Multiobjective optimization of building design using TRNSYS simulations, genetic algorithm, and Artificial Neural Network

#	Paper	IF	Citations
465	A decision tree method for building energy demand modeling. *Energy and Buildings*, **2010**, 42, 1637-1646	7	337
464	A software framework for model predictive control with GenOpt. *Energy and Buildings*, **2010**, 42, 1084-1092	7	79
463	A multi-objective decision model for the improvement of energy efficiency in buildings. *Energy*, **2010**, 35, 5483-5496	7.9	145
462	Tćnicas de Control del Confort en Edificios. **2010**, 7, 5-24		15
461	Utilizing a Multidisciplinary Design Team for Energy Efficient Renovations of Existing Buildings. **2011**,		
460	Optimised design of energy efficient building faḋdes via Evolutionary Neural Networks. *Energy and Buildings*, **2011**, 43, 3297-3302	7	54
459	Optimization of an HVAC system with a strength multi-objective particle-swarm algorithm. *Energy*, **2011**, 36, 5935-5943	7.9	51
458	Phi-array: A novel method for fitness visualization and decision making in evolutionary design optimization. **2011**, 25, 676-687		13
457	Design explorations of performance driven geometry in architectural design using parametric modeling and genetic algorithms. **2011**, 25, 656-675		166
456	Optimization of a smooth flat plate solar air heater using stochastic iterative perturbation technique. **2011**, 85, 2331-2337		20
455	Multi-objective optimization of temperature distributions using Artificial Neural Networks. **2012**,		4
454	A linear programming approach to household energy conservation: Efficient allocation of budget. *Energy and Buildings*, **2012**, 49, 200-208	7	24
453	Development of a numerical optimization approach to ventilation system design to control airborne contaminant dispersion and occupant comfort. **2012**, 5, 39-50		7
452	Estimation model and benchmarks for heating energy consumption of schools and sport facilities in Germany. *Building and Environment*, **2012**, 49, 324-335	6.5	51
451	Contaminant source identification within a building: Toward design of immune buildings. *Building and Environment*, **2012**, 51, 320-329	6.5	42
450	Indoor thermal condition in urban heat Island Ḋevelopment of a predictive tool. *Building and Environment*, **2012**, 57, 7-17	6.5	41
449	Energy optimization of building design for different housing units in apartment buildings. *Applied Energy*, **2012**, 94, 330-337	10.7	37

430	State of the Art on Retrofit Strategies Selection Using Multi-objective Optimization and Genetic Algorithms. **2013**, 279-297		1
429	Optimizing aspects of pedestrian traffic in building designs. **2013**,		4
428	OPTIMISATION OF BUILDING ENERGY SYSTEM TECHNOLOGY CONFIGURATION USING MULTI-CRITERIA DECISION MAKING METHODS / DAUGIAKRITERIŲ METODŲ TAIKYMAS RACIONALIAM PASTATO ENERGETINĖS SISTEMOS TECHNOLOGIJŲ DERINIUI NUSTATYTI. **2013**, 5, 410-422		1
427	Building Behavior Simulation by Means of Artificial Neural Network in Summer Conditions. *Sustainability*, **2014**, 6, 5339-5353	3.6	15
426	Control and Optimization of Thermal Energy Storage Systems. **2014**, 311-346		
425	A Multiobjective Harmony-Search Algorithm for Building Life-cycle Energy Optimization. **2014**,		5
424	Inverse design of aircraft cabin environment by coupling artificial neural network and genetic algorithm. **2014**, 20, 836-843		12
423	Designing in complexity: Simulation, integration, and multidisciplinary design optimization for architecture. **2014**, 90, 936-959		29
422	Multi-objective optimization of building envelope for energy consumption and daylight. **2014**, 23, 70-80		39
421	Comparison of the Robustness of RNN, MPC and ANN Controller for Residential Heating System. **2014**,		9
420	Optimal Trade-Offs between Social Quality of Life and Life-Cycle Cost in Housing Units. *Journal of Construction Engineering and Management - ASCE*, **2014**, 140, 04014058	4.2	11
419	A review on simulation-based optimization methods applied to building performance analysis. *Applied Energy*, **2014**, 113, 1043-1058	10.7	730
418	High throughput computing based distributed genetic algorithm for building energy consumption optimization. *Energy and Buildings*, **2014**, 76, 92-101	7	51
417	Evolutive Housing System: Refurbishment with new technologies and unsteady simulations of energy performance. *Energy and Buildings*, **2014**, 74, 173-181	7	30
416	Building Information Modeling Steered by Evolutionary Computing. **2014**, 28, 05014003		8
415	Algorithms for optimization of building design: A review. *Renewable and Sustainable Energy Reviews*, **2014**, 31, 101-112	16.2	297
414	From solar constraints to urban design opportunities: Optimization of built form typologies in a Brazilian tropical city. *Energy and Buildings*, **2014**, 76, 43-56	7	62
413	A proposal for a site location planning model of environmentally friendly urban energy supply plants using an environment and energy geographical information system (E-GIS) database (DB) and an artificial neural network (ANN). *Applied Energy*, **2014**, 119, 99-117	10.7	48

412	Designing-in performance: A framework for evolutionary energy performance feedback in early stage design. **2014**, 38, 59-73		62
411	Polycarbonate panels for buildings: Experimental investigation of thermal and optical performance. *Energy and Buildings*, **2014**, 70, 23-35	7	32
410	Assessing long-term performance of centralized thermal energy storage system. **2014**, 62, 313-321		43
409	Statistical analysis of the ranking capability of long-term thermal discomfort indices and their adoption in optimization processes to support building design. *Building and Environment*, **2014**, 75, 114-131	6.5	27
408	Portuguese sustainable construction assessment tools benchmarked with BREEAM and LEED: An energy analysis. *Energy and Buildings*, **2014**, 69, 451-463	7	50
407	THE MULTICRITERIA ASSESSMENT MODEL FOR AN ENERGY SUPPLY SYSTEM OF A LOW ENERGY HOUSE / MAŽAENERGIO PASTATO APRŪPINIMO ENERGIJA DAUGIATIKSLIO VERTINIMO MODELIS. **2014**, 6, 33-41		8
406	A simulation-based inverse design of preset aircraft cabin environment. *Building and Environment*, **2014**, 82, 20-26	6.5	33
405	Evolutionary energy performance feedback for design: Multidisciplinary design optimization and performance boundaries for design decision support. *Energy and Buildings*, **2014**, 84, 426-441	7	37
404	Comfort Control in Buildings. **2014**,		5
403	Improving thermal performance of automatically generated floor plans using a geometric variable sequential optimization procedure. *Applied Energy*, **2014**, 132, 200-215	10.7	17
402	A modular optimisation model for reducing energy consumption in large scale building facilities. *Renewable and Sustainable Energy Reviews*, **2014**, 38, 990-1002	16.2	35
401	Integrated and multi-hour optimization of office building energy consumption and expenditure. *Energy and Buildings*, **2014**, 82, 391-398	7	14
400	Multi-objective optimization for building retrofit: A model using genetic algorithm and artificial neural network and an application. *Energy and Buildings*, **2014**, 81, 444-456	7	264
399	Development of surrogate models using artificial neural network for building shell energy labelling. **2014**, 69, 457-466		54
398	Large-scale building simulation using cloud computing for estimating lifecycle energy consumption. **2014**, 41, 252-262		7
397	Indoor thermal condition in urban heat island: Comparison of the artificial neural network and regression methods prediction. *Energy and Buildings*, **2014**, 76, 597-604	7	57
396	Framework for assessing the performance potential of seasonally adaptable facades using multi-objective optimization. *Energy and Buildings*, **2014**, 79, 106-113	7	63
395	Using self-adaptive optimisation methods to perform sequential optimisation for low-energy building design. *Energy and Buildings*, **2014**, 81, 18-29	7	19

