

## I. Summary of Education & Professional Experience

### A. Education:

- PhD, Industrial Engineering and Management Sciences, Northwestern University, 2020.
- MS, Industrial Engineering and Management Sciences, Northwestern University, 2016.
- MS, Industrial Engineering, Boğaziçi University, 2014.
- BS, Industrial Engineering, İstanbul Technical University, 2011.

### B. Professional Experience:

**Miami University,** Department of Information Systems and Analytics, Oxford, OH, USA  
*Assistant Professor* **August, 2022 - present**

**Northwestern University,** Northwestern Argonne Institute of Science and Engineering, Evanston, IL, USA  
*Postdoctoral Research Fellow* **January, 2021 - August, 2022**

**Northwestern University,** Industrial Engineering and Management Sciences, Evanston, IL, USA  
*Postdoctoral Scholar* **October, 2020 - December, 2020**

**Northwestern University,** Industrial Engineering and Management Sciences, Evanston, IL, USA  
*Graduate Assistant* **September, 2016 - August, 2020**

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## II. Teaching and Academic Advising

### A. Classroom Teaching

#### 1. Courses Taught

Semester	Course	Credits	Enrollment	% Responsibility
Spring 2019	IEMS 303: Statistics	3 hrs	26	100%
Fall 2022	ISA 291C: Applied Regression Analysis	3 hrs	22	100%
	ISA 291D: Applied Regression Analysis	3 hrs	14	100%
Spring 2023	ISA 291A: Applied Regression Analysis	3 hrs	27	100%
	ISA 291B: Applied Regression Analysis	3 hrs	17	100%
Fall 2023	ISA 291A: Applied Regression Analysis	3 hrs	26	100%
	ISA 291B: Applied Regression Analysis	3 hrs	26	100%

#### Summary of Completed Evaluations:

- (a) **Midterm Student Evaluations:** Table 1 provides the details.
- (b) **End-of-the-Semester Student Evaluations:** Table 2 provides the details.

Table 1: Summary of Midterm Evaluations

Semester	Fall 2022		Spring 2023		Fall 2023	
Course	ISA291		ISA291		ISA291	
Section	C	D	A	B	A	B
Enrollment	22	14	27	17	26	26
Responses	19	9	24	13	21	16
Scale item <i>(1=strongly disagree; 5=strongly agree)</i>						
(1) Held students to high standards	4.3	4.7	4.3	4.5	4.6	4.4
(2) Effectively challenged me to think/learn	3.9	4.6	3.8	4.5	4.5	4.4
(3) Was well prepared	3.5	4.4	3.9	4.5	4.8	4.9
(4) Examinations were challenging	3.8	4.6	4.0	4.5	4.5	4.8
(5) Showed enthusiasm for the subject	4.2	4.3	4.1	4.4	4.5	4.6
(6) Felt free to ask questions in class	4.3	4.8	4.5	4.7	4.4	4.6
(7) Dealt with questions effectively	3.4	4.2	3.9	4.6	4.5	4.6
(8) Available during office hours	3.1	3.2	3.1	0.8	1.8	2.1
<b>Mean evaluation (questions 1-8)</b>	<b>3.80</b>	<b>4.30</b>	<b>4.00</b>	<b>4.00</b>	<b>4.20</b>	<b>4.30</b>
<b>(9) Overall rating of instructor</b>	<b>3.30</b>	<b>4.10</b>	<b>3.50</b>	<b>4.20</b>	<b>4.50</b>	<b>4.40</b>

Table 2: Summary of End-of-the-Semester Evaluations

Semester	Fall 2022		Spring 2023		Fall 2023	
Course	ISA291		ISA291		ISA291	
Section	C	D	A	B	A	B
Enrollment	22	14	27	17	26	26
Responses	21	14	27	14	22	24
GPA	3.18	3.11	3.03	3.12	3.46	2.98
Scale item <i>(0=strongly disagree; 4=strongly agree)</i>						
(1) Held students to high standards	3.43	3.50	3.41	3.79	3.59	3.58
(2) Effectively challenged me to think/learn	3.33	3.57	3.07	3.57	3.64	3.63
(3) Was well prepared	2.86	3.50	3.07	3.57	3.64	3.71
(4) Examinations were challenging	3.33	3.43	3.22	3.64	3.64	3.67
(5) Showed enthusiasm for the subject	3.33	3.21	3.11	3.57	3.59	3.67
(6) Felt free to ask questions in class	3.33	3.43	3.07	3.57	3.36	3.63
(7) Dealt with questions effectively	2.95	3.21	2.82	3.50	3.55	3.63
(8) Available during office hours	3.81	3.36	3.38	3.75	3.87	3.61
<b>Mean evaluation (questions 1-8)</b>	<b>3.30</b>	<b>3.40</b>	<b>3.14</b>	<b>3.62</b>	<b>3.61</b>	<b>3.64</b>
<b>(9) Overall rating of instructor</b>	<b>2.79</b>	<b>3.00</b>	<b>2.63</b>	<b>3.36</b>	<b>3.33</b>	<b>3.48</b>

