

## CURRICULUM VITAE

### Jaehyun Choi, Professor, Ph.D.

**Office Address:**

School of Architectural Engineering  
Korea University of Technology and Education  
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### Education

- Ph.D.** Construction Management in Civil & Coastal Engineering, Aug 2006  
University of Florida, Gainesville, FL  
Dissertation: "Simulation of Disruption Events based on Process  
Production Analysis"
- M.E.** Construction Management in Civil & Coastal Engineering, May 2003  
University of Florida, Gainesville, FL  
Thesis: "Foundations of a Subcontractor Resource Management  
Ontology"
- B.E.** in Architectural Engineering, Chungbuk National University, Feb 1999  
Chungju, Korea

### Appointments

- Professor** Mar 2010-Present  
School of Architectural Engineering  
Korea University of Technology and Education

Undergraduate Courses

Construction Management / Construction  
Planning and Scheduling / Construction Estimating  
Construction Quality Management  
Creative Problem Solving for Engineering

Graduate Courses

International Construction Contracts and Claims  
Program Management  
Construction Project Management and Finance  
Research Methodology and Seminar

### Industry Experience

- Project Controls Manager** Aug 2009-Feb  
K-C PMC, Yongsan US Military Base Relocation Program, Seoul, Korea 2010  
Managing C4I project budget and scope (Approx. 4 Billion USD)
- Project Controls Specialist** Jun 2006-Jul  
Jacobs Engineering Group, Greenville, SC, 2007  
Coors Brewery Facility, Elkton, VA
- CH2M HILL, Inc., Spartanburg, SC Jul 2007-Jun 2009  
Roche Pharmaceutical Facility, Florence, SC

## **Government Funded Research Projects**

Development of Construction Inspection System by using Deep-learning based Object Detection Model, National Research Foundation of Korea, Mar 2021~Feb 2024

Improvement of US Military Construction Project Management Process in Korea. Ministry of Defense, Jul 2022~Jan 2023.

Development of an Intelligent Management Support System for Engineering Projects, Ministry of Trade, Industry and Energy, Jan 2017~Dec 2019

Development of an integrated project management technique for plant engineering collaboration, Ministry of Land and Transportation, Dec 2014~Nov 2019

Improvement of Construction Engineering and Management Policies and Regulations of Korea, Ministry of Land and Transportation, Jun 2016~Dec 2016

Developing a Smart Scheduling System for Industrial Plant Construction Projects, National Research Foundation of Korea, May 2012~Apr 2015

Optimizing Highway Construction Process for CO2 minimization, Ministry of Land and Transportation, Oct 2012~Mar 2015

Improvement of US Military Based Relocation Program in Korea, Ministry of Defense, Apr 2013~Oct 2013

PLM(Plant Lifecycle Management)-based Modular Engineering Technology, Ministry of Land and Transportation Apr 2012~Oct 2012

Development of a Standard Operation Procedure for the High-Tech Engineering Work Process, 2011.5~2012.2

An Economic Evaluation Based on Total Cost of Aggregate Base vs. Asphalt Base, funded by Florida Department of Transportation (State Grant No.: BC 354), May 2002~Apr 2004

Scalable Extraction of Enterprise Knowledge, National Science Foundation (Grant No.: CMS 0075407). Jan 2001~May 2002.

## **Publication (Most Recent)**

S. Jo, J.G., Lee, D. Kim, & Choi, J. (2023) "Development of a Framework for Auto-Generating Construction Inspection Tasks Activity." Korean Institute of Construction Engineering and Management, 24(1), 40-50

Choi, J. & Ha, M (2021). "Validation of project management information systems for industrial construction projects." Journal of Asian Architecture and Building Engineering, DOI: 10.1080/13467581.2021.1941999, SCI(E)

Im, H., Ha, M., Kim, D. & Choi, J. (2021). "Development of an Ontological Cost Estimating Knowledge Framework for EPC Projects." KSCE Journal of Civil Engineering, DOI

10.1007/s12205-021-1582-8, SCI(E)

Choi, J. (2020) "Road User Costs for Highway Construction Projects Involving a Lane Closure" *Sustainability*, 12(8), 1-12. SCI(E)

D. Kim, Ha, M. & Choi, J. (2020) "Development of Integrated Cost-Schedule Management Guidelines for EPC Modular Projects." *Korean Institute of Construction Engineering and Management*, 21(3), 76-84

Ryu, H., Lee, S., & Choi, J. (2020) "Evaluation of Capability for Practicing CM at Risk in Korea", *Korean Institute of Construction Engineering and Management*, 21(2), 79-87

Wang, H. & Choi, J. (2019) "Data-driven Interactive Planning Methodology for EPC Plant Projects", *Korean Institute of Construction Engineering and Management*, 20(2), 95-104

Choi, J. & Ryu, H. (2019) "Analysis of Occupational Injury and Feature Importance of Fall Accidents on the Construction Sites using Adaboost", *Architectural Institute of Korea* , 35(11), 155-162

Ha, M., Kim, D. Kim, H., & Choi, J. (2019) "Benchmarking Highway Maintenance Practices for Standardized Guideline Development", *Korean Institute of Construction Engineering and Management* , 20(6), 44-56

Kim, H., & Choi, J. (2019) "Development of a Conceptual Estimate Methodology for Plant Construction Projects", *Korean Institute of Construction Engineering and Management* , 20(1), 141-150

Choi, J., Jia X., & Jeong, W. (2018) "Optimizing the Construction Job Site Vehicle Scheduling Problem", *Sustainability*, 10, 1381, 1-13. SCI(E)

Wang, H., Park, J., & Choi, J. (2018) "Developing a Project Management Information System for Construction Claims", *Korean Institute of Construction Engineering and Management* , 19(4), 70-81

Kang, N. & Choi, J. (2017) " Construction Cost-Schedule Integration Management Methodology by using Progress Integration Unit" *Korean Institute of Construction Engineering and Management*, 18(3), 42-51.

