

Hyoungh-June Park, Ph.D./ M.S./ M.Arch.

Associate Professor of Architecture + Design & Computation
School of Architecture + University of Hawai'i at Manoa

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<http://i.design4futures.com/>

EDUCATION

- Apr., 2005 **Ph. D. in Architecture**, University of Michigan, Ann Arbor, MI
Dissertation: A Quantification of Proportionality Aesthetics in Morphological Design
- Jun., 1997 **Master of Science in Architecture Studies concentrated on Design & Computation**
Massachusetts Institute of Technology, Cambridge, MA
Thesis: Formalization, Data Abstraction, and Communication
Graduated with MIT Compton Award
- Apr., 1995 **Master of Architecture in Design**, University of Michigan, Ann Arbor, MI
Graduated with AIA Alumni Society Award for Distinguished Design

ADMINISTRATION EXPERIENCE

- Aug., 2019-
July, 2021 **Graduate Chair/ Director of Doctor of Architecture Program,**
School of Architecture, University of Hawai'i at Manoa
(NAAB granted a full eight year term of accreditation)
- Aug., 2017-
July, 2018
- Jan., 2014-
July, 2015 **Chair of Undergraduate Program,**
School of Architecture, University of Hawai'i at Manoa
(Bachelor of Environment Design, BENVD, officially installed and separated from
Doctor of Architecture Degree)
- 2011 - 2013 **Chair of NAAB Preparation Committee,**
School of Architecture, University of Hawai'i at Manoa
(NAAB granted a full six year term of accreditation)

TEACHING EXPERIENCE

- Aug., 2013 **Associate Professor, School of Architecture, Univ. of Hawai'i at Manoa (UHM)**
- present Teaches Core CAAD/ Design computing courses, Design Studios, Advanced
Elective Courses, and Doctoral Student Advising.
- Aug., 2006 **Assistant Professor, School of Architecture, Univ. of Hawai'i at Manoa (UHM)**
- Jul., 2013 (Tenure clock started from August, 2007 due to VISA issue – only permanent
resident allowed for tenure track at UHM until August 2007)

RESEARCH EXPERIENCE

- Sep., 2013
-Present **Director of Design Futures Lab. (<http://i.design4futures.com/>)**
Develops a multi-objective optimization for forecasting future changes in architecture
- Aug., 2018
-2019 **Principal Investigator, Waipahu Transit Oriented Dev. (TOD) Collaboration**
Develops "Design Futures in Digital Optimization – Dynamic Model" in order to provide proof of Concept Research, Planning and Design Study
- Sep., 2012
-2015 **Principal Investigator, Samkoo Hawaii, LLC.**
Investigates "The Optimization of a Smart Building Design and Its Management Solutions on View of Cost Effectiveness for Building Users" supported by Extramural Research Fund Award from Samkoo Hawaii, LLC.
- Sep., 2012
-2015 **Co-Principal Investigator, University of Hawai'i**
Explores "Development of a Futures Scenario Based Computational Model for Design Planning" supported by "Technology, Innovation, and Society (TIS)" Research Award , University of Hawaii
- Aug., 2009
- Aug., 2010 **Co-Investigator, University of Hawaii**
Developed & submitted **2011 Solar Decathlon Design Project** supported by US Department of Energy
- May, 2009
-May, 2010 **Co-Investigator, Graduate School of Culture Technology, KAIST**
Developed **VECSiD** (Visual Exploration of Cultural Study in Design) project for a comparative pattern study between Spain and Korea
- Dec., 2007
- May, 2009
Honolulu. **Principal Investigator, University of Hawai'i**
Develops a method of mass-customization in the design of 4,000 bus stops in supported by University of Hawai'i Research Relations Fund
- Dec., 2007
- May, 2009 **Principal Investigator, University of Hawai'i**
Explores Morphological Transformations of Body Movements with Genetic Algorithms in the design of a kinetic structure, supported by special fund for innovative scholarship and creative work from University Research Council at University of Hawaii

INDEXED & PEER REVIEWED PUBLICATIONS (Selected)

Zhou, Y., and **Park, H-J**, 2021. "SKETCH WITH ARTIFICIAL INTELLIGENCE (AI) - A Multimodal AI Approach for Conceptual Design," *Proceedings of the 26th CAADRIA Conference - Volume 1, The Chinese University of Hong Kong and Online, Hong Kong*, 29 March - 1 April 2021, pp. 201-210 (Indexing: SCOPUS, Web of Science, Comunicad)

