

W. Eric Brown
Assistant Professor of Practice
Area of Information and Quantitative Sciences
Rawls College of Business
Texas Tech University

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703 Flint Avenue
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RESEARCH INTERESTS

- Design and implementation of advanced data mining theory with a focus on imbalanced data classification and medical applications.
- Mathematical modeling and analysis of advanced linear and nonlinear methods in power systems optimization.
- Development of new algorithms for discrete nonlinear optimization.

EDUCATION

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| Ph.D. | Texas A&M University, College Station, TX
Industrial Engineering | 2020 |
| | <i>Dissertation: Efficient and Effective Algorithms for Contingency Response in Electric Power Systems with Transmission Switching</i>
Erick Moreno-Centeno (Chair), Sergiy Butenko, Alfredo Garcia, Le Xie | |
| M.Eng. | Texas A&M University, College Station, TX
Industrial Engineering | 2011 |
| B.S. | Abilene Christian University, Abilene, TX
Mathematics | 2008 |

EMPLOYMENT HISTORY

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|---|--------------------------|
| Assistant Professor of Practice
Texas Tech University - Rawls College of Business
Area of Information Systems and Quantitative Sciences
Lubbock, TX | 2020 - Present |
| Graduate Research and Teaching Assistant
Texas A&M University - Industrial and Systems Engineering
College Station, TX | 2010 - 2011, 2014 - 2020 |
| Operations Research Analyst Intern
National Security Agency
Fort Meade, MD | Summer 2015 |
| Operations Research Analyst
Teledyne Brown Engineering
Huntsville, AL | 2011 - 2014 |

SELECTED AWARDS AND HONORS

1. DHS HS-STEM Career Development Grant Fellowship 2010 - 2011
Awarded to qualified graduate students to conduct high-quality research and develop skills to further serve in the fields of Homeland Security and Defense.

PUBLICATIONS

1. Brown, W., E. Moreno-Centeno, "A data mining topology control heuristic for post-contingency ACPF violation reduction in real-world large-scale systems." (Submitted for Review).
2. Sung, K., W. Brown, E. Moreno-Centeno, Y. Ding, "Guided undersampling using ensemble outlier filtering and normalized cuts for imbalanced data classification" (Submitted for Review).

3. Brown, W., E. Moreno-Centeno, "A mixed-integer programming solution to AC optimal transmission switching for load shed prevention" (Accepted – IEEE Transactions on Power Systems).
4. Brown, W., K. Sung, E. Moreno-Centeno, D. Aleman, C. McIntosh, T. Purdie, "Guided undersampling classification for automated radiation therapy of prostate cancer treatment." *Medical Physics* 45.4 (2018).

MANUSCRIPTS IN PROGRESS

1. Brown, W., E. Moreno-Centeno, "A line ranking heuristic for AC optimal transmission switching using nodal price components."

CONFERENCE PRESENTATIONS

1. Brown, W., E. Moreno-Centeno, "A data mining topology control heuristic for post-contingency ACPF violation reduction in real-world large-scale systems", INFORMS Annual Meeting, Seattle, WA, October 2019.
2. Brown, W., E. Moreno-Centeno, L. Quadrifoglio, J. Long, "Laying the foundation for the development of an intelligent tutoring system for operations research." Presidents Excellence Fund Symposium, College Station, TX, April 2019.
3. Brown, W., E. Moreno-Centeno, "A mixed-integer programming solution to AC optimal transmission switching for load shed prevention", INFORMS Annual Meeting, Phoenix, AZ, November 2018.
4. Brown, W., K. Sung, E. Moreno-Centeno, D. Aleman, C. McIntosh, T. Purdie, "Guided undersampling classification for automated radiation therapy of prostate cancer treatment", INFORMS Annual Meeting, Houston, TX, October 2017.
5. Brown, W., J. Davis, M. Givens, M. Quinn, E. Fry, V. Wing, "Estimating the effect of an automated critical care system on the logistics and manpower requirements of the navy expeditionary health services system", 80th Military Operations Research Society (MORS) Symposium, Colorado Springs, CO, June 2012.

TEACHING EXPERIENCE

Graduate Teaching Assistant

Industrial and Systems Engineering, Texas A&M University

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|---|------------------------|
| – ISEN 320 - Operations Research I | Fall 2019, Spring 2020 |
| – ISEN 340 - Operations Research II | Fall 2018 |
| – ISEN 416 - Facility Location and Design | Fall 2014, Spring 2015 |
| – ISEN 620 - Survey of Optimization | Fall 2019 |

PROFESSIONAL DEVELOPMENT

Academy for Future Faculty

Texas A&M University - Center for Teaching Excellence Spring 2017

INFORMS Doctoral Student Colloquium

INFORMS 2016 Annual Meeting, Nashville TN Fall 2016