

Jinmo Rhee

Address Carnegie Mellon University, Pittsburgh, PA, 15213.

Margaret Morrison Carnegie Hall, 402.

E-mail jinmor@cmu.edu

Website <http://www.jinmorhee.net>

Education

- 2019.09- Ph.D. Candidate in Computational Design
Carnegie Mellon University School of Architecture, Pittsburgh, PA
- 2019.05 M.S. in Computational Design
Carnegie Mellon University School of Architecture, Pittsburgh, PA
- 2016.02 B.Arch. *With Honors*
Korea National University of Arts, Seoul, Korea

Licenses & Certificates

- 2018 Mathematics for Machine Learning: Linear Algebra, Multivariate Calculus
Certificated by Imperial College London and offered through Coursera
- 2014-2016 Royal Institute of British Architects (RIBA) Part II
66 Portland Palace, London W1B 1AD, England
- 2009-2011 Royal Institute of British Architects (RIBA) Part I
66 Portland Palace, London W1B 1AD, England

Work Experiences

- 2020-2022 Generative Design for Apartment Building Layout Using Artificial Intelligence Techonology with DL E&C
- 2020- CRAIDL (Creative AI and Design Launchpad) Co-Founders, Carnegie Mellon University
- 2018 -2020 CoDeLab Manager, Carnegie Mellon University
- 2015-2019 Interior and Branding Architect
JinmoRhee, Seoul, Korea
Youlhyeon 300-42, Renovation
Cafe Ch.Gonggahm, Interior Design and Construciton
SN Boarding School, Renovation Visualization
Ann' Garden Florist Training Center, Interior Design
ACE Security, Brand design
Pooreun Community House, Design Proposal
- 2017.01 Project Architect
Urban Operation, Seoul, Korea
Art Complex Pyeongchang, Design Competition
- 2013-2017 Architectural Assistant

SSWA Architects, Seoul, Korea

Jang's house in Sindang-dong

Community Center Renovation: Gongreung 1, Wolgye 1, Siheung 5

Gasan Cultural Community Center

Folly Park of Geumcheon Park Renovation

Han River Architectural Imagination Exhibition

Hado Elderly Welfare Center, Design Competition (Winning)

House of Yeesang, Cultural Space in Memory of Poet Yeesang

2015.07 Project Manager, Architectural Assistant

ArchiWorkshop, Seoul, Korea

International Idea Competition of the Jamsil Sports Complex in Seoul

Eunpyeong Residence for the Disabled

Mapo Social Box Complex

2013.09 Architectural Assistant

MLNP Architects, Seoul, Korea

Kazakhstan Astana Tower

Teaching Experiences

2019.09- Studio Instructor / Graduate Instructor

Carnegie Mellon University School of Architecture, Pittsburgh, PA

Generative Systems for Design (68-702)

Introduction to Artificial Intelligence in Design Studies (48-770)

Scripting and Parametric Design (48-724)

Shaping Form at CMU Qatar (62-212)

Descriptive Geometry (62-175)

Fundamentals of Computational Design (62-275)

Architecture Design Studio: Foundation I (48-100)

2017-2019 Teaching Assistant

Carnegie Mellon University School of Architecture, Pittsburgh, PA

MSCD Pre-Thesis II (48-716)

Digital Skill Workshop 2018 and 2019 (48-689)

Digital Media I and II (48-120, 48-125, 62-122, 62-123)

Generative Modeling (48-783)

2013.04 Instructor of Rhinoceros3D and Grasshopper Workshop

Ein Architects & Engineering, 181, Yangjaechun-ro, Gangnam-gu, Seoul

2017.05 Guest Speaker for Intermediate Design Studio, "Digital to Physical"

Sookmyung Women's University, Seoul, Korea

2017.05 Guest Speaker for Advanced Design Studio, "Digital to Physical"

Korea National University, Seoul, Korea

Publications

Papers

- 2022 Jinmo Rhee, Pedro Veloso, Ardavan Bidgoli, Manuel Rodríguez, “Bubble2Floor: A pedagogical experience with deep learning for floor plan generation” in *27th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA)*, Australia (in process)
- 2021 Jinmo Rhee, Pedro Veloso, “Type Investigation in the Form of High-rise Building Using Deep Neural Network” in *19th International Conference of CAAD FUTURES*
- 2021 Jinmo Rhee, Pedro Veloso, Ramesh Krishnamurti, “Generative Design of Urban Fabrics Using Deep Learning” in *26th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA)*, Hongkong
- 2021 Jinmo Rhee, “Implementing Diffusion-Limited Aggregation Algorithm to Space Planning: A Design Experiment for Planning Underground Plaza Using Multi-agent System” in *Annual Conference of Architectural Institute of Korea*
- 2020 Jinmo Rhee, Pedro Veloso, Ramesh Krishnamurti, “Integrating Building Footprint Prediction and Building Massing” in *25th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA)*, Bangkok
- 2019 Jinmo Rhee, Jae-won Chung, "A Study of Automation of Housing Design Method Using Artificial Intelligence" in *Annual Conference of Architectural Institute of Korea* (Best Paper Awarded)
- 2019 Jinmo Rhee, Jae-won Chung, "Applicability of Artificial Intelligence in Apartment Complex Design" in *Annual Conference of Architectural Institute of Korea*
- 2019 Jinmo Rhee, Daniel Cardoso Llach, Ramesh Krishnamurti, "Context-rich Urban Analysis Using Machine Learning" in *Architecture in the Age of the 4th Industrial Revolution, eCAADe + SIGraDi*, Porto
- 2019 Pedro Veloso, Jinmo Rhee, Ramesh Krishnamurti, "Multi-agent Space Planning A literature review (2008-2017)" in *Hello Cultures, CAAD FUTURES*, Daejeon
- 2016 Jinmo Rhee, "A study of Similar Quality of Transition Space between Korean Apartment House and Traditional House" in *Collections of Excellent Graduation Paper* (Architectural Institute of Korea)
- 2011 Jiho Kim and Jinmo Rhee, "Computing Nature" in *Computing Aesthetics* v.18-no.4, Korea Information Processing Society

