community Hospital (orthopedic), outside Army Agencies, member of Highland Falls community.

Last updated: July 25, 2020

Nicholas J. Clark