

# Choongwan Koo

## List of Publications by Citations

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**Version:** 2024-04-27

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The third column is the impact factor (IF) of the journal, and the fourth column is the number of citations of the article.

86  
papers

2,357  
citations

29  
h-index

44  
g-index

91  
ext. papers

2,682  
ext. citations

7.7  
avg, IF

5.49  
L-index

#	Paper	IF	Citations
86	A review on sustainable construction management strategies for monitoring, diagnosing, and retrofitting the building's dynamic energy performance: Focused on the operation and maintenance phase. <i>Applied Energy</i> , <b>2015</b> , 155, 671-707	10.7	107
85	LCC and LCCO2 analysis of green roofs in elementary schools with energy saving measures. <i>Energy and Buildings</i> , <b>2012</b> , 45, 229-239	7	90
84	Development of a method for estimating the rooftop solar photovoltaic (PV) potential by analyzing the available rooftop area using Hillshade analysis. <i>Applied Energy</i> , <b>2017</b> , 194, 320-332	10.7	87
83	A GIS (geographic information system)-based optimization model for estimating the electricity generation of the rooftop PV (photovoltaic) system. <i>Energy</i> , <b>2014</b> , 65, 190-199	7.9	84
82	A CBR-based hybrid model for predicting a construction duration and cost based on project characteristics in multi-family housing projects. <i>Canadian Journal of Civil Engineering</i> , <b>2010</b> , 37, 739-752	1.3	78
81	A decision support model for reducing electric energy consumption in elementary school facilities. <i>Applied Energy</i> , <b>2012</b> , 95, 253-266	10.7	69
80	Development of a new energy efficiency rating system for existing residential buildings. <i>Energy Policy</i> , <b>2014</b> , 68, 218-231	7.2	68
79	An estimation model for the heating and cooling demand of a residential building with a different envelope design using the finite element method. <i>Applied Energy</i> , <b>2014</b> , 115, 205-215	10.7	65
78	An optimization model for selecting the optimal green systems by considering the thermal comfort and energy consumption. <i>Applied Energy</i> , <b>2016</b> , 169, 682-695	10.7	61
77	Framework for the analysis of the potential of the rooftop photovoltaic system to achieve the net-zero energy solar buildings. <i>Progress in Photovoltaics: Research and Applications</i> , <b>2014</b> , 22, 462-478	6.8	59
76	An economic and environmental assessment for selecting the optimum new renewable energy system for educational facility. <i>Renewable and Sustainable Energy Reviews</i> , <b>2014</b> , 29, 286-300	16.2	58
75	Estimation of the monthly average daily solar radiation using geographic information system and advanced case-based reasoning. <i>Environmental Science &amp; Technology</i> , <b>2013</b> , 47, 4829-39	10.3	57
74	A decision support model for improving a multi-family housing complex based on CO2 emission from gas energy consumption. <i>Building and Environment</i> , <b>2012</b> , 52, 142-151	6.5	52
73	An integrated multi-objective optimization model for determining the optimal solution in implementing the rooftop photovoltaic system. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 57, 822-837	16.2	51
72	An estimation model for determining the annual energy cost budget in educational facilities using SARIMA (seasonal autoregressive integrated moving average) and ANN (artificial neural network). <i>Energy</i> , <b>2014</b> , 71, 71-79	7.9	51
71	The development of a construction cost prediction model with improved prediction capacity using the advanced CBR approach. <i>Expert Systems With Applications</i> , <b>2011</b> , 38, 8597-8606	7.8	49
70	AN INTEGRATED MULTI-OBJECTIVE OPTIMIZATION MODEL FOR SOLVING THE CONSTRUCTION TIME-COST TRADE-OFF PROBLEM. <i>Journal of Civil Engineering and Management</i> , <b>2015</b> , 21, 323-333	3	47

