

YOUNGSIK CHOI

youngsik-choi.github.io

(Updated on Mar. 15, 2023)

EDUCATION

PhD	Texas A&M University , Mechanical Engineering - <i>Building Energy & HVAC</i> Advisor: Prof. Zheng O'Neill	May. 2022 –
MS	Seoul National University , Architectural Engineering - <i>Building Simulation</i> Advisor: Prof. Cheol-Soo Park Thesis: 'Stochastic Setpoint Temperature Learning for Occupant Behavior-based Control'	Mar. 2020 – Feb. 2022
BS	Seoul National University , Architectural Engineering 2-year absence to fulfill mandatory military service (Aug. 2016 – Jul. 2018)	Mar. 2014 – Feb. 2020
	Peking University , College of Engineering International Exchange Student (Summer session offered in English)	Jul. 2016

FIELDS OF INTEREST

Building Simulation, EnergyPlus Modeling, Building HVAC Control, Machine Learning, Occupant Behavior

EXPERIENCE

Research Assistant , Texas A&M University	May. 2022 –
Teaching Assistant , Seoul National University <ul style="list-style-type: none">400.418 Creative Engineering Design	Sep. 2020 – Feb. 2021

HONORS AND AWARDS

AI for IoT Information (AI3) Competition Phase Winner Phase 1 winner, Won \$10,000 as a team	Feb 2023
Emil Buehler Aerodynamic Analo Fellowship Fellowship, J. Mike Walker '66 Department of Mechanical Engineering, Texas A&M University	Aug. 14, 2022
Outstanding Paper Award (co-author) The 2022 Spring Annual Conference of the Architectural Institute of Korea	Apr. 29, 2022
Poster Session Award Winner (runner-up) The 2020 Winter Simulation Conference	Dec. 14, 2020
Organization Scholarship Full tuition, The Education and Research Foundation of Seoul National University	Sep. 2020 – Feb. 2022
Eminence Scholarship Full tuition, Seoul National University	Mar. 2016 – Feb. 2020

Certificate of Appreciation 2018 Key Resolve R.O.K & U.S. Joint Exercise (Took charge of translation)	May. 3, 2018
Organization Scholarship Full tuition, Moon-Ju Scholarship Foundation	Sep. 2015 – Feb. 2016
Merit-based Scholarship Partial tuition (40%), Seoul National University	Mar. 2015 – Aug. 2015

PROJECTS

High-performance Whole Building Design 3D-printed Carbon-Absorbing Funicular Structures (led by UPenn) DOE ARPA-E HESTIA, @ Texas A&M University	Jan. 2023 – Dec. 2024
Optimizing Supply Air Temperature Control for Dedicated Outdoor Air Systems ASHRAE 1865, @ Texas A&M University	May. 2022 – Mar. 2024
Development of BEMS Algorithms @ Seoul National University	Jun. 2020 – Feb. 2021
Development of Real-time Diagnosis Technology of Home Energy Usage and Smart & Autonomous Control/Management System @ Seoul National University	Jan. 2020 – Feb. 2022

CONFERENCE PROCEEDINGS

- Choi, Y., Shin, H.S., Cho, S., Ko, Y.D. and Park, C.S.**(2020), Predictive Uncertainty of Residential Building Energy Model, Proceedings of the 2020 Winter Simulation Conference (*Best Poster Award*)
- Choi, Y., Yi, D.H., Shin, H., Chu, H.G., Yoo, S. and Park, C.S.**(2020), Application of transfer learning to a simulation model for room air temperature, Proceeding of Annual Conference of the Architectural Institute of Korea, Vol. 40-2, pp. 386-387
- Choi, Y., Shin, H., Ko, Y., Cho, S. and Park, C.S.**(2020), Predictive uncertainty of energy simulation model using Deep Ensembles, Proceeding of Annual Conference of the Architectural Institute of Korea, Vol. 40-1, pp. 290-291

TECHNICAL SKILLS

Building Simulation: EnergyPlus modeling, Optimization, Machine learning

Programming: Python, Visual Basic, Arduino

OTHER EXPERIENCE

Hyundai Engineering and Construction • Worksite manager	Dec. 2018 – Feb. 2019
Republic of Korea Naval Mobile Construction Squadron • Construction engineer & translator (mandatory military service)	May. 2017 – Jul. 2018
Republic of Korea Naval Academy • Building facility manager (mandatory military service)	Oct. 2016 – Apr. 2017