Choongwan Koo

List of Publications by Year in Descending Order

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	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. *Energy*, **2022**, 254, 124302	7.9	1
85	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. *Sustainability*, **2021**, 13, 4709	3.6	1
84	A real-time optimal control strategy for multi-zone VAV air-conditioning systems adopting a multi-agent based distributed optimization method. *Applied Energy*, **2021**, 287, 116605	10.7	10
83	Toward productivity in future construction: mapping knowledge and finding insights for achieving successful offsite construction projects. *Journal of Computational Design and Engineering*, **2021**, 8, 1-14	4.6	6
82	Performance Optimization Studies on Heating, Cooling and Lighting Energy Systems of Buildings during the Design Stage: A Review. *Sustainability*, **2021**, 13, 9815	3.6	3
81	A scalable platform for investigating the space-specific features of the temporal energy usage pattern and saving potential with real-time bigdata. *Journal of Cleaner Production*, **2021**, 314, 128028	10.3	1
80	A novel operation approach for the energy efficiency improvement of the HVAC system in office spaces through real-time big data analytics. *Renewable and Sustainable Energy Reviews*, **2020**, 127, 109885	16.2	13
79	Embodied and Operational CO2 Emissions of the Elementary School Buildings in Different Climate Zones. *KSCE Journal of Civil Engineering*, **2020**, 24, 1037-1048	1.9	5
78	Spatial perception of ceiling height and type variation in immersive virtual environments. *Building and Environment*, **2019**, 163, 106285	6.5	16
77	Multi-criteria decision support system of the photovoltaic and solar thermal energy systems using the multi-objective optimization algorithm. *Science of the Total Environment*, **2019**, 659, 1100-1114	10.2	9
76	A novel estimation approach for the solar radiation potential with its complex spatial pattern via machine-learning techniques. *Renewable Energy*, **2019**, 133, 575-592	8.1	14
75	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. *Applied Energy*, **2018**, 215, 41-53	10.7	10
74	DEVELOPMENT OF A DYNAMIC INCENTIVE AND PENALTY PROGRAM FOR IMPROVING THE ENERGY PERFORMANCE OF EXISTING BUILDINGS. *Technological and Economic Development of Economy*, **2018**, 24, 295-317	4.7	7
73	A BREAK-EVEN ANALYSIS AND IMPACT ANALYSIS OF RESIDENTIAL SOLAR PHOTOVOLTAIC SYSTEMS CONSIDERING STATE SOLAR INCENTIVES. *Technological and Economic Development of Economy*, **2018**, 24, 358-382	4.7	14
72	DEVELOPMENT OF THE MONTHLY AVERAGE DAILY SOLAR RADIATION MAP USING A-CBR, FEM, AND KRIGING METHOD. *Technological and Economic Development of Economy*, **2018**, 24, 489-512	4.7	3
71	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. *Renewable and Sustainable Energy Reviews*, **2018**, 82, 824-836	16.2	10
70	Energy Efficiency in the Building Sector: The Effect of Residential Progressive Electricity Tariffs on the Economic Performance of the Building-Integrated Photovoltaic Blind. *Green Energy and Technology*, **2018**, 793-808	0.6	

69	An optimized gene expression programming model for forecasting the national CO2 emissions in 2030 using the metaheuristic algorithms. *Applied Energy*, **2018**, 228, 808-820	10.7	36
68	An integrated model for estimating the techno-economic performance of the distributed solar generation system on building faĉdes: Focused on energy demand and supply. *Applied Energy*, **2018**, 228, 1071-1090	10.7	14
67	A novel real-time method for HVAC system operation to improve indoor environmental quality in meeting rooms. *Building and Environment*, **2018**, 144, 365-385	6.5	17
66	Nonlinearity analysis of the shading effect on the technical-economic performance of the building-integrated photovoltaic blind. *Applied Energy*, **2017**, 194, 467-480	10.7	22
65	Development of the smart photovoltaic system blind and its impact on net-zero energy solar buildings using technical-economic-political analyses. *Energy*, **2017**, 124, 382-396	7.9	43
