

Review

Energy consumption prediction using machine learning; a review

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Abstract: Machine learning (ML) methods has recently contributed very well in the advancement of the prediction models used for energy consumption. Such models highly improve the accuracy, robustness, and precision and the generalization ability of the conventional time series forecasting tools. This article reviews the state of the art of machine learning models used in the general application of energy consumption. Through a novel search and taxonomy the most relevant literature in the field are classified according to the ML modeling technique, energy type, prediction type, and the application area. A comprehensive review of the literature identifies the major ML methods, their application and a discussion on the evaluation of their effectiveness in energy consumption prediction. This paper further makes a conclusion on the trend and the effectiveness of the ML models. As the result, this research reports an outstanding rise in the accuracy and an ever increasing performance of the prediction technologies using the novel hybrid and ensemble prediction models.

Keywords: energy consumption; prediction; machine learning models; deep learning models; artificial intelligence (AI); computational intelligence (CI); forecasting; soft computing (SC);

1. Introduction

Energy consumption is among one of the essential topics of energy systems. Energy consumption came under the consideration after the energy crisis in 1970s[1]. Also, It is shown that energy consumption throughout the world is rapidly increasing [2]. Therefore, each country tries to use as less energy as possible in their country in different areas from building to farms, from industrial process to vehicles [3]. As energy comes from three different resources like fossil fuels, renewable and nuclear resources [4], it need so much effort to keep tracking of energy consumption of these types in different area. However by doing so, we can predict the amount of energy, which is consumed in different areas and try to make plans, specialized for a specific usage and area.

For all energy types mentioned above, estimating the usage is useful for decision and policy makers. By knowing how much energy will be used for their process or work, they can be able to think of some changes in them to reduce the amount energy usage. Predicting future energy usage both in Short-term and Long-term manner will help us even to know, that in which type energy is used mostly and try to change the trend, as it is happened in the recent years for fossil fuels and now we have renewable energy. The amount of energy used in different areas is influenced by different factors such as water, wind, temperature. Having multiple factors, predicting the energy consumption is a complex problem[5].

Nowadays ML models are being used in different areas because they are useful and the way ML works is like a function which best maps the input data to output. Machine learning models can produce prediction for energy consumption with high accuracy. So they can be used by governments to implement energy-saving policies. For instance, ML models can predict the amount energy used in

building [6]. They can also be used to predict the future use of different types of energy like electricity or natural gas[6].

This research work has been conducted in the prediction of different energy type usage. Predictions can be done on the usage of energy in a specific procedure in industry [7] or the total amount of energy used in a country [8]. This study tries to review the recent studies related to modeling and estimating of energy consumption in different area.

The organization of this paper is in a way to review different ML models for energy prediction like: ANFIS, ANN, DT, ELM, MLP, SVM/SVR, WNN, ENSEMBLE, HYBRID, and DEEP LEARNING. In each section related to each model we try to review the latest studies which uses ML models for forecasting energy usage in different applications.

2. Research Methodology

The database is created using the following search keywords to identify the manuscripts on energy consumption prediction using machine learning models. ISI and Scopus databases had been explored using the essential search keywords, i.e., (TITLE-ABS-KEY ("energy consumption") AND TITLE-ABS-KEY ("machine learning" OR "Deep learning" OR "ANN" OR "MLP" OR "ELM" OR "neural network" OR "ANFIS" OR "decision tree" OR wnn)).

Documents by year

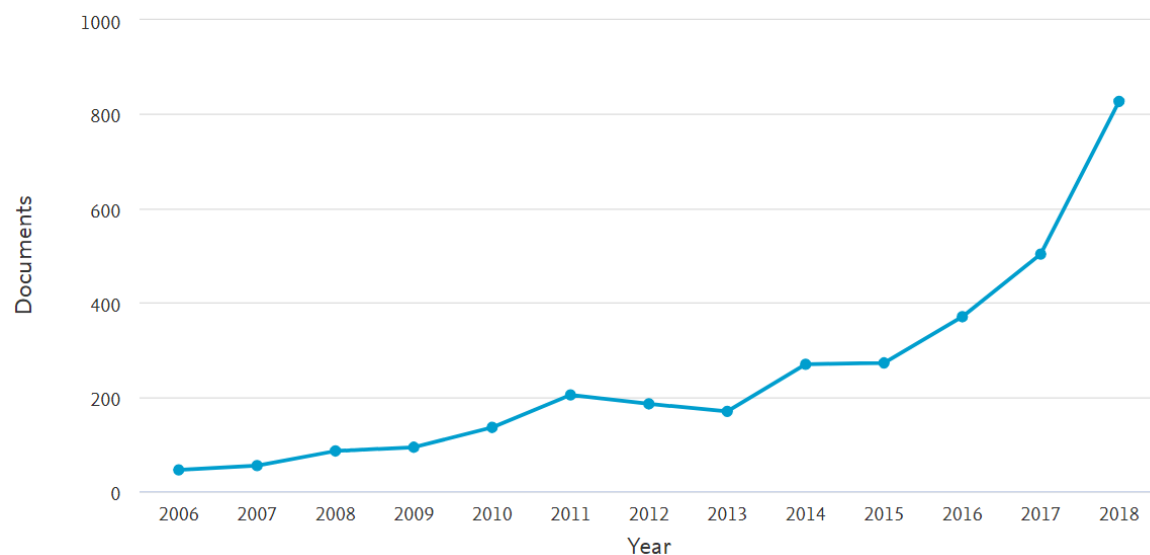


Figure 1. The progress of ML models for energy consumption prediction

Study the database shows a dramatic increase in the number of papers from 2006 to 2018. The database includes 4300 papers. The most relevant and original works have been revised in this state-of-the-art.

3. Machine learning models

Here comes the taxonomy chart and one paragraph explanation. The ML models include: ANFIS, ANN, DT, ELM, MLP, SVM/SVR, WNN, ENSEMBLE, HYBRID, and DEEP LEARNING.

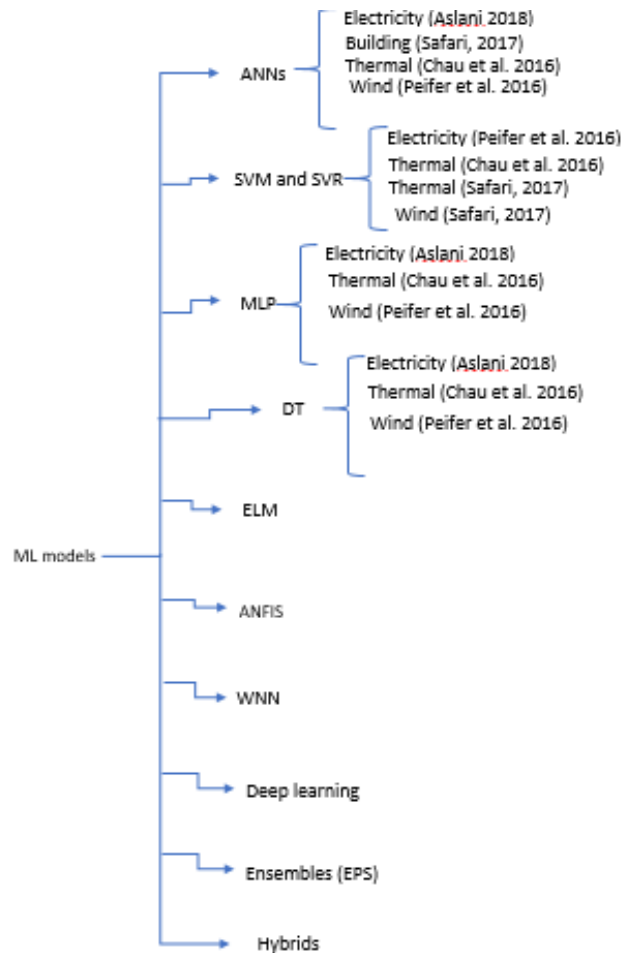


Figure 2. The taxonomy of research

3.1. ANFIS

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
Y. H. Gao, J.; Cai, L.; Chen, G.; Jia, N.; Zhu, L.; Wang, H.	2018	energy	MDF medium-density fiberboard	Long-term	U.S.
H. N.-P. Hosseinzadeh-Bandbafha, A.; Shamshirband, S.	2017	energy	fattening farms	Short-term	Iran
S. H. A. F. Kaboli, A.; Selvaraj, J.; Rahim, N. A.	2017	electricity	the whole country	Long-term	ASEAN-5 countries
O. M. Popoola	2016	electricity	lighting in residential houses	Short-term	South Africa
R. L. Maachou, A.; Khouider, A.; Bermad, A.	2016	energy	nitrate production in the	Long-term	Algeiers

				wastewater treatment		
S. S. Naji, S.; Basser, H.; Alengaram, U. J.; Jumaat, M. Z.; Amirmojahedi, M.	2016	energy	buildings	Long-term	Iran	
S. S. Naji, S.; Basser, H.; Keivani, A.; Alengaram, U. J.; Jumaat, M. Z.; Petković, D.	2016	energy	building	Long-term	iran	
S. S. Naji, S.; Basser, H.; Alengaram, U. J.; Jumaat, M. Z.; Amirmojahedi, M.	2015	energy	bulilding with different envelope parameters	Long-term	Iran	
B. R. Khoshnevisan, S.; Omid, M.; Mousazadeh, H.	2014	energy	agriculture	Long-term	Iran	
V. N. A. Majazi Dalfard, M.; Nazari-Shirkouhi, S.; Sajadi, S. M.; Asadzadeh, S. M.	2013	Natural GAS	power generation	Long-term	IRAN	

3.2. ANNs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
B. Z. Sena, S. A.; Yakub, F.; Yusoff, N. M.; Ridwan, M. K.	2018	electricity	household	Real-time	Malaysia
J. F. Yue, H.; Yang, G.; Li, Z.	2018	solar	AGB estimation	Long-term	China
S. K. Saravanan, K.	2018	electricity	agriculture sector	Long-term	India
S. V. B. Oprea, A.; Reveiu, A.	2018	energy	building	Long-term	Romania
A. A. D. Z. Shojaie, A.; Vafaie, S.	2017	fuel	fuel station	Long-term	Iran
S. Ö. Tiryaki, Ş; Aydın, A.	2017	energy	machining of wood	Short-term	Turkey
J. W. J. Moon, S. K.	2016	thermal	accomodation buildings	daily	South Korea
M. M. Macas, F.; Fonti, A.; Giantomassi, A.; Comodi, G.;	2016	gas	buildings	hourly	Italy

Annunziato, M.; Pizzuti, S.; Capra, A.						
E. D. Siami-Irdemoosa, S. R.	2015	fuel	mini dump trucks	Long-term	U.S.	
M. S. Gunduz, H. B.	2015	hydro energy	hydroelectric power plant (renewable)	Long-term	Turkey	

3.2. SVMs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
H. F. Deng, D.; Eckelman, M. J.	2018	energy	comertial building	Long-term	U.S.
J. F. Yue, H.; Yang, G.; Li, Z.	2018	solar	AGB estimation	Long-term	China
X. L. Wang, D.; Zhao, X.; Sun, Z.	2018	energy	the whole country	yearly	China
C. E. T. Kontokosta, C.	2017	energy	buildings in a city	Long-term	U.S.
M. S. Stul, K.; Leenders, R.; Butaye, L.	2017	energy	industrial installations	Long-term	Belgium
D. P. Caicedo, A.	2016	electricity	indoor office lightning	Short-term	Netherlands
F. D. Zhang, C.; Lee, S. E.; Yang, J.; Shah, K. W.	2016	electricity	building	half-hourly and daily	Singapore
F. D. Zhang, C.; Lee, S. E.; Yang, J.; Shah, K. W.	2016	energy	institutional building	long	Singapore
S. S. Idowu, S.; Åhlund, C.; Schelén, O.	2016	water thermal	buldings	hourly	Sweden
W. H. Sun, Y.; Chang, H.	2015	fossil fuel energy	power generation	Long-term	China

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3.2. WNNs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
J. G. Zhao, S.; Ren, D.; Li, Z.; Xue, L.	2015	energy	smart residential homes	Long-term	China
H Chitsaz, N amjady, H Zareipour	2014	wind	wind farms	hourly	Iran
	2013	electricity	load forecasting	Short-term	Canada/ Iran

Hui Zhao ; Rong Liu ; Zhuoqun Zhao ; Chuanli Fan	2011	energy	energy consumption	Long-term	China
Eynard, Julien, Stéphane Grieu, and Monique Polit	2011	thermal	multi-energy district boiler	Short-term	France
C Chenm, S Duan, T cai, B Liu	2011	solar	solar power prediction	daily	China
Z. A. Bashir ; M. E. El- Hawary	2009	electricity	load demand	hourly	Canada
H Esen, F Ozgen, M Esen, A sengur	2009	solar	solar air heater	Long-term	Turkey
A. Oonsivilai ; M.E. El- Hawary	2002	electricity	electric power system comercial load	daily	Mexico
R Goa, L H Tsoukalas	2001	electricity	power consumption	Short-term	USA

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3.2. DTs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
J. F. Yue, H.; Yang, G.; Li, Z.	2018	solar	AGB estimation	Long-term	China
P. M. Shine, M. D.; Upton, J.; Scully, T.	2018	water/ electricity	farm	monthly	Ireland
X. M. Lin, L.; Luo, Y.; Zhang, S.	2017	electricity	electric vehcle	Long-term	China
Z. H. Yu, F.; Fung, B. C. M.; Yoshino, H.	2010	energy	building	Long-term	Canada
G. K. F. Y. Tso, K. K. W.	2007	electricity	comparison	Long-term	Hong Kong

Here comes the review.