394	Maximizing Occupants' Comfort in Affordable Housing Units. **2014**,		
393	Optimal Configurations of Design and Construction Decisions to Maximize Social Quality-of-Life for Single-Family Housing Residents. **2014**,		
392	Sample Path Sharing in Policy Improvement for Indoor Air Temperature Control. **2014**, 47, 247-252		2
391	Model Based Indirect Submetering Method of HVAC End-use in Existing Office Building. **2015**, 121, 1705-1712		
390	A bottom-up and procedural calibration method for building energy simulation models based on hourly electricity submetering data. *Energy*, **2015**, 93, 2337-2350	7.9	24
389	Synergic relationships between thermophysical properties of wall materials in energy-saving building design. **2015**, 90, 246-253		9
388	Computational homogenization of nonlinear elastic materials using neural networks. **2015**, 104, 1061-1084		138
387	Simulating Performance Risk for Lighting Retrofit Decisions. *Buildings*, **2015**, 5, 650-667	3.2	4
386	Prediction of energy performance of residential buildings: A genetic programming approach. *Energy and Buildings*, **2015**, 102, 67-74	7	75
385	Enclosure Optimization. **2015**, 59-80		
384	School Buildings Rehabilitation. **2015**,		2
383	Evaluation of Lighting Performance Risk Using Surrogate Model and EnergyPlus. **2015**, 118, 522-529		4
382	Evolutionary multi-objective optimisation: a survey. **2015**, 7, 1		51
381	Speedup Genetic Algorithm Using C-CUDA. **2015**,		
380	Agent-based geometry optimization with Genetic Algorithm (GA) for tall apartment solar right. **2015**, 113, 236-250		36
379	Thermal inertia and energy efficiency Parametric simulation assessment on a calibrated case study. *Applied Energy*, **2015**, 145, 111-123	10.7	66
378	New optimisation methodology to uncover robust low energy designs that accounts for occupant behaviour or other unknowns. *Journal of Building Engineering*, **2015**, 2, 59-68	5.2	18
377	Optimisation of night-time ventilation parameters to reduce building's energy consumption by integrating DOE2 and MATLAB Earlier version of this paper is presented in the 34th AIVC conference, Athens, Greece, 25 6 September 2013.View all notes. **2015**, 34, 516-527		

376	Building information modeling based building design optimization for sustainability. *Energy and Buildings*, **2015**, 105, 139-153	7	99
375	Topographical optimisation of single-storey non-domestic steel framed buildings using photovoltaic panels for net-zero carbon impact. *Building and Environment*, **2015**, 86, 120-131	6.5	16
374	HVAC terminal hourly end-use disaggregation in commercial buildings with Fourier series model. *Energy and Buildings*, **2015**, 97, 33-46	7	40
373	A model calibration framework for simultaneous multi-level building energy simulation. *Applied Energy*, **2015**, 149, 415-431	10.7	90
372	Optimizing tradeoffs among housing sustainability objectives. **2015**, 53, 83-94		19
371	Correlation analysis of building plane and energy consumption of high-rise office building in cold zone of China. **2015**, 8, 487-498		13
370	Improving the energy performance of residential buildings: A literature review. *Renewable and Sustainable Energy Reviews*, **2015**, 52, 960-975	16.2	138
369	A new methodology for investigating the cost-optimality of energy retrofitting a building category. *Energy and Buildings*, **2015**, 107, 456-478	7	130
368	Neural network control algorithm for stand-alone solar cell electrical energy conversion system. **2015**,		0
367	A systematic approach for energy efficient building design factors optimization. *Energy and Buildings*, **2015**, 89, 87-96	7	45
366	Building energy performance analysis: A case study. *Energy and Buildings*, **2015**, 87, 87-94	7	68
365	A new methodology for cost-optimal analysis by means of the multi-objective optimization of building energy performance. *Energy and Buildings*, **2015**, 88, 78-90	7	116
364	Application of multi-objective genetic algorithm to optimize energy efficiency and thermal comfort in building design. *Energy and Buildings*, **2015**, 88, 135-143	7	218
363	A multi-objective approach for optimal prioritization of energy efficiency measures in buildings: Model, software and case studies. *Applied Energy*, **2015**, 139, 131-150	10.7	71
362	Multi-objectives optimization of Energy Efficiency Measures in existing buildings. *Energy and Buildings*, **2015**, 95, 57-69	7	130
361	Improving building energy efficiency by multiobjective neighborhood field optimization. *Energy and Buildings*, **2015**, 87, 45-56	7	51
360	Envelope Thermal Design Optimization for Urban Residential Buildings in Malawi. *Buildings*, **2016**, 6, 13	3.2	7
359	Decision-making process for improving thermal and energy performance of residential buildings: A case study of constructive systems in Brazil. *Energy and Buildings*, **2016**, 128, 270-286	7	23

358	Optimal Trade-Offs between Housing Cost and Environmental Performance. *Journal of Architectural Engineering*, **2016**, 22, 04015018	1.5	2
357	Integration of storage and renewable energy into district heating systems: A review of modelling and optimization. **2016**, 136, 49-64		131
356	Application of photovoltaic cells with an intelligent control system for railway transport. **2016**,		1
355	A novel approach for the simulation-based optimization of the buildings energy consumption using NSGA-II: Case study in Iran. *Energy and Buildings*, **2016**, 127, 552-560	7	92
354	Performance evaluation of long-term thermal comfort indices in building simulation according to ASHRAE Standard 55. *Building and Environment*, **2016**, 102, 95-115	6.5	31
353	Genetic algorithm for building envelope calibration. *Applied Energy*, **2016**, 168, 691-705	10.7	67
352	Design optimization of office building envelope configurations for energy conservation. *Applied Energy*, **2016**, 171, 336-346	10.7	68
351	Early stage decision support for sustainable building renovation A review. *Building and Environment*, **2016**, 103, 165-181	6.5	105
350	Multi-stage and multi-objective optimization for energy retrofitting a developed hospital reference building: A new approach to assess cost-optimality. *Applied Energy*, **2016**, 174, 37-68	10.7	114
349	Evaluation of Autotune calibration against manual calibration of building energy models. *Applied Energy*, **2016**, 182, 115-134	10.7	57
348	Multi-objective optimization for building performance design considering thermal comfort and energy consumption. **2016**,		1
347	Active Learning in Multi-objective Evolutionary Algorithms for Sustainable Building Design. **2016**,		1
346	A review on building energy efficient design optimization rom the perspective of architects. *Renewable and Sustainable Energy Reviews*, **2016**, 65, 872-884	16.2	123
345	Multi-criteria assessment for the effective decision management in residential energy retrofitting. *Energy and Buildings*, **2016**, 129, 284-307	7	40
344	Testing advanced driver assistance systems using multi-objective search and neural networks. **2016** ,		65
343	Performance indices and evaluation of algorithms in building energy efficient design optimization. *Energy*, **2016**, 114, 100-112	7.9	42
342	Comparing the linear and logarithm normalized artificial neural networks in inverse design of aircraft cabin environment. **2016**, 9, 729-734		5
341	AN INSULATION THICKNESS OPTIMIZATION METHODOLOGY FOR SCHOOL BUILDINGS REHABILITATION COMBINING ARTIFICIAL NEURAL NETWORKS AND LIFE CYCLE COST. **2016**, 22, 915-923		16