69	Framework for the implementation of a new renewable energy system in an educational facility. <i>Applied Energy</i> , <b>2013</b> , 103, 539-551	10.7	46
68	Decision support model for establishing the optimal energy retrofit strategy for existing multi-family housing complexes. <i>Energy Policy</i> , <b>2014</b> , 66, 157-169	7.2	44
67	Development of the smart photovoltaic system blind and its impact on net-zero energy solar buildings using technical-economic-political analyses. <i>Energy</i> , <b>2017</b> , 124, 382-396	7.9	43
66	Framework for the mapping of the monthly average daily solar radiation using an advanced case-based reasoning and a geostatistical technique. <i>Environmental Science &amp; Technology</i> , <b>2014</b> , 48, 4604-12	10.3	43
65	Benchmarks as a tool for free allocation through comparison with similar projects: Focused on multi-family housing complex. <i>Applied Energy</i> , <b>2014</b> , 114, 663-675	10.7	40
64	A decision support model for improving a multi-family housing complex based on CO2 emission from electricity consumption. <i>Journal of Environmental Management</i> , <b>2012</b> , 112, 67-78	7.9	37
63	An optimized gene expression programming model for forecasting the national CO2 emissions in 2030 using the metaheuristic algorithms. <i>Applied Energy</i> , <b>2018</b> , 228, 808-820	10.7	36
62	Development of a dynamic operational rating system in energy performance certificates for existing buildings: Geostatistical approach and data-mining technique. <i>Applied Energy</i> , <b>2015</b> , 154, 254-270	10.7	35
61	A model for predicting the environmental impacts of educational facilities in the project planning phase. <i>Journal of Cleaner Production</i> , <b>2015</b> , 107, 538-549	10.3	33
60	An economic impact analysis of state solar incentives for improving financial performance of residential solar photovoltaic systems in the United States. <i>Renewable and Sustainable Energy Reviews</i> , <b>2016</b> , 58, 590-607	16.2	32
59	Establishment of an optimal occupant behavior considering the energy consumption and indoor environmental quality by region. <i>Applied Energy</i> , <b>2017</b> , 204, 1431-1443	10.7	31
58	An integrated multi-objective optimization model for establishing the low-carbon scenario 2020 to achieve the national carbon emissions reduction target for residential buildings. <i>Renewable and Sustainable Energy Reviews</i> , <b>2015</b> , 49, 410-425	16.2	31
57	Development of a prediction model for the cost saving potentials in implementing the building energy efficiency rating certification. <i>Applied Energy</i> , <b>2017</b> , 189, 257-270	10.7	29
56	Life cycle economic and environmental assessment for establishing the optimal implementation strategy of rooftop photovoltaic system in military facility. <i>Journal of Cleaner Production</i> , <b>2015</b> , 104, 315-327	10.3	29
55	Framework for establishing the optimal implementation strategy of a fuel-cell-based combined heat and power system: Focused on multi-family housing complex. <i>Applied Energy</i> , <b>2014</b> , 127, 11-24	10.7	29
54	Assessment of Seasonal Energy Efficiency Strategies of a Double Skin Façade in a Monsoon Climate Region. <i>Energies</i> , <b>2013</b> , 6, 4352-4376	3.1	28
53	An integrated psychological response score of the occupants based on their activities and the indoor environmental quality condition changes. <i>Building and Environment</i> , <b>2017</b> , 123, 66-77	6.5	26
52	A program-level management system for the life cycle environmental and economic assessment of complex building projects. <i>Environmental Impact Assessment Review</i> , <b>2015</b> , 54, 9-21	5.3	26