3.2. DTs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
H. F. Deng, D.; Eckelman, M. J.	2018	energy	comertial building		U.S.
J. F. Yue, H.; Yang, G.; Li, Z.	2018	solar	AGB estimation	Long-term	China
P. M. Shine, M. D.; Upton, J.; Scully, T.	2018	electricity/water	pasture based dairy farms	monthly	Irland

Z. W. Wang, Y.; Zeng, R.; Srinivasan, R. S.; Ahrentzen, S.	2018	energy	educational buildings	hourly	U.S.
C. E. T. Kontokosta, C.	2017	energy	city scale energy use in buildings commercial	yearly	U.S.
H. F. Deng, D.; Eckelman, M. J.	2017	energy	building energy	long	U.S.
M. W. M. Ahmad, M.; Rezgui, Y.	2017	energy	building	hourly	Spain
SVM	2017	temporal	appliances in low- energy house	Short-term	Belgium
S. S. Idowu, S.; Åhlund, C.; Schelén, O.	2016	water thermal	buildings	hourly	Sweden
Greek Long-term energy consumption prediction using artificial neural networks	2010	energy	the whole country	Long-term	Greece

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3.2. ELMs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
N. O. Izadyar, H. C.; Shamshirband, S.; Ghadamian, H.; Tong, C. W.	2015	thermal	residential heating demand	monthly	Iran
H. F. C. Gong, Z. S.; Zhu, Q. X.; He, Y. L.	2017	energy	petrochemical	Long-term	China
X. K. Lin, W.	2016	energy	cement industry	Long-term	China
S. K. Najji, A.; Shamshirband, S.; Alengaram, U. J.; Jumaat, M. Z.; Mansor, Z.; Lee, M.	2016	energy	building material construction	Long-term	Iran
J. Q. Wang, F.; Zhao, F.; Sutherland, J. W.	2016	energy	sintering process	yearly	U.S.
N. O. Izadyar, H. C.; Shamshirband, S.; Ghadamian, H.; Tong, C. W.	2015	natural gas	residential heating demand	monthly	Malaysia

D. S. Zhai, Y. C.	2017	energy	ACMV systems	Long-term	Singapore
Y. Z. Han, Q.; Geng, Z.; Zhu, Q.	2018	energy	energy management optimization	Long-term	China

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3.2. MLPs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
C. L. Deb, S. E.; Santamouris, M.	2018	energy	office building	Short-term	Singapore
P. M. Shine, M. D.; Upton, J.; Scully, T.	2018	electrical, water	farms	monthly	Ireland
Y. Z. Ding, Q.; Yuan, T.; Yang, K.	2018	thermal	HVAC System	daily	China
F. K. Wahid, D. H.	2017	energy	residential building	Short-term	South Korea
M. S. Safa, M.; Allen, J.; Shahi, A.; Haas, C. T.	2017	energy	offices and retail outlets	monthly	New Zealand
Y. Z. Ding, Q.; Yuan, T.; Yang, K.	2017	thermal	HVAC	Short-term	China
L. M. Mba, P.; Kemajou, A.	2016	energy	building in humid region	hourly	Cameroon
A. G. Capozzoli, D.; Causone, F.	2015	thermal	schools	Long-term	Italy
C. W. Zeng, C.; Zuo, L.; Zhang, B.; Hu, X.	2014	electricity	multi product pipeline	daily	China
D. C. Suh, S.	2012	electricity/ gas./ water	multi-family residential	Long-term	Korea

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3.2. ENSEMBLES

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
P. M. Shine, M. D.; Upton, J.; Scully, T.	2018	electricity/water	pasture based dairy farms	monthly	Ireland
S. A. Papadopoulos, E.; Woon, W. L.; Kontokosta, C. E.	2018	energy	buildings		UAE
S. N. Dai, D.; Li, Y.	2018	energy	Country level	Long-term	china
Z. W. Wang, Y.; Zeng, R.; Srinivasan, R. S.; Ahrentzen, S.	2018	electricity	educational buildings	hourly	U.S.

M. H. C. Alobaidi, F.; Meguid, M. A.	2018	energy	Individual household	Daily	France
M. W. M. Ahmad, M.; Rezgui, Y.	2017	energy	buildings	Hourly	Spain
L. W. Tang, S.; He, K.; Wang, S.	2015	nuclear energy	nuclear energy consumption in china	Long-term	China
R. Ž. S. Jovanović, A. A.; Živković, B. D.	2015	thermal	heating energy consumption	Short-term	Serbia
R. S. Jovanović, A.	2015	thermal	heating energy consumption	Long-term	Serbia
R. Ž. S. Jovanović, A. A.; Živković, B. D.	2015	thermal	energy consumption in a university campus	Short-term	Serbia

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3.2. HYBRIDs

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	Energy type	application	Prediction type	Region
X. L. Wang, D.; Zhao, X.; Sun, Z.	2018	energy	the whole country	Long-term	China
C. D. Li, Z.; Zhao, D.; Yi, J.; Zhang, G.	2017	energy	building	Short-term	China
C. T. M. Cheung, K. W.; Wong, L. T.	2017	energy	cooling energy	Long-term	China
G. N. Golkarnarenji, M.; Badii, K.; Milani, A. S.; Jazar, R. N.; Khayyam, H.	2017	thermal	carbon fiber production line	Long-term	Australia
Y. T. Chen, H.; Berardi, U.	2017	electricity	commercial buildings	Hourly	China
B. L. Dong, Z.; Rahman, S. M. M.; Vega, R.	2016	electricity	residential building	hourly	U.S.
J. Q. Wang, F.; Zhao, F.; Sutherland, J. W.	2016	energy	sintering process	yearly	China
A. A. Azadeh, S. M.; Mirseraji, G. H.; Saberi, M.	2015	natural GAS	the whole country	Long-term	Iran
A. H. Abdoos, M.; Abdoos, A. A.	2015	electricity	electricity market	Hourly	Iran
J. C. An, Y.; Wu, M.	2015	energy	Blast furnace		China

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DEEP LEARNINGS

Table 1. This is a table. Tables should be placed in the main text near to the first time they are cited.

Reference	Year	energy type	application	prediction type	region
A. S. Rahman, A. D.	2018	thermal	comertial building	weekly	U.S.
C. D. Li, Z.; Zhao, D.; Yi, J.; Zhang, G.	2017	energy	building	Long-term	China
E. N. Mocanu, P. H.; Gibescu, M.; Kling, W. L.	2016	electricity	residential building	minutely	Netherlands
D. P. Antanasijević, V.; Ristić, M.; Perić-Grujić, A.	2015	energy	GHG	Long-term	Serbia
J. Q. Wang, F.; Zhu, J.; Ni, J.	2014	energy	a large-scale iron and steel enterprise (sintering process)	Long-term	China
E Mocanu, P H Ngueyen, M Gibescu, W L kling	2016	electricity	renewable energy sources	Long-term	Netherlands
C Fan, F Xiao, Y Zhao	2017	cooling	cooling load for building	daily	China
-J C .Riquelme	2016	electricity	load prediction for smart grid	Short-term	South Korea

[9-258], [7, 259-489], [490-739]

4. Discussion

The use of ML models have been increased during the last decade. Along with the conventional ML methods, e.g., ANNs and MLP, DTs, the application of hybrids and Ensemble methods has been dramatically increased. Through hybrid methods the researcher aim at higher accuracy and efficiency. The future direction of the research is to develop hybrid models with higher accuracy and higher speeds.

5. Conclusions

The use of ML models have been increased during the last decade. Along with the conventional ML methods, e.g., ANNs and MLP, DTs, the application of hybrids and Ensemble methods has been dramatically increased. Through hybrid methods the researcher aim at higher accuracy and efficiency. The future direction of the research is to develop hybrid models with higher accuracy and higher speeds.

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Conflicts of Interest: The authors declare no conflict of interest

References

1. Oluklulu, Ç., *A research on the photovoltaic modules that are being used actively in utilizing solar energy, sizing of the modules and architectural using means of the modules*. MSc, Gazi University, Ankara, Turkey, 2001.
2. Pérez-Lombard, L., J. Ortiz, and C. Pout, *A review on buildings energy consumption information*. *Energy and buildings*, 2008. **40**(3): p. 394-398.
3. Barak, S. and S.S. Sadegh, *Forecasting energy consumption using ensemble ARIMA–ANFIS hybrid algorithm*. *International Journal of Electrical Power & Energy Systems*, 2016. **82**: p. 92-104.
4. Demirbas, A., *Potential applications of renewable energy sources, biomass combustion problems in boiler power systems and combustion related environmental issues*. *Progress in energy and combustion science*, 2005. **31**(2): p. 171-192.
5. Zhao, H.-x. and F. Magoulès, *A review on the prediction of building energy consumption*. *Renewable and Sustainable Energy Reviews*, 2012. **16**(6): p. 3586-3592.
6. Ekici, B.B. and U.T. Aksoy, *Prediction of building energy consumption by using artificial neural networks*. *Advances in Engineering Software*, 2009. **40**(5): p. 356-362.
7. Yilmazkaya, E., et al., *Prediction of mono-wire cutting machine performance parameters using artificial neural network and regression models*. *Engineering Geology*, 2018. **239**: p. 96-108.
8. Zhang, W. and J. Yang, *Forecasting natural gas consumption in China by Bayesian model averaging*. *Energy Reports*, 2015. **1**: p. 216-220.
9. Abdoli, B., et al., *Evaluation of the air-borne ultrasound on fluidized bed drying of shelled corn: Effectiveness, grain quality, and energy consumption*. *Drying Technology*, 2018. **36**(14): p. 1749-1766.
10. Abramovich, B.N. and I.S. Babanova, *Development of neural network models to predict and control power consumption in mineral mining industry*. *Mining Informational and Analytical Bulletin*, 2018. **2018**(5): p. 206-213.
11. Abtahi, T., et al., *Accelerating Convolutional Neural Network with FFT on Embedded Hardware*. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 2018. **26**(9): p. 1737-1749.
12. Abu Sharkh, M. and A. Shami, *An evergreen cloud: Optimizing energy efficiency in heterogeneous cloud computing architectures*. *Vehicular Communications*, 2017. **9**: p. 199-210.
13. Acharya, S. and D.A. D’Mello, *Energy and cost efficient dynamic load balancing mechanism for resource provisioning in cloud computing*. *International Journal of Applied Engineering Research*, 2017. **12**(24): p. 15782-15790.
14. Acharya, S. and C.R. Tripathy, *An ANFIS estimator based data aggregation scheme for fault tolerant Wireless Sensor Networks*. *Journal of King Saud University - Computer and Information Sciences*, 2018. **30**(3): p. 334-348.

