

# YOUNGJUN CHOE

## *Curriculum Vitae*

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Department of Industrial and Systems Engineering  
141F AERB  
Box 352650  
Seattle, WA 98195-2650

Phone: (206) 221-8908  
Fax: (206) 685-3072  
Email: ychoe@uw.edu

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## EDUCATIONAL HISTORY

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**University of Michigan**, Ann Arbor, MI

Ph.D., Industrial & Operations Engineering, 2016

*Concentration:* Quality Engineering & Applied Statistics

*Dissertation:* Computationally Efficient Reliability Evaluation with Stochastic Simulation Models (Advisor: Eunshin Byon)

M.A., Statistics, 2016

**Korea Advanced Institute of Science and Technology (KAIST)**, Daejeon, S. Korea

B.S. (summa cum laude), Physics and Management Science (double major), 2010

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## EMPLOYMENT HISTORY

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**University of Washington**, Seattle, WA

Assistant Professor, Industrial & Systems Engineering, 9/1/2016 – Present

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## AWARDS AND HONORS

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- **NSF OSEER ECM Fellow**, 2020-2021  
NSF-supported Operations and Systems Engineering Extreme Event Research (OSEER) network's Early Career Mentoring (ECM) Program
  - **INFORMS QSR Best Paper Competition Finalist**, 10/21/2019  
Quality, Statistics, and Reliability (QSR) Section, INFORMS
  - **IISE Annual Conference Best Track Paper Award (Energy Systems Track)**, 4/14/2016  
Institute of Industrial and Systems Engineers (IISE)
  - **INFORMS QSR Best Paper Competition Finalist**, 11/2/2015  
Quality, Statistics, and Reliability (QSR) Section, INFORMS
  - **Mary G. and Joseph Natrella Scholarship**, 5/11/2015  
Quality and Productivity Section, American Statistical Association (ASA)
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## PUBLICATIONS

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(Footnote: Undergraduate students<sup>0</sup>; Graduate students<sup>1</sup>; Equally contributed authors<sup>†</sup>)

### Refereed Archival Journal Publications

1. Cao, Q. D.<sup>1</sup>, Miles, S., and **Choe, Y.** (2021). Infrastructure Recovery Curve Estimation Using Gaussian Process Regression on Expert Elicited Data. 29 pages. Accepted in *Reliability Engineering and System Safety*. DOI: 10.1016/j.ress.2021.108054
2. Yang, Z.<sup>0</sup>, **Choe, Y.**, Martell, M.<sup>1</sup> (2021). COVID-19 Economic Policy Effects on Consumer Spending and Foot Traffic in the U.S. 20 pages. Accepted in *Journal of Safety Science and Resilience*. Preprint: <http://arxiv.org/abs/2012.08028>