51	An estimation methodology for the dynamic operational rating of a new residential building using the advanced case-based reasoning and stochastic approaches. <i>Applied Energy</i> , <b>2015</b> , 150, 308-322	10.7	24
50	A finite element model for estimating the techno-economic performance of the building-integrated photovoltaic blind. <i>Applied Energy</i> , <b>2016</b> , 179, 211-227	10.7	24
49	Nonlinearity analysis of the shading effect on the technical-economic performance of the building-integrated photovoltaic blind. <i>Applied Energy</i> , <b>2017</b> , 194, 467-480	10.7	22
48	Integrated CO <sub>2</sub> , cost, and schedule management system for building construction projects using the earned value management theory. <i>Journal of Cleaner Production</i> , <b>2015</b> , 103, 275-285	10.3	22
47	A dynamic energy performance curve for evaluating the historical trends in the energy performance of existing buildings using a simplified case-based reasoning approach. <i>Energy and Buildings</i> , <b>2015</b> , 92, 338-350	7	21
46	Estimation of the Available Rooftop Area for Installing the Rooftop Solar Photovoltaic (PV) System by Analyzing the Building Shadow Using Hillshade Analysis. <i>Energy Procedia</i> , <b>2016</b> , 88, 408-413	2.3	20
45	An integrated multi-objective optimization model for determining the optimal solution in the solar thermal energy system. <i>Energy</i> , <b>2016</b> , 102, 416-426	7.9	20
44	Framework for the analysis of the low-carbon scenario 2020 to achieve the national carbon Emissions reduction target: Focused on educational facilities. <i>Energy Policy</i> , <b>2014</b> , 73, 356-367	7.2	20
43	An economic impact analysis of residential progressive electricity tariffs in implementing the building-integrated photovoltaic blind using an advanced finite element model. <i>Applied Energy</i> , <b>2017</b> , 202, 259-274	10.7	20
42	Advanced Strategies for Net-Zero Energy Building: Focused on the Early Phase and Usage Phase of a Building's Life Cycle. <i>Sustainability</i> , <b>2017</b> , 9, 2272	3.6	19
41	A Lagrangian finite element model for estimating the heating and cooling demand of a residential building with a different envelope design. <i>Applied Energy</i> , <b>2015</b> , 142, 66-79	10.7	18
40	Zoning-Based Vertical Transportation Optimization for Workers at Peak Time in a Skyscraper Construction. <i>Computer-Aided Civil and Infrastructure Engineering</i> , <b>2016</b> , 31, 826-845	8.4	17
39	A Preliminary Study on the 2-axis Hybrid Solar Tracking Method for the Smart Photovoltaic Blind. <i>Energy Procedia</i> , <b>2016</b> , 88, 484-490	2.3	17
38	A novel real-time method for HVAC system operation to improve indoor environmental quality in meeting rooms. <i>Building and Environment</i> , <b>2018</b> , 144, 365-385	6.5	17
37	Spatial perception of ceiling height and type variation in immersive virtual environments. <i>Building and Environment</i> , <b>2019</b> , 163, 106285	6.5	16
36	Establishment of a base price for the Solar Renewable Energy Credit (SREC) from the perspective of residents and state governments in the United States. <i>Renewable and Sustainable Energy Reviews</i> , <b>2017</b> , 75, 1066-1080	16.2	16
35	An Economic and Environmental Assessment Model for Selecting the Optimal Implementation Strategy of Fuel Cell Systems—A Focus on Building Energy Policy. <i>Energies</i> , <b>2014</b> , 7, 5129-5150	3.1	16
34	Improvements of the operational rating system for existing residential buildings. <i>Applied Energy</i> , <b>2017</b> , 193, 112-124	10.7	15

33	A BREAK-EVEN ANALYSIS AND IMPACT ANALYSIS OF RESIDENTIAL SOLAR PHOTOVOLTAIC SYSTEMS CONSIDERING STATE SOLAR INCENTIVES. <i>Technological and Economic Development of Economy</i> , <b>2018</b> , 24, 358-382	4.7	14
32	An integrated model for estimating the techno-economic performance of the distributed solar generation system on building façades: Focused on energy demand and supply. <i>Applied Energy</i> , <b>2018</b> , 228, 1071-1090	10.7	14
31	A novel estimation approach for the solar radiation potential with its complex spatial pattern via machine-learning techniques. <i>Renewable Energy</i> , <b>2019</b> , 133, 575-592	8.1	14
30	A novel operation approach for the energy efficiency improvement of the HVAC system in office spaces through real-time big data analytics. <i>Renewable and Sustainable Energy Reviews</i> , <b>2020</b> , 127, 109885	16.2	13
29	The optimal photovoltaic system implementation strategy to achieve the national carbon emissions reduction target in 2030: Focused on educational facilities. <i>Energy and Buildings</i> , <b>2016</b> , 119, 101-110	7	13
28	Framework for Approaching the Minimum CV(RMSE) using Energy Simulation and Optimization Tool. <i>Energy Procedia</i> , <b>2016</b> , 88, 265-270	2.3	13
27	Development of an integrated multi-objective optimization model for determining the optimal solar incentive design. <i>International Journal of Energy Research</i> , <b>2017</b> , 41, 1749-1766	4.5	12
26	Development of the life-cycle economic and environmental assessment model for establishing the optimal implementation strategy of the rooftop photovoltaic system. <i>Technological and Economic Development of Economy</i> , <b>2015</b> , 24, 27-47	4.7	12
25	An Environmental and Economic Assessment for Selecting the Optimal Ground Heat Exchanger by Considering the Entering Water Temperature. <i>Energies</i> , <b>2015</b> , 8, 7752-7776	3.1	12
24	Theory of an Intelligent Planning Unit for the Complex Built Environment. <i>Journal of Management in Engineering - ASCE</i> , <b>2017</b> , 33, 04016046	5.3	11
23	Improving the prediction performance of the finite element model for estimating the technical performance of the distributed generation of solar power system in a building façade. <i>Applied Energy</i> , <b>2018</b> , 215, 41-53	10.7	10
22	A model for determining the optimal lease payment in the solar lease business for residences and third-party companies [With focus on the region and on multi-family housing complexes. <i>Renewable and Sustainable Energy Reviews</i> , <b>2018</b> , 82, 824-836	16.2	10
21	Infrastructure asset management system for bridge projects in South Korea. <i>KSCE Journal of Civil Engineering</i> , <b>2013</b> , 17, 1551-1561	1.9	10
20	A real-time optimal control strategy for multi-zone VAV air-conditioning systems adopting a multi-agent based distributed optimization method. <i>Applied Energy</i> , <b>2021</b> , 287, 116605	10.7	10
19	A Prototype Design and Development of the Smart Photovoltaic System Blind Considering the Photovoltaic Panel, Tracking System, and Monitoring System. <i>Applied Sciences (Switzerland)</i> , <b>2017</b> , 7, 1077	2.6	9
18	A simplified estimation model for determining the optimal rooftop photovoltaic system for gable roofs. <i>Energy and Buildings</i> , <b>2017</b> , 151, 320-331	7	9
17	Multi-criteria decision support system of the photovoltaic and solar thermal energy systems using the multi-objective optimization algorithm. <i>Science of the Total Environment</i> , <b>2019</b> , 659, 1100-1114	10.2	9
16	Framework for the validation of simulation-based productivity analysis: focused on curtain wall construction process. <i>Journal of Civil Engineering and Management</i> , <b>2016</b> , 23, 163-172	3	8