Hashimoto, J., and **Park, H-J**, 2020. "Dance with Shadows: Capturing Tacit Knowledge with Smart Device Augmented Reality (SDAR)," *Proceedings of the 38th Education and Research in Computer Aided Architectural Design in Europe (eCAADe)*, Technische Universität Berlin, Berlin, pp.165-172 (Indexing: Web of Science, Comunicad)

Park, H-J, 2020. "Stylistic Reproductions of Mondrian's Composition with Red, Yellow, and Blue," *Proceedings of the 25th CAADRIA Conference*, Chulalongkorn University, Bangkok, Thailand, pp.133-142 (Indexing: SCOPUS, Web of Science, Comunicad)

Sandstrom, A., and **Park, H-J**, 2019. "Reflection in Action - An educational indie video game with design schema," *Proceedings of the 24th CAADRIA Conference - Volume 2, Victoria University of Wellington*, Wellington, New Zealand, 15-18 April 2019, pp. 303-312 (Indexing: SCOPUS, Web of Science, Comunicad)

Molina, K., and **Park, H-J**, 2018. "Sparking Off Walkability: A Computational Approach of Urban Network Analysis on Walkability in TOD Neighborhoods," *Proceedings of the 23rd International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2018)* / Tsinghua University, Beijing, China, pp. 391-400. (Indexing: Web of Science, Comunicad)

Park H-J, 2017. "Ratios from the Intersections of 10 + 1 Proportionalities," *Nexus Network Journal* **19**(1): 145 – 154. (Indexing: Social Science Citation Index Expanded–SCIE, SCOPUS, Arts & Humanities Citation Index –AHCI)

Park, H-J and Kassa, B., 2016. "A Tale of Two Cities: A Cost-driven Design Optimization in Addis Ababa & Honolulu," *Proceedings of the 21st International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2016)* / Melbourne, Australia. pp. 23-32 (Indexing: Web of Science, Comunicad)

Park, H-J, Yeh, R., and Ahlers, R. 2014. "A FUTURE SCENARIOS BASED COMPUTATIONAL FRAMEWORK FOR CAMPUS PLANNING," *Proceedings of the 19th International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2014)* / Kyoto, Japan. pp. 419-428 (Indexing: Web of Science, Comunicad)

Park, H-J, and Chen, J. 2014. "A COST-DRIVEN DESIGN OPTIMIZATION FRAMEWORK," *Proceedings of the 19th International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2014)* / Kyoto, Japan. pp. 957-958, (Indexing: Web of Science, Comunicad)

Lee J-H, **Park H-J**, Lim S, Kim S-J. 2013. "A formal approach to the study of the evolution and commonality of patterns," *Environment and Planning B: Planning and Design* 40 (1) pp. 23 – 42. (Indexing: Social Science Citation Index – SSCI)

Suh, Junghwa, and **Park H-J**. 2013. "Daylighting as a Synthesis Tool in the Early Stage of an Urban-Scape Design," *Proceedings of the 18th International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2013)* / Singapore, pp. 189-198. (Indexing: Web of Science, Comunicad)

Kato, K., and **Park, H-J**, 2012. "Toward a Performance-Oriented Architecture: An integrated design approach to a real-time responsive structure," *Proceedings of the 17th International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2012)*, Chennai, India, 25-28 April, 2012, pp. 59-68. (Indexing: Web of Science, Comunicad)

Park, H-J, and Burry, J. (eds) *International Journal of Architectural Computing (IJAC)* -"New Frontier," Volume 9, Number 1, March 2011. (Indexing: Emerging Sources Citation Index - ESCI, SCOPUS, EBSCO, Comunicad)

Park, H-J, "A Parametric Design Strategy for 4,000 Bus Stops," *CAAD Futures 2011 [Proceedings of the 14th Biennial International Conference on Computer Aided Architectural Design Futures]* Liege, Belgium, 6-8 July 2011, pp. 265-278. (Indexing: Comunicad)

Kim, J-W, and **Park, H-J**, "Design of a transformable disaster shelter with the computational implementation of Korean joinery system," *Proceedings of the 16th International Conference on Computer-Aided Architectural Design Research in Asia (CAADRIA 2011)*, Newcastle, Australia, 27-30 April, 2011, pp. 61-70. (Indexing: Web of Science, Comunicad)

Park, H.J. and Park, Y.K. "Revitalization of Environmental Sustainability hidden in Yeongyeongdang," *Journal of Asian Architecture and Building Engineering (JAABE)* Vol.9 No.2 November 2010, pp. 291-298. (Indexing: AHCI, SCIE, SCOPUS, Civil Engineering Abstracts - CEA, Compendex)