15. Adamović, V.M., et al., *An artificial neural network approach for the estimation of the primary production of energy from municipal solid waste and its application to the Balkan countries*. Waste Management, 2018. **78**: p. 955-968.
16. Adnan, W.N.W.M., N.Y. Dahlan, and I. Musirin, *Development of hybrid artificial neural network for quantifying energy saving using measurement and verification*. Indonesian Journal of Electrical Engineering and Computer Science, 2017. **8**(1): p. 137-145.
17. Aftab, M., et al., *Automatic HVAC control with real-time occupancy recognition and simulation-guided model predictive control in low-cost embedded system*. Energy and Buildings, 2017. **154**: p. 141-156.
18. Aghbashlo, M., et al., *Fuzzy modeling and optimization of the synthesis of biodiesel from waste cooking oil (WCO) by a low power, high frequency piezo-ultrasonic reactor*. Energy, 2017. **132**: p. 65-78.
19. Aghbashlo, M., et al., *Multi-objective exergetic and technical optimization of a piezoelectric ultrasonic reactor applied to synthesize biodiesel from waste cooking oil (WCO) using soft computing techniques*. Fuel, 2019. **235**: p. 100-112.
20. Aghbashlo, M., M. Tabatabaei, and S. Hosseinpour, *On the exergoeconomic and exergoenvironmental evaluation and optimization of biodiesel synthesis from waste cooking oil (WCO) using a low power, high frequency ultrasonic reactor*. Energy Conversion and Management, 2018. **164**: p. 385-398.
21. Ahmad, M.W., et al., *Deep highway networks and tree-based ensemble for predicting short-term building energy consumption*. Energies, 2018. **11**(12).
22. Ahmad, M.W., M. Mourshed, and Y. Rezgui, *Trees vs Neurons: Comparison between random forest and ANN for high-resolution prediction of building energy consumption*. Energy and Buildings, 2017. **147**: p. 77-89.
23. Ahmad, M.W., J. Reynolds, and Y. Rezgui, *Predictive modelling for solar thermal energy systems: A comparison of support vector regression, random forest, extra trees and regression trees*. Journal of Cleaner Production, 2018. **203**: p. 810-821.
24. Ahmad, T. and H. Chen, *Potential of three variant machine-learning models for forecasting district level medium-term and long-term energy demand in smart grid environment*. Energy, 2018. **160**: p. 1008-1020.
25. Ahmad, T. and H. Chen, *Nonlinear autoregressive and random forest approaches to forecasting electricity load for utility energy management systems*. Sustainable Cities and Society, 2019. **45**: p. 460-473.
26. Ahmad, T., et al., *Supervised based machine learning models for short, medium and long-term energy prediction in distinct building environment*. Energy, 2018. **158**: p. 17-32.
27. Ahmad, T., H. Chen, and W.A. Shah, *Effective bulk energy consumption control and management for power utilities using artificial intelligence techniques under conventional and renewable energy resources*. International Journal of Electrical Power and Energy Systems, 2019. **109**: p. 242-258.
28. Ahn, J. and S. Cho, *Dead-band vs. machine-learning control systems: Analysis of control benefits and energy efficiency*. Journal of Building Engineering, 2017. **12**: p. 17-25.

29. Ahn, J., S. Cho, and D.H. Chung, *Analysis of energy and control efficiencies of fuzzy logic and artificial neural network technologies in the heating energy supply system responding to the changes of user demands*. Applied Energy, 2017. **190**: p. 222-231.
30. Ahn, J., D.H. Chung, and S. Cho, *Performance analysis of space heating smart control models for energy and control effectiveness in five different climate zones*. Building and Environment, 2017. **115**: p. 316-331.
31. Ahn, J., D.H. Chung, and S. Cho, *Network-based energy supply optimal system in the condition where both heating and cooling are required simultaneously in a swing season*. Intelligent Buildings International, 2018. **10**(1): p. 42-57.
32. Ahn, J., et al., *Convolutional neural network-based classification system design with compressed wireless sensor network images*. PLoS ONE, 2018. **13**(5).
33. Ak, R., O. Fink, and E. Zio, *Two Machine Learning Approaches for Short-Term Wind Speed Time-Series Prediction*. IEEE Transactions on Neural Networks and Learning Systems, 2016. **27**(8): p. 1734-1747.
34. Akila, V. and T. Sheela, *An efficient TDMA technique with priority queues in wireless sensor networks*. International Journal of Pharmacy and Technology, 2016. **8**(4): p. 21690-21700.
35. Akmandor, A.O., H. Yin, and N.K. Jha, *Smart, Secure, Yet Energy-Efficient, Internet-of-Things Sensors*. IEEE Transactions on Multi-Scale Computing Systems, 2018. **4**(4): p. 914-930.
36. Akpinar, M., M.F. Adak, and N. Yumusak, *Day-ahead natural gas demand forecasting using optimized ABC-based neural network with sliding window technique: The case study of regional basis in Turkey*. Energies, 2017. **10**(6).
37. Alam, M.A.U., et al., *A smart segmentation technique towards improved infrequent non-speech gestural activity recognition model*. Pervasive and Mobile Computing, 2017. **34**: p. 25-45.
38. Alani, A.Y. and I.O. Osunmakinde, *Short-term multiple forecasting of electric energy loads for sustainable demand planning in smart grids for smart homes*. Sustainability (Switzerland), 2017. **9**(11).
39. Alarfaj, O. and K. Bhattacharya, *A controlled load estimator-based energy management system for water pumping systems*. IEEE Transactions on Smart Grid, 2018. **9**(6): p. 6307-6317.
40. Al-Hamed, S.A. and M.F. Wahby, *Prediction of potato yield based on energy inputs using artificial neural networks and c-sharp under Saudi Arabia Conditions*. Biosciences Biotechnology Research Asia, 2016. **13**(2): p. 631-644.
41. Ali, A., et al., *Enhancement of RWSN lifetime via firework clustering algorithm validated by ANN*. Information (Switzerland), 2018. **9**(3).
42. Ali Mirza, Q.K., I. Awan, and M. Younas, *CloudIntell: An intelligent malware detection system*. Future Generation Computer Systems, 2018. **86**: p. 1042-1053.
43. Al-Kaseem, B.R., et al., *A new intelligent approach for optimizing 6LoWPAN MAC layer parameters*. IEEE Access, 2017. **5**: p. 16229-16240.
44. Allami, R., *Premature ventricular contraction analysis for real-time patient monitoring*. Biomedical Signal Processing and Control, 2019. **47**: p. 358-365.

45. Almalaq, A. and J.J. Zhang, *Evolutionary Deep Learning-Based Energy Consumption Prediction for Buildings*. IEEE Access, 2019. **7**: p. 1520-1531.
46. Alobaidi, M.H., F. Chebana, and M.A. Meguid, *Robust ensemble learning framework for day-ahead forecasting of household based energy consumption*. Applied Energy, 2018. **212**: p. 997-1012.
47. Alshinina, R.A. and K.M. Elleithy, *A Highly Accurate Deep Learning Based Approach for Developing Wireless Sensor Network Middleware*. IEEE Access, 2018. **6**: p. 29885-29898.
48. Alsaidari, Z.H., *The prediction of energy consumption using multivariate regression and artificial neural network models: Transport in the GCC*. International Journal of Engineering and Technology(UAE), 2018. **7**(4): p. 98-106.
49. Alvarado-Iniesta, A., et al., *Multi-objective optimization of an injection molding process*, in *Studies in Computational Intelligence*. 2017. p. 391-407.
50. Álvarez, J.A., et al., *Modeling of Energy Efficiency for Residential Buildings Using Artificial Neuronal Networks*. Advances in Civil Engineering, 2018. **2018**.
51. Alwisy, A., et al., *Energy-based target cost modelling for construction projects*. Journal of Building Engineering, 2018. **20**: p. 387-399.
52. Alzoubi, I., et al., *Integrating artificial neural network and imperialist competitive algorithm (ICA), to predict the energy consumption for land leveling*. International Journal of Energy Sector Management, 2017. **11**(4): p. 522-540.
53. Alzoubi, I., et al., *Prediction of environmental indicators in land leveling using artificial intelligence techniques*. Journal of Environmental Health Science and Engineering, 2018. **16**(1): p. 65-80.
54. Alzoubi, I., et al., *Comparing ANFIS and integrating algorithm models (ICA-ANN, PSO-ANN, and GA-ANN) for prediction of energy consumption for irrigation land leveling*. Geosystem Engineering, 2018. **21**(2): p. 81-94.
55. Amber, K.P., et al., *Intelligent techniques for forecasting electricity consumption of buildings*. Energy, 2018. **157**: p. 886-893.
56. Amedi, H.R., A. Baghban, and M.A. Ahmadi, *Evolving machine learning models to predict hydrogen sulfide solubility in the presence of various ionic liquids*. Journal of Molecular Liquids, 2016. **216**: p. 411-422.
57. Ameer, K., et al., *Optimization and modeling for heat reflux extraction of total yield, stevioside and rebaudioside-A from Stevia rebaudiana (Bertoni) leaves*. Separation Science and Technology (Philadelphia), 2017. **52**(7): p. 1193-1205.
58. Ammendola, R., et al., *The Brain on Low Power Architectures: Efficient Simulation of Cortical Slow Waves and Asynchronous States*, in *Advances in Parallel Computing*. 2018. p. 760-769.
59. Anarado, I., et al., *Mitigating Silent Data Corruptions in Integer Matrix Products: Toward Reliable Multimedia Computing on Unreliable Hardware*. IEEE Transactions on Circuits and Systems for Video Technology, 2017. **27**(11): p. 2476-2489.
60. Andri, R., et al., *Yoda NN: An architecture for ultralow power binary-weight CNN acceleration*. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018. **37**(1): p. 48-60.

61. Androjić, I. and Z. Dolaček-Alduk, *Artificial neural network model for forecasting energy consumption in hot mix asphalt (HMA) production*. Construction and Building Materials, 2018. **170**: p. 424-432.
62. Androjić, I., et al., *Achieving sustainability through the temperature prediction of aggregate stockpiles*. Journal of Cleaner Production, 2019. **219**: p. 451-460.
63. Araújo, J.P.C., et al., *Estimation of energy consumption on the tire-pavement interaction for asphalt mixtures with different surface properties using data mining techniques*. Transportation Research Part D: Transport and Environment, 2019. **67**: p. 421-432.
64. Araya, D.B., et al., *An ensemble learning framework for anomaly detection in building energy consumption*. Energy and Buildings, 2017. **144**: p. 191-206.
65. Ardakani, A., et al., *VLSI Implementation of Deep Neural Network Using Integral Stochastic Computing*. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2017. **25**(10): p. 2688-2699.
66. Ardakani, S.R., S.M. Hossein, and A. Aslani, *Statistical Approaches to Forecasting Domestic Energy Consumption and Assessing Determinants: The Case of Nordic Countries*. Strategic Planning for Energy and the Environment, 2018. **38**(1): p. 26-71.
67. Arriandiaga, A., et al., *A new approach for dynamic modelling of energy consumption in the grinding process using recurrent neural networks*. Neural Computing and Applications, 2016. **27**(6): p. 1577-1592.
68. Arslan, E., et al., *Event-triggered H_{∞} filtering for delayed neural networks via sampled-data*. Neural Networks, 2017. **91**: p. 11-21.
69. Ascione, F., et al., *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**: p. 200-219.
70. Ascione, F., et al., *Artificial neural networks to predict energy performance and retrofit scenarios for any member of a building category: A novel approach*. Energy, 2017. **118**: p. 999-1017.
71. Ashouri, M., et al., *Development of a ranking procedure for energy performance evaluation of buildings based on occupant behavior*. Energy and Buildings, 2019. **183**: p. 659-671.
72. Assareh, E. and M. Nedaei, *A metaheuristic approach to forecast the global carbon dioxide emissions*. International Journal of Environmental Studies, 2018. **75**(1): p. 99-120.
73. Ateeq, M., et al., *Multi-parametric analysis of reliability and energy consumption in IoT: A deep learning approach*. Sensors (Switzerland), 2019. **19**(2).
74. Attoue, N., I. Shahrou, and R. Younes, *Smart building: Use of the artificial neural network approach for indoor temperature forecasting*. Energies, 2018. **11**(2).
75. Auffmanberg, F., et al., *A comfort-based approach to smart heating and air conditioning*. ACM Transactions on Intelligent Systems and Technology, 2017. **9**(3).

