

Juyeong Choi

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PROFESSIONAL EXPERIENCE

Assistant Professor, Civil & Environmental Eng. Jul. 2018 ~ Present
FAMU-FSU College of Engineering, Tallahassee, FL

EDUCATION

Doctor of Philosophy, Civil Eng. (Construction Eng. and Manage.) May 2018
Purdue University, West Lafayette, IN

Master of Science, Civil Eng. (Construction Eng. and Manage.) Aug. 2015
Purdue University, West Lafayette, IN

Bachelor of Science, Architectural Eng. (Construction Eng. and Manage.) Jun. 2013
University of Seoul, Seoul, South Korea

AWARDS AND HONORS

The Enabling the Next Generation of Hazards and Disasters Researchers Fellowship, NSF 2019
First Year Assistant Professor Award, Florida State University 2019
Outstanding Reviewer, ASCE J. Manage. Eng. 2018
Emerald Literati Award: Highly Commended Paper, Emerald Publishing 2018
Purdue Graduate Student Government Travel Award, Purdue University 2018
Purdue Graduate Student Government Travel Award, Purdue University 2017
Engineering Conference Travel Award, Purdue University 2017
Zimmerman Award for Innovation and Outreach, Purdue University 2016
Best Peer Reviewed Paper Honorable Mention, ASCE J. Manage. Eng. 2016
Excellence Award at Engineering Design Project Competition, University of Seoul 2011
KOSCA Award at Concrete Skills Competition, Korea Specialty Contractors Association 2011
Second Place Award at Design Competition for Membrane Structure, University of Seoul 2011

PUBLICATIONS AND SCHOLARLY WORKS

Peer-Reviewed Journal Papers

1. Mahdavi A., Naderpajouh, N., **Choi, J.**, Ketabi, A. B., Hastak, M., and Cui, Q. (2019) "Dynamics of Project Selection and Growth in Project Based Organizations." *International Journal of Construction Management*, Taylor & Francis, 0(0), 1–18.
2. **Choi, J.**, Naderpajouh, N., Yu, D. J., and Hastak, M. (2019) "Capacity Building for an Infrastructure System in Case of Disaster Using the System's Associated Social and Technical Components." *Journal of Management in Engineering*, 35(4), 04019013.
3. **Choi, J.**, Deshmukh, A., and Hastak, M. (2019) "Seven layers of critical infrastructure to improve community resilience to natural disasters." *Journal of Infrastructure Systems*, 25(2), 04019012.

4. Zamenian, H., **Choi, J.**, Sadeghi, S. A., and Naderpajouh, N. (2017). "Systematic approach for asset management of urban water pipeline infrastructure systems." *Built Environment Project and Asset Management*, 7(5), 506–517.
5. **Choi, J.**, Deshmukh, A., Naderpajouh, N., and Hastak, M. (2017). "Dynamic relationship between functional stress and strain capacity of post-disaster infrastructure." *Natural Hazards*, 87(2), 817–841.
6. **Choi, J.**, Deshmukh, A., and Hastak, M. (2016). "Increase in stress on infrastructure facilities due to natural disasters." *International Journal of Urban Sciences*, 20(1), 77–89.
7. Naderpajouh, N., **Choi, J.**, and Hastak, M. (2016). "Exploratory framework for application of analytics in the construction industry." *Journal of Management in Engineering*, 32(2), 4015047.
8. **Choi, J.-Y.**, Kim, H.-B., Son, M.-J., and Hyun, C.-T. (2015). "Application of real option based life cycle cost analysis for reflecting operational flexibility in solar heating systems." *Korean Journal of Construction Engineering and Management*, 16(4), 70–79.