Park, H.-J. and J.-H. Lee. "Exploring Integrated Design Strategies for the Optimal Use of BIM," *Architectural Research* Vol.12, No.2, Architectural Institute of Korea, December, 2010, pp. 9-14. (Indexing: KSCI- Korean Science Citation Index)

Dave, B., Li, A. I., Gu, N., and **Park, H.-J.** (eds.): *New Frontiers: Proceedings of the 15th International Conference on Computer-Aided Architectural Design Research in Asia CAADRIA 2010*, Association for Research in Computer-Aided Architectural Research in Asia (CAADRIA), Hong Kong, 7-9 April. (Indexing: Web of Science, Comunicad)

Chellappa, J. and **Park, H.J.**, "BIM + HEALTHCARE: On the view of the renovation of a primary healthcare project," *CAADRIA 2010 [Proceedings of the 15th International Conference on Computer Aided Architectural Design Research in Asia]*, Hong Kong, 7-9 April, 2010, pp. 293-302. . (Indexing: Web of Science, Comunicad)

Lee, J.H., **Park, H.J.** , and et al, "A Formal Approach for the Interpretation of Cultural Content(s): On the View of a Korean Traditional Pattern, BOSANGWHAMUN," *CAADRIA 2010 [Proceedings of the 15th International Conference on Computer Aided Architectural Design Research in Asia]*, Hong Kong, 7-9 April, 2010, pp. 19-28. (Indexing: Web of Science, Comunicad)

Park, H.J. , "BODY + SPACE: Exploring Morphological Transformations of Body Movements in the Design of a Transformable Structure," *CAADRIA 2009 [Proceedings of the 14th International Conference on Computer Aided Architectural Design Research in Asia]* Yunlin (Taiwan) 22-25 April 2009, pp. 85-92. (Indexing: Web of Science, Comunicad)

Park, H.J., "Parametric Variations of Palladio's Villa Rotonda," *International Journal of Architectural Computing (IJAC)*, Issue 02, Volume 06, pp 145-169, 2008. (Indexing: Emerging Sources Citation Index - ESCI, SCOPUS, EBSCO, Comunicad)

Park, H.J. , "EVOLUTION + BIM: The Utilization of Building Information Modeling at an Early Design Stage," *CAADRIA 2008 [Proceedings of the 13th Conference on Computer Aided Architectural Design Research in Asia]* Chiang Mai (Thailand) 9- 12 April 2008, pp. 552-559. (Indexing: Web of Science, Comunicad)

Park, Y.K., and **Park, H.J.** , "The Study of Environmental Sustainability in the 19th Century Traditional Korean Residence, Yeongyeongdang," *CAADRIA 2008 [Proceedings of the 13th Conference on Computer Aided Architectural Design Research in Asia]* Chiang Mai (Thailand) 9-12 April 2008, pp. 229-235. (Indexing: Web of Science, Comunicad)

INVITED PUBLICATIONS

Park, H.J. Urban Design Institute of Korea
http://www.udik.or.kr/html/search_index.jsp?purl=webzine

"Biki". Urban Design Focus & Review: 2018.2 (Seoul, Korea)
 "Optimization". Urban Design Focus & Review: 2017.11 (Seoul, Korea)
 "Disaster Preparedness". Urban Design Focus & Review: 2017.9 (Seoul, Korea)
 "Artificial Intelligence". Urban Design Focus & Review: 2017.6 (Seoul, Korea)
 "Urban Resilience". Urban Design Focus & Review: 2017.4 (Seoul, Korea)
 "Mapping Futures(s)". Urban Design Focus & Review: 2017.2 (Seoul, Korea)
 "Liquidation I". Urban Design Focus & Review: 2016.12 (Seoul, Korea)
 "Technology & City". Urban Design Focus & Review: 2016.10 (Seoul, Korea)

INVITED PRESENTATION

2019 **Park, H.J.** "Design Optimization in Architecture," the School of Architecture and Urban Planning, Nanjing University, China, May 24, 2019

2016 **Park, H.J.** "Oh Ye of Little Faith," Seoul Biennale of Architecture and Urbanism: Mapping the New Commons, Seoul, Korea, May 6, 2016

2009 **Park, H.J.** and Garcia, A., "BODY+SPACE," Pecha Kucha Night 7.0 in Honolulu, December 11, 2009. The footage of the interview in the event can be found at <http://vimeo.com/8458375>.