Articles

- 2021 Jinmo Rhee and Pedro Veloso, “In Pursuit of Deep Architectural Design” in *Rumoer #76 Generative Design*, Building Technology Study Association

Books

- 2021 Chapter 5. Urban Form Analysis through Morphometry and Machine Learning, *Artificial Intelligence in Urban Planning and Design*, Elsevier (Publishing)
- 2020 Jinmo Rhee, *Context-rich Urban Analysis Using Machine Learning*, Eliva Press
- 2020 Jinmo Rhee, *Artificial Intelligence for Architecture*, Wooribook
- 2020 Jinmo Rhee, *Architectural Artificial Intelligence*, Bookk

	2020	Jinmo Rhee and Eddy Man Kim, <i>Digital Media Series: Grasshopper</i> , Amazon Kindle Publisher
	2019	Jinmo Rhee and Eddy Man Kim, <i>Digital Media Series: Rhinoceros</i> , Amazon Kindle Publisher
	2016	Jinmo Rhee, <i>Rhino3D for Architecture</i> , Wooribook
Exhibition	2021	Video work, "Rethinking Urban Form: Morphological Understanding of City Space through Data", Video work, Austria Pavilion, Venice Biennale
	2019	Invited Artist, "Context-rich Urban Analysis and Generation Using Artificial Intelligence", The 2nd Special Exhibition for Korean Student in America by Korean Institute of Architects, Culture Station Seoul 284, Seoul, Korea
	2015	"Skydium and Jamsil Sports Complex Renovation Master Plan", Korea National University of Arts, Seoul, Korea
	2013	Invited Artist, "Aesthetics of the Nature" Munji Culture Center, Seoul
	2013	Entry Team Artist, "REAL DMZ 2013" Art Seonjae, Seoul
Invited Lectures	2021.11	Guest Speaker for Graduate Seminar: Situating Research, "Analysis of Urban Form Using Artificial Intelligence" School of Architecture, Carnegie Mellon University
	2017.05	Guest Speaker for Intermediate Design Studio, "Digital to Physical" Sookmyung Women's University, Seoul, Korea
	2017.05	Guest Speaker for Advanced Design Studio, "Digital to Physical" Korea National University, Seoul, Korea
Panels	2021.09	Discussion Panel for Exchange: AI in Design School of Architecture, Carnegie Mellon University

Academic Services

- 2021 Session Chair, Urban Analytics, The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA) Conference
- 2019 - Reviewer, The Association for Computer-Aided Architectural Design Research in Asia (CAADRIA) Conference
- 2019 - Reviewer, The Ibero-American Society of Digital Graphics (SIGRADI)
- 2021 Session Chair in Generative Design at *26th International Conference of the Association for Computer-Aided Architectural Design Research in Asia (CAADRIA)*, Hongkong

Patents

- 2021 Media Control Device and System (Provisional Patent)
- 2018 Diagrammatic Image Dataset Generation with Neural Networks (Provisional Patent)
- 2018 Custom Generative Systems with Adaptation Mechanisms (Provisional Patent)

Honours and Awards

Awards	2021	Grand Prize in Digital Architecture Competition 2021 (DA 2021), Architectural Institute of Korea and Korea Ministry of Land, Infrastructure and Transport
	2020	Young CAADRIA Award 2020, The Association for Computer-Aided Architectural Design Research in Asia
	2019	Grand Prize in Digital Architecture & Architecture Startup Competition 2019 (DAAS 2019), Architectural Institute of Korea and Korea Ministry of Land, Infrastructure and Transport
	2019	Best Paper in Annual Conference of Architectural Institute of Korea, 2019
	2016	Honorable Mentions in Collections of Excellent Graduation Paper, Architectural Institute of Korea
	2014	Honorable Mentions in Architectural Structure Design Competition, The Korean Structural Engineers Association
	2010	Honorable Mentions in Jeju Architecture Awards, Jeju City Government
	2010	Honorable Mentions in Idea Competition of the Public Facility on Kwanghwamoon Plaza, Seoul Design Foundation
	Scholarship	2021-2022
2018 -2020		Graduate Student Small Project Help (GuSH) funds, Carnegie Mellon University
2019		SoA + GSA International Conference Travel Grants, Carnegie Mellon University
2017-2019		Merit-based Admission Scholarship, MSCD, Carnegie Mellon University
2015		Kookmin Bank Academic Scholarship
2010-2015		Academic Performance Scholarship, Korea National University

Additional Information

Memberships	Associate Member, RIBA (Royal Institute of British Architects)
	Chartered Member, Architectural Institute of Korea
	Chartered Member, Society of Computational Design and Engineering
Languages	English(Proficient), Korean(Native)
Programming	Python, JavaScript, HTML, C#, CSS
Packages	Tensorflow, Pytorch, Keras, Scikit-Learn, Open CV
Software	Autodesk AutoCAD, Maya, 3ds Max, Revit
	McKneel Rhinoceros, Grasshopper
	Adobe Photoshop, Illustrator, InDesign, After Effects, Premiere Pro
	ABB RobotStudio, HAL