### III. Research, Scholarship and Creative Achievement

#### A. Publications, Presentations, Performances, etc.

##### 1. Refereed Articles that Appeared In Print and/or Online

8. Dan Liyanage, **Özge Sürer**, Matthew Plumlee, Stefan M. Wild, Ulrich Heinz. Bayesian calibration of viscous anisotropic hydrodynamic simulations of heavy ion collisions. *Physical Review C*, 108, 054905, 2023. (link).
7. **Özge Sürer**, Matthew Plumlee, Stefan M. Wild. Sequential Bayesian experimental design for calibration of expensive simulation models. *Technometrics*, 2023. (link).
6. **Özge Sürer**, Daniel W. Apley, Edward C. Malthouse. Discovering interpretable structure in longitudinal data via coefficient trees. *Advances in Data Analysis and Classification*, 2023. (link).
5. **Özge Sürer**, Filomena M. Nunes, Matthew Plumlee, Stefan M. Wild. Uncertainty quantification in breakup reactions. *Physical Review C*, 106, 024607, 2022. (link).
4. **Özge Sürer**, Daniel W. Apley, Edward C. Malthouse. Coefficient tree regression: fast, accurate and interpretable predictive modeling. *Machine Learning*, 1–38, 2021. (link).

3. **Özge Sürer**, Daniel W. Apley, Edward C. Malthouse. Coefficient tree regression for generalized linear models. *Statistical Analysis and Data Mining: The ASA Data Science Journal*, 14, 407–429, 2021. (link)
2. Haoxiang Yang, **Özge Sürer**, Daniel Duque, David P. Morton, Bismark Singh, Spencer Fox, Remy Pasco, Kelly Pierce, Paul Rathouz, Zhanwei Du, Michael Pignone, Mark E. Escott, Stephen I. Adler, S. Clairborne Johnston, Lauren Ancel Meyers. Design of COVID-19 staged alert systems to ensure healthcare capacity with minimal closures. *Nature Communications*, 12, 3767, 2021. (link)
1. Seda Yanik, **Özge Sürer**, Başar Öztayşi. Designing sustainable energy regions using genetic algorithms and location-allocation approach. *Energy*, 161–172, 2016. (link)

## 2. Peer Reviewed Conference Proceedings

3. **Özge Sürer**, Matthew Plumlee. Calibration using emulation of filtered simulation results. *Winter Simulation Conference*, 2021. (link)
2. **Özge Sürer**, Robin Burke, Edward C. Malthouse. Multistakeholder recommendation with provider constraints. *Proceedings of the 12th ACM Conference on Recommender Systems*, 54–62, 2018. (link)
1. **Özge Sürer**. Improving similarity measures using ontological data. *Proceedings of the 11th ACM Conference on Recommender Systems*, 416–420, 2017. (link)

## 3. Contributed Conference Presentations and Invited Talks

18. INFORMS Annual Meeting, Phoenix, AZ (October, 2023). *Performance analysis of sequential experimental design for calibration in parallel computing environments.*
17. The Center for Approximation and Mathematical Data Analytics (CAMDA) Conference, College Station, TX (May, 2023). *Sequential Bayesian experimental design for calibration of expensive simulation models.*
16. Information and Statistics in Nuclear Experiment and Theory (ISNET) Conference, St. Louis, MO (May, 2023). *Sequential Bayesian experimental design for calibration of expensive expensive physics models.*
15. 2022 Fall Meeting of the Division of Nuclear Physics of the American Physical Society, New Orleans, LA (October, 2022). *The Bayesian analysis of nuclear dynamics framework.*
14. INFORMS Annual Meeting, Indianapolis, IN (October, 2022). *Batch sequential calibration of a computationally intensive simulation model using parallel computing.*
13. SIAM Conference on Uncertainty Quantification, Atlanta, GA (April, 2022). *A sequential approach to calibration of a computationally intensive model.*
12. SIAM Conference on Parallel Processing for Scientific Computing, Seattle, WA (February, 2022). *Calibration of a computationally intensive model with parallel computing aspects.*
11. Winter Simulation Conference, Phoenix, AZ (December, 2021). *Calibration using emulation of filtered simulation results.*
10. INFORMS Annual Meeting, Anaheim, CA (October, 2021). *Calibration using emulation of filtered simulation results.*
9. INFORMS Workshop on Data Mining and Decision Analytics, Anaheim, CA (October, 2021). *Discovering group structure in longitudinal data.*