76. Avci, H., et al., *Optimisation of the design parameters of a domestic refrigerator using CFD and artificial neural networks*. International Journal of Refrigeration, 2016. **67**: p. 227-238.
77. Ayala-Romero, J.A., J.J. Alcaraz, and J. Vales-Alonso, *Energy saving and interference coordination in HetNets using dynamic programming and CEC*. IEEE Access, 2018. **6**: p. 71110-71121.
78. Aydin, G., H. Jang, and E. Topal, *Energy consumption modeling using artificial neural networks: The case of the world's highest consumers*. Energy Sources, Part B: Economics, Planning and Policy, 2016. **11**(3): p. 212-219.
79. Azadeh, A., et al., *A novel performance measurement approach based on trust context using fuzzy T-norm and S-norm operators: The case study of energy consumption*. Energy Exploration and Exploitation, 2016. **34**(4): p. 561-585.
80. Azar, J., et al., *An energy efficient IoT data compression approach for edge machine learning*. Future Generation Computer Systems, 2019. **96**: p. 168-175.
81. Azmoodeh, A., et al., *Detecting crypto-ransomware in IoT networks based on energy consumption footprint*. Journal of Ambient Intelligence and Humanized Computing, 2018. **9**(4): p. 1141-1152.
82. Aznar, F., et al., *Modelling the thermal behaviour of a building facade using deep learning*. PLoS ONE, 2018. **13**(12).
83. Bachraty, M., et al., *Neural network modeling of cutting fluid impact on energy consumption during turning*. Tribology in Industry, 2016. **38**(2): p. 149-155.
84. Badalians Gholikandi, G., M. Nili Ardakani, and F. Moradi, *Fered-Fenton technology for efficient waste-activated sludge stabilization: Determination of the main specifications and optimization of the energy consumption*. Journal of Environmental Chemical Engineering, 2018. **6**(1): p. 1546-1557.
85. Bagiorgas, H.S. and G. Mihalakakou, *On the influence of the urban heat island on the cooling load of a school building in Athens, Greece*. Journal of Atmospheric and Solar-Terrestrial Physics, 2016. **138-139**: p. 179-186.
86. Bagloee, S.A., M. Asadi, and M. Patriksson, *Minimization of water pumps' electricity usage: A hybrid approach of regression models with optimization*. Expert Systems with Applications, 2018. **107**: p. 222-242.
87. Bai, X., et al., *Understanding and leveraging the impact of response latency on user behaviour in web search*. ACM Transactions on Information Systems, 2017. **36**(2).
88. Bai, Y., D. Fan, and M. Lin, *Stochastic-based synapse and soft-limiting neuron with spintronic devices for low power and robust artificial neural networks*. IEEE Transactions on Multi-Scale Computing Systems, 2018. **4**(3): p. 463-476.
89. Bakošová, M., et al., *Neural-network-based and robust model-based predictive control of a tubular heat exchanger*. Chemical Engineering Transactions, 2017. **61**: p. 301-306.
90. Balouchestani, M. and S. Krishnan, *Advanced K-means clustering algorithm for large ECG data sets based on a collaboration of compressed sensing theory and K-SVD approach*. Signal, Image and Video Processing, 2016. **10**(1): p. 113-120.

91. Baptista, D., et al., *Implementation strategy of convolution neural networks on field programmable gate arrays for appliance classification using the voltage and current (V-I) trajectory*. Energies, 2018. **11**(9).
92. Barak, S. and S.S. Sadegh, *Forecasting energy consumption using ensemble ARIMA-ANFIS hybrid algorithm*. International Journal of Electrical Power and Energy Systems, 2016. **82**: p. 92-104.
93. Barroso-Maldonado, J.M., et al., *Predicting the energy performance of a reciprocating compressor using artificial neural networks and probabilistic neural networks*. Revista Mexicana de Ingeniera Quimica, 2017. **16**(2): p. 679-690.
94. Basagni, S., et al., *MARLIN-Q: Multi-modal communications for reliable and low-latency underwater data delivery*. Ad Hoc Networks, 2019. **82**: p. 134-145.
95. Bassamzadeh, N. and R. Ghanem, *Multiscale stochastic prediction of electricity demand in smart grids using Bayesian networks*. Applied Energy, 2017. **193**: p. 369-380.
96. Bazan-Krzywoszańska, A., et al., *Economic conditions for the development of energy efficient civil engineering using RES in the policy of cohesion of the European Union (2014-2020). Case study: The town of Zielona Gora*. Energy and Buildings, 2016. **118**: p. 170-180.
97. Beccali, M., et al., *Artificial neural network decision support tool for assessment of the energy performance and the refurbishment actions for the non-residential building stock in Southern Italy*. Energy, 2017. **137**: p. 1201-1218.
98. Bedogni, L., M. Di Felice, and L. Bononi, *Context-aware Android applications through transportation mode detection techniques*. Wireless Communications and Mobile Computing, 2016. **16**(16): p. 2523-2541.
99. Beghoura, M.A., A. Boubetra, and A. Boukerram, *Green software requirements and measurement: random decision forests-based software energy consumption profiling*. Requirements Engineering, 2017. **22**(1): p. 27-40.
100. Beigi, M., M. Torki-Harchegani, and M. Tohidi, *Experimental and ANN modeling investigations of energy traits for rough rice drying*. Energy, 2017. **141**: p. 2196-2205.
101. Belkacem, S., S. Bouafia, and M. Chabani, *Study of oxytetracycline degradation by means of anodic oxidation process using platinized titanium (Ti/Pt) anode and modeling by artificial neural networks*. Process Safety and Environmental Protection, 2017. **111**: p. 170-179.
102. Belmonte-Fernández, Ó., et al., *An indoor positioning system based on wearables for ambient-assisted living*. Sensors (Switzerland), 2017. **17**(1).
103. Ben Rached, N., et al., *A time-varied probabilistic ON/OFF switching algorithm for cellular networks*. IEEE Communications Letters, 2018. **22**(3): p. 634-637.
104. Benalcazar, P., M. Krawczyk, and J. Kamiński, *Forecasting global coal consumption: An artificial neural network approach*. Gospodarka Surowcami Mineralnymi / Mineral Resources Management, 2017. **33**(4): p. 29-44.
105. Benedetti, M., et al., *Energy consumption control automation using Artificial Neural Networks and adaptive algorithms: Proposal of a new methodology and case study*. Applied Energy, 2016. **165**: p. 60-71.

106. Benedict, S., *SCALE-EA: A scalability aware performance tuning framework for OpenMP applications*. Scalable Computing, 2018. **19**(1): p. 15-29.
107. Berco, D., et al., *Nanoscale Conductive Filament with Alternating Rectification as an Artificial Synapse Building Block*. ACS Nano, 2018. **12**(6): p. 5946-5955.
108. Bharti, S. and K.K. Pattanaik, *Gravitational outlier detection for wireless sensor networks*. International Journal of Communication Systems, 2016. **29**(13): p. 2015-2027.
109. Bhinge, R., et al., *Toward a Generalized Energy Prediction Model for Machine Tools*. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2017. **139**(4).
110. Bhowmik, S., et al., *A comparative study of artificial intelligence based models to predict performance and emission characteristics of a single cylinder diesel engine fueled with diesosenol*. Journal of Thermal Science and Engineering Applications, 2018. **10**(4).
111. Bhowmik, S., et al., *Prediction of performance and exhaust emissions of diesel engine fuelled with adulterated diesel: An artificial neural network assisted fuzzy-based topology optimization*. Energy and Environment, 2018. **29**(8): p. 1413-1437.
112. Bhowmik, S., et al., *Performance-exhaust emission prediction of diesosenol fueled diesel engine: An ANN coupled MORSM based optimization*. Energy, 2018. **153**: p. 212-222.
113. Bin Altaf, M.A. and J. Yoo, *A 1.83 μ J/Classification, 8-Channel, Patient-Specific Epileptic Seizure Classification SoC Using a Non-Linear Support Vector Machine*. IEEE Transactions on Biomedical Circuits and Systems, 2016. **10**(1): p. 49-60.
114. Bisen, D. and S. Sharma, *An Energy-Efficient Routing Approach for Performance Enhancement of MANET Through Adaptive Neuro-Fuzzy Inference System*. International Journal of Fuzzy Systems, 2018. **20**(8): p. 2693-2708.
115. Biswas, M.A.R., M.D. Robinson, and N. Fumo, *Prediction of residential building energy consumption: A neural network approach*. Energy, 2016. **117**: p. 84-92.
116. Blumberga, A., et al., *System dynamics model of a biotechonomy*. Journal of Cleaner Production, 2018. **172**: p. 4018-4032.
117. Boga, K., et al., *A Generalized Stochastic Implementation of the Disparity Energy Model for Depth Perception*. Journal of Signal Processing Systems, 2018. **90**(5): p. 709-725.
118. Bogomolov, A., et al., *Energy consumption prediction using people dynamics derived from cellular network data*. EPJ Data Science, 2016. **5**(1).
119. Boguslawski, B., et al., *Energy-Efficient Associative Memory Based on Neural Cliques*. IEEE Transactions on Circuits and Systems II: Express Briefs, 2016. **63**(4): p. 376-380.
120. Bolanča, T., et al., *Modeling of policies for reduction of GHG emissions in energy sector using ANN: case study—Croatia (EU)*. Environmental Science and Pollution Research, 2017. **24**(19): p. 16172-16185.
121. Boulmaiz, A., et al., *Robust acoustic bird recognition for habitat monitoring with wireless sensor networks*. International Journal of Speech Technology, 2016. **19**(3): p. 631-645.

122. Bozic, M., et al., *Optimization of wheg robot running with simulation of neuro-fuzzy control*. International Journal of Simulation Modelling, 2017. **16**(1): p. 19-30.
123. Burrioni, J., et al., *Energetic constraints produce self-sustained oscillatory dynamics in neuronal networks*. Frontiers in Neuroscience, 2017. **11**(FEB).
124. Çağlayan, M.U., *EROL GELENBE: A CAREER in MULTI-DISCIPLINARY PROBABILITY MODELS*. Probability in the Engineering and Informational Sciences, 2016. **30**(3): p. 308-325.
125. Cai, E., et al., *Learning-Based Power/Performance Optimization for Many-Core Systems with Extended-Range Voltage/Frequency Scaling*. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2016. **35**(8): p. 1318-1331.
126. Cai, L., et al., *Treatment of Styrene-Contaminated Air Using Combined Process of Microelectrolysis and Biotrickling Filter*. Environmental Engineering Science, 2018. **35**(12): p. 1302-1308.
127. Cao, S.J. and C. Ren, *Ventilation control strategy using low-dimensional linear ventilation models and artificial neural network*. Building and Environment, 2018. **144**: p. 316-333.
128. Cao, X. and A.L. Yu, *Multi-AUV Cooperative Target Search Algorithm in 3-D Underwater Workspace*. Journal of Navigation, 2017. **70**(6): p. 1293-1311.
129. Carlucho, I., et al., *Adaptive low-level control of autonomous underwater vehicles using deep reinforcement learning*. Robotics and Autonomous Systems, 2018. **107**: p. 71-86.
130. Carreira, P., et al., *Can HVAC really learn from users? A simulation-based study on the effectiveness of voting for comfort and energy use optimization*. Sustainable Cities and Society, 2018. **41**: p. 275-285.
131. Carvalho, S.A.L., D.C. Cunha, and A.G. Silva-Filho, *Autonomous power management in mobile devices using dynamic frequency scaling and reinforcement learning for energy minimization*. Microprocessors and Microsystems, 2019. **64**: p. 205-220.
132. Casado-Mansilla, D., et al., *Embedding intelligent eco-aware systems within everyday things to increase people's energy awareness*. Soft Computing, 2016. **20**(5): p. 1695-1711.
133. Caviglione, L., et al., *Seeing the unseen: Revealing mobile malware hidden communications via energy consumption and artificial intelligence*. IEEE Transactions on Information Forensics and Security, 2016. **11**(4): p. 799-810.
134. Chaabouni, S., *Modeling and forecasting 3E in Eastern Asia: a comparison of linear and nonlinear models*. Quality and Quantity, 2016. **50**(5): p. 1993-2008.
135. Chae, Y.T., et al., *Artificial neural network model for forecasting sub-hourly electricity usage in commercial buildings*. Energy and Buildings, 2016. **111**: p. 184-194.
136. Chaib Draa, I., et al., *Sensing user context and habits for run-time energy optimization*. Eurasip Journal on Embedded Systems, 2017. **2017**(1).