3. Pendergrast, C., Miles, S. B., **Choe, Y.**, Errett, N. A. (2021). Perspectives of Fitness, Parks, and Active Transportation Organizations on Factors Influencing Physical Activity and Wellbeing During Disaster Recovery. 34 double-spaced pages. Accepted in *International Journal of Mass Emergencies and Disasters*.
4. Terry, N.<sup>1</sup> and **Choe, Y.** (2021). Splitting Gaussian Processes for Computationally-Efficient Regression. *PLoS ONE*. 16(8): e0256470:1-17. DOI: 10.1371/journal.pone.0256470
5. Martell, M.<sup>1</sup>, Miles, S. B., and **Choe, Y.** (2021). Review on Empirical Quantitative Data Use in Lifeline Infrastructure Restoration Modeling. *Natural Hazards Review*. 22(4): 03121001:1-14. DOI: 10.1061/(ASCE)NH.1527-6996.0000514
6. Liu, Z.<sup>1</sup>, Banerjee, A. G., and **Choe, Y.** (2021). Identifying the Influential Inputs for Network Output Variance Using Sparse Polynomial Chaos Expansion. *IEEE Transactions on Automation Science and Engineering*. 18(3): 1026-1036. DOI: 10.1109/TASE.2020.2993257
  - Selected as the **2019 INFORMS QSR Best Paper Competition Finalist**
7. Starling, J.<sup>1</sup>, **Choe, Y.**, and Mastrangelo, C. (2021). Identifying DMSMS Availability Risk at the System Level. *International Journal of Production Research*. 59(10): 2905-2925. DOI: 10.1080/00207543.2020.1743894
8. Doubleday, A., **Choe, Y.**, Busch Isaksen, T. M., Errett, N. A. (2021). Urban Bike and Pedestrian Activity Impacts from Wildfire Smoke Events in Seattle, WA. *Journal of Transport & Health*. 21(101033):1-9. DOI: 10.1016/j.jth.2021.101033
9. Starling, J.<sup>1</sup>, Mastrangelo, C., and **Choe, Y.** (2021). Improving Weibull Distribution Estimation for Generalized Type I Censored Data Using Modified SMOTE. *Reliability Engineering and System Safety*. 211(107505):1-12. DOI: 10.1016/j.res.2021.107505
10. Doubleday, A., **Choe, Y.**, Busch Isaksen, T. M., Miles, S. B., and Errett, N. A. (2021). How Did Outdoor Biking and Walking Change during COVID-19?: A Case Study of Three U.S. Cities. *PLoS ONE*. 16(1): e0245514:1-13. DOI: 10.1371/journal.pone.0245514
11. Liu, Z.<sup>1</sup> and **Choe, Y.** (2021). Data-Driven Sensitivity Indices for Models With Dependent Inputs Using Polynomial Chaos Expansions. *Structural Safety*. 88(101984):1-10. DOI: 10.1016/j.strusafe.2020.101984
12. Cao, Q. D.<sup>1</sup> and **Choe, Y.** (2020). Building Damage Annotation on Post-Hurricane Satellite Imagery Based on Convolutional Neural Networks. *Natural Hazards*. 103(3): 3357-3376. DOI: 10.1007/s11069-020-04133-2
  - Data (Open Access): <http://dx.doi.org/10.21227/sdad-1e56>
13. Kotani, T., Tozato, K., Takase, S., Moriguchi, S., Terada, K., Fukutani, Y., Otake, Y., Nojima, K., Sakuraba, M., **Choe, Y.** (2020). Probabilistic Tsunami Hazard Assessment with Simulation-Based Response Surfaces. *Coastal Engineering*. 160(103719):1-12. DOI: 10.1016/j.coastaleng.2020.103719
14. Shang, L., Lee, H. W., Dermisi, S., **Choe, Y.** (2020). Impact of Energy Benchmarking and Disclosure Policy on Office Buildings. *Journal of Cleaner Production*. 250(119500):1-9. DOI: 10.1016/j.jclepro.2019.119500
15. Kim, A., Reed, D., **Choe, Y.**, Wang, S., and Recart, C. (2019). New Building Cladding System Using Independent Tilted BIPV Panels with Battery Storage Capability. *Sustainability*. 11(20):5546:1-18. DOI: 10.3390/su11205546

16. Chen, Y<sup>†</sup>. and **Choe, Y<sup>†</sup>**. (2019). Importance Sampling and its Optimality for Stochastic Simulation Models. *Electronic Journal of Statistics*. 13(2): 3386-3423. DOI: 10.1214/19-EJS1604
17. Doubleday, A., **Choe, Y.**, Miles, S. B., and Errett, N. A. (2019). Daily Bicycle and Pedestrian Activity as an Indicator of Disaster Recovery: A Hurricane Harvey Case Study. *International Journal of Environmental Research and Public Health*. 16(2836): 1-10. DOI: 10.3390/ijerph16162836
18. Cao, Q. D.<sup>1</sup> and **Choe, Y.** (2019). Cross-Entropy Based Importance Sampling for Stochastic Simulation Models. *Reliability Engineering and System Safety*, 191(106526): 1-12. DOI: 10.1016/j.ress.2019.106526
19. **Choe, Y.**, Lam, H., and Byon, E. (2018). Uncertainty Quantification of Stochastic Simulation for Black-box Computer Experiments. *Methodology and Computing in Applied Probability*, 20(4): 1155–1172. DOI: 10.1007/s11009-017-9599-7
  - Selected for the **Natrella invited session** in the 2015 Quality & Productivity Research Conference at Raleigh, NC.
20. **Choe, Y.**, Guo, W., Byon, E., Jin, J., and Li, J. J. (2016). Change-Point Detection on Solar Panel Performance Using Thresholded LASSO. *Quality and Reliability Engineering International*, 32(8): 2653–2665. DOI: 10.1002/qre.2077
21. **Choe, Y.**, Pan, Q., and Byon, E. (2016). Computationally Efficient Uncertainty Minimization in Wind Turbine Extreme Load Assessments. *ASME Journal of Solar Energy Engineering*, 138(4):041012:1-8. DOI: 10.1115/1.4033511
22. Byon, E., **Choe, Y.**, and Yampikulsakul, N. (2016). Adaptive Learning in Time-variant Processes with Application to Wind Power Systems. *IEEE Transactions on Automation Science and Engineering*, 13(2):997–1007. DOI: 10.1109/TASE.2015.2440093
23. **Choe, Y.**, Byon, E., and Chen, N. (2015). Importance Sampling for Reliability Evaluation with Stochastic Simulation Models. *Technometrics*, 57(3):351–361. DOI: 10.1080/00401706.2014.1001523
  - Selected by the journal's Editor for the **Technometrics invited session** in the 2015 INFORMS Annual Meeting at Philadelphia, PA.