8. INFORMS Annual Meeting, Seattle, WA (October, 2019). *Coefficient tree regression for discovering structure in generalized linear models.*
7. INFORMS Annual Meeting, Seattle, WA (October, 2019). *Discovering structure in longitudinal data via coefficient tree regression.*
6. INFORMS Annual Meeting, Phoenix, AZ (November, 2018). *Coefficient tree regression for discovering hidden structure.*
5. The 12th ACM Conference on Recommender Systems, Vancouver, Canada (October, 2018). *Multi-stakeholder recommendation with provider constraints.*
4. The Midwest Machine Learning Symposium, Chicago, IL (June, 2018). *Coefficient tree regression for discovering hidden structure.*
3. The 11th ACM Conference on Recommender Systems, Como, Italy (August, 2017). *Improving similarity measures using ontological data.*
2. The 34th National Conference for Operations Research and Industrial Engineering, Bursa, Turkey (June, 2014). *Event and clock-based representations in mathematical optimization.*
1. The 26th European Conference on Operational Research, Rome, Italy (July, 2013). *Simulated annealing algorithm with variable cluster number and comparison with k-means algorithm.*

## B. Grants Received

### 1. External Grants:

1. Bayesian Analysis of Nuclear Dynamics (BAND), **National Science Foundation**, Senior Personnel (w/ 11 PI, co-PI and Senior Personnel), \$3,716,619 (Miami Share \$169,021), 2022-2025.

### 2. Internal Grants:

1. Examining the Privacy Implications from the Use of Wearables, PI (w/ 3 co-PIs), **Miami University Advanced Research Teams (ART) Grant program**, \$59,339, 2023-2024.

## C. External Grants Under Review

1. Advancing Theory for Nuclear Double-Beta Decay (@NBD), **National Science Foundation**, Senior Personnel (w/ 16 PI, co-PI and Senior Personnel), Budget: \$2,000,000 (Miami Share \$57,800), 2024-2029. **Status:** Under review.

## IV. Service

### A. Service to the Profession (since 2018)

1. **Advisory board member**, Information and Statistics in Nuclear Experiment and Theory (ISNET), 2023-Present.
2. **Session chair**, “Efficient Statistical Methods for Uncertainty Quantification”, INFORMS Annual Meeting, Indianapolis, IN. October, 2022.
3. **Workshop organizer**, “Statistical Methods for Uncertainty Quantification and Parallel Computing”, SIAM Conference on Parallel Processing for Scientific Computing, Seattle, WA. February, 2022.

4. **Session chair**, “Data-driven Modeling in Uncertainty Quantification”, INFORMS Annual Meeting, Anaheim, CA. October, 2021.
5. **Session chair**, “Interpretable Predictive Models”, INFORMS Annual Meeting, Seattle, WA. October, 2019.
6. **Session chair**, “Intriguing Tweaks in Data Science I”, INFORMS Annual Meeting, Phoenix, AZ. November, 2018.
7. **Reviewer for journals including:**
  - *International Journal for Uncertainty Quantification*
  - *Journal of Quality Technology*
  - *Machine Learning*
  - *INFORMS Journal on Computing*
  - *Information Systems*
  - *IIE Transactions*

## B. Community Engagement

1. Since 2021, I have had the opportunity to work closely with 4 universities (**Ohio U.**, **Ohio State U.**, **Michigan State U.** and **Northwestern U.**) on developing a software framework to quantify uncertainties for nuclear physics problems. I have provided software, tutorials, and guidelines under BAND Framework to make statistical tools more accessible to the nuclear physics community.
2. As a part of the internal grant, our goal is to design meaningful translational, experiential learning experiences that can be shared with high school students. We intend to pilot the newly designed experiences in Fall 2024 at Middletown High School.