340	Comfort metrics for an integrated evaluation of buildings performance. *Energy and Buildings*, **2016**, 127, 411-424	7	34
339	Cyclic overlapping block coordinate search for optimizing building design. **2016**, 71, 242-261		2
338	Optimizing wall insulation material parameters in renovation projects using NSGA-II. **2016**,		0
337	AN ADVANCED MULTI-CRITERIA EVALUATION MODEL OF THE RATIONAL BUILDING ENERGY PERFORMANCE. **2016**, 22, 844-851		11
336	Data-driven approximation algorithms for rapid performance evaluation and optimization of civil structures. **2016**, 72, 279-293		16
335	Design for structural and energy performance of long span buildings using geometric multi-objective optimization. *Energy and Buildings*, **2016**, 127, 748-761	7	49
334	Multi-objective optimization of the renewable energy mix for a building. **2016**, 101, 612-621		54
333	Demand side management for a residential customer in multi-energy systems. **2016**, 22, 63-77		71
332	A performance comparison of multi-objective optimization algorithms for solving nearly-zero-energy-building design problems. *Energy and Buildings*, **2016**, 121, 57-71	7	185
331	Sustainable building envelope design by considering energy cost and occupant satisfaction. **2016**, 31, 118-129		34
330	A multi-stage stochastic optimization model for energy systems planning and risk management. *Energy and Buildings*, **2016**, 110, 49-56	7	24
329	A review of recent developments and technological advancements of variable-air-volume (VAV) air-conditioning systems. *Renewable and Sustainable Energy Reviews*, **2016**, 59, 784-817	16.2	91
328	A HPC based cloud model for real-time energy optimisation. **2016**, 10, 108-128		7
327	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
326	Multi-objective optimization of the building energy performance: A simulation-based approach by means of particle swarm optimization (PSO). *Applied Energy*, **2016**, 170, 293-303	10.7	249
325	Parallel Computing Framework for Optimizing Environmental and Economic Performances of Housing Units. **2016**, 30, 04015026		1
324	Simulation-based optimization of an integrated daylighting and HVAC system using the design of experiments method. *Applied Energy*, **2016**, 162, 666-674	10.7	43
323	Simulation-based model predictive control by the multi-objective optimization of building energy performance and thermal comfort. *Energy and Buildings*, **2016**, 111, 131-144	7	134

322	Identification of the hygrothermal properties of a building envelope material by the covariance matrix adaptation evolution strategy. **2016**, 9, 101-114		19
321	Optimal building envelope design based on simulated performance: History, current status and new potentials. *Energy and Buildings*, **2016**, 117, 387-398	7	62
320	The challenge of sustainable building renovation: assessment of current criteria and future outlook. **2016**, 123, 88-100		85
319	The use of genetic algorithm and self-updating artificial neural network for the inverse design of cabin environment. **2017**, 26, 347-354		11
318	A global survey of adverse energetic effects of increased wall insulation in office buildings: degree day and climate zone indicators. **2017**, 10, 97-116		8
317	Parametric design-based multi-objective optimisation for high-pressure turbine disc. **2017**, 55, 4847-4861		7
316	Integrated assessment of energy supply system of an energy-efficient house. *Energy and Buildings*, **2017**, 138, 443-454	7	13
315	Impacts of building envelope design factors upon energy loads and their optimization in US standard climate zones using experimental design. *Energy and Buildings*, **2017**, 141, 1-15	7	40
314	A review on time series forecasting techniques for building energy consumption. *Renewable and Sustainable Energy Reviews*, **2017**, 74, 902-924	16.2	372
313	Artificial Neural Networks for Predicting the Energy Behavior of a Building Category: A Powerful Tool for Cost-Optimal Analysis. **2017**, 305-340		0
312	A review on current advances in the energy and environmental performance of buildings towards a more sustainable built environment. *Renewable and Sustainable Energy Reviews*, **2017**, 77, 845-860	16.2	119
311	CASA, cost-optimal analysis by multi-objective optimisation and artificial neural networks: A new framework for the robust assessment of cost-optimal energy retrofit, feasible for any building. *Energy and Buildings*, **2017**, 146, 200-219	7	64
310	Genetic Algorithm for Building Optimization. **2017**,		13
309	Improving sustainable office building operation by using historical data and linear models to predict energy usage. **2017**, 29, 107-117		22
308	Energy in buildings Policy, materials and solutions. **2017**, 4, 1		11
307	Modified predator-prey algorithm approach to designing a cooling or insulating skylight. *Building and Environment*, **2017**, 126, 331-338	6.5	4
306	Building energy data analysis by clustering measured daily profiles. **2017**, 122, 583-588		4
305	Decision-making based on network visualization applied to building life cycle optimization. **2017**, 35, 565-573		16

304	Ant colony algorithm for building energy optimisation problems and comparison with benchmark algorithms. *Energy and Buildings*, **2017**, 154, 404-414	7	42
303	PMV-based event-triggered mechanism for building energy management under uncertainties. *Energy and Buildings*, **2017**, 152, 73-85	7	48
302	Resilience of robust cost-optimal energy retrofit of buildings to global warming: A multi-stage, multi-objective approach. *Energy and Buildings*, **2017**, 153, 150-167	7	54
301	A computational multi-objective optimization method to improve energy efficiency and thermal comfort in dwellings. *Energy and Buildings*, **2017**, 154, 283-294	7	58
300	Multiobjective optimization for lifecycle cost, carbon dioxide emissions and exergy of residential heat and electricity prosumers. *Energy Conversion and Management*, **2017**, 154, 455-469	10.6	17
299	The Potential of Decision Support Systems for More Sustainable and Intelligent Constructions: A Short Overview. **2017**, 12, 33-41		8
298	Neural network metamodelling in multi-objective optimization of a high latitude solar community. **2017**, 155, 323-335		10
297	Modelling the relationship between heating energy use and indoor temperatures in residential buildings through Artificial Neural Networks considering occupant behavior. *Energy and Buildings*, **2017**, 151, 332-343	7	43
296	Energy demand prediction through novel random neural network predictor for large non-domestic buildings. **2017**,		15
295	Rethinking investment planning and optimizing net zero emission buildings. **2017**, 19, 1711-1724		9
294	An Evolutionary Approach to Single-sided Ventilated Faãde Design. **2017**, 180, 582-590		9
293	Building Automation and Control Systems and performance optimization: A framework for analysis. *Renewable and Sustainable Energy Reviews*, **2017**, 75, 313-330	16.2	82
292	Artificial neural networks to predict energy performance and retrofit scenarios for any member of a building category: A novel approach. *Energy*, **2017**, 118, 999-1017	7.9	131
291	Analysis of uncertainty indices used for building envelope calibration. *Applied Energy*, **2017**, 185, 82-94	10.7	35
290	An approach for building design optimization using design of experiments. **2017**, 10, 323-336		14
289	Multi-criterion stochastic optimal selection of a double glazing system. **2017**, 10, 1-9		9
288	A comprehensive, multi-objective optimization of solar-powered absorption chiller systems for air-conditioning applications. *Energy Conversion and Management*, **2017**, 132, 281-306	10.6	86
287	Data-driven Urban Energy Simulation (DUE-S): Integrating machine learning into an urban building energy simulation workflow. **2017**, 142, 2114-2119		4

286	Research on Energy-Saving Optimization for the Performance Parameters of Rural-Building Shape and Envelope by TRNSYS-GenOpt in Hot Summer and Cold Winter Zone of China. *Sustainability*, **2017**, 9, 294	3.6	12
285	Early-Stage Design Considerations for the Energy-Efficiency of High-Rise Office Buildings. *Sustainability*, **2017**, 9, 623	3.6	32
284	Development of a Multi-Objective Sizing Method for Borehole Heat Exchangers during the Early Design Phase. *Sustainability*, **2017**, 9, 1876	3.6	6
283	Passive Optimization Design Based on Particle Swarm Optimization in Rural Buildings of the Hot Summer and Warm Winter Zone of China. *Sustainability*, **2017**, 9, 2288	3.6	10
282	Multi-Objective Optimization for Energy Performance Improvement of Residential Buildings: A Comparative Study. *Energies*, **2017**, 10, 245	3.1	33
281	Towards a New Generation of Building Envelope Calibration. *Energies*, **2017**, 10, 2102	3.1	21
280	Aerodynamic CFD Based Optimization of Police Car Using Bezier Curves. **2017**, 10, 85-93		1
279	Universal approach to modelling multi-layer structures in building energy simulations. *Energy and Buildings*, **2018**, 170, 122-133	7	1
278	Mortality prediction in intensive care units (ICUs) using a deep rule-based fuzzy classifier. **2018**, 79, 48-59		41
277	A model-based design optimization strategy for ground source heat pump systems with integrated photovoltaic thermal collectors. *Applied Energy*, **2018**, 214, 178-190	10.7	47
276	Data-driven based estimation of HVAC energy consumption using an improved Fourier series decomposition in buildings. **2018**, 11, 633-645		14
275	Modelling ground source heat pump system by an integrated simulation programme. **2018**, 134, 450-459		17
274	Cost-benefit analysis for Energy Efficiency Retrofit of existing buildings: A case study in China. **2018**, 177, 493-506		99
273	Multi-objective optimization-simulation model to improve the buildings design specification in different climate zones of Iran. **2018**, 40, 394-415		11
272	Multi-objective optimization of hybrid CSP+PV system using genetic algorithm. *Energy*, **2018**, 147, 490-503	7.9	63
271	Sensitivity analysis of energy performance and thermal comfort throughout building design process. *Energy and Buildings*, **2018**, 164, 278-294	7	35
270	The use of the interval Pareto sorting method in simulation-based design of an indoor environment. **2018**, 24, 410-417		5
269	Data-driven model predictive control using random forests for building energy optimization and climate control. *Applied Energy*, **2018**, 226, 1252-1272	10.7	126