Conference Papers

1. **Choi, J.**, Park, C., Yesiller, N., and Abichou, T. (2020). "A Spatiotemporal Framework for the Resilience of a Post-Disaster Waste Management System." *Proceedings of ASCE Construction Research Congress 2020*, Reston, VA, March 8–March 10.
2. **Choi, J.**, Sanusi, F., and Hastak, M. (2019). "Robust Reserve Capacity Planning for Post-Disaster Health-care Facilities through Intelligent Planning Units (IPUs)." *Proceedings of CSCE International Construction Specialty Conference*, Montreal, QC, Canada, June 12–June 15.
3. **Choi, J.** and Hastak, M. (2018). "Robustness Enhancement of Healthcare Infrastructure through Intelligent Planning Units (IPUs)." *Proceeding of ASCE Construction Research Congress 2018*, Reston, VA, April 2–April 4, 202–212.
4. **Choi, J.** and Hastak, M. (2017). "Assessment of strain capacities of post-disaster critical infrastructure with respect to functional and structural stress." *Proceedings of CSCE International Construction Specialty Conference*, Montreal, QC, Canada, May 31–June 3.
5. Naderpajouh, N., **Choi, J.**, and Hastak, M. (2016). "State of the art of construction analytics." *Proceeding of ASCE Construction Research Congress 2016*, Reston, VA, May 31–June 2 970–979.
6. **Choi, J.**, Kang, K., and Hastak, M. (2016). "Infrastructure supply chain robustness to disasters by strain capacity design of critical infrastructure." *Proceeding of the International Institute for Infrastructure Resilience and Reconstruction (I3R2)*, Peradeniya, Sri Lanka, August 5–7.

Poster/Podium Presentations

1. **Choi, J.** and Sanusi, F. (2019). "Dynamic Relationships between Primary and Secondary Infrastructure for the Operation of Hurricane Shelters." Podium Presentation at the US-Korean Conference (UKC) 2019, Chicago, IL, August 14-August 17.
2. **Choi, J.**, Naderpajouh, N., and Hastak, M. (2017). "Purdue Index for Construction (Pi-C): A Framework for Construction Analytics Based Decision Making." Poster Presentation at the 2017 CII Annual Conference, Orlando, FL, July 31– August 2.
3. **Choi, J.** and Hastak, M. (2016). "Stress–Strain Capacity Analysis for Robust Infrastructure Service during Post-Disaster Recovery." Poster Presentation at the National Symposium for Resilient Critical Infrastructure (NSRCI), Chicago, IL, August 16–18.
4. **Choi, J.**, Naderpajouh, N., and Hastak, M. (2016). "Customized Research Social Network for Construction Engineering and Management." Poster Presentation at the Young Generation and Professional Forum at US-Korea Conference, Dallas, TX, August 10–13.
5. **Choi, J.** and Hastak, M. (2016). "Functional Stress-Strain Analysis of the Dynamic Operational Condition of Critical Infrastructure during Post-Disaster Recovery." Poster Presentation at the Civil, Environmental, Architecture Symposium at US-Korea Conference, Dallas, TX, August 10–13.

- Hamed, Z., **Choi, J.**, Abraham, D., and Iseley, T. (2014). “Prioritize the Condition Assessment of Water Pipelines Network in City of Indianapolis.” Poster Presentation at NASTT’s 2014 No-Dig Show, Orlando, FL, April 13–17.

Invited speeches and seminars

- Choi, J.** (2018). “Stress–Strain Approach to Resilience Planning for Seven Interrelated Layers of Critical Infrastructure.” Research Seminar, Department of Civil and Environmental Engineering, FAMU-FSU College of Engineering, Tallahassee, FL.
- Choi, J.** (2018). “Stress–Strain Approach to Resilience Planning for Seven Interrelated Layers of Critical Infrastructure.” Research Seminar, Department of Civil, Environmental and Geodetic Engineering, Columbus, OH.
- Choi, J.** (2016). “Stress–Strain Capacity Analysis for the Impact of Natural Disasters on Coupled Infrastructure Facilities.” Invited Speaker at CE691 CEM Graduate Student Seminar. Instructor: Dr. Makarand Hastak, Purdue University, Oct. 14.
- Choi, J.** (2013). “Stress–Strain Capacity Analysis for Robust Infrastructure Service during Post-Disaster Recovery.” Student Speaker in the Student Competition: Lightening Talks at the National Symposium for Resilient Critical Infrastructure (NSRCI). Chicago, IL, Aug. 16.

TEACHING EXPERIENCE

Instructor

CGN 5930: Infrastructure System-of-Systems Analysis and Planning	Fall 2019
CGN 5905: Management and Planning of Hurricane Shelters (Directed Individual Study)	Summer 2019
CGN 5905: Infrastructure Planning of Smart Cities (Directed Individual Study)	Fall 2018

Teaching assistant

CEM 32400: Human Resource Management in Construction, Purdue University	Fall 2017
CEM 38000: Construction Engineering Professional Development II	Fall 2017
CEM 48500: Legal Aspects of Construction Engineering	Spring 2017
CE 52400: Legal Aspects in Engineering Practice	Spring 2017