15	A decision support system for determining the optimal size of a new expressway service area: Focused on the profitability. <i>Decision Support Systems</i> , <b>2014</b> , 67, 9-20	5.6	8
14	Estimating the Loss Ratio of Solar Photovoltaic Electricity Generation through Stochastic Analysis. <i>Journal of Construction Engineering and Project Management</i> , <b>2013</b> , 3, 23-34		8
13	DEVELOPMENT OF A DYNAMIC INCENTIVE AND PENALTY PROGRAM FOR IMPROVING THE ENERGY PERFORMANCE OF EXISTING BUILDINGS. <i>Technological and Economic Development of Economy</i> , <b>2018</b> , 24, 295-317	4.7	7
12	A Preliminary Study for Determining Photovoltaic Panel for a Smart Photovoltaic Blind Considering Usability and Constructability Issues. <i>Energy Procedia</i> , <b>2016</b> , 88, 363-367	2.3	7
11	Toward productivity in future construction: mapping knowledge and finding insights for achieving successful offsite construction projects. <i>Journal of Computational Design and Engineering</i> , <b>2021</b> , 8, 1-14	4.6	6
10	Embodied and Operational CO2 Emissions of the Elementary School Buildings in Different Climate Zones. <i>KSCE Journal of Civil Engineering</i> , <b>2020</b> , 24, 1037-1048	1.9	5
9	Development of the hybrid model for estimating the undisturbed ground temperature using the finite element method and geostatistical technique. <i>Energy and Buildings</i> , <b>2017</b> , 152, 162-174	7	4
8	DEVELOPMENT OF THE MONTHLY AVERAGE DAILY SOLAR RADIATION MAP USING A-CBR, FEM, AND KRIGING METHOD. <i>Technological and Economic Development of Economy</i> , <b>2018</b> , 24, 489-512	4.7	3
7	Mapping the Rescue Equipment Mobilization Potential: Decision Support Tool for Emergency Management. <i>Journal of Management in Engineering - ASCE</i> , <b>2017</b> , 33, 04017037	5.3	3
6	Performance Optimization Studies on Heating, Cooling and Lighting Energy Systems of Buildings during the Design Stage: A Review. <i>Sustainability</i> , <b>2021</b> , 13, 9815	3.6	3
5	A Techno-Economic Feasibility Analysis of Mono-Si and Poly-Si Photovoltaic Systems in the Rooftop Area of Commercial Building under the Feed-In Tariff Scheme. <i>Sustainability</i> , <b>2021</b> , 13, 4709	3.6	1
4	A Conceptual Framework for an Intelligent Planning Unit for the Complex Built Environment. <i>Procedia Engineering</i> , <b>2016</b> , 161, 269-274		1
3	A scalable platform for investigating the space-specific features of the temporal energy usage pattern and saving potential with real-time bigdata. <i>Journal of Cleaner Production</i> , <b>2021</b> , 314, 128028	10.3	1
2	Integrated approach to evaluating the impact of feed-in tariffs on the life cycle economic performance of photovoltaic systems in China: A case study of educational facilities. <i>Energy</i> , <b>2022</b> , 254, 124302	7.9	1
1	Energy Efficiency in the Building Sector: The Effect of Residential Progressive Electricity Tariffs on the Economic Performance of the Building-Integrated Photovoltaic Blind. <i>Green Energy and Technology</i> , <b>2018</b> , 793-808	0.6	