#### Conference Proceedings and Other Non-journal Articles (Fully Refereed)

1. Starling, J.<sup>1</sup>, **Choe, Y.**, and Mastrangelo, C. (2019). Optimal Technology Refresh Strategies for Strategic DMSMS Management using Ranking and Selection. *Proceedings of the 2019 Winter Simulation Conference*, p.2524-2535. DOI: 10.1109/WSC40007.2019.9004856
2. **Choe, Y.**, Guo, W., Byon, E., Jin, J., and Li, J. J. (2016). Change-Point Detection in Solar Panel Performance Analysis. *Proceedings of the 2016 Industrial and Systems Engineering Research Conference (ISERC)*, p.236-241.
  - Selected for the conference's **Best Track Paper (Energy Systems Track)**.

#### Papers Submitted

1. Cao, Q. D.<sup>1</sup> and **Choe, Y.**, Post-Hurricane Damage Assessment Using Satellite Imagery and Geolocation Features. 9 double-column pages. Preprint: <https://arxiv.org/abs/2012.08624>
  - Data (Open Access): <https://doi.org/10.17603/ds2-3cca-f398>

2. Ankit, A.<sup>0</sup>, Liu, Z.<sup>1</sup>, Miles, S., and **Choe, Y.**, U.S. Power Resilience for 2002-2017. 16 pages. Preprint: <https://arxiv.org/abs/2103.15859>
3. Liu, Z.<sup>1</sup> and **Choe, Y.**, Data-Driven Sparse Polynomial Chaos Expansion for Models with Dependent Inputs. 23 pages. Preprint: <https://arxiv.org/abs/2101.07997>
4. Liu, Z.<sup>1†</sup>, Maneekul, P.<sup>1†</sup>, Pendergrast, C., Doubleday, A., Miles, S. B., Errett, N. A., and **Choe, Y.** Assessing Disaster Recovery Using Physical Activity Monitoring Data. 29 double-spaced pages.
5. Chen, S. A.<sup>1†</sup>, Escay, A.<sup>0†</sup>, Haberland, C.<sup>1†</sup>, Schneider, T.<sup>1†</sup>, Staneva, V. and **Choe, Y.**, Benchmark Dataset for Automatic Damaged Building Detection from Post-Hurricane Remotely Sensed Imagery. 8 double-column pages.
  - Preprint: <https://arxiv.org/abs/1812.05581>
  - Data (Open Access): <http://dx.doi.org/10.21227/1s3n-f891>
6. **Choe, Y.**, Chen, Y. and Terry, N.<sup>1</sup>, Information Criterion for Boltzmann Approximation Problems. 67 double-spaced pages. Preprint: <https://arxiv.org/abs/1704.04315>

## Letters

1. **Choe, Y.** (2021). Book Review: *Design of Experiments for Generalized Linear Models* by Kenneth G. Russell. *Journal of the American Statistical Association*. 116(534):1038. DOI: 10.1080/01621459.2021.1921472

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## OTHER SCHOLARLY ACTIVITY

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### Invited Lectures and Seminars