2009 **Park, H.J.** VECSiD (Visual Exploration of Cultural Style in Design) Workshop held in KAIST, Korea from September 24 ~ 25 as a co-investigator, 2009

2008 **Park, H.J.** "Alberti's Dream - Current Trend in Digital Architecture," at University of Seoul, Seoul, Korea, March 26, 2008

2007 **Park, H.J.** Panel presentation for "Digital technology in architecture and its future" session in the 7th International Symposium on Asia Pacific Architecture at the University of Hawaii, June 13 ~16, 2007.

WORKSHOP PARTICIPATION

2009 Generative Component Workshop supported by Bentley System on October 2,

EDITOR, PAPER REVIEWER AND INTERNATIONAL CONERENCE COMMITTEE

2021 **Paper Reviewer, CAAD Futures 2021** at University of Southern California, USA
 2017-present **Paper Reviewer, CAADRIA** (Computer Aided Architectural Design Research in Asia), and **eCAADe** (Education and research in Computer Aided Architectural Design in Europe)

2017 **Paper Reviewer, Nexus Network Journal**, Birkhauser, Springer

2017 **Paper Reviewer, IASDR** (International Association of and Societies of Design Research) conference to be held on October 31 – November 3, 2017 at University of Cincinnati, Cincinnati, USA

2015 **Paper Reviewer, ASME (American Society of Mechanical Engineers) 2015** International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE), Boston, Massachusetts

- 2015 **Paper Reviewer, CAAD Futures 2015** at MASP, Sao Paulo, Brazil
- 2014 **Paper Reviewer, Journal of the American Planning Association (JAPA)**
- 2014 **Paper Reviewer, International Journal of Architectural Computing (IJAC)**
- 2013 **Scientific Committee** – International Paper Review Panel, **CAAD Futures 2013** at Tongji University, Shanghai, China
- 2012 **Paper Reviewer, PRACTICAL BIM 2012 Conference**, University of Southern California, Los Angeles
- 2011 **Paper Reviewer, IASDR** (International Association of and Societies of Design Research) conference to be held on October 31 – November 4, 2011 at TU Delft, Delft, Netherlands
- 2011 **Co-Editor, International Journal of Architectural Computing (IJAC)**
- 2009~Present **International Review Committee**, Computer Aided Architectural Design Research in Asia (CAADRIA)
- 2009 ~ 2010 **Co-Editor, The Proceedings of 15th International Conference on Computer Aided Architectural Design Research in Asia (CAADRIA)**, Hong Kong, April, 2010
- 2010 **Paper Reviewer, ASME (American Society of Mechanical Engineers) 2010 International Design Engineering Technical Conferences (IDETC) and Computers and Information in Engineering Conference (CIE)**, Montreal, April, 2010
- 2009 ~ 2010 **Paper Selection Committee**, Association for Computer Aided Design in Architecture (CAADRIA), 2009 ~ 2010
- 2009 **Paper Reviewer, IASDR** (International Association of and Societies of Design Research) conference held on 18-22 October, 2009 in Seoul, Korea
- 2008 **Paper Reviewer, Korean Studies, International journal of Center for Korean Studies** at University of Hawaii at Manoa.

GRANT, AWARDS, HONORS, AND PATENT

- 2020 **ACSA Collaborative Practice Award**, Waipahu TOD Collaboration team for "**best practices in school-based community outreach programs**"
- 2018 "**Waipahu Transit Oriented Development (TOD) Collaboration: Design Futures Optimization- Dynamic Model,**" (\$25,000) supported by **Office of Planning**, State of Hawaii
- 2014 **Board of Regent's Medal for Excellence in Teaching**, University of Hawaii
- 2014,16,18 **Travel Grant (\$4,200)**, University Research Council (URC), University of Hawaii at Manoa
- 2012-15 **Extramural Research Fund Award (\$30,000)**, Samkoo Hawaii (previously Sam

- House Development) LLC
- 2012-15 **"Technology, Innovation, and Society" Grant Award (\$20,000)**, University of Hawaii at Manoa, Honolulu
- 2012 **Elmer E. Botsai Professional Practice and Research Award (\$3,500)**, School of Architecture, University of Hawaii at Manoa, Honolulu
- 2012 **Best Paper Award** at 2012 CAADRIA Conference at Chennai, India (Co-authored with Kody Kato)
- 2012 **Patent Pending:** Provisional Patent Application 61/687,400 titled "System and Method for Performance-Oriented Architecture (Co-inventor with Kody Kato)
- 2009, 11 **Travel Grant (\$3,587)**, University Research Council (URC), University of Hawaii at Manoa, Honolulu
- 2007 **University of Hawai'i Research Relations Fund Award (\$4,914)**, University of Hawaii at Manoa, Honolulu
- 2007 **Special fund for innovative scholarship and creative work (\$3,301)**, University of Hawaii at Manoa, Honolulu

