Curriculum Vitae
Ph.D. Candidate Mr. Youngjun Kweon

Department of Civil and Environmental Engineering
Seoul National University, Seoul, South Korea

Phone: +82 10 2496 0920
Email: yjkweon@snu.ac.kr

Education

2019 - present	M.S./Ph.D. in Civil and Environmental Engineering, Seoul National University Academic advisor: Professor Junho Song, Seoul National University Expected degree date in 2025.02
2015 - 2019	B.S. in Civil and Environmental Engineering, Seoul National University Scholarship: Academic full-ride scholarship for six semesters Thesis Title: "Predicting Global Responses based on Local Responses in 2D Frame Model Using Artificial Neural Network" Thesis advisor: Professor Junho Song, Seoul National University
2012 - 2015	Gyeonggi Science High School for the Gifted Thesis Topic: Developing synthetic heuristic algorithms for traveling salesman problem based on solution space exploration of 2-opt and 3-opt algorithms Thesis advisor: Professor Byung-Ro Moon, Seoul National University

Research Interests

Mr. Kwon has research interests in (1) system reliability-based assessment in disaster resilience viewpoint, (2) reliability analysis of infrastructure networks, focusing on quantifying the relative importance of network components, and (3) probabilistic causality analysis of dynamics in infrastructure networks. He is currently applying the methodologies to the flow-based network reliability analysis of the power grid and extending them to the dimension of optimal resilience-informed decision-making of complex systems.

Publications

1. Kim, D., Song, J., Lee, YJ., Yoon, S., Yoon, D. K., Lee, Y. K., Kwon, Y., Lee, D., and Choi, YW. (2023), Seismic Performance Management of Aging Road Facilities in Korea: Part 2 - Decision-making Support Technology and Its Application, *KSCE Journal of Civil Engineering*, https://doi.org/10.1007/s12205-023-0601-3

2. Kwon, Y., and Song, J. (2023), Decision-support Measure for Resilient Infrastructure Networks Considering Operation Mechanism and Cascading Failure, *Proceeding of the 14th International Conference on Application of Statistics and Probability in Civil Engineering (ICASP14)*, July 9-13, Dublin, Ireland, http://www.tara.tcd.ie/handle/2262/103420

3. Kwon, Y., and Song, J. (2023), System-Reliability-Based Disaster Resilience Analysis of Infrastructure Networks and Causality-Based Importance Measure, *ASCE-ASME Journal of Risk and Uncertainty in Engineering Systems, Part B: Mechanical Engineering, 9*(3), 031104, https://doi.org/10.1115/1.4062682

4. Kwon, Y., and Song, J. (2022), Evaluation of Relative Importance of Network Components by System-reliability-based Disaster Resilience Analysis, *Proceeding of the 8th International Symposium on Reliability Engineering and Rick Management (ISRERM 2022)*, September 4-7, Hannover, Germany, https://rpsonline.com.sg/proceedings/isrerm2022/html/MS-16-095.xml

Conferences

1. Kwon, Y., and Song, J. (2023), Quantifying Causal Impacts of Transmission Line Failures on Disaster Resilience of Power Grids, *ASCE Infrastructure Innovation & Adaptation for a Sustainable & Resilient World 2023 Conference (ASCE INSPIRE 2023)*, November 16-18, Virginia, USA.
2. Kwon, Y., Seok, U., and Song, J. (2023), Quantification of Equipment-wise Risks Considering Plant Shutdowns by Seismic Hazards, *2023 Workshop & Conference of Earthquake Engineering Society of Korea*, September 13-15, Jeju, Korea.
3. Kwon, Y., and Song, J. (2023), Decision-support Measure for Resilient Infrastructure Networks Considering Operation Mechanism and Cascading Failure, *14th International Conference on Application of Statistics and Probability in Civil Engineering (ICASP14)*, July 9-13, Dublin, Ireland.
4. Kwon, Y., and Song, J. (2022), Decision-support Measures for Disaster Resilience of Infrastructure Networks, *International Symposium on Emerging Developments & Innovative Applications of Reliability Engineering & Risk Managements (EDIARR 2022)*, October 30-November 3, Taipei, Taiwan.
5. Kwon, Y., and Song, J. (2022), Component Importance Measure for Infrastructure Networks by System-Reliability-based Earthquake Resilience Analysis, *Korean Society of Civil Engineering 2022 Convention*, October 19-21, Busan, Korea.
6. Kwon, Y., and Song, J. (2022), Evaluation of Relative Importance of Network Components by System-reliability-based Disaster Resilience Analysis, *8th International Symposium on Reliability Engineering and Rick Management (ISRERM 2022)*, September 4-7, Hannover, Germany.
7. Kwon, Y., Mun, C., Song, J. (2022), Measuring Component Importance of Complex Systems Using System-Reliability-based Earthquake Resilience Analysis, *2022 Conference of the Earthquake Engineering Society of Korea*, September 22-23, Jeju, Korea.