Choi, J. & Ryu, H. (2016) "Multidimensional Representation of Educational Facility o LCC (Life Cycle Cost) Data" *Indian Journal of Science and Technology*, 8 (25), DOI: 10.17485/ijst/2015/v8i25/IPL0936. SCOPUS

Kim, J., Im, H., and Choi, J. (2016) "Forecasting the Effects of the Claims in the Korean Construction Industry" Korean Institute of Construction Engineering and Management, 17(5), 35-46.

Choi, J. & Ryu, H. (2015) "Statistical Analysis of Construction Productivity for Highway Pavement Operations" KSCE Journal of Civil Engineering, 19(5), 1193-1202. SCI(E)

Kang, N., Kim H., and Choi, J. (2015) "Effects of the contingent liabilities caused by project financing on financial status of the Korean construction firms", Korean Institute of Construction Engineering and Management, 16(6), 84-92.

Im, H. and Choi, J. (2015) "Identifying the key financial ratios to evaluate Korean construction firms' soundness", Architectural Institute of Korea, 31(7), 117-126.

Kang N., Song H., Kim H., and Choi, J. (2015) "Information system for managing cost reimbursable construction projects", Journal of the Korea Institute of Building Construction, 15(2), 237-247

Choi, J., Ryu, H. (2015) "Application and Effects Analysis of Building Information Modeling for Construction Management of Construction Field", Journal of the Korea Institute of Building Construction, 15(1), 115-121

Choi, J., Kim J., and Son, J. (2015) "Developing a Project and Program Management Capability Assessment System for the Korean Construction Management Firms", Korean Institute of Construction Engineering and Management, 16(1), 3-12.

Choi, J. & Song, H. (2014) "Evaluation of the modular method for industrial plant construction projects." International Journal of Construction Management, 14(3), 171-180, SCI(E)

Song, H. and Choi, J., (2014) "A Methodology for an Effective Utilization of Construction Equipment for Highway Construction Projects)", Korean Institute of Construction Engineering and Management , 15(6), 26-35

Lee, K. and Choi, J., (2013) "Project Risk Assessment Through Construction Sequence Analyses for Industrial Plant Construction Projects, Korean Institute of Construction Engineering and Management , 14(4), 141-151

Choi, J. and Lee K., (2013), "An Automated Progress Tracking System for Industrial Facility Construction Projects", Advanced Materials Research, Advanced Materials Research, 671674 (2013), 2973~2977

Choi, J. and Song L., (2013), "Optimized Construction Equipment Allocation Method for Highway Construction Projects, Advanced Materials Research, 671-674 (2013), 31203125

Choi, J. (2012) "A Knowledge Representation Model for Formalizing Subcontractors' Scheduling Process." *Journal of Asian Architecture and Building Engineering*, 11(2), 275-282. SCI(E)

Lee, K. and Choi, J., (2012) "An Alternative Method of Estimating Piping Construction Projects", *Applied Mechanics and Materials*, 166-169 (2012), 1131~1136

Kim, J., Choi, J., & Lee, S. (2011). "Factors affecting the Losses of Domestic Construction Productivity and Strategies for Avoiding Them." *Architectural Institute of Korea*, 27(2), 113-124.

Choi, J, Son, J., & Lee, S. (2011) "Development of a Stochastic Simulation Model for Estimating Construction Time Durations." *International Information Institute*, 14(7), 2207-2218. SCI(E)

Lee, S., Oh, S., Choi, J., Hong, M., (2011) "Developing an Algorithm for Measuring the Quantity of Installed Euro Forms." *International Information Institute*, 14(7), 2219-2228. SCI(E)

Choi, J. (2011). "Quantifying the Effects of Interference for an Alternative Method of Construction Productivity Estimation." *Korea Society of Civil Engineers*, 15(5), 761-769. SCI(E)

Choi, C., Najafi, F. T., Choi, J., & Kim, J. (2007). "Route Choice Characteristics of Truck Operators in Korea." *Journal of Institute of Transportation Engineers*. 77 (5). SCI(E)

Choi, J., & Minchin, E. R. (2006). "Work Flow Management and Productivity Control for Asphalt Pavement Operation." *Canadian Journal of Civil Engineering*, 33(8), 1039-1049, ISSN: 1208-6029. SCI(E)

Choi, J., Minchin, E. R., & Herbsman, Z. J. (2006). "A Decision Making Model for Base Material Options." *Journal of Transportation Research Board, Transportation Research Record No. 1974*, Transportation Research Board, Washington DC, 63-69. SCI(E)

### **Publication (Books)**

*Construction Planning and Scheduling Construction* (2019), Korea Institute of Construction Engineering and Management, CIR, ISBN: 979-11-5610-710-1

"*Building Construction Management*" (2015), The Korea Institute of Construction, Kimoondang, ISBN:978-89-6225-659-8.

"*Program Management*" (2011) (Chuck Thomsen, FAIA, FCMAA), Spacetime, ISBN:978-89-5592.

### **Licensure**

Engineering Intern, Korea

Mar 1998- Present

**Affiliations**

KICEM (Korea Institute of Construction Engineering and Management)	Mar 2010- Present
AIK (Architectural Institute of Korea)	Mar 2010- Present
KSCE (Korean Society of Civil Engineers)	Mar 2010- Present
KIBC (Korea Institute of Building Construction)	Mar 2010- Present

**Honors and Awards**

Achievement Award by the Korean Ministry of Land and Transportation	Dec 2016
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