137. Chakraborty, D. and H. Elzarka, *Advanced machine learning techniques for building performance simulation: a comparative analysis*. Journal of Building Performance Simulation, 2019. **12**(2): p. 193-207.
138. Chalbi, N., M. Boubaker, and M.H. Bedoui, *Implementation of a low-power LVQ architecture on FPGA*. IET Circuits, Devices and Systems, 2017. **11**(6): p. 597-604.
139. Chandanapalli, S.B., E.S. Reddy, and D.R. Lakshmi, *DFTDT: distributed functional tangent decision tree for aqua status prediction in wireless sensor networks*. International Journal of Machine Learning and Cybernetics, 2018. **9**(9): p. 1419-1434.
140. Chander, B. and Kumaravelan, *One class SVMs outlier detection for wireless sensor networks in harsh environments: Analysis*. International Journal of Recent Technology and Engineering, 2018. **7**(4): p. 294-301.
141. Chandra, S., S. Agrawal, and D.S. Chauhan, *Soft computing based approach to evaluate the performance of solar PV module considering wind effect in laboratory condition*. Energy Reports, 2018. **4**: p. 252-259.
142. Chang, S., et al., *An NNwC MPPT-Based energy supply solution for sensor nodes in buildings and its feasibility study*. Energies, 2019. **12**(1).
143. Chantrapornchai, C. and P. Nusawat, *Two machine learning models for mobile phone battery discharge rate prediction based on usage patterns*. Journal of Information Processing Systems, 2016. **12**(3): p. 436-454.
144. Chari, A. and S. Christodoulou, *Building energy performance prediction using neural networks*. Energy Efficiency, 2017. **10**(5): p. 1315-1327.
145. Chaudhari, S.S. and R.C. Biradar, *Resource prediction-based routing using agents in mobile ad hoc networks*. International Journal of Communication Networks and Distributed Systems, 2018. **20**(4): p. 413-445.
146. Chayjan, R.A. and M. Kaveh, *Drying characteristics of eggplant (*Solanum melongena* L.) slices under microwave-convective drying*. Research in Agricultural Engineering, 2016. **62**(4): p. 170-178.
147. Chen, G.P., *Optimized control for attitude variable structure of UAV based on recurrent wavelet neural networks*. Shenyang Gongye Daxue Xuebao/Journal of Shenyang University of Technology, 2018. **40**(1): p. 94-98.
148. Chen, L., et al., *Ultra-low power $Hf_{0.5}Zr_{0.5}O_2$ based ferroelectric tunnel junction synapses for hardware neural network applications*. Nanoscale, 2018. **10**(33): p. 15826-15833.
149. Chen, L., et al., *Deep mobile traffic forecast and complementary base station clustering for C-RAN optimization*. Journal of Network and Computer Applications, 2018. **121**: p. 59-69.
150. Chen, L.M., et al., *Cooperative impulsive formation control for networked uncertain Euler-Lagrange systems with communication delays*. Chinese Physics B, 2017. **26**(6).
151. Chen, M.C., A. Sengupta, and K. Roy, *Magnetic Skyrmion as a Spintronic Deep Learning Spiking Neuron Processor*. IEEE Transactions on Magnetics, 2018. **54**(8).
152. Chen, Q., et al., *Improvement of envelope design through multilayer feed-forward neural networks*. Open House International, 2016. **41**(3): p. 32-37.

153. Chen, S., T.T. Ren, and Z.C. Wu, *Research on neural network optimization algorithm for building energy consumption prediction*. Journal of Computational Methods in Sciences and Engineering, 2018. **18**(3): p. 695-707.
154. Chen, X., et al., *Hybrid multistep modeling for calculation of carbon efficiency of iron ore sintering process based on yield prediction*. Neural Computing and Applications, 2017. **28**(6): p. 1193-1207.
155. Chen, X., et al., *A hybrid just-in-time soft sensor for carbon efficiency of iron ore sintering process based on feature extraction of cross-sectional frames at discharge end*. Journal of Process Control, 2017. **54**: p. 14-24.
156. Chen, X. and T.T. Öpöz, *Effect of different parameters on grinding efficiency and its monitoring by acoustic emission*. Production and Manufacturing Research, 2016. **4**(1): p. 190-208.
157. Chen, Y., et al., *Forecasting traction energy consumption of metro based on support vector regression*. Xitong Gongcheng Lilun yu Shijian/System Engineering Theory and Practice, 2016. **36**(8): p. 2101-2107.
158. Chen, Y., H. Tan, and U. Berardi, *Day-ahead prediction of hourly electric demand in non-stationary operated commercial buildings: A clustering-based hybrid approach*. Energy and Buildings, 2017. **148**: p. 228-237.
159. Chen, Y., et al., *Artificial synapses based on nanomaterials*. Nanotechnology, 2019. **30**(1).
160. Cheng, M.Y., J.S. Chou, and M.T. Cao, *Nature-inspired metaheuristic multivariate adaptive regression splines for predicting refrigeration system performance*. Soft Computing, 2017. **21**(2): p. 477-489.
161. Cheng, S., et al., *Rural household energy consumption behavior with neural network approach: A case study*. International Journal of Heat and Technology, 2018. **36**(4): p. 1482-1492.
162. Cheng, Z., et al., *Satisfaction based Q-learning for integrated lighting and blind control*. Energy and Buildings, 2016. **127**: p. 43-55.
163. Chereshnev, R. and A. Kertész-Farkas, *RapidHARe: A computationally inexpensive method for real-time human activity recognition from wearable sensors*. Journal of Ambient Intelligence and Smart Environments, 2018. **10**(5): p. 377-391.
164. Chincoli, M. and A. Liotta, *Self-learning power control in wireless sensor networks*. Sensors (Switzerland), 2018. **18**(2).
165. Choi, K.B., et al., *A split-gate positive feedback device with an integrate-and-fire capability for a high-density low-power neuron circuit*. Frontiers in Neuroscience, 2018. **12**(OCT).
166. Choi, Y., Y. Jang, and S. Lee, *Prediction of silica fouling using mathematical model and artificial neural network in a direct contact membrane distillation*. Desalination and Water Treatment, 2017. **90**: p. 16-22.
167. Chou, J.S. and N.T. Ngo, *Time series analytics using sliding window metaheuristic optimization-based machine learning system for identifying building energy consumption patterns*. Applied Energy, 2016. **177**: p. 751-770.

168. Chou, J.S. and D.S. Tran, *Forecasting energy consumption time series using machine learning techniques based on usage patterns of residential householders*. Energy, 2018: p. 709-726.
169. Christoforidis, E.I., S. Xydis, and D. Soudris, *CF-TUNE: Collaborative Filtering Auto-Tuning for Energy Efficient Many-Core Processors*. IEEE Computer Architecture Letters, 2018. **17**(1): p. 25-28.
170. Chu, X., et al., *Distributed formation tracking of multi-robot systems with nonholonomic constraint via event-triggered approach*. Neurocomputing, 2018. **275**: p. 121-131.
171. Chung, M.H., et al., *Application of artificial neural networks for determining energy-efficient operating set-points of the VRF cooling system*. Building and Environment, 2017. **125**: p. 77-87.
172. Ciman, M., et al., *Stairstep recognition and counting in a serious Game for increasing users' physical activity*. Personal and Ubiquitous Computing, 2016. **20**(6): p. 1015-1033.
173. Coelho, I.M., et al., *A GPU deep learning metaheuristic based model for time series forecasting*. Applied Energy, 2017. **201**: p. 412-418.
174. Comito, C. and D. Talia, *Energy consumption of data mining algorithms on mobile phones: Evaluation and prediction*. Pervasive and Mobile Computing, 2017. **42**: p. 248-264.
175. Conde-Gutiérrez, R.A., et al., *Optimal multivariable conditions in the operation of an absorption heat transformer with energy recycling solved by the genetic algorithm in artificial neural network inverse*. Applied Soft Computing Journal, 2018. **72**: p. 218-234.
176. Conti, F., et al., *Accelerated Visual Context Classification on a Low-Power Smartwatch*. IEEE Transactions on Human-Machine Systems, 2017. **47**(1): p. 19-30.
177. Conti, F., et al., *PULP: A Ultra-Low Power Parallel Accelerator for Energy-Efficient and Flexible Embedded Vision*. Journal of Signal Processing Systems, 2016. **84**(3): p. 339-354.
178. Cui, C., et al., *Short-term building energy model recommendation system: A meta-learning approach*. Applied Energy, 2016. **172**: p. 251-263.
179. Curado, L.F.A., et al., *Modeling the reflection of Photosynthetically active radiation in a monodominant floodable forest in the Pantanal of Mato Grosso State using multivariate statistics and neural networks*. Anais da Academia Brasileira de Ciências, 2016. **88**(3): p. 1387-1395.
180. D'Agostino, D., et al., *SoC-based computing infrastructures for scientific applications and commercial services: Performance and economic evaluations*. Future Generation Computer Systems, 2019. **96**: p. 11-22.
181. Dai, S., D. Niu, and Y. Li, *Forecasting of energy consumption in China based on Ensemble Empirical Mode Decomposition and Least Squares Support Vector Machine Optimized by Improved Shuffled Frog Leaping Algorithm*. Applied Sciences (Switzerland), 2018. **8**(5).
182. Danassis, P., et al., *A low-complexity control mechanism targeting smart thermostats*. Energy and Buildings, 2017. **139**: p. 340-350.

183. Das, B., J. Schulze, and U. Ganguly, *Ultra-low energy LIF neuron using Si NIPIN diode for spiking neural networks*. IEEE Electron Device Letters, 2018. **39**(12): p. 1832-1835.
184. Davie, K., et al., *A Single-Cell Transcriptome Atlas of the Aging Drosophila Brain*. Cell, 2018. **174**(4): p. 982-998.e20.
185. Davis, N.F., et al., *Carbon footprint in flexible ureteroscopy: A comparative study on the environmental impact of reusable and single-use ureteroscopes*. Journal of Endourology, 2018. **32**(3): p. 214-217.
186. De Baets, L., et al., *On the Bayesian optimization and robustness of event detection methods in NILM*. Energy and Buildings, 2017. **145**: p. 57-66.
187. De Cauwer, C., et al., *A data-driven method for energy consumption prediction and energy-efficient routing of electric vehicles in real-world conditions*. Energies, 2017. **10**(5).
188. De, G. and W. Gao, *Forecasting China's natural gas consumption based on adaboost-particle swarm optimization-extreme learning machine integrated learning method*. Energies, 2018. **11**(11).
189. De Graaff, M.S., et al., *Full-Scale Highly-Loaded Wastewater Treatment Processes (A-Stage) to Increase Energy Production from Wastewater: Performance and Design Guidelines*. Environmental Engineering Science, 2016. **33**(8): p. 571-577.
190. De Kok, R., A. Mauri, and A. Bozzon, *Automatic processing of user-generated content for the description of energy-consuming activities at individual and group level*. Energies, 2019. **12**(1).
191. De Paz, J.F., et al., *Intelligent system for lighting control in smart cities*. Information Sciences, 2016. **372**: p. 241-255.
192. Deb, C., et al., *Forecasting diurnal cooling energy load for institutional buildings using Artificial Neural Networks*. Energy and Buildings, 2016. **121**: p. 284-297.
193. Deb, C., S.E. Lee, and M. Santamouris, *Using artificial neural networks to assess HVAC related energy saving in retrofitted office buildings*. Solar Energy, 2018. **163**: p. 32-44.
194. Deb, M. and T.K. Chakrabarty, *A wavelet based hybrid SARIMA-ETS model to forecast electricity consumption*. Electronic Journal of Applied Statistical Analysis, 2017. **10**(2): p. 408-431.
195. Deb, S., et al., *Domain Wall Motion-Based Dual-Threshold Activation Unit for Low-Power Classification of Non-Linearly Separable Functions*. IEEE Transactions on Biomedical Circuits and Systems, 2018. **12**(6): p. 1410-1421.
196. Debrunner, T., S. Saeedi, and P.H.J. Kelly, *AUKE: Automatic kernel code generation for an analogue SIMD focal-plane sensor-processor array*. ACM Transactions on Architecture and Code Optimization, 2019. **15**(4).
197. Dega Rajaji, V. and K. Chandra Sekhar, *ANFIS forecast model for predicting wind energy generation based on historical data*. Journal of Advanced Research in Dynamical and Control Systems, 2018. **10**(12): p. 183-190.
198. Dehghani, F. and N. Movahhedinia, *CCN Energy-Delay Aware Cache Management Using Quantized Hopfield*. Journal of Network and Systems Management, 2018. **26**(4): p. 1058-1078.