268	Shading devices optimization to enhance thermal comfort and energy performance of a residential building in Morocco. *Journal of Building Engineering*, **2018**, 18, 292-302	5.2	44
267	General Correlation of Building Energy Use Via Hybrid Genetic Programming/Genetic Algorithm. **2018**, 140,		3
266	Dynamic energy assessment to analyze different refurbishment strategies of existing dwellings placed in Madrid. *Energy*, **2018**, 152, 1011-1023	7.9	13
265	A zone-level, building energy optimisation combining an artificial neural network, a genetic algorithm, and model predictive control. *Energy*, **2018**, 151, 729-739	7.9	124
264	Building electric energy prediction modeling for BEMS using easily obtainable weather factors with Kriging model and data mining. **2018**, 11, 739-751		6
263	Optimized design of low-rise commercial buildings under various climates Energy performance and passive cooling strategies. *Building and Environment*, **2018**, 132, 83-95	6.5	33
262	Virtual reality research on vibration characteristics of long-span bridges with considering vehicle and wind loads based on neural networks and finite element method. **2018**, 29, 1303-1309		6
261	Multi-objective optimization of double suction centrifugal pump. **2018**, 232, 1108-1117		18
260	Automated processes of estimating the heating and cooling load for building envelope design optimization. **2018**, 11, 219-233		6
259	Uses of dynamic simulation to predict thermal-energy performance of buildings and districts: a review. **2018**, 7, e269		9
258	Modeling techniques used in building HVAC control systems: A review. *Renewable and Sustainable Energy Reviews*, **2018**, 83, 64-84	16.2	123
257	Assessment of equivalent thermal properties of multilayer building walls coupling simulations and experimental measurements. *Building and Environment*, **2018**, 127, 77-85	6.5	17
256	Estimation and optimisation of buildings' thermal load using LiDAR data. *Building and Environment*, **2018**, 128, 12-21	6.5	13
255	Towards adoption of building energy simulation and optimization for passive building design: A survey and a review. *Energy and Buildings*, **2018**, 158, 1306-1316	7	105
254	Evaluation of tree-based ensemble learning algorithms for building energy performance estimation. **2018**, 11, 322-332		44
253	A genetic algorithm to optimize consistency ratio in AHP method for energy performance assessment of residential buildings Application of top-down and bottom-up approaches in Algerian case study. **2018**, 42, 622-636		15
252	Multi-objective optimization of hybrid PTC+PV system using genetic algorithm. **2018**,		2
251	Integrating Economy, Energy, Air Pollution in Building Renovation Plans. **2018**, 51, 102-107		4

250	Knowledge-Based Optimization of Artificial Neural Network Topology for Process Modeling of Fused Deposition Modeling. **2018**,		
249	Machine Learning as Surrogate to Building Performance Simulation: A Building Design Optimization Application. **2018**, 94-102		
248	Evaluation of the Computation Times for Direct and Iterative Resolution Methods of MTJ Library Matrices Applied in a Thermal Simulation System. *Communications in Computer and Information Science*, **2018**, 110-123	0.3	
247	Operation strategy of public building: Implications from trade-off between carbon emission and occupant satisfaction. **2018**, 205, 629-644		6
246	Insulation or Smart Temperature Control for Domestic Heating: A Combined Analysis of the Costs, the Eco-Costs, the Customer Perceived Value, and the Rebound Effect of Energy Saving. *Sustainability*, **2018**, 10, 3231	3.6	7
245	Predicting Fibrous Filters Efficiency by Two Methods: Artificial Neural Network (ANN) and Integration of Genetic Algorithm and Artificial Neural Network (GAINN). **2018**, 2, 197-205		2
244	Multi-Objective Optimisation of the Energy Performance of Lightweight Constructions Combining Evolutionary Algorithms and Life Cycle Cost. *Energies*, **2018**, 11, 1863	3.1	14
243	A simulation-based optimization method for designing energy efficient buildings. *Energy and Buildings*, **2018**, 178, 216-227	7	20
242	Passive design optimization of low energy buildings in different climates. *Energy*, **2018**, 165, 591-613	7.9	84
241	A collaborative control optimization of grid-connected net zero energy buildings for performance improvements at building group level. *Energy*, **2018**, 164, 536-549	7.9	19
240	The Use of Demand Modelling for Community Energy Analysis. **2018**,		0
239	Modified method for evaluating improved technologies for indoor thermal environment of earth buildings. *Building and Environment*, **2018**, 144, 673-681	6.5	2
238	OPTIMIZING THERMAL COMFORT AND ENERGY CONSUMPTION IN A LARGE BUILDING WITHOUT RENOVATION WORK. **2018**,		2
237	A review on optimization methods applied in energy-efficient building geometry and envelope design. *Renewable and Sustainable Energy Reviews*, **2018**, 92, 897-920	16.2	144
236	On the performance of meta-models in building design optimization. *Applied Energy*, **2018**, 225, 814-826	10.7	33
235	Predicting electricity consumption in a building using an optimized back-propagation and Levenberg Marquardt back-propagation neural network: Case study of a shopping mall in China. **2018**, 42, 176-183		64
234	Multi-objective optimisation of bio-based thermal insulation materials in building envelopes considering condensation risk. *Applied Energy*, **2018**, 224, 602-614	10.7	42
233	Multi-objective optimization of a solar-assisted heat pump for swimming pool heating using genetic algorithm. **2018**, 142, 118-126		25

#	Title	IF	Cites
232	Implementing artificial neural networks in energy building applications A review. **2018**,		4
231	Development of Building Thermal Load and Discomfort Degree Hour Prediction Models Using Data Mining Approaches. *Energies*, **2018**, 11, 1570	3.1	13
230	Thermal energy demand and potential energy savings in a Spanish surgical suite through calibrated simulations. *Energy and Buildings*, **2018**, 174, 513-526	7	5
229	Multi-Objectives Optimization of Ventilation Controllers for Passive Cooling in Residential Buildings. **2018**, 18,		17
228	Design Optimization Considering Variable Thermal Mass, Insulation, Absorptance of Solar Radiation, and Glazing Ratio Using a Prediction Model and Genetic Algorithm. *Sustainability*, **2018**, 10, 336	3.6	20
227	Optimization of Passive Envelop Energy Efficient Measures for Office Buildings in Different Climate Regions of China Based on Modified Sensitivity Analysis. *Sustainability*, **2018**, 10, 907	3.6	12
226	Improving the Distillate Prediction of a Membrane Distillation Unit in a Trigeneration Scheme by Using Artificial Neural Networks. **2018**, 10, 310		9
225	Parametrized analysis of a carbon dioxide transcritical Rankine cycle driven by solar energy. **2018**, 140, 580-592		16
224	Machine Learning-Based Occupant Energy Use Behavior Optimization. **2018**,		
223	Data-driven Urban Energy Simulation (DUE-S): A framework for integrating engineering simulation and machine learning methods in a multi-scale urban energy modeling workflow. *Applied Energy*, **2018**, 225, 1176-1189	10.7	72
222	Structural health monitoring for a 600´m high skyscraper. **2018**, 27, e1490		25
221	Deep-learning neural-network architectures and methods: Using component-based models in building-design energy prediction. **2018**, 38, 81-90		102
220	An RSS-based regression model for user equipment location in cellular networks using machine learning. **2019**, 25, 4839-4848		2
219	Comparison between two genetic algorithms minimizing carbon footprint of energy and materials in a residential building. **2019**, 12, 224-242		7
218	Path Analysis of Energy-Saving Technology in Yangtze River Basin Based on Multi-Objective and Multi-Parameter Optimisation. **2019**, 28, 1164-1175		1
217	Influence of model calibration and optimization techniques on the evaluation of thermal comfort and retrofit measures of a Lisbon household using building energy simulation. **2019**, 1-32		4
216	Overview of the use of artificial neural networks for energy-related applications in the building sector. **2019**, 43, 6680		10
215	Energy Management through Cost Forecasting for Residential Buildings in New Zealand. *Energies*, **2019**, 12, 2888	3.1	3