64	Improvements of the operational rating system for existing residential buildings. *Applied Energy*, **2017**, 193, 112-124	10.7	15
63	Establishment of an optimal occupant behavior considering the energy consumption and indoor environmental quality by region. *Applied Energy*, **2017**, 204, 1431-1443	10.7	31
62	Development of an integrated multi-objective optimization model for determining the optimal solar incentive design. *International Journal of Energy Research*, **2017**, 41, 1749-1766	4.5	12
61	Development of a prediction model for the cost saving potentials in implementing the building energy efficiency rating certification. *Applied Energy*, **2017**, 189, 257-270	10.7	29
60	A Prototype Design and Development of the Smart Photovoltaic System Blind Considering the Photovoltaic Panel, Tracking System, and Monitoring System. *Applied Sciences (Switzerland)*, **2017**, 7, 1077	2.6	9
59	Mapping the Rescue Equipment Mobilization Potential: Decision Support Tool for Emergency Management. *Journal of Management in Engineering - ASCE*, **2017**, 33, 04017037	5.3	3
58	Development of the hybrid model for estimating the undisturbed ground temperature using the finite element method and geostatistical technique. *Energy and Buildings*, **2017**, 152, 162-174	7	4
57	A simplified estimation model for determining the optimal rooftop photovoltaic system for gable roofs. *Energy and Buildings*, **2017**, 151, 320-331	7	9
56	An integrated psychological response score of the occupants based on their activities and the indoor environmental quality condition changes. *Building and Environment*, **2017**, 123, 66-77	6.5	26
55	An economic impact analysis of residential progressive electricity tariffs in implementing the building-integrated photovoltaic blind using an advanced finite element model. *Applied Energy*, **2017**, 202, 259-274	10.7	20
54	Establishment of a base price for the Solar Renewable Energy Credit (SREC) from the perspective of residents and state governments in the United States. *Renewable and Sustainable Energy Reviews*, **2017**, 75, 1066-1080	16.2	16
53	Theory of an Intelligent Planning Unit for the Complex Built Environment. *Journal of Management in Engineering - ASCE*, **2017**, 33, 04016046	5.3	11
52	Development of a method for estimating the rooftop solar photovoltaic (PV) potential by analyzing the available rooftop area using Hillshade analysis. *Applied Energy*, **2017**, 194, 320-332	10.7	87

51	Advanced Strategies for Net-Zero Energy Building: Focused on the Early Phase and Usage Phase of a Building's Life Cycle. *Sustainability*, **2017**, 9, 2272	3.6	19
50	Estimation of the Available Rooftop Area for Installing the Rooftop Solar Photovoltaic (PV) System by Analyzing the Building Shadow Using Hillshade Analysis. *Energy Procedia*, **2016**, 88, 408-413	2.3	20
49	Framework for the validation of simulation-based productivity analysis: focused on curtain wall construction process. *Journal of Civil Engineering and Management*, **2016**, 23, 163-172	3	8
48	Zoning-Based Vertical Transportation Optimization for Workers at Peak Time in a Skyscraper Construction. *Computer-Aided Civil and Infrastructure Engineering*, **2016**, 31, 826-845	8.4	17
47	A Preliminary Study for Determining Photovoltaic Panel for a Smart Photovoltaic Blind Considering Usability and Constructability Issues. *Energy Procedia*, **2016**, 88, 363-367	2.3	7
46	A Preliminary Study on the 2-axis Hybrid Solar Tracking Method for the Smart Photovoltaic Blind. *Energy Procedia*, **2016**, 88, 484-490	2.3	17
45	An integrated multi-objective optimization model for determining the optimal solution in implementing the rooftop photovoltaic system. *Renewable and Sustainable Energy Reviews*, **2016**, 57, 822-837	16.2	51
44	An economic impact analysis of state solar incentives for improving financial performance of residential solar photovoltaic systems in the United States. *Renewable and Sustainable Energy Reviews*, **2016**, 58, 590-607	16.2	32