SERVICE

Department

- Aug., 2019-
July, 2021
Aug., 2017-
July, 2018 **Graduate Chair/ Director of Doctor of Architecture Program, School of Architecture, University of Hawai'i at Manoa**
(NAAB granted a full eight year term of accreditation)
- Jan., 2014-
July, 2015 **Chair of Undergraduate Program, School of Architecture, University of Hawai'i at Manoa**
(Bachelor of Environment Design, BENVD, officially installed and separated from Doctor of Architecture Degree)
- 2016 ~ 2017 **Chair of Architecture Faculty Senate, School of Architecture (SoA)**
Scholarship Committee – School of Architecture (SoA)
School Policy Committee – School of Architecture (SoA)
- 2013 ~ 2015
2016 ~ 2017 **Architecture Personal Committee (APC) – School of Architecture (SoA)**
- 2007 ~ 2017 **Portfolio Review Committee, School of Architecture (SoA)**
2015 ~ 2017 **Teaching Excellence Convener – School of Architecture (SoA)**
- 2011 - 2013 **Chair of NAAB Preparation Committee, School of Architecture, University of Hawai'i at Manoa**
- 2011 ~ 2013 **Secretary of Faculty Senate, School of Architecture (SoA)**
2010 ~ 2017 **NAAB Preparation Committee, School of Architecture (SoA)**
2011 ~ 2017 **Strategic Planning Committee, Lecture Committee, and SoA Journal Committee**

, School of Architecture (SoA)
 2010 ~ 2011 **SoA Journal Committee, All-School Charette Committee, and Portfolio Review Committee**, School of Architecture (SoA)
 2009 ~ 2010 **Curriculum Committee**, School of Architecture (SoA)
Global Programs Committee, School of Architecture (SoA)
 2007 ~ 2009 **Digital Design and Fabrication Committee**, School of Architecture (SoA)
Faculty Research Committee, School of Architecture (SoA)

University

2011 ~ 2013 **Manoa Faculty Senate** – University of Hawaii at Manoa (UHM)
 2016 ~ 2018
 2018~ 2019 **Committee on Academic Policy and Planning (CAPP)** at UHM
 2017~ 2018 **Committee on Professional Matter (CAB)** at UHM
 2016~ 2017 **Committee on Administration and Budget (CAB)** at UHM
Graduate Council at UHM
All Campus Council of Faculty Senate Chairs (ACCFSC) in UH System
 2012 ~ 2014 **Committee on Research and Graduate Education (CORGE)** at UHM
 2013 ~ Present **Member**, Center for Korean Study (CKS), University of Hawaii at Manoa (UHM)
 2008 ~ 2013 **Associate Member**, Center for Korean Study (CKS)

Community

2013~ 2015 **Affordable Housing Think Tank** – Senator Suzanne Chun Oakland, Hawaii

MEMBERSHIPS/ AFFILIATIONS

Associate Member of the American Institute of Architects (**Associate AIA**)
 Association of College Schools of Architecture (**ACSA**)
 Association of Computer-Aided Architectural Design Research in Asia (**CAADRIA**)
 Association of Education and research in Computer Aided Architectural Design in Europe (**eCAADe**)

SKILLS

Scripting: UNITY3D, Maya Embedded Language (MEL), GRASSHOPPER, PROCESSING, Action Script for Flash MX, Q Script for QuickTime, SMIL, XML, HTML, JavaScript
Building Information Modeling: Autodesk Revit 8~2020, Archicad 10
Programming Language: LISP, AutoLISP, Python, Java, C and C++, MATLAB
3D Modeling: Maya, Rhinoceros 3D, 3D MAX, AutoCAD 12 - 2010, Solidworks, Sketch-up, Form Z,
Interactive Multimedia: FinalCut Pro, Flash 3 ~ Flash MX 2004 Professional
Computation & Statistics : MATLAB, SPSS
Image Processing: Photoshop 5-CS6, Illustrator 8-CS6, Freehand 8-9, Quirkexpress
VRML: Inventor, OpenGL