214	Transient simulation and multi-objective optimization of a VSD ground source heat pump in various usage. *Energy Conversion and Management*, **2019**, 197, 111847	10.6	10
213	Prediction, comparison and analysis of comfort level and energy consumption of a passively remodeled dwelling based on BP neural network computation. *IOP Conference Series: Earth and Environmental Science*, **2019**, 329, 012006	0.3	
212	Assessment of Micro-Organism Growth Risk on Filters with Machine Learning. **2019**, 111, 05017		1
211	Adaptive Approximate Dynamic Optimization : a slider-crank case study. **2019**,		0
210	Evaluation of Optimum Building Envelope Materials in Different Climate Regions of Turkey. **2019**, 471, 062009		0
209	Role of immersive visualization tools in renewable energy system development. *Renewable and Sustainable Energy Reviews*, **2019**, 115, 109363	16.2	6
208	Thermal comfort prediction in a building category: Artificial neural network generation from calibrated models for a social housing stock in southern Europe. **2019**, 150, 492-505		36
207	Optimization of HVAC system energy consumption in a building using artificial neural network and multi-objective genetic algorithm. **2019**, 35, 48-57		72
206	Surrogate modelling for sustainable building design A review. *Energy and Buildings*, **2019**, 198, 170-186	7	65
205	Meta-models for building energy loads at an arbitrary location. *Journal of Building Engineering*, **2019**, 25, 100823	5.2	6
204	A novel design-based optimization framework for enhancing the energy efficiency of high-rise office buildings in urban areas. **2019**, 49, 101597		27
203	Multi-Objective Optimization of Energy Saving Control for Air Conditioning System in Data Center. *Energies*, **2019**, 12, 1474	3.1	7
202	Developing surrogate ANN for selecting near-optimal building energy renovation methods considering energy consumption, LCC and LCA. *Journal of Building Engineering*, **2019**, 25, 100790	5.2	45
201	Evidence-based ranking of green building design factors according to leading energy modelling tools. **2019**, 47, 101491		12
200	Modelling Influential Factors of Consumption in Buildings Connected to District Heating Systems. *Energies*, **2019**, 12, 586	3.1	5
199	Optimization of a hybrid community district heating system integrated with thermal energy storage system. **2019**, 23, 128-137		12
198	Rethinking HVAC temperature setpoints in commercial buildings: The potential for zero-cost energy savings and comfort improvement in different climates. *Building and Environment*, **2019**, 155, 350-359	6.5	57
197	Overview of computational intelligence for building energy system design. *Renewable and Sustainable Energy Reviews*, **2019**, 108, 76-90	16.2	17

196	Multi-objective planning of building stock renovation. **2019**, 130, 101-110		10
195	A multi-objective optimization model for determining the building design and occupant behaviors based on energy, economic, and environmental performance. *Energy*, **2019**, 174, 823-834	7.9	34
194	Urban heat island, urban climate maps and urban development policies and action plans. **2019**, 14, 100341		39
193	Knowledge-Based Design of Artificial Neural Network Topology for Additive Manufacturing Process Modeling: A New Approach and Case Study for Fused Deposition Modeling. **2019**, 141,		27
192	Model and Algorithms for the Planning of Fog Computing Networks. **2019**, 6, 3873-3884		17
191	The optimization method of HVAC system from a holistic perspective according to energy criterion. *Energy Conversion and Management*, **2019**, 181, 621-644	10.6	6
190	Performative computational architecture using swarm and evolutionary optimisation: A review. *Building and Environment*, **2019**, 147, 356-371	6.5	36
189	Ineffectiveness of optimization algorithms in building energy optimization and possible causes. *Renewable Energy*, **2019**, 134, 1295-1306	8.1	18
188	Avoiding overheating in existing school buildings through optimized passive measures. **2020**, 48, 349-363		17
187	Construction Cost Prediction Based on Genetic Algorithm and BIM. **2020**, 34, 2059026		9
186	An artificial neural network (ANN) expert system enhanced with the electromagnetism-based firefly algorithm (EFA) for predicting the energy consumption in buildings. *Energy*, **2020**, 190, 116370	7.9	57
185	An efficient metamodel-based method to carry out multi-objective building performance optimizations. *Energy and Buildings*, **2020**, 206, 109576	7	28
184	Energy storage and management system design optimization for a photovoltaic integrated low-energy building. *Energy*, **2020**, 190, 116424	7.9	43
183	A systematic review of genetic algorithm-based multi-objective optimisation for building retrofitting strategies towards energy efficiency. *Energy and Buildings*, **2020**, 210, 109690	7	37
182	Artificial Neural Networks for parametric daylight design. **2020**, 63, 210-221		2
181	Hybrid multi-objective control allocation strategy for compound high-speed rotorcraft. **2020**, 98, 207-226		4
180	Optimization of electricity use in office buildings under occupant uncertainty. **2020**, 13, 13-25		2
179	Reliability analysis of an energy-based form optimization of office buildings under uncertainties in envelope and occupant parameters. *Energy and Buildings*, **2020**, 209, 109707	7	12

178	Methodology to Solve the Multi-Objective Optimization of Acrylic Acid Production Using Neural Networks as Meta-Models. **2020**, 8, 1184		1
177	P2P Network Based Smart Parking System Using Edge Computing. **2020**, 25, 2226-2239		1
176	Artificial neural network structure optimisation for accurately prediction of exergy, comfort and life cycle cost performance of a low energy building. *Applied Energy*, **2020**, 280, 115862	10.7	12
175	Building energy optimization using surrogate model and active sampling. **2020**, 13, 760-776		9
174	Blockchain for energy sharing and trading in distributed prosumer communities. **2020**, 123, 103282		22
173	Bio-inspired cooling technologies and the applications in buildings. *Energy and Buildings*, **2020**, 225, 110313	7	15
172	Machine learning for filter pollution control. **2020**, 324, 03002		1
171	Using a deep temporal convolutional network as a building energy surrogate model that spans multiple climate zones. *Applied Energy*, **2020**, 278, 115563	10.7	14
170	Dynamic Coupling Analysis of Vehicle-Bridge System for Long-Span Suspension Bridge Based on Backpropagation Neural Network Method. **2020**, 2020, 1-11		1
169	Kouvola Housing fair NZEB houses energy, cost and carbon analyses. **2020**, 172, 13001		
168	Low-income load profile development using occupancy and occupants' activities in residential households. **2020**,		1
167	Federating Smart Cluster Energy Grids for Peer-to-Peer Energy Sharing and Trading. **2020**, 8, 102419-102435		11
166	Prediction and optimization of energy consumption in an office building using artificial neural network and a genetic algorithm. **2020**, 61, 102325		59
165	Intelligent buildings: An overview. *Energy and Buildings*, **2020**, 223, 110192	7	25
164	Promoting Energy Efficiency in the Built Environment through Adapted BIM Training and Education. *Energies*, **2020**, 13, 2308	3.1	8
163	Complementary Resources for Tomorrow. *Springer Proceedings in Energy*, **2020**,	0.2	
162	Modeling and design of smart buildings. **2020**, 59-86		3
161	Solar+ Optimizer: A Model Predictive Control Optimization Platform for Grid Responsive Building Microgrids. *Energies*, **2020**, 13, 3093	3.1	3