43	An integrated multi-objective optimization model for determining the optimal solution in the solar thermal energy system. *Energy*, **2016**, 102, 416-426	7.9	20
42	The optimal photovoltaic system implementation strategy to achieve the national carbon emissions reduction target in 2030: Focused on educational facilities. *Energy and Buildings*, **2016**, 119, 101-110	7	13
41	An optimization model for selecting the optimal green systems by considering the thermal comfort and energy consumption. *Applied Energy*, **2016**, 169, 682-695	10.7	61
40	A finite element model for estimating the techno-economic performance of the building-integrated photovoltaic blind. *Applied Energy*, **2016**, 179, 211-227	10.7	24
39	A Conceptual Framework for an Intelligent Planning Unit for the Complex Built Environment. *Procedia Engineering*, **2016**, 161, 269-274		1
38	Framework for Approaching the Minimum CV(RMSE) using Energy Simulation and Optimization Tool. *Energy Procedia*, **2016**, 88, 265-270	2.3	13
37	A dynamic energy performance curve for evaluating the historical trends in the energy performance of existing buildings using a simplified case-based reasoning approach. *Energy and Buildings*, **2015**, 92, 338-350	7	21
36	Life cycle economic and environmental assessment for establishing the optimal implementation strategy of rooftop photovoltaic system in military facility. *Journal of Cleaner Production*, **2015**, 104, 315-327	10.3	29
35	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. *Applied Energy*, **2015**, 155, 671-707	10.7	107
34	An estimation methodology for the dynamic operational rating of a new residential building using the advanced case-based reasoning and stochastic approaches. *Applied Energy*, **2015**, 150, 308-322	10.7	24

33	A model for predicting the environmental impacts of educational facilities in the project planning phase. *Journal of Cleaner Production*, **2015**, 107, 538-549	10.3	33
32	Integrated CO2, cost, and schedule management system for building construction projects using the earned value management theory. *Journal of Cleaner Production*, **2015**, 103, 275-285	10.3	22
31	Development of the life-cycle economic and environmental assessment model for establishing the optimal implementation strategy of the rooftop photovoltaic system. *Technological and Economic Development of Economy*, **2015**, 24, 27-47	4.7	12
30	An Environmental and Economic Assessment for Selecting the Optimal Ground Heat Exchanger by Considering the Entering Water Temperature. *Energies*, **2015**, 8, 7752-7776	3.1	12
29	An integrated multi-objective optimization model for establishing the low-carbon scenario 2020 to achieve the national carbon emissions reduction target for residential buildings. *Renewable and Sustainable Energy Reviews*, **2015**, 49, 410-425	16.2	31
28	A program-level management system for the life cycle environmental and economic assessment of complex building projects. *Environmental Impact Assessment Review*, **2015**, 54, 9-21	5.3	26
27	Development of a dynamic operational rating system in energy performance certificates for existing buildings: Geostatistical approach and data-mining technique. *Applied Energy*, **2015**, 154, 254-270	10.7	35
26	AN INTEGRATED MULTI-OBJECTIVE OPTIMIZATION MODEL FOR SOLVING THE CONSTRUCTION TIME-COST TRADE-OFF PROBLEM. *Journal of Civil Engineering and Management*, **2015**, 21, 323-333	3	47
25	A Lagrangian finite element model for estimating the heating and cooling demand of a residential building with a different envelope design. *Applied Energy*, **2015**, 142, 66-79	10.7	18
24	Framework for the analysis of the potential of the rooftop photovoltaic system to achieve the net-zero energy solar buildings. *Progress in Photovoltaics: Research and Applications*, **2014**, 22, 462-478	6.8	59
23	Development of a new energy efficiency rating system for existing residential buildings. *Energy Policy*, **2014**, 68, 218-231	7.2	68