1. Stanford Urban Resilience Initiative (SURI)'s Disaster Resilience Seminar Series, *Leveraging Physical Activity Data to Assess and Inform Disaster Recovery*, 28 Oct. 2020.
2. Center for Studies in Demography & Ecology (CSDE) Seminar, *Integrating Physical Activity Data in Disaster Recovery Planning and Implementation*, 16 Oct. 2020.
3. UW Department of Statistics Seminar, *Information Criterion for Boltzmann Approximation Problems*, 9 Oct. 2020. (The recording is available on the [department website](#) and [YouTube](#).)
4. UW Environmental & Occupational Health Seminar, *The COVID-19 Pandemic and the Seattle, Washington Street View Campaign*, 1 Oct. 2020.
5. IISE/QCRE Webinar, *Damage Assessment on Post Hurricane Imagery*, 6 Aug. 2019. (The recording is available on the IISE [website](#).)
6. UW M9 Seminar, *Machine Annotation of Post-Hurricane Damages on Satellite Imagery*, 19 Jun. 2018.

### Conference Presentations

(Note: Presenter in bold, Undergraduate students<sup>0</sup>, Graduate students<sup>1</sup>, Equally contributed authors<sup>†</sup>)

1. Martell, M.<sup>1</sup>, Miles, S., and **Choe, Y.**, "Literature Review on Modeling of Lifeline Infrastructure Restoration Using Empirical Quantitative Data", *INFORMS Annual Meeting*, Virtual, 7-13 Nov. 2020.
2. **Terry, N.**<sup>1</sup> and Choe, Y. "Splitting Gaussian Process Models For Fast Regression", *INFORMS Annual Meeting*, Virtual, 7-13 Nov. 2020.

3. Liu, Z.<sup>1†</sup>, Maneekul, P.<sup>1†</sup>, Pendergrast, C., Doubleday, A., Miles, S. B., Errett, N. A., and **Choe, Y.** "Assessing Disaster Recovery Using Physical Activity Monitoring Data", *Researchers Meeting Following the Annual Natural Hazards Research and Applications Workshop*, Virtual, 15-16 Jul. 2020.
4. **Martell, M.**<sup>1</sup>, Miles, S., and Choe, Y., "Modeling of Lifeline Infrastructure Restoration Using Empirical Quantitative Data", *Researchers Meeting Following the Annual Natural Hazards Research and Applications Workshop*, Virtual, 15-16 Jul. 2020.
5. **Cao, Q. D.**<sup>1</sup>, Miles, S., and Choe, Y., "Infrastructure Recovery Curve Estimation using Gaussian Process Regression on Expert Elicited Data", *Researchers Meeting Following the Annual Natural Hazards Research and Applications Workshop*, Virtual, 15-16 Jul. 2020.
6. **Wartman, J., Silver, B., Errett, N. A., and Choe, Y.**, "The COVID-19 Pandemic and the Seattle, Washington Street View Campaign", *Annual Natural Hazards Research and Applications Workshop*, Virtual, 12-15 Jul. 2020.
7. **Pedersen, K.**, Grover, H., Choe, Y., and Errett, N. A. "Documenting The Impact Of Lifeline Service Disruptions On Healthcare System Performance Following Earthquakes Since 2000: A Reconnaissance Report Analysis", *Annual Natural Hazards Research and Applications Workshop*, Virtual, 12-15 Jul. 2020.
8. Martell, M.<sup>1</sup>, Miles, S., and **Choe, Y.**, "Literature Review on Modeling of Lifeline Infrastructure Restoration Using Empirical Quantitative Data", *NHERI SimCenter Workshop on Simulation and Data Needs to Support Disaster Recovery Planning*, Berkeley, CA, USA, 30-31 Jan. 2020.
9. **Starling, J.**<sup>1</sup>, Choe, Y., and Mastrangelo, C. "Optimal Technology Refresh Strategies for Strategic DMSMS Management Using Ranking and Selection", *Winter Simulation Conference 2019*, National Harbor, MD, USA, 8-11 Dec. 2019.
10. **Starling, J.**<sup>1</sup>, Mastrangelo, C., and Choe, Y., "Optimal Life of Need Buy Policy Algorithms for Strategic DMSMS Management", *Diminishing Manufacturing Sources and Material Shortages (DMSMS) 2019 Conference*, Phoenix, AZ, USA, 2-5 Dec. 2019.
11. **Starling, J.**<sup>1</sup>, Mastrangelo, C., and Choe, Y., "Optimal Technology Refresh Strategies Using Infinite Horizon Optimization", *INFORMS Annual Meeting*, Seattle, WA, USA, 20-23 Oct. 2019.
12. **Liu, Z.**<sup>1</sup>, Banerjee, A. G., and Choe, Y., "Identifying the Influential Inputs For Network Output Variance Using Sparse Polynomial Chaos Expansion", *INFORMS Annual Meeting*, Seattle, WA, USA, 20-23 Oct. 2019.
13. **Maneekul, P.**<sup>1†</sup>, Liu, Z.<sup>1†</sup>, Miles, S., Errett, N. and **Choe, Y.**, "Personal Fitness Monitoring App Data to Assess Community Recovery at Scale: Case Study on Post-hurricane Harvey Recovery of Harris County, Texas", *INFORMS Annual Meeting*, Seattle, WA, USA, 20-23 Oct. 2019.
14. **Cao, Q. D.**<sup>1</sup> and Choe, Y., " Hurricane-damaged Building Identification Using Satellite Imagery and Geographical Features", *INFORMS Annual Meeting*, Seattle, WA, USA, 20-23 Oct. 2019.
15. **Starling, J.**<sup>1</sup>, Mastrangelo, C., and Choe, Y., "Optimal Life of Need Buy Policies for Strategic DMSMS Management", *The 2019 Joint Undersea Warfare Technology Fall Conference*. Groton, CT, USA, 16-18 Sep. 2019.
16. Cao, Q. D.<sup>1</sup> and **Choe, Y.**, "Post-Hurricane Damage Assessment with Satellite Imagery Data", *The Second Conference on Risk Analysis, Decision Analysis and Security*, Buffalo/Niagara Falls, NY, USA, 30 Jul.-2 Aug. 2019.
17. Doubleday, A.<sup>†</sup>, Pendergrast, C.<sup>†</sup>, Miles, S. B., Choe, Y., and **Errett, N. A.**, "Understanding the Impact of Hurricane Harvey on Bike and Pedestrian Path Usage, and Examining Factors Influencing Physical Activity and Wellbeing During Disaster Recovery", *Annual Natural Hazards Research and Applications Workshop*, Broomfield, CO, USA, 14-17 Jul. 2019.