199. Dehghani, H., B. Vahidi, and S.H. Hosseinian, *Wind farms participation in electricity markets considering uncertainties*. Renewable Energy, 2017. **101**: p. 907-918.
200. Deng, H., D. Fannon, and M.J. Eckelman, *Predictive modeling for US commercial building energy use: A comparison of existing statistical and machine learning algorithms using CBECS microdata*. Energy and Buildings, 2018. **163**: p. 34-43.
201. Deng, L., et al., *Energy consumption analysis for various memristive networks under different learning strategies*. Physics Letters, Section A: General, Atomic and Solid State Physics, 2016. **380**(7-8): p. 903-909.
202. Derakhshan, S. and M. Bashiri, *Investigation of an efficient shape optimization procedure for centrifugal pump impeller using eagle strategy algorithm and ANN (case study: slurry flow)*. Structural and Multidisciplinary Optimization, 2018. **58**(2): p. 459-473.
203. Di Corso, E., T. Cerquitelli, and D. Apiletti, *METATECH: METeorological data analysis for thermal energy characterization by means of self-learning transparent models*. Energies, 2018. **11**(6).
204. Di Pascale, E., et al., *The Network As a Computer: A Framework for Distributed Computing over IoT Mesh Networks*. IEEE Internet of Things Journal, 2018. **5**(3): p. 2107-2119.
205. Di Piazza, M.C., et al., *A two-stage Energy Management System for smart buildings reducing the impact of demand uncertainty*. Energy and Buildings, 2017. **139**: p. 1-9.
206. Diamond, A., T. Nowotny, and M. Schmuker, *Comparing neuromorphic solutions in action: Implementing a bio-inspired solution to a benchmark classification task on three parallel-computing platforms*. Frontiers in Neuroscience, 2016. **9**(JAN).
207. Diao, L., et al., *Modeling energy consumption in residential buildings: A bottom-up analysis based on occupant behavior pattern clustering and stochastic simulation*. Energy and Buildings, 2017. **147**: p. 47-66.
208. Ding, C., S. Yang, and C. Gan, *Dynamic behavior and its optimization of robot under randomly uncertain disturbance*. Nongye Jixie Xuebao/Transactions of the Chinese Society for Agricultural Machinery, 2016. **47**(8): p. 356-363 and 398.
209. Ding, R., et al., *Lightening the load with highly accurate storage- and energy-efficient lightnns*. ACM Transactions on Reconfigurable Technology and Systems, 2018. **11**(3).
210. Ding, W., J. Zhang, and Y. Leung, *Prediction of air pollutant concentration based on sparse response back-propagation training feedforward neural networks*. Environmental Science and Pollution Research, 2016. **23**(19): p. 19481-19494.
211. Ding, Y., et al., *Model input selection for building heating load prediction: A case study for an office building in Tianjin*. Energy and Buildings, 2018. **159**: p. 254-270.
212. Dinh, N.T. and Y. Kim, *An energy efficient integration model for sensor cloud systems*. IEEE Access, 2019. **7**: p. 3018-3030.
213. Divina, F., et al., *Stacking ensemble learning for short-term electricity consumption forecasting*. Energies, 2018. **11**(4).
214. Doblander, C., et al., *Poster Abstract: Real-time load prediction with high velocity smart home data stream*. Computer Science - Research and Development, 2018. **33**(1-2): p. 233-234.

215. Dogan, H., et al., *Accelerating Synchronization Using Moving Compute to Data Model at 1,000-core Multicore Scale*. ACM Transactions on Architecture and Code Optimization, 2019. **16**(1).
216. Dong, B., et al., *A hybrid model approach for forecasting future residential electricity consumption*. Energy and Buildings, 2016. **117**: p. 341-351.
217. Dong, C., et al., *What is the probability of achieving the carbon dioxide emission targets of the Paris Agreement? Evidence from the top ten emitters*. Science of the Total Environment, 2018. **622-623**: p. 1294-1303.
218. Dong, Q., K. Xing, and H. Zhang, *Artificial neural network for assessment of energy consumption and cost for cross laminated timber office building in severe cold regions*. Sustainability (Switzerland), 2017. **10**(1).
219. Dong, S., et al., *Comparison of prediction models for power draw in grinding and flotation processes in a gold treatment plant*. Journal of Chemical Engineering of Japan, 2016. **49**(2): p. 204-210.
220. Du, R., C. Liu, and F. Liu, *Trust authorization monitoring model in IoT*. International Journal of Performability Engineering, 2018. **14**(3): p. 453-462.
221. Du, Y., et al., *Predicting vehicle fuel consumption patterns using floating vehicle data*. Journal of Environmental Sciences, 2017. **59**: p. 24-29.
222. Du, Y., et al., *Predicting vehicle fuel consumption patterns using floating vehicle data*. Journal of environmental sciences (China), 2017. **59**: p. 24-29.
223. Duan, N., *The research of air conditioning temperature control system based on ant colony algorithm with neural network*. Boletín Técnico/Technical Bulletin, 2017. **55**(10): p. 168-175.
224. Dursun, M. and S. Özden, *Optimization of soil moisture sensor placement for a PV-powered drip irrigation system using a genetic algorithm and artificial neural network*. Electrical Engineering, 2017. **99**(1): p. 407-419.
225. Edwards-Murphy, F., et al., *B+WSN: Smart beehive with preliminary decision tree analysis for agriculture and honey bee health monitoring*. Computers and Electronics in Agriculture, 2016. **124**: p. 211-219.
226. Eletter, S.F., et al., *Predicting energy consumption using artificial neural networks: A case study of the UAE*. Electronic Journal of Applied Statistical Analysis, 2018. **11**(1): p. 137-154.
227. Elhami, B., M. Khanali, and A. Akram, *Combined application of Artificial Neural Networks and life cycle assessment in lentil farming in Iran*. Information Processing in Agriculture, 2017. **4**(1): p. 18-32.
228. Elhoseny, M., et al., *Dynamic Multi-hop Clustering in a Wireless Sensor Network: Performance Improvement*. Wireless Personal Communications, 2017. **95**(4): p. 3733-3753.
229. Entchev, E., et al., *Energy, economic and environmental performance simulation of a hybrid renewable microgeneration system with neural network predictive control*. Alexandria Engineering Journal, 2018. **57**(1): p. 455-473.
230. Erdeljan, A.M., B.Z. Vukobratović, and R.J. Struharik, *IP core for efficient Zero-Run length compression of CNN feature maps*. Telfor Journal, 2018. **10**(1): p. 44-49.

231. Eryilmaz, S.B., et al., *Training a Probabilistic Graphical Model with Resistive Switching Electronic Synapses*. IEEE Transactions on Electron Devices, 2016. **63**(12): p. 5004-5011.
232. Esfandyari, M., et al., *Experimental Study on Heat Insulation Performance of Ceramic Additives Paint (CAP) in an Indoor Closed Media*. Silicon, 2018. **10**(5): p. 2341-2351.
233. Eskandari, N. and S. Jalilzadeh, *Residential load manageability factor analyses by load sensitivity affected by temperature*. Iranian Journal of Electrical and Electronic Engineering, 2016. **12**(4): p. 314-321.
234. Eškinja, Z., S. Ružić, and O. Kuljača, *Modelling heat loss through multi storey Double Skin Façade as preliminaries for an energy efficient control strategy*. Gradjevinar, 2018. **70**(11): p. 931-942.
235. Espinosa-Aranda, J.L., et al., *Smart doll: Emotion recognition using embedded deep learning*. Symmetry, 2018. **10**(9).
236. Esposito, C., et al., *Securing collaborative deep learning in industrial applications within adversarial scenarios*. IEEE Transactions on Industrial Informatics, 2018. **14**(11): p. 4972-4981.
237. Estrada-Lopez, J.J., et al., *Smart Soil Parameters Estimation System Using an Autonomous Wireless Sensor Network with Dynamic Power Management Strategy*. IEEE Sensors Journal, 2018. **18**(21): p. 8913-8923.
238. Everett, S.E. and R. Dubay, *A sub-space artificial neural network for mold cooling in injection molding*. Expert Systems with Applications, 2017. **79**: p. 358-371.
239. Faizollahzadeh Ardabili, S., et al., *A novel enhanced exergy method in analyzing HVAC system using soft computing approaches: A case study on mushroom growing hall*. Journal of Building Engineering, 2017. **13**: p. 309-318.
240. Falch, T.L. and A.C. Elster, *Machine learning-based auto-tuning for enhanced performance portability of OpenCL applications*. Concurrency Computation, 2017. **29**(8).
241. Fayaz, M. and D. Kim, *A prediction methodology of energy consumption based on deep extreme learning machine and comparative analysis in residential buildings*. Electronics (Switzerland), 2018. **7**(10).
242. Feali, M.S., A. Ahmadi, and M. Hayati, *Implementation of adaptive neuron based on memristor and memcapacitor emulators*. Neurocomputing, 2018. **309**: p. 157-167.
243. Fenza, G., M. Gallo, and V. Loia, *Drift-aware methodology for anomaly detection in smart grid*. IEEE Access, 2019. **7**: p. 9645-9657.
244. Folgheraiter, M. and B. Aubakir, *Design and Modeling of a Lightweight and Low Power Consumption Full-Scale Biped Robot*. International Journal of Humanoid Robotics, 2018. **15**(5).
245. Fong, S., et al., *Predicting unusual energy consumption events from smart home sensor network by data stream mining with misclassified recall*. Journal of Ambient Intelligence and Humanized Computing, 2018. **9**(4): p. 1197-1221.
246. Foscoliano, C., et al., *Predictive control of an activated sludge process for long term operation*. Chemical Engineering Journal, 2016. **304**: p. 1031-1044.

247. Fox, S. and E. Clifford, *Detecting the End of Nitrification in Small and Decentralized Wastewater Treatment Systems Using Low-Resource Real-Time Control Methods*. Journal of Environmental Engineering (United States), 2018. **144**(8).
248. Fu, C., D. Qian, and Z. Luan, *An Energy Consumption Model for Softwares Using Machine Learning and Its Applications*. Hsi-An Chiao Tung Ta Hsueh/Journal of Xi'an Jiaotong University, 2018. **52**(12): p. 70-76.
249. Fu, H., et al., *Fault diagnosis of wireless sensor network based on optimized probabilistic neural network*. Journal Europeen des Systemes Automatises, 2018. **51**: p. 295-308.
250. Fu, M., J.A. Kelly, and J.P. Clinch, *Estimating annual average daily traffic and transport emissions for a national road network: A bottom-up methodology for both nationally-aggregated and spatially-disaggregated results*. Journal of Transport Geography, 2017. **58**: p. 186-195.
251. Fu, X. and X. Zhang, *Estimation of building energy consumption using weather information derived from photovoltaic power plants*. Renewable Energy, 2019. **130**: p. 130-138.
252. Fu, Y. and W. Wu, *Predicting household water use behaviour for improved hygiene practices in internet of things environment via dynamic behaviour intervention model*. IET Networks, 2016. **5**(5): p. 143-151.
253. Fud, G., *Deep belief network based ensemble approach for cooling load forecasting of air-conditioning system*. Energy, 2018. **148**: p. 269-282.
254. Fukushima, A., et al., *Prediction of energy consumption for new electric vehicle models by machine learning*. IET Intelligent Transport Systems, 2018. **12**(9): p. 1174-1180.
255. Funes, E., et al., *Predictive ANN models for the optimization of extra virgin olive oil clarification by means of vertical centrifugation*. Journal of Food Process Engineering, 2018. **41**(1).
256. Gajic, D., et al., *Modelling of electrical energy consumption in an electric arc furnace using artificial neural networks*. Energy, 2016. **108**: p. 132-139.
257. Galiullin, L.A. and R.A. Valiev, *Modeling of internal combustion engines test conditions based on neural network*. International Journal of Pharmacy and Technology, 2016. **8**(3): p. 14902-14910.
258. Gallagher, C.V., K. Bruton, and D.T.J. O'Sullivan, *Utilising the cross industry standard process for data mining to reduce uncertainty in the measurement and verification of energy savings*, in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. 2016. p. 48-58.
259. Seok, M.G., B.G. Kang, and D. Park, *Event-driven sensor/actuator microcontroller using neural network-based parameter reconfiguration method for unknown plant-model control applications*. International Journal of Applied Engineering Research, 2016. **11**(17): p. 9172-9179.
260. Seong, S., et al., *Reliable low-energy group formation for infrastructure-less public safety networks*. Eurasip Journal on Wireless Communications and Networking, 2016. **2016**(1).

