

CHEOLJOON JEONG

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ACADEMIC APPOINTMENTS	Assistant Professor (Tenure-Track) Department of Industrial Engineering, Clemson University, Clemson, SC, USA	8/2025–Present
RESEARCH INTERESTS	Data Science, Statistics, and AI for Complex Engineering Systems • <i>Methodologies:</i> design and analysis of computer experiments, statistical machine learning, Bayesian optimization, nonlinear/convex optimization, survival analysis, diffusion models • <i>Applications:</i> digital twin calibration, online learning and adaptive control, transfer learning, quality and reliability engineering, operational decision-making • <i>Domains:</i> energy systems (building energy and wind power), manufacturing systems (hybrid and smart manufacturing), healthcare systems (medical image processing)	
EDUCATION	University of Michigan , Ann Arbor, MI, USA Ph.D. in Industrial and Operations Engineering – <i>Dissertation:</i> Digital Twin Calibration with Operational Data – <i>Committee:</i> Drs. Eunshin Byon (Chair), Albert S. Berahas, Judy Jin, and Edward Ionides M.A. in Statistics North Carolina State University , Raleigh, NC, USA M.Eng. in Industrial and Systems Engineering Yonsei University , Seoul, Korea B.S. in Information and Industrial Engineering	9/2020–5/2025 9/2023–5/2025 8/2018–5/2020 3/2009–2/2016
HONORS AND AWARDS	• Best Student Paper Award Finalist, QSR Section, INFORMS • Institute for Energy Solutions Graduate Fellowship, University of Michigan • Richard C. Wilson Best Paper Prize, University of Michigan • IOE Bonder Fellowship, University of Michigan • Rackham Travel Grant, 4 times, University of Michigan • Best Paper Award Finalist, DAIS Division, IISE • Best Student Paper Award Winner, QCRE Division, IISE • IOE Departmental Fellowship, University of Michigan • Edward P. Fitts Fellowship, North Carolina State University • Korea National Science and Technology Scholarship, KOSAF • Academic Excellence Awards, 4 times, Yonsei University • Commandant's List in the Warrior Leader Course (NCOA), Eighth U.S. Army	2024 2024 2023 2021–2022 2021–2024 2021 2020 2020–2021 2019–2020 2013–2016 2010–2015 2012
RESEARCH PROJECTS	• Neural Network-Based Contextual Bayesian Optimization • Automated Diagnostics and Prognostics of Geographic Atrophy Based on Optical Coherence Tomography Images Using Machine Learning • Privacy-Preserving Reliability Analysis Using Federated Learning • Digital Twin Calibration with Operational Data • Quality Fault Diagnostics Using Multi-Steam High-Dimensional Signals	6/2025–Present 6/2025–Present 9/2024–8/2025 9/2020–Present 1/2019–5/2020

WORKING
PAPERS

- W1. Neural Network-Based Episodic Contextual Bayesian Optimization, In Preparation.
W2. Geographic Atrophy Progression Modeling Based on Optical Coherence Tomography Images via Diffusion Models. In Preparation.

REFERRED
JOURNAL
PUBLICATIONS

* *First author*, † *Corresponding author*

- J1. Li, C.^{*}, Byon, E., and **Jeong, C.**[†] (2026+). Efficient Calibration of Building Energy Models via Multi-Block Bayesian Optimization with Seasonal Contexts, Under Review.
J2. **Jeong, C.**^{*,†} and Byon, E. (2026+). Multivariate Nonparametric Functional Calibration of Engineering Wake Models in Multi-Turbine Wind Farms, Under Review at *IEEE Transactions on Sustainable Energy*.
J3. **Jeong, C.**^{*}, Yue, X., and Chung, S.[†] (2026). Fed-Joint: Joint Modeling of Nonlinear Degradation Signals and Failure Events for Remaining Useful Life Prediction Using Federated Learning, *Reliability Engineering and System Safety*, **267**, 111833 [[Link](#)]
J4. **Jeong, C.**^{*} and Byon, E.[†] (2026). Explainable Parameter Calibration via Importance-Driven Sequential Design with an Application to Building Energy Systems, To appear in *The Annals of Applied Statistics* [[Link](#)]
• [Finalist, Best Student Paper Award in the QSR Section, INFORMS, 2024](#)
J5. **Jeong, C.**^{*} and Byon, E.[†] (2024). Calibration of Building Energy Models via Bias-Corrected Iteratively Reweighted Least Squares Method, *Applied Energy*, **360**, 122753 [[Link](#)]
J6. **Jeong, C.**^{*}, Byon, E., He, F., and Fang, X.[†] (2024). Tensor-Based Statistical Learning Methods for Diagnosing Product Quality Defects in Multistage Manufacturing Processes, *IIE Transactions*, **57**(6), 706-723 [[Link](#)]
J7. **Jeong, C.**^{*}, Xu, Z., Byon, E.[†], Berahas, A. S., and Cetin, K. (2023). Multi-Block Parameter Calibration in Computer Models, *INFORMS Journal on Data Science*, **2**(2), 116-137 [[Link](#)]
• [Winner, Richard C. Wilson Best Paper Prize, University of Michigan, 2023](#)
• [Research Spotlight, INFORMS Journal on Data Science, 2025](#)
J8. **Jeong, C.**^{*} and Fang, X.[†] (2022). Two-Dimensional Variable Selection and Its Applications in the Diagnostics of Product Quality Defects, *IIE Transactions*, **54**(7), 619-629 [[Link](#)]
• [Winner, Best Student Paper Award in the QCRE Division, IIE, 2020](#)