18. Liu, Z.<sup>1†</sup>, Maneekul, P.<sup>1†</sup>, Miles, S., Errett, N. and **Choe, Y.**, "Personal Fitness Monitoring App Data to Assess Community Recovery at Scale: Case Study on Post-Hurricane Harvey Recovery of Harris County, Texas", *Annual Natural Hazards Research and Applications Workshop*, Broomfield, CO, USA, 14-17 Jul. 2019.
19. **Starling, J.**<sup>1</sup>, Choe, Y., and Mastrangelo, C., "Identifying DMSMS Availability Risk at the System Level", *The 87th Military Operations Research Society (MORS) Symposium*, Colorado Springs, CO, USA, 17-20 Jun. 2019.
20. Cao, Q. D.<sup>1</sup> and **Choe, Y.**, "Detecting Damaged Buildings on Post-Hurricane Satellite Imagery", *IISE Annual Conference & Expo 2019*, Orlando, FL, USA, 18-21 May. 2019.
21. Liu, Z.<sup>1†</sup>, Maneekul, P.<sup>1†</sup>, **Choe, Y.**, Miles, S. B., and Errett, N. A., "Assessing Community Recovery Using Personal Health Monitoring Data", *IISE Annual Conference & Expo 2019*, Orlando, FL, USA, 18-21 May. 2019.
22. **Starling, J.**<sup>1</sup>, Choe, Y., and Mastrangelo, C., "Simulating DMSMS Risk: Identifying and Prioritizing DMSMS Risk at the Platform Level", *Diminishing Manufacturing Sources and Material Shortages (DMSMS) 2018 Conference*, Nashville, TN, USA, 3-6 Dec. 2018.
23. **Cao, Q. D.**<sup>1</sup> and Choe, Y., "Deep Learning Based Damage Detection on Post-hurricane Satellite Imagery", *INFORMS Annual Meeting*, Phoenix, AZ, USA, 4-7 Nov. 2018.
  - Selected for **the 3rd place winner** in the INFORMS Poster Competition
24. **Cao, Q. D.**<sup>1</sup> and Choe, Y., "Machine Annotation of Post-hurricane Satellite Imagery for Identifying Damages", *INFORMS Annual Meeting*, Phoenix, AZ, USA, 4-7 Nov. 2018.
25. **Liu, Z.**<sup>1</sup>, Banerjee, A. G., and Choe, Y., "Sensitivity Analysis on a Network using the Polynomial Chaos Expansion", *INFORMS Annual Meeting*, Phoenix, AZ, USA, 4-7 Nov. 2018.
26. **Liu, Z.**<sup>1</sup> and Choe, Y., "Data-Driven Sensitivity Indices for Models with Dependent Inputs using the Polynomial Chaos Expansion", *INFORMS Annual Meeting*, Phoenix, AZ, USA, 4-7 Nov. 2018.
27. **Chen, S. A.**<sup>1</sup>, Escay, A.<sup>0</sup>, **Haberland, C.**<sup>1</sup>, Schneider, T.<sup>1</sup>, Yan, A.<sup>1</sup>, Cao, Q. D.<sup>1</sup>, Staneva, V. and Choe, Y., "Automatic Detection of Damaged Buildings on Post-Hurricane Remotely Sensed Imagery", *Cascadia Innovation Corridor Conference*, Vancouver, BC, Canada, 9-10 Oct. 2018.
28. **Wang, S.**, Kim, A., Reed, D. and Choe, Y., "Risk Reduction Through Building Energy Resiliency", *Lloyd's Day Houston at Rice University: "The Smart and Resilient City"*, Houston, TX, USA, 4 Oct. 2018.
29. **Xu, A.**<sup>0</sup>, Aquiningoc, T.<sup>0</sup>, Choe, Y., Miles, S. B., and Errett, N. A., "Measuring Short Term Community Recovery from the Santa Rosa Wildfires", *Washington NASA Space Grant Consortium's Annual Space Grant Awards Reception and Poster Session*, Seattle, WA, USA, 21 Sep. 2018.
30. **Aquiningoc, T.**<sup>0</sup>, Choe, Y., Miles, S. B., and Errett, N. A., "Tracking Wildfire Recovery in Santa Rosa", *Washington NASA Space Grant Consortium's Annual Space Grant Awards Reception and Poster Session*, Seattle, WA, USA, 21 Sep. 2018.
31. Cao, Q. D.<sup>1</sup> and **Choe, Y.**, "Machine Annotation of Post-Hurricane Satellite Imagery for Identifying Damages", *Annual Natural Hazards Research and Applications Workshop*, Broomfield, CO, USA, 8-11 Jul. 2018.
32. Choe, Y., **Guo, W.**, Byon, E., Jin, J., and Li, J. J., "Change-point Detection on Solar Panel Performance Using Thresholded Lasso", *INFORMS Annual Meeting*, Nashville, TN, USA, 13-16 Nov. 2016.
33. **Choe, Y.**, Guo, W., Byon, E., Jin, J., and Li, J. J., "Change-Point Detection in Solar Panel Performance Analysis", *Industrial & Systems Engineering Research Conference (ISERC)*, Anaheim, CA, USA, 21-24 May. 2016.