261. Sethi, D. and P.P. Bhattacharya, *Artificial neural network based base station localization for energy efficient routing in WSN*. Recent Patents on Computer Science, 2016. **9**(3): p. 248-259.
262. Shah, J.J., et al., *Cost-Optimal Consumption-Aware Electric Water Heating Via Thermal Storage under Time-of-Use Pricing*. IEEE Transactions on Smart Grid, 2016. **7**(2): p. 592-599.
263. Shao, Y., *An improved WSN data integration scheme base on BP neural network*. International Journal of Future Generation Communication and Networking, 2016. **9**(9): p. 279-288.
264. Shao, Y. and D. Witarsyah, *Fast recognition method of moving video images based on BP neural networks*. Open Physics, 2018. **16**(1): p. 1024-1032.
265. Shareef, H., et al., *Review on Home Energy Management System Considering Demand Responses, Smart Technologies, and Intelligent Controllers*. IEEE Access, 2018. **6**: p. 24498-24509.
266. Sharifian, F., et al., *Contextual modulation is related to efficiency in a spiking network model of visual cortex*. Frontiers in Computational Neuroscience, 2016. **10**(January).
267. Sharma, V., B. Alam, and M.N. Doja, *ANFIS aided AODV routing protocol for mobile Ad Hoc networks*. Journal of Computer Science, 2017. **13**(10): p. 514-523.
268. Shen, J.X., et al., *Mimicking Synaptic Plasticity and Neural Network Using Memtransors*. Advanced Materials, 2018. **30**(12).
269. Shevchik, S.A., et al., *Acoustic Emission for in Situ Monitoring of Solid Materials Pre-Weakening by Electric Discharge: A Machine Learning Approach*. IEEE Access, 2018. **6**: p. 40313-40324.
270. Shi, Y., et al., *Neuroinspired unsupervised learning and pruning with subquantum CBRAM arrays*. Nature Communications, 2018. **9**(1).
271. Shin, S.J., et al., *Energy prediction modeling for numerical control programs using MTconnect*. Journal of the Korean Society for Precision Engineering, 2017. **34**(5): p. 355-362.
272. Shojaie, A.A., A. Dolatshahi Zand, and S. Vafaie, *Calculating production by using short term demand forecasting models: a case study of fuel supply system*. Evolving Systems, 2017. **8**(4): p. 271-285.
273. Sholahudin, S. and H. Han, *Simplified dynamic neural network model to predict heating load of a building using Taguchi method*. Energy, 2016. **115**: p. 1672-1678.
274. Sicari, S., et al., *Performance comparison of reputation assessment techniques based on self-organizing maps in wireless sensor networks*. Wireless Communications and Mobile Computing, 2017. **2017**.
275. Simić, V.M., et al., *Optimization of microwave-assisted extraction of total polyphenolic compounds from chokeberries by response surface methodology and artificial neural network*. Separation and Purification Technology, 2016. **160**: p. 89-97.
276. Singh, A.V., V. Juyal, and R. Saggarr, *Trust based Intelligent Routing Algorithm for Delay Tolerant Network using Artificial Neural Network*. Wireless Networks, 2017. **23**(3): p. 693-702.

277. Singh, P., V. Pareek, and A.K. Ahlawat, *Designing an energy efficient network using integration of KSOM, ANN and data fusion techniques*. International Journal of Communication Networks and Information Security, 2017. **9**(3): p. 466-473.
278. Singh, R., J. Singh, and R. Singh, *Fuzzy based advanced hybrid intrusion detection system to detect malicious nodes in wireless sensor networks*. Wireless Communications and Mobile Computing, 2017. **2017**.
279. Singh, S. and A. Yassine, *Big data mining of energy time series for behavioral analytics and energy consumption forecasting*. Energies, 2018. **11**(2).
280. Singh, S.K., F. Carpio, and A. Jukan, *Improving animal-human cohabitation with machine learning in fiber-wireless networks*. Journal of Sensor and Actuator Networks, 2018. **7**(3).
281. Skiba, M., M. Mrówczyńska, and A. Bazan-Krzywoszańska, *Modeling the economic dependence between town development policy and increasing energy effectiveness with neural networks. Case study: The town of Zielona Góra*. Applied Energy, 2017. **188**: p. 356-366.
282. Soltanali, H., A. Nikkhah, and A. Rohani, *Energy audit of Iranian kiwifruit production using intelligent systems*. Energy, 2017. **139**: p. 646-654.
283. Son, H. and C. Kim, *Short-term forecasting of electricity demand for the residential sector using weather and social variables*. Resources, Conservation and Recycling, 2017. **123**: p. 200-207.
284. Song, R., Q. Wei, and W. Xiao, *ADP-based optimal sensor scheduling for target tracking in energy harvesting wireless sensor networks*. Neural Computing and Applications, 2016. **27**(6): p. 1543-1551.
285. Soofastaei, A., et al., *Development of a multi-layer perceptron artificial neural network model to determine haul trucks energy consumption*. International Journal of Mining Science and Technology, 2016. **26**(2): p. 285-293.
286. Sopic, D., et al., *Real-Time Event-Driven Classification Technique for Early Detection and Prevention of Myocardial Infarction on Wearable Systems*. IEEE Transactions on Biomedical Circuits and Systems, 2018. **12**(5): p. 982-992.
287. Soudari, M., et al., *Learning based personalized energy management systems for residential buildings*. Energy and Buildings, 2016. **127**: p. 953-968.
288. Sparvoli, M., M.F.P. Silva, and M. Gazziro, *Development of doped graphene oxide resistive memories for applications based on neuromorphic computing*, in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. 2017. p. 580-588.
289. Sridevi, R., et al., *Development of a pedagogical framework to analyze the performance of induction machines*. International Journal of Electrical Engineering Education, 2019.
290. Stamenković, L.J., et al., *Prediction of nitrogen oxides emissions at the national level based on optimized artificial neural network model*. Air Quality, Atmosphere and Health, 2017. **10**(1): p. 15-23.
291. Staroverov, B.A. and B.A. Gnatyuk, *Universal energy consumption forecasting system based on neural network ensemble*. Optical Memory and Neural Networks (Information Optics), 2016. **25**(3): p. 198-202.

292. Strušnik, D., et al., *Energy efficiency analysis of steam ejector and electric vacuum pump for a turbine condenser air extraction system based on supervised machine learning modelling*. Applied Energy, 2016. **173**: p. 386-405.
293. Su, F., et al., *Nonlinear predictive control for adaptive adjustments of deep brain stimulation parameters in basal ganglia–thalamic network*. Neural Networks, 2018. **98**: p. 283-295.
294. Subba, B., S. Biswas, and S. Karmakar, *A Game Theory Based Multi Layered Intrusion Detection Framework for Wireless Sensor Networks*. International Journal of Wireless Information Networks, 2018. **25**(4): p. 399-421.
295. Sulandari, W., et al., *Forecasting electricity load demand using hybrid exponential smoothing-artificial neural network model*. International Journal of Advances in Intelligent Informatics, 2016. **2**(3): p. 131-139.
296. Sun, L., et al., *Synaptic Computation Enabled by Joule Heating of Single-Layered Semiconductors for Sound Localization*. Nano Letters, 2018. **18**(5): p. 3229-3234.
297. Sun, W. and Q. Gao, *Exploration of energy saving potential in China power industry based on Adaboost back propagation neural network*. Journal of Cleaner Production, 2019. **217**: p. 257-266.
298. Sun, Y., et al., *Analysis of electric power alternative potential under multi-scenario*. Dianwang Jishu/Power System Technology, 2017. **41**(1): p. 118-123.
299. Sun, Z. and N. Roos, *Dynamically stable walk control of biped humanoid on uneven and inclined terrain*. Neurocomputing, 2018. **280**: p. 111-122.
300. Sutthichaimethee, P. and B. Dockthaisong, *A relationship of causal factors in the economic, social, and environmental aspects affecting the implementation of sustainability policy in Thailand: Enriching the path analysis based on a GMM model*. Resources, 2018. **7**(4).
301. Swhli, K.M.H., et al., *Detection and evaluation of heating load of building by machine learning*. Sensor Review, 2018. **38**(1): p. 99-101.
302. Syai'in, M., et al., *Smart meter based on time series modify and neural network for online energy monitoring*. International Journal of Mechanical and Mechatronics Engineering, 2018. **18**(3): p. 46-53.
303. Sze, V., *Designing Hardware for Machine Learning: The Important Role Played by Circuit Designers*. IEEE Solid-State Circuits Magazine, 2017. **9**(4): p. 46-54.
304. Taheri-Rad, A., et al., *Energy flow modeling and predicting the yield of Iranian paddy cultivars using artificial neural networks*. Energy, 2017. **135**: p. 405-412.
305. Taki, M., et al., *Assessment of energy consumption and modeling of output energy for wheat production by neural network (MLP and RBF) and Gaussian process regression (GPR) models*. Journal of Cleaner Production, 2016. **172**: p. 3028-3041.
306. Tan, R., et al., *Unsupervised Residential Power Usage Monitoring Using a Wireless Sensor Network*. ACM Transactions on Sensor Networks, 2017. **13**(3).
307. Tanakunmas, P., et al., *Optimization-Based Control Strategy with Wavelet Network Input-Output Linearizing Constraint for an Ill-Conditioned High-Purity Distillation Column*. Industrial and Engineering Chemistry Research, 2017. **56**(31): p. 8927-8939.

308. Tang, G., et al., *A simple and robust approach to energy disaggregation in the presence of outliers*. Sustainable Computing: Informatics and Systems, 2016. **9**: p. 8-19.
309. Tang, X., et al., *Energy efficient job scheduling with workload prediction on cloud data center*. Cluster Computing, 2018. **21**(3): p. 1581-1593.
310. Tang, Z.L. and S.M. Li, *Deep recurrent neural network for multiple time slot frequency spectrum predictions of cognitive radio*. KSII Transactions on Internet and Information Systems, 2017. **11**(6): p. 3029-3045.
311. Tarafdar, A., et al., *Artificial Neural Network Modeling of Water Activity: a Low Energy Approach to Freeze Drying*. Food and Bioprocess Technology, 2018. **11**(1): p. 164-171.
312. Teng, G., et al., *Use of group method of data handling for transport energy demand modeling*. Energy Science and Engineering, 2017. **5**(5): p. 302-317.
313. Thirugnanasambandham, K. and K. Shine, *Investigation on the Removal of Chromium from Wastewater using Electrocoagulation*. International Journal of Chemical Reactor Engineering, 2018. **16**(5).
314. Tian, C., et al., *Data Driven Parallel Prediction of Building Energy Consumption Using Generative Adversarial Nets*. Energy and Buildings, 2019. **186**: p. 230-243.
315. Tian, W., et al., *Global sensitivity analysis and multi-objective optimization design of temperature field of sinter cooler based on energy value*. Applied Thermal Engineering, 2018. **143**: p. 759-766.
316. Tian, Z., S. Li, and Y. Wang, *The multi-objective optimization model of flue aimed temperature of coke oven*. Journal of Chemical Engineering of Japan, 2018. **51**(8): p. 683-694.
317. Tien, P.L., *A new discrete-time multi-constrained K-winner-take-all recurrent network and its application to prioritized scheduling*. IEEE Transactions on Neural Networks and Learning Systems, 2017. **28**(11): p. 2674-2685.
318. Tiryaki, S., A. Malkoçlu, and Ş. Özşahin, *Artificial neural network modeling to predict optimum power consumption in wood machining*. Drewno, 2016. **59**(196): p. 109-125.
319. Tiryaki, S., Ş. Özşahin, and A. Aydın, *Employing artificial neural networks for minimizing surface roughness and power consumption in abrasive machining of wood*. European Journal of Wood and Wood Products, 2017. **75**(3): p. 347-358.
320. Tolgayılmaz, M., S. Bayar, and S. Özcan, *Treatment of sugar industry wastewater by electrocoagulation using Fe and Al electrodes: A comparative study*. Desalination and Water Treatment, 2018. **131**: p. 206-211.
321. Tong, Y., et al., *Research on energy-saving production scheduling based on a clustering algorithm for a forging enterprise*. Sustainability (Switzerland), 2016. **8**(2).
322. Tong, Y., et al., *Research on energy efficiency evaluation for overhead crane*. Kybernetes, 2016. **45**(5): p. 788-797.
323. Torabi, M., et al., *A Hybrid clustering and classification technique for forecasting short-term energy consumption*. Environmental Progress and Sustainable Energy, 2019. **38**(1): p. 66-76.