160	Modeling of Heating and Cooling Energy Needs in Different Types of Smart Buildings. **2020**, 8, 29711-29728		4
159	Balancing the impacts of energy efficiency strategies on comfort quality of interior places: Application of optimization algorithms in domestic housing. *Journal of Building Engineering*, **2020**, 29, 101174	5.2	4
158	State-of-the-art on research and applications of machine learning in the building life cycle. *Energy and Buildings*, **2020**, 212, 109831	7	82
157	Minimizing delivered energy and life cycle cost using Graphical script: An office building retrofitting case. *Applied Energy*, **2020**, 268, 114929	10.7	23
156	Techno-economic design optimization of hybrid renewable energy applications for high-rise residential buildings. *Energy Conversion and Management*, **2020**, 213, 112868	10.6	43
155	An incentive model between a contractor and multiple subcontractors in a green supply chain based on robust optimization. **2020**, 7, 481-509		8
154	Application and characterization of metamodels based on artificial neural networks for building performance simulation: A systematic review. *Energy and Buildings*, **2020**, 217, 109972	7	38
153	A weighted multi-objective optimisation approach to improve based facade aperture sizes in terms of energy, thermal comfort and daylight usage. **2021**, 44, 435-460		7
152	An ANN-exhaustive-listing method for optimization of multiple building shapes and envelope properties with maximum thermal performance. **2021**, 15, 550-563		1
151	Generation of whole building renovation scenarios using variational autoencoders. *Energy and Buildings*, **2021**, 230, 110520	7	4
150	Multi-objective optimization (MOO) of a skylight roof system for structure integrity, daylight, and material cost. *Journal of Building Engineering*, **2021**, 34, 102056	5.2	2
149	Multi-objective optimisations of envelope components for a prefabricated house in six climate zones. *Applied Energy*, **2021**, 282, 116012	10.7	12
148	A machine learning-based surrogate model to approximate optimal building retrofit solutions. *Applied Energy*, **2021**, 281, 116024	10.7	11
147	Exploring the impact of problem formulation in numerical optimization: A case study of the design of PV integrated shading systems. *Building and Environment*, **2021**, 188, 107422	6.5	5
146	Design optimization of office building envelope based on quantum genetic algorithm for energy conservation. *Journal of Building Engineering*, **2021**, 35, 102048	5.2	19
145	Energy planning of renewable applications in high-rise residential buildings integrating battery and hydrogen vehicle storage. *Applied Energy*, **2021**, 281, 116038	10.7	22
144	Optimization and Prediction of Design Variables Driven by Building Energy Performance A Case Study of Office Building in Wuhan. **2021**, 229-242		
143	Innovative time efficient method to optimize buildings performance using Design of Experiment, Polynomial Regression and Genetic Algorithms. **2021**, 1714, 012014		1

142	Genetic algorithm based cooling energy optimization of data centers. **2021**, 31, 3148-3168		0
141	MILP-based Imitation Learning for HVAC Control. **2021**, 1-1		0
140	Using artificial neural network and WebGL to algorithmically optimize window wall ratios of high-rise office buildings. **2021**, 8, 638-653		1
139	An optimization and evaluation method construction of zero-energy residential building renovation. *IOP Conference Series: Earth and Environmental Science*, **2021**, 675, 012079	0.3	1
138	Adaptive Pitch Controller of a Large-Scale Wind Turbine Using Multi-Objective Optimization. **2021**, 11, 2844		7
137	Quantitative Risk Assessment in Construction Disputes Based on Machine Learning Tools. **2021**, 13, 744		5
136	Application of surrogate modelling to improve the thermal performance of single-family homes through archetype development. *Energy and Buildings*, **2021**, 237, 110812	7	6
135	Building Retrofitting through Coupling of Building Energy Simulation-Optimization Tool with CFD and Daylight Programs. *Energies*, **2021**, 14, 2180	3.1	5
134	An Automated Machine Learning-Genetic Algorithm Framework With Active Learning for Design Optimization. **2021**, 143,		5
133	Achieving zero-energy building performance with thermal and visual comfort enhancement through optimization of fenestration, envelope, shading device, and energy supply system. **2021**, 44, 101020		25
132	Multiobjective optimization of building energy consumption based on BIM-DB and LSSVM-NSGA-II. **2021**, 294, 126153		18
131	Leveraging Neural Networks and Genetic Algorithms to Refine Electrode Properties in Redox Flow Batteries. **2021**, 168, 050547		0
130	Hybrid renewable energy applications in zero-energy buildings and communities integrating battery and hydrogen vehicle storage. *Applied Energy*, **2021**, 290, 116733	10.7	31
129	Modeling, simulation and control tools for nZEB: A state-of-the-art review. *Renewable and Sustainable Energy Reviews*, **2021**, 142, 110851	16.2	15
128	Design Optimization of a Passive Building with Green Roof through Machine Learning and Group Intelligent Algorithm. *Buildings*, **2021**, 11, 192	3.2	4
127	Joint optimization of maintenance and inventory policies for multi-unit systems. **2021**, 12, 587-607		2
126	Determination of design parameters to minimize LCOE, for a 1 MWe CSP plant in different sites. *Renewable Energy*, **2021**, 169, 1013-1025	8.1	6
125	A Pragmatic Investigation of Energy Consumption and Utilization Models in the Urban Sector Using Predictive Intelligence Approaches. *Energies*, **2021**, 14, 3900	3.1	9

#	Reference	IF	Cites
124	Thermal zoning and window optimization framework for high-rise buildings. *Applied Energy*, **2021**, 292, 116894	10.7	6
123	Energy performance of window with PCM frame. **2021**, 45, 101109		5
122	Ground-Source Heat Pump Systems: The Effects of Variable Trench Separations and Pipe Configurations in Horizontal Ground Heat Exchangers. *Energies*, **2021**, 14, 3919	3.1	3
121	A review on behavioural propensity for building load and energy profile development Model inadequacy and improved approach. **2021**, 45, 101235		0
120	Intelligent building control systems for thermal comfort and energy-efficiency: A systematic review of artificial intelligence-assisted techniques. *Renewable and Sustainable Energy Reviews*, **2021**, 144, 110969	16.2	26
119	An automated deep learning convolutional neural network algorithm applied for soil salinity distribution mapping in Lake Urmia, Iran. **2021**, 778, 146253		16
118	Using Machine Learning to Predict Retrofit Effects for a Commercial Building Portfolio. *Energies*, **2021**, 14, 4334	3.1	3
117	A Review on Numerical Approach to Achieve Building Energy Efficiency for Energy, Economy and Environment (3E) Benefit. *Energies*, **2021**, 14, 4487	3.1	6
116	A constrained distributed time-series neural network MPC approach for HVAC system energy saving in a medium-large building. **2021**, 14, 383-400		2
115	Simulation and validation of indoor temperatures and relative humidity in multi-zone buildings under occupancy conditions using multi-objective calibration. *Building and Environment*, **2021**, 200, 107973	6.5	11
114	Multi-zone indoor temperature prediction with LSTM-based sequence to sequence model. *Energy and Buildings*, **2021**, 245, 111053	7	7
113	Multi-objective design optimization on building integrated photovoltaic with Trombe wall and phase change material based on life cycle cost and thermal comfort. **2021**, 46, 101277		6
112	Embedding ensemble learning into simulation-based optimisation: a learning-based optimisation approach for construction planning. **2021**, ahead-of-print,		0
111	Edge HVAC Analytics. *Energies*, **2021**, 14, 5464	3.1	2
110	Block-Level Building Transformation Strategies for Energy Efficiency, Thermal Comfort, and Visibility Using Bayesian Multilevel Modeling. *Journal of Architectural Engineering*, **2021**, 27, 05021008	1.5	
109	A coupled machine learning and genetic algorithm approach to the design of porous electrodes for redox flow batteries. *Applied Energy*, **2021**, 298, 117177	10.7	5
108	Thermal performance optimization for housing unit design in a cold region of China. **2021**, 14, 461-479		0
107	A metamodel-based multi-objective optimization method to balance thermal comfort and energy efficiency in a campus gymnasium. *Energy and Buildings*, **2021**, 111513	7	3