REFEREED
CONFERENCE
PROCEEDINGS

- C1. Xu, Z.^{*}, **Jeong, C.**^{*}, Byon, E.[†], and Cetin, K. (2021). Season-Dependent Parameter Calibration in Building Energy Simulation, *Proceedings of the 2021 IIE Annual Conference*.
• [Finalist, Best Paper Award in the DAIS Division, IIE, 2021](#)

TECHNICAL
REPORT AND
MODULES

- T1. Wildstein, P., Arvan, T., Cho, S., and **Jeong, C.** (2024). Michigan's Power Play: How Can Campus Buildings Be Leveraged for Carbon Neutrality? (Lecture Module) [[Link](#)]
T2. **Jeong, C.**^{*,†} (2017). A New Possibility for Using Real Estate Auction Event Data in Credit Scoring: Examining the Correlation Between Real Estate Auction Events and Mortality Risk (Korean Ver.), CRO Report, *Credit Insight*, Summer Vol., 22-34 [[Link](#)]

PRESENTATIONS

- P1. Invited Talk, "Multivariate Nonparametric Functional Calibration of Engineering Wake Models," IMS/ASA Spring Research Conference, Clemson, SC, May 2026 (Expected).
P2. Contributed Talk, "Multivariate Nonparametric Functional Calibration of Engineering Wake Models," IIE Annual Conference, Arlington, TX, May 2026 (Expected).
P3. Invited Talk, "Toward Efficient and Interpretable Calibration of Digital Twins in Energy Systems," Statistics Seminar Series, School of Mathematical and Statistical Sciences, Clemson University, Clemson, SC, February 2026.

- P4. Invited Talk, “Multivariate Nonparametric Functional Calibration of Engineering Wake Models,” INFORMS Annual Meeting, Atlanta, GA, October 2025.
- P5. Invited Talk, “Explainable Parameter Calibration via Importance-Driven Sequential Design,” Quality and Productivity Research Conference (QPRC), Seattle, WA, June 2025.
- P6. Invited Talk, “Explainable Parameter Calibration via Importance-Driven Sequential Design,” ISE Winter Symposium, Korea Advanced Institute of Science and Technology (KAIST), Daejeon, Korea, December 2024.
- P7. Invited Talk, “Digital Twin Calibration with Operational Data,” Department of Industrial and Operations Engineering, University of Michigan, Ann Arbor, MI, December 2024.
- P8. Invited Talk, “Explainable Parameter Calibration via Importance-Driven Sequential Design,” Award Session, INFORMS Annual Meeting, Seattle, WA, December 2024.
- P9. Invited Talk, “Calibration of Building Energy Computer Models via Bias-Corrected Iteratively Reweighted Least Squares Method,” Institute of Energy Solutions (IES), University of Michigan, Ann Arbor, MI, October 2024.
- P10. Contributed Talk, “Explainable Parameter Calibration via Importance-Driven Sequential Design,” IISE Annual Conference, Montréal, Canada, May 2024.
- P11. Invited Talk, “Calibration of Building Energy Models via Bias-Corrected Iteratively Reweighted Least Squares Method,” Michigan Student Symposium for Interdisciplinary Statistical Sciences (MSSISS), University of Michigan, Ann Arbor, MI, February 2024.
- P12. Contributed Talk, “Explainable Parameter Calibration via Importance-Driven Sequential Design,” INFORMS Annual Meeting, Phoenix, AZ, October 2023.
- P13. Contributed Talk, “Explainable Parameter Calibration via Importance-Driven Sequential Design,” INFORMS Workshop on Data Mining and Decision Analytics (DMDA), Phoenix, AZ, October 2023.
- P14. Contributed Poster, “Multi-Block Parameter Calibration in Computer Models,” Hyundai Vision Conference, Seoul, Korea, August 2023.
- P15. Contributed Talk, “Multi-Block Parameter Calibration in Computer Models,” INFORMS Conference on Quality, Statistics, and Reliability (ICQSR), Raleigh, NC, June 2023.
- P16. Invited Talk, “Multi-Block Parameter Calibration in Computer Models,” INFORMS Annual Meeting, Indianapolis, IN, October 2022.
- P17. Invited Talk, “Modularized Bias-Corrected Parameter Calibration,” INFORMS Annual Meeting, Indianapolis, IN, October 2022.
- P18. Invited Talk, “Multi-Block Parameter Calibration in Computer Models,” IMS/ASA Spring Research Conference (SRC), Online, May 2022.
- P19. Contributed Talk, “Season-Dependent Parameter Calibration in Building Energy Models,” INFORMS Annual Meeting, Online, October 2021.
- P20. Invited Talk, “Season-Dependent Parameter Calibration in Building Energy Models,” IEEE Conference on Automation Science and Engineering (CASE), Online, August 2021.
- P21. Invited Talk, “Season-Dependent Parameter Calibration in Building Energy Models,” Award Session, IISE Annual Conference, Online, May 2021 (Presented by Co-Author).
- P22. Invited Talk, “Two-Dimensional Variable Selection and Its Applications in the Diagnostics of Product Quality Defects,” Award Session, IISE Annual Conference, Online, May 2020.