34. **Choe, Y.**, Pan, Q., and Byon, E., "Computationally Efficient Uncertainty Minimization in Wind Turbine Extreme Load Assessments", *Industrial & Systems Engineering Research Conference (ISERC)*, Anaheim, CA, USA, 21-24 May. 2016.
35. **Choe, Y.** and Byon, E., "Importance Sampling With a Novel Information Criterion for Efficient Reliability Evaluation", *INFORMS Annual Meeting (QSR Best Refereed Paper Competition Session)*, Philadelphia, PA, USA, 1-4 Nov. 2015.
36. **Choe, Y.** and Byon, E., "Importance Sampling With a Novel Information Criterion for Efficient Reliability Evaluation", *INFORMS Annual Meeting (Joint Session QSR/Energy: Data Analytics in Energy Systems)*, Philadelphia, PA, USA, 1-4 Nov. 2015.
37. **Choe, Y.**, Lam, H., and Byon, E., "Towards Understanding Distributional Properties of Importance Sampling Estimators with Stochastic Simulations", *INFORMS Annual Meeting*, Philadelphia, PA, USA, 1-4 Nov. 2015.
38. **Choe, Y.**, **Byon, E.**, and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *INFORMS Annual Meeting (Technometrics Invited Session)*, Philadelphia, PA, USA, 1-4 Nov. 2015.
39. **Choe, Y.** and Byon, E., "Data Analytics for Wind Energy Systems" (Poster Presentation), *INFORMS Annual Meeting (QSR Best Student Poster Competition Session)*, Philadelphia, PA, USA, 1-4 Nov. 2015.
40. **Choe, Y.** and Byon, E., "Data Analytics for Wind Energy Systems" (Poster Presentation), *From Industrial Statistics to Data Science: A Conference in Honor of Vijay Nair*, Ann Arbor, MI, 1-3 Oct., 2015.
41. **Choe, Y.**, **Byon, E.**, and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *ASCE EMI (Engineering Mechanics Institute) Conference*, San Francisco, CA, USA, 16-19 Jun. 2015.
42. **Choe, Y.**, Lam, H., and Byon, E., "Towards Understanding Distributional Properties of Importance Sampling Estimators with Stochastic Simulations", *Quality & Productivity Research Conference*, Raleigh, NC, USA, 10-12 Jun. 2015.
43. **Choe, Y.**, Byon, E., and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *Quality & Productivity Research Conference*, Raleigh, NC, USA, 10-12 Jun. 2015.
44. **Choe, Y.**, Lam, H., and Byon, E., "Towards Understanding Distributional Properties of Importance Sampling Estimators with Stochastic Simulations", *Industrial & Systems Engineering Research Conference (ISERC)*, Nashville, TN, USA, 30 May - 2 Jun. 2015.
45. Byon, E. and **Choe, Y.**, "Data-driven Modeling and Analyses for Wind Power Systems" (Poster Presentation), *The 3rd Biennial Wind Energy Systems Engineering Workshop*, Boulder, CO, 15 Jan., 2015.
46. **Choe, Y.**, Byon, E., and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *INFORMS Annual Meeting*, San Francisco, CA, USA, 9-12 Nov. 2014.
47. **Choe, Y.**, Byon, E., and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *INFORMS Southeast Michigan Symposium*, East Lansing, MI, USA, 3 Oct. 2014.
48. **Choe, Y.**, **Byon, E.**, and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *INFORMS Annual Meeting*, Minneapolis, MN, USA, 6-9 Oct. 2013.
49. **Choe, Y.**, Byon, E., and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *The 59th World Statistics Congress*, Hong Kong, China, 25-30 Aug. 2013.
50. **Choe, Y.**, Byon, E., and Chen, N., "Importance Sampling for Reliability Evaluation with Stochastic Simulation Models", *The workshop of System Informatics and Analytics, The 9th*