106	Methodology for Simultaneous Optimization of the Thermal, Visual, and Acoustic Performance of Building Envelope. *Journal of Architectural Engineering*, **2021**, 27,	1.5	2
105	Multi-objective optimization of energy efficiency and thermal comfort in an existing office building using NSGA-II with fitness approximation: A case study. *Journal of Building Engineering*, **2021**, 41, 102440	5.2	18
104	Multi-objective optimization of building-integrated microalgae photobioreactors for energy and daylighting performance. *Journal of Building Engineering*, **2021**, 42, 102832	5.2	6
103	Thermal load prediction and operation optimization of office building with a zone-level artificial neural network and rule-based control. *Applied Energy*, **2021**, 300, 117429	10.7	6
102	An architectural building cluster morphology generation method to perceive, derive, and form based on cyborg-physical wind tunnel (CPWT). *Building and Environment*, **2021**, 203, 108045	6.5	2
101	Model predictive control strategy using encoder-decoder recurrent neural networks for smart control of thermal environment. *Journal of Building Engineering*, **2021**, 42, 103017	5.2	2
100	Multi-objective optimization of the multi-story residential building with passive design strategy in South Korea. *Building and Environment*, **2021**, 203, 108061	6.5	10
99	A critical review of fenestration/window system design methods for high performance buildings. *Energy and Buildings*, **2021**, 248, 111184	7	5
98	Impact of BIPV windows on building energy consumption in street canyons: Model development and validation. *Energy and Buildings*, **2021**, 249, 111207	7	3
97	A heuristic solution and multi-objective optimization model for life-cycle cost analysis of solar PV/GSHP system: A case study of campus residential building in Korea. **2021**, 47, 101490		2
96	End-to-end deep meta modelling to calibrate and optimize energy consumption and comfort. *Energy and Buildings*, **2021**, 250, 111218	7	2
95	Real data-driven occupant-behavior optimization for reduced energy consumption and improved comfort. *Applied Energy*, **2021**, 302, 117276	10.7	7
94	Multi-objective optimization (MOO) for high-rise residential buildings layout centered on daylight, visual, and outdoor thermal metrics in China. *Building and Environment*, **2021**, 205, 108263	6.5	7
93	Simulation-based design optimization of heat pump systems considering building variations. *Energy and Buildings*, **2021**, 251, 111310	7	4
92	High-resolution hourly surrogate modeling framework for physics-based large-scale building stock modeling. **2021**, 75, 103292		1
91	Optimizing energy efficiency and thermal comfort in building green retrofit. *Energy*, **2021**, 237, 121509	7.9	23
90	Neural Network for Big Data Sets. **2022**, 41-67		
89	Artificial Neural Network Models for Large-Scale Data. **2022**, 112-145		

88	Multivariable Coupling Influence on Energy-Efficient Skylight Design. **2021**, 3-16		
87	A Virtual Collaborative Platform to Support Building Information Modeling Implementation for Energy Efficiency. **2018**, 539-550		3
86	The Markov Network Fitness Model. **2012**, 125-140		4
85	Development of Artificial Neural Networks for Prediction of Compression Coefficient of Soft Soil. *Lecture Notes in Civil Engineering*, **2020**, 1167-1172	0.3	10
84	Passive design optimization of newly-built residential buildings in Shanghai for improving indoor thermal comfort while reducing building energy demand. *Energy and Buildings*, **2018**, 169, 484-506	7	118
83	Peeling of metal foil from a compliant substrate. **2021**, 97, 672-703		2
82	Application of hybrid algorithm of bionic heuristic and machine learning in nonlinear sequence. **2020**, 1682, 012009		1
81	A Genetic Algorithm Based Multi-Objective Optimization of Squealer Tip Geometry in Axial Flow Turbines: A Constant Tip Gap Approach. **2020**, 142,		2
80	Supervisory Control and Distributed Optimization of Building Energy Systems. **2020**, 142,		2
79	Otimizaõ multiobjetivo das dimensõs dos ambientes de uma residñcia unifamiliar baseada em simulaõ energtica e estrutural. **2017**, 17, 267-288		7
78	AEROTHERMAL OPTIMIZATION OF SQUEALER GEOMETRY IN AXIAL FLOW TURBINES USING GENETIC ALGORITHM. **2018**, 4, 1896-1911		3
77	OPTIMIZATION OF WINDOW SIZE DESIGN FOR DETACHED HOUSE USING TRNSYS SIMULATIONS AND GENETIC ALGORITHM. *Architecture Civil Engineering Environment*, **2017**, 10, 133-140	0.4	6
76	COMPUTATIONAL OPTIMIZATION OF HOUSING COMPLEXES FORMS TO ENHANCE ENERGY EFFICIENCY. **2018**, 24, 193-205		3
75	OPTIMAL DESIGN OF HOUSING ATTICS WITH INTEGRATED SOLAR COLLECTORS. **2017**, 12, 1-20		1
74	Comparative Study of Thermal Comfort Induced from Masonry Made of Stabilized Compressed Earth Block vs Conventional Cementitious Material. **2019**, 07, 385-403		5
73	Optimization of Office Building Façades in a Warm Summer Continental Climate. **2012**, 03, 222-230		7
72	Building Indoor Temperature Control Using Control Horizon Method in Cooling Systems. **2012**, 13, 4902-4909		3
71	Faãde Optimization in a Wind-Driven Ventilated Residential Building Targeting Thermal Comfort, IAQ and Energy Consumption. **2016**, 7, 379-384		2

70	Comprehensive Risk Management in Passive Buildings Projects. *Energies*, **2021**, 14, 6830	3.1	1
69	Comparison of the Ranking Capabilities of the Long-Term Discomfort Indices. **2013**, 21-55		
68	Comfort Control Techniques for the Users of a Room. **2014**, 143-218		1
67	Optimization and Approximation Methods. **2015**, 19-29		
66	Mažaenergio vienbučo namo aprūpinimo energija integruotas vertinimas. **2015**,		1
65	Research on vibro-acoustic characteristics of the aluminum motor shell based on GA-BP neural network and boundary element method. *Journal of Vibroengineering*, **2017**, 19, 707-723	0.5	2
64	Artificial Neural Network Models for Large-Scale Data. *Advances in Data Mining and Database Management Book Series*, **2019**, 406-439	0.6	
63	MULTI-VARIABLE OPTIMIZATION MODELS FOR BUILDING ENVELOPE DESIGN USING ENERGYPLUS SIMULATION AND METAHEURISTIC ALGORITHMS. *Architecture Civil Engineering Environment*, **2019**, 12, 81-90	0.4	
62	Neural Network for Big Data Sets. *Advances in Computational Intelligence and Robotics Book Series*, **2019**, 271-303	0.4	
61	GAN-based method for generative design of visual comfort in underground space. *IOP Conference Series: Earth and Environmental Science*, **2021**, 861, 072015	0.3	0
60	An Extensive Study for a Wide Utilization of Green Architecture Parameters in Built Environment Based on Genetic Schemes. *Buildings*, **2021**, 11, 507	3.2	2
59	Dynamic Simulation-Based Surrogate Model for the Dimensioning of Building Energy Systems. *Energies*, **2021**, 14, 7141	3.1	0
58	A simplified model to predict and optimize energy consumption of residential buildings in the cold climate regions of Iran. *Energy Sources, Part A: Recovery, Utilization and Environmental Effects*, 1-19	1.6	1
57	Finite Element Analysis of Thermal Characterization of Equivalent Walls in Buildings Using Optimization Method. *Springer Proceedings in Energy*, **2020**, 213-225	0.2	
56	BIM for Energy Efficiency Training Requirements in the Context of a Developing Country: The Case of Saudi Arabia. **2021**,		0
55	Time Cost Optimization Using Genetic Algorithm of a Construction Project. *Lecture Notes in Civil Engineering*, **2021**, 909-927	0.3	
54	Applying data mining techniques to explore technology adoptions, grades and costs of green building projects. *Journal of Building Engineering*, **2022**, 45, 103669	5.2	1
53	Building performance optimization for university dormitory through integration of digital gene map into multi-objective genetic algorithm. *Applied Energy*, **2021**, 307, 118211	10.7	1