TEACHING EXPERIENCE	Instructor , Clemson University	
	• IE 3610: Industrial Applications of Probability and Statistics II • IE 4910/6910: Engineering Data Analytics (newly developed course)	Spring 2026 Fall 2025
	Graduate Student Instructor , University of Michigan	
	• IOE 473: Advanced Data Analytics • IOE 461: Quality Engineering Principles and Analysis • IOE 565: Time Series Analysis • IOE 591: Statistical Learning for Data Science • IOE 591: Introduction to Data Analytics	Winter 2025 Fall 2024 Winter 2024 Fall 2023 Fall 2022
	Teaching Assistant , North Carolina State University	
	• ISE 361: Deterministic Models in Industrial Engineering • ISE 311: Economic Decision Analysis	Spring 2019 Fall 2018
PROFESSIONAL EXPERIENCE	Credit Data Analyst , National Information and Credit Evaluation	1/2016–6/2018
	• Developed a new business line leveraging large-scale real estate datasets • Contributed to the development of credit scoring models leveraging alternative data sources for financial risk prediction	
	KATUSA Soldier , Eighth U.S. Army	3/2011–12/2012
	• Managed an effective training program with the U.S. Commander • Honorably discharged as a sergeant	
UNIVERSITY SERVICES	• Judge, Student Poster Competition, Industrial Engineering, Clemson University	2025
	• Doctoral Dissertation Committee	
	– Luke Shannon (Ph.D. Candidate in AuE, with Dr. Saeed Farahani)	2026
	• Faculty Advisor, Engineering Honors Capstone Project, University of Michigan	2024
	• Vice President, Yonsei-Michigan Student Association	2023–2024
	• President, Michigan IOE Korean Student Association	2023–2025
	• Mentor, Graduate Application Mentoring Program, University of Michigan	2023
	• Department Representative and Fundraiser, MSSISS, University of Michigan	2021–2022
	• Team Leader, Global Engineer Program, Yonsei University	2014
	• Officer, Supply Chain Student Society (MSC), Yonsei University	2010–2011
	• Staff, University Student Unions, Yonsei University	2009
PROFESSIONAL SERVICES	• Panelist, “Preparing for the Job Market,” OR Track, IISE Annual Conference	2026
	• Contributed Talk/Poster Committee, IMS/ASA Spring Research Conference	2026
	• Judge, SPES+Q&P Paper Competition, IMS/ASA Spring Research Conference	2025
	• Session Chair and Organizer, INFORMS Annual Meeting	
	– Recent Advances in Design and Analysis of Computer Experiments	2024
	– Modern Design and Analysis of Computer Experiments	2023
	– Applied Paper Presentation for DMDA Workshop	2023
	• Reviewer, <i>IISE Transactions</i> , <i>INFORMS Journal on Data Science</i> , <i>Technometrics</i> , etc.	
PROFESSIONAL AFFILIATIONS	• Member, Institute for Operations Research and the Management Sciences (INFORMS)	
	• Member, Institute of Industrial and Systems Engineers (IISE)	
	• Member, American Statistical Association (ASA)	

REFERENCES

1. **Dr. Eunshin Byon**
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University of Michigan
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