LEADERSHIP INITIATIVES

- Guest Editor** Aug. 2018–Present
Journal of Management in Engineering, American Society of Civil Engineers
 - Propose a special issue that aims to document interdisciplinary contributions in the field of resilience, with a focus on the engineering managerial issues at the interface of the built environment with social and ecological systems.
 - Encourage contributions to a special issue of the journal, work with the journal’s editor, and oversee the overall production of the issue.
- Professional Development Committee Co-Chair** Aug. 2017–May 2018
Civil Engineering Graduate Student Advisory Council, Purdue University
 - Organize seminar programs and workshops to help students develop their professional skills and prepare for their future careers
 - Search for emerging leaders who graduated from Purdue Civil Engineering within the last five years and invite them to the campus to share their success stories with students
- President** Aug. 2017–May 2018
Purdue Korean Civil Engineering Student Association, Purdue University
 - Manage communication and organize social events within the Korean Civil Engineering Student Association

- Serve as the organization’s representative for communicating with other student organizations

CONTRACTS AND GRANTS

Competitive Funding Acquired for Research & Development

1. Significance of Secondary Infrastructure for Shelter Management in the Aftermath of Hurricane Michael, Dec. 2018–Feb.2019, Natural Hazards Center, \$2,000 (**J. Choi**, PI, E. Ozguven, co-PI, and T. Abichou, co-PI)
2. Workshop on Post-Disaster Materials and Environmental Management, National Science Foundation, Mar. 2019–July 2019, National Science Foundation, \$47,946 (S. Derrible, PI, N. Yesiller, Co-PI, and **J. Choi**, co-PI)
3. Capacity building planning and management for a sustainable and resilient health-care facility, the First Year Assistant Professor (FYAP) award program, Council on Research and Creativity, Florida State University, \$20,000 (**J. Choi**, PI)
4. Florida Index for Transportation: A System of Systems Approach to Understanding the Changing Nature of Transportation, Aug. 2019–Jan. 2021, Florida Department of Transportation, \$149,992.15 (**J. Choi**, PI, Y. Sun, co-PI, R. Moses, co-PI, D. Smith, co-PI, M. Horner, co-PI, and J. Crute, co-PI)
5. EAGER: Sustainable Material Management Extreme Events Reconnaissance (SUMMEER) Organization, Jan. 2020–Dec. 2021, National Science Foundation, \$299,999 (**J. Choi**, PI, N. Yesiller, co-PI, and S. Derrible, co-PI) [Under Review]

Travel grants

6. **Conference Travel Grant (2018)**, Purdue Graduate Student Government (Awarded \$250).
7. **Conference Travel Grant (2017)**, Purdue College of Engineering (Awarded \$500).
8. **Conference Travel Grant (2017)**, Purdue Graduate Student Government (Awarded \$250).

PROFESSIONAL SERVICE

Reviewer for peer-reviewed journals

1. **Reviewer**, International Journal of Urban Sciences (Taylor and Francis Group)
2. **Reviewer**, International Journal of Construction Management (Taylor and Francis Group)
3. **Reviewer**, IEEE Transactions on Engineering Management
4. **Reviewer**, Journal of Management in Engineering (American Society of Civil Engineers)
5. **Reviewer**, Journal of Infrastructure Systems (American Society of Civil Engineers)
6. **Reviewer**, Journal of Water Resources Planning and Mngt. (American Society of Civil Engineers)
7. **Reviewer**, Euro-Mediterranean Journal for Environmental Integration (Springer Nature)
8. **Reviewer**, Built Environment Project and Asset Management (Springer Nature)

Editor for peer-reviewed journals

1. **Guest editor**, ASCE Journal of Management in Engineering, Special Collection: Management of Resilience in Civil Infrastructure Systems: An Interdisciplinary Approach, Aug. 2018–Present.

Membership in professional organizations

1. **Member**, American Society of Civil Engineers
2. **Affiliate**, Institute for Successful Longevity, Florida State University
3. **Member**, Korean-American Scientists and Engineers Association

Thesis and dissertation committee member

1. Fehintola Sanusi, Ph.D. (Primary Advisor) In progress

2. Navid Nickdoost, Ph.D. (Primary Advisor) In progress
3. Oluwatosin P. Theophilus, Ph.D. (Committee Member) In progress

Community outreach

4. **Judge**, the Swift Creek Science Fair, Swift Creek Middle School, Tallahassee, FL Nov. 2018

Conference Session Chairs

1. 7th CSCE International Construction Specialty Conference, Disaster Management Session
Laval, Québec, Canada 2019