52	Study on dual-objective optimization method of life cycle energy consumption and economy of office building based on HypE genetic algorithm. *Energy and Buildings*, **2021**, 256, 111749	7	1
51	Research on Optimization of Climate Responsive Indoor Space Design in Residential Buildings. *Buildings*, **2022**, 12, 59	3.2	2
50	Multi-Objective Optimization Models to Design a Responsive Built Environment: A Synthetic Review. *Energies*, **2022**, 15, 486	3.1	4
49	Predictive modelling and optimization of HVAC systems using neural network and particle swarm optimization algorithm. *Building and Environment*, **2022**, 209, 108681	6.5	2
48	Development of an Integrated Performance Design Platform for Residential Buildings Based on Climate Adaptability. *Energies*, **2021**, 14, 8223	3.1	3
47	Combination of model-predictive control with an Elman neural for optimization of energy in office buildings. *Multiscale and Multidisciplinary Modeling, Experiments and Design*, 1	1.4	
46	Multi-objective optimization of a CSP-based dish Stirling field layout using Genetic Algorithm and TOPSIS method: Case studies in Ouarzazate and Madrid. *Energy Conversion and Management*, **2022**, 254, 115220	10.6	3
45	Optimized Design of Residential Building Envelope in Tropical Climate Region: Thermal Comfort and Cost Efficiency in an Indonesian Case Study. *Journal of Architectural Engineering*, **2022**, 28,	1.5	1
44	Physical energy and data-driven models in building energy prediction: A review. *Energy Reports*, **2022**, 8, 2656-2671	4.6	7
43	Early-Phase Performance-Driven Design Using Generative Models. *Communications in Computer and Information Science*, **2022**, 87-106	0.3	
42	A Novel Method of BP Neural Network Based Green Building Design⯑The Case of Hotel Buildings in Hot Summer and Cold Winter Region of China. *Sustainability*, **2022**, 14, 2444	3.6	2
41	Effect of Architectural Building Design Parameters on Thermal Comfort and Energy Consumption in Higher Education Buildings. *Buildings*, **2022**, 12, 329	3.2	3
40	Optimizing passive design strategies for energy efficient buildings using hybrid artificial neural network (ANN) and multi-objective evolutionary algorithm through a case study approach. *International Journal of Construction Management*, 1-13	1.9	0
39	Predicting annual illuminance and operative temperature in residential buildings using artificial neural networks. *Building and Environment*, **2022**, 109031	6.5	0
38	Optimization of the solar space heating system with thermal energy storage using data-driven approach. *Renewable Energy*, **2022**, 190, 764-776	8.1	2
37	Challenges in implementing data-driven approaches for building life cycle energy assessment: A review. *Renewable and Sustainable Energy Reviews*, **2022**, 160, 112327	16.2	0
36	An optimal surrogate-model-based approach to support comfortable and nearly zero energy buildings design. *Energy*, **2022**, 248, 123584	7.9	1
35	Towards Advanced Technologies for Smart Building Management: Linking Building Components and Energy Use. *Studies in Infrastructure and Control*, **2022**, 179-202		

34	Course timetable optimization for a university teaching building considering the building energy efficiency and time-varying thermal perception of students. *Building and Environment*, **2022**, 109175	6.5	1
33	Data-driven decision support system for building stocks energy retrofit policy. *Journal of Building Engineering*, **2022**, 104633	5.2	0
32	Multiobjective Optimization Model for the Life Cycle Cost-Sustainability Trade-Off Problem of Building Upgrading Using a Generic Sustainability Assessment Tool. *Journal of Construction Engineering and Management - ASCE*, **2022**, 148,	4.2	0
31	Development of a Cognitive Digital Twin for Building Management and Operations. *Frontiers in Built Environment*, **2022**, 8,	2.2	1
30	Data model integration layer. **2022**, 161-204		
29	Control for smart systems: Challenges and trends in smart cities. *Annual Reviews in Control*, **2022**, 53, 358-369	10.3	2
28	Optimal design for a hybrid microgrid-hydrogen storage facility in Saudi Arabia. *Energy, Sustainability and Society*, **2022**, 12,	3.9	1
27	Building Energy Retrofits: A Review of Decision-Making Models. *Lecture Notes in Civil Engineering*, **2023**, 65-79	0.3	
26	Application of CFD plug-ins integrated into urban and building design platforms for performance simulations: A literature review. *Frontiers of Architectural Research*, **2022**,	2.3	2
25	A Bibliometric Review on Artificial Intelligence for Smart Buildings. **2022**, 14, 10230		2
24	Evaluation of Thermal Insulation Performance of Building Exterior Wall Based on Multiobjective Optimization Algorithm. **2022**, 2022, 1-8		
23	A machine learning-enhanced design optimizer for urban cooling. 1420326X2211128		1
22	Multi-optimal design and dispatch for a grid-connected solar photovoltaic-based multigeneration energy system through economic, energy and environmental assessment. **2022**, 243, 393-409		0
21	Improving robustness and efficiency of edge computing models.		0
20	Utilizing artificial intelligence for environmental sustainability. **2022**, 259-279		0
19	Surrogate optimization of energy retrofits in domestic building stocks using household carbon valuations. 1-22		0
18	Physics-informed machine learning for metamodeling thermal comfort in non-air-conditioned buildings.		0
17	Data-driven performance analysis of a residential building applying artificial neural network (ANN) and multi-objective genetic algorithm (GA). **2022**, 225, 109633		0

16	Digital Twin of HVAC system (HVACDT) for multiobjective optimization of energy consumption and thermal comfort based on BIM framework with ANN-MOGA. 1-49	0
15	Response surface methods based in artificial intelligence for superstructure thermoeconomic optimization of waste heat recovery systems in a large internal combustion engine. **2022**, 271, 116275	0
14	Multiobjective optimization of building energy consumption and thermal comfort based on integrated BIM framework with machine learning-NSGA II. **2022**, 277, 112479	1
13	Comparing the performance of four shading strategies based on a multi-objective genetic algorithm: A case study in a university library. **2022**, 105532	0
12	Performance assessment of RBFMOpt, NSGA2, and MHACO on the thermal and energy optimization of an office building. 1-15	0
11	Multi objective optimization of detailed building models with Typical Short Sequences considering sequential and adaptive methods. **2023**, 118, 105645	0
10	An Interactive Multi-criteria Decision-making Method for Building Performance Design. **2023**, 112793	1
9	A Novel Approach for Optimizing Building Energy Models Using Machine Learning Algorithms. **2023**, 16, 1033	1
8	Sustainable Building Optimization Model for Early-Stage Design. **2023**, 13, 74	0
7	Building Energy Model Calibration Using a Surrogate Neural Network. **2023**, 113057	0
6	Overheating analysis of optimized nearly Zero-Energy dwelling during current and future heatwaves coincided with cooling system outage. **2023**, 287, 112998	0
5	Limitations: Developing an Evidence-Based Energy Policy Framework to Asset Robust Energy Performance Evaluation and Certification Schemes. **2022**, 617-640	0
4	Investigation of Predictive Regulation Strategy of Secondary Loop in District Heating Systems. **2023**, 15, 3524	0
3	Accelerating Optimal Control Strategy Generation for HVAC Systems Using a Scenario Reduction Method: A Case Study. **2023**, 16, 2988	0
2	Investigating the reliability of building energy models: Comparative analysis of the Impact of data pipelines and model complexities. **2023**, 106511	0
1	Integrated performance optimization of industrial buildings in relation to thermal comfort and energy consumption: A case study in hot summer and cold winter climate. **2023**, 102991	0