22	An estimation model for the heating and cooling demand of a residential building with a different envelope design using the finite element method. *Applied Energy*, **2014**, 115, 205-215	10.7	65
21	An economic and environmental assessment for selecting the optimum new renewable energy system for educational facility. *Renewable and Sustainable Energy Reviews*, **2014**, 29, 286-300	16.2	58
20	A GIS (geographic information system)-based optimization model for estimating the electricity generation of the rooftop PV (photovoltaic) system. *Energy*, **2014**, 65, 190-199	7.9	84
19	A decision support system for determining the optimal size of a new expressway service area: Focused on the profitability. *Decision Support Systems*, **2014**, 67, 9-20	5.6	8
18	Framework for the mapping of the monthly average daily solar radiation using an advanced case-based reasoning and a geostatistical technique. *Environmental Science & Technology*, **2014**, 48, 4604-12	10.3	43
17	Benchmarks as a tool for free allocation through comparison with similar projects: Focused on multi-family housing complex. *Applied Energy*, **2014**, 114, 663-675	10.7	40
16	Framework for the analysis of the low-carbon scenario 2020 to achieve the national carbon Emissions reduction target: Focused on educational facilities. *Energy Policy*, **2014**, 73, 356-367	7.2	20

15	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). *Energy*, **2014**, 71, 71-79	7.9	51
14	An Economic and Environmental Assessment Model for Selecting the Optimal Implementation Strategy of Fuel Cell Systems—A Focus on Building Energy Policy. *Energies*, **2014**, 7, 5129-5150	3.1	16
13	Framework for establishing the optimal implementation strategy of a fuel-cell-based combined heat and power system: Focused on multi-family housing complex. *Applied Energy*, **2014**, 127, 11-24	10.7	29
12	Decision support model for establishing the optimal energy retrofit strategy for existing multi-family housing complexes. *Energy Policy*, **2014**, 66, 157-169	7.2	44
11	Infrastructure asset management system for bridge projects in South Korea. *KSCE Journal of Civil Engineering*, **2013**, 17, 1551-1561	1.9	10
10	Framework for the implementation of a new renewable energy system in an educational facility. *Applied Energy*, **2013**, 103, 539-551	10.7	46
9	Estimation of the monthly average daily solar radiation using geographic information system and advanced case-based reasoning. *Environmental Science & Technology*, **2013**, 47, 4829-39	10.3	57
8	Assessment of Seasonal Energy Efficiency Strategies of a Double Skin Façade in a Monsoon Climate Region. *Energies*, **2013**, 6, 4352-4376	3.1	28
7	Estimating the Loss Ratio of Solar Photovoltaic Electricity Generation through Stochastic Analysis. *Journal of Construction Engineering and Project Management*, **2013**, 3, 23-34		8
6	LCC and LCCO2 analysis of green roofs in elementary schools with energy saving measures. *Energy and Buildings*, **2012**, 45, 229-239	7	90
5	A decision support model for improving a multi-family housing complex based on CO2 emission from electricity consumption. *Journal of Environmental Management*, **2012**, 112, 67-78	7.9	37
4	A decision support model for improving a multi-family housing complex based on CO2 emission from gas energy consumption. *Building and Environment*, **2012**, 52, 142-151	6.5	52
3	A decision support model for reducing electric energy consumption in elementary school facilities. *Applied Energy*, **2012**, 95, 253-266	10.7	69
2	The development of a construction cost prediction model with improved prediction capacity using the advanced CBR approach. *Expert Systems With Applications*, **2011**, 38, 8597-8606	7.8	49
1	A CBR-based hybrid model for predicting a construction duration and cost based on project characteristics in multi-family housing projects. *Canadian Journal of Civil Engineering*, **2010**, 37, 739-752	1.3	78