*IEEE International Conference on Automation Science and Engineering (IEEE CASE 2013), Madison, WI, USA, 17-21 Aug. 2013.*

### **Professional Society Memberships**

- Institute for Operations Research and the Management Sciences (INFORMS), 2013 – Present
- Institute of Industrial and Systems Engineers (IISE), 2013 – Present
- American Statistical Association (ASA), 2016 – Present

### **Invited Workshop Participation**

1. *NSF NHERI DesignSafe and SimCenter Workshop on Artificial Intelligence in Natural Hazards Engineering*, Austin, TX, USA, 18-19 Feb. 2020.
  - Selected for the NSF travel grant.
2. *NSF NHERI SimCenter Workshop on Simulation and Data Needs to Support Disaster Recovery Planning*, Berkeley, CA, USA, 30-31 Jan. 2020.
  - Selected for the NSF travel grant.
3. *NSF NHERI@UC San Diego 5th Users Training Workshop*, San Diego, CA, USA, 16-17 Dec. 2019.
  - Selected for the NSF travel grant.

### **Media Coverage**

1. Tracking COVID-19 response in Seattle over time using a mobile imaging system: [UW News](#), [Medical Xpress](#), [KIRO-TV](#), [KING-TV](#), [High Country News](#). Oct.-Dec. 2020.
2. Assessing community well-being after Hurricane Harvey via physical activity data: [UW Population Health](#), [UW School of Public Health](#). Oct. 2019.
3. Energy solutions for public health of remote communities after Hurricane Maria: [UW Boundless](#), [UW Clean Energy Institute](#), [Washington Examiner](#), [Security Management](#), [KING 5](#), [New York Times](#). Dec. 2017.