324. Torregrossa, D., et al., *Energy saving in WWTP: Daily benchmarking under uncertainty and data availability limitations*. Environmental Research, 2016. **148**: p. 330-337.
325. Torrejon, J., et al., *Neuromorphic computing with nanoscale spintronic oscillators*. Nature, 2017. **547**(7664): p. 428-431.
326. Touzani, S., J. Granderson, and S. Fernandes, *Gradient boosting machine for modeling the energy consumption of commercial buildings*. Energy and Buildings, 2018. **158**: p. 1533-1543.
327. Touzani, S., et al., *Statistical change detection of building energy consumption: Applications to savings estimation*. Energy and Buildings, 2019. **185**: p. 123-136.
328. Trinh, H., et al., *Energy-Aware Mobile Edge Computing and Routing for Low-Latency Visual Data Processing*. IEEE Transactions on Multimedia, 2018. **20**(10): p. 2562-2577.
329. Tsai, K.L., F.Y. Leu, and I. You, *Residence Energy Control System Based on Wireless Smart Socket and IoT*. IEEE Access, 2016. **4**: p. 2885-2894.
330. Tsao, H.N. and M. Grätzel, *Illumination Time Dependent Learning in Dye Sensitized Solar Cells*. ACS Applied Materials and Interfaces, 2018. **10**(43): p. 36602-36607.
331. Tseranidis, S., N.C. Brown, and C.T. Mueller, *Data-driven approximation algorithms for rapid performance evaluation and optimization of civil structures*. Automation in Construction, 2016. **72**: p. 279-293.
332. Tsimpourlas, F., et al., *A design space exploration framework for convolutional neural networks implemented on edge devices*. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018. **37**(11): p. 2212-2221.
333. Tu, F., et al., *Deep Convolutional Neural Network Architecture with Reconfigurable Computation Patterns*. IEEE Transactions on Very Large Scale Integration (VLSI) Systems, 2017. **25**(8): p. 2220-2233.
334. Tunckaya, Y., *Performance assessment of permeability index prediction in an ironmaking process via soft computing techniques*. Proceedings of the Institution of Mechanical Engineers, Part E: Journal of Process Mechanical Engineering, 2017. **231**(6): p. 1101-1113.
335. Tushar, W., et al., *Internet of Things for Green Building Management: Disruptive Innovations Through Low-Cost Sensor Technology and Artificial Intelligence*. IEEE Signal Processing Magazine, 2018. **35**(5): p. 100-110.
336. Uhlmann, E., et al., *Intelligent pattern recognition of SLM machine energy data*. Journal of Machine Engineering, 2017. **17**(2): p. 65-76.
337. ul Islam, F.M.M., et al., *Task aware hybrid DVFS for multi-core real-time systems using machine learning*. Information Sciences, 2018. **433-434**: p. 315-332.
338. Ullah, I., R. Ahmad, and D. Kim, *A prediction mechanism of energy consumption in residential buildings using hidden markov model*. Energies, 2018. **11**(2).
339. Umucu, Y., et al., *The evaluation of grinding process using artificial neural network*. International Journal of Mineral Processing, 2016. **146**: p. 46-53.
340. Urbain, G., et al., *Morphological properties of mass-spring networks for optimal locomotion learning*. Frontiers in Neurorobotics, 2017. **11**(MAR).

341. Valerio, L., M. Conti, and A. Passarella, *Energy efficient distributed analytics at the edge of the network for IoT environments*. Pervasive and Mobile Computing, 2018. **51**: p. 27-42.
342. van Albada, S.J., et al., *Performance comparison of the digital neuromorphic hardware SpiNNaker and the neural network simulation software NEST for a full-scale cortical microcircuit model*. Frontiers in Neuroscience, 2018. **12**(MAY).
343. Vanini, S., et al., *Using barometric pressure data to recognize vertical displacement activities on smartphones*. Computer Communications, 2016. **87**: p. 37-48.
344. Vasim Babu, M. and R. Ramasamy, *An optimal energy consuming protocol for localization using ANFIS residual energy for MANET*. International Journal of Engineering and Technology(UAE), 2018. **7**(2): p. 667-673.
345. Vastardis, N., M. Kampouridis, and K. Yang, *A user behaviour-driven smart-home gateway for energy management*. Journal of Ambient Intelligence and Smart Environments, 2016. **8**(6): p. 583-602.
346. Vázquez-Canteli, J.R., et al., *Fusing TensorFlow with building energy simulation for intelligent energy management in smart cities*. Sustainable Cities and Society, 2019. **45**: p. 243-257.
347. Viana, D.F., G.R. Salazar-Banda, and M.S. Leite, *Electrochemical degradation of Reactive Black 5 with surface response and artificial neural networks optimization models*. Separation Science and Technology (Philadelphia), 2018. **53**(16): p. 2647-2661.
348. Viegas, E., et al., *Towards an energy-efficient anomaly-based intrusion detection engine for embedded systems*. IEEE Transactions on Computers, 2017. **66**(1): p. 163-177.
349. Villaizan Reyes, J.A., R. Jiménez Moreno, and O.L. Ramos Sandoval, *Energy impact simulation in hybrid vehicles using neural networks*. International Review of Mechanical Engineering, 2017. **11**(8): p. 597-601.
350. von Grabe, J., *Potential of artificial neural networks to predict thermal sensation votes*. Applied Energy, 2016. **161**: p. 412-424.
351. Wagy, M.D., et al., *Crowdsourcing Predictors of Residential Electric Energy Usage*. IEEE Systems Journal, 2018. **12**(4): p. 3151-3160.
352. Wahid, F. and D.H. Kim, *Short-term energy consumption prediction in Korean residential buildings using optimized multi-layer perceptron*. Kuwait Journal of Science, 2017. **44**(2): p. 67-77.
353. Wan, C., et al., *Indium-Zinc-Oxide Neuron Thin Film Transistors Laterally Coupled by Sodium Alginate Electrolytes*. IEEE Transactions on Electron Devices, 2016. **63**(10): p. 3958-3963.
354. Wang, D., et al., *Estimating traction energy consumption of high-speed trains based on BP neural network*. Zhongnan Daxue Xuebao (Ziran Kexue Ban)/Journal of Central South University (Science and Technology), 2017. **48**(4): p. 1104-1110.
355. Wang, H., et al., *A fault feature characterization based method for remanufacturing process planning optimization*. Journal of Cleaner Production, 2017. **161**: p. 708-719.
356. Wang, J., et al., *Liquid floodback detection for scroll compressor in a VRF system under heating mode*. Applied Thermal Engineering, 2017. **114**: p. 921-930.

357. Wang, J., et al., *Energy consumption prediction for water-source heat pump system using pattern recognition-based algorithms*. Applied Thermal Engineering, 2018. **136**: p. 755-766.
358. Wang, J., J. Lu, and L. Tian, *Effect of Fiberoptic Collimation Technique on 808 nm Wavelength Laser Stimulation of Cochlear Neurons*. Photomedicine and Laser Surgery, 2016. **34**(6): p. 252-257.
359. Wang, J., et al., *A Data-Driven Model for Energy Consumption in the Sintering Process*. Journal of Manufacturing Science and Engineering, Transactions of the ASME, 2016. **138**(10).
360. Wang, J., et al., *Treatment of reverse-osmosis concentrate of printing and dyeing wastewater by electro-oxidation process with controlled oxidation-reduction potential (ORP)*. Chemosphere, 2018. **201**: p. 621-626.
361. Wang, P., et al., *A Comparison Among Different Numeric Representations in Deep Convolution Neural Networks*. Jisuanji Yanjiu yu Fazhan/Computer Research and Development, 2017. **54**(6): p. 1348-1356.
362. Wang, Q., et al., *Energy efficient parallel neuromorphic architectures with approximate arithmetic on FPGA*. Neurocomputing, 2017. **221**: p. 146-158.
363. Wang, R.D., et al., *Cloud computing and extreme learning machine for a distributed energy consumption forecasting in equipment-manufacturing enterprises*. Cybernetics and Information Technologies, 2016. **16**(Specialissue6): p. 83-97.
364. Wang, S., et al., *Feedforward Feedback Linearization Linear Quadratic Gaussian with Loop Transfer Recovery Control of Piezoelectric Actuator in Active Vibration Isolation System*. Journal of Vibration and Acoustics, Transactions of the ASME, 2018. **140**(4).
365. Wang, S., et al., *Big Data enabled Intelligent Immune System for energy efficient manufacturing management*. Journal of Cleaner Production, 2018. **195**: p. 507-520.
366. Wang, W., et al., *Indoor-outdoor detection using a smart phone sensor*. Sensors (Switzerland), 2016. **16**(10).
367. Wang, X., A. Anctil, and S.J. Masten, *Energy Consumption and Environmental Impact Analysis of Ozonation Catalytic Membrane Filtration System for Water Treatment*. Environmental Engineering Science, 2019. **36**(2): p. 149-157.
368. Wang, X., et al., *Identification of key energy efficiency drivers through global city benchmarking: A data driven approach*. Applied Energy, 2017. **190**: p. 18-28.
369. Wang, X., et al., *Prediction of Aircraft Cabin Energy Consumption Based on PSO and CRO Algorithms*. Xitong Fangzhen Xuebao / Journal of System Simulation, 2018. **30**(8): p. 3074-3081.
370. Wang, X., et al., *Prediction of Aircraft Cabin Energy Consumption Based on Improved Cooperative PSO Neural Network*. Xitong Fangzhen Xuebao / Journal of System Simulation, 2018. **30**(4): p. 1535-1541.
371. Wang, Y., H. Li, and X. Li, *A Case of On-Chip Memory Subsystem Design for Low-Power CNN Accelerators*. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018. **37**(10): p. 1971-1984.
372. Wang, Y., et al., *Can China Achieve the 2020 and 2030 carbon intensity targets through energy structure adjustment?* Energies, 2018. **11**(10).

373. Wang, Y., K. Velswamy, and B. Huang, *A long-short term memory recurrent neural network based reinforcement learning controller for office heating ventilation and air conditioning systems*. Processes, 2017. **5**(3).
374. Wang, Y., R. Wang, and X. Xu, *Neural Energy Supply-Consumption Properties Based on Hodgkin-Huxley Model*. Neural Plasticity, 2017. **2017**.
375. Wang, Y., X. Xu, and R. Wang, *An energy model of place cell network in three dimensional space*. Frontiers in Neuroscience, 2018. **12**(APR).
376. Wang, Y., et al., *A strategy of electrical energy management for internal combustion engine vehicle based on driving cycle recognition and electrical load perception*. Advances in Mechanical Engineering, 2018. **10**(11).
377. Wei, Y., et al., *Prediction of occupancy level and energy consumption in office building using blind system identification and neural networks*. Applied Energy, 2019: p. 276-294.
378. Weng, Y., N. Zhang, and C. Xia, *Multi-Agent-Based Unsupervised Detection of Energy Consumption Anomalies on Smart Campus*. IEEE Access, 2019. **7**: p. 2169-2178.
379. Whatmough, P.N., et al., *DNN Engine: A 28-nm Timing-Error Tolerant Sparse Deep Neural Network Processor for IoT Applications*. IEEE Journal of Solid-State Circuits, 2018. **53**(9): p. 2722-2731.
380. Witanto, J.N., H. Lim, and M. Atiquzzaman, *Adaptive selection of dynamic VM consolidation algorithm using neural network for cloud resource management*. Future Generation Computer Systems, 2018. **87**: p. 35-42.
381. Wu, B.F., et al., *An Uphill Safety Controller with Deep Learning-Based Ramp Detection for Intelligent Wheelchairs*. IEEE Access, 2018. **6**: p. 28356-28371.
382. Wu, C., et al., *Socially-driven learning-based prefetching in mobile online social networks*. IEEE/ACM Transactions on Networking, 2017. **25**(4): p. 2320-2333.
383. Wu, D., et al., *A fog computing-based framework for process monitoring and prognosis in cyber-manufacturing*. Journal of Manufacturing Systems, 2017. **43**: p. 25-34.
384. Wu, J., B. Lu, and Z. Liang, *Performance Prediction of Room Air Conditioners and Optimization of Control Strategy for Energy Conservation*. Heat Transfer Engineering, 2018. **39**(17-18): p. 1619-1630.
385. Wu, J. and H. Xu, *An advanced scheme of compressed sensing of acceleration data for telemonitoring of human gait*. BioMedical Engineering Online, 2016. **15**(1).
386. Wu, K., et al., *Adaptive Critic Design Based Control of Tunnel Ventilation System with Variable Jet Speed*. Journal of Signal Processing Systems, 2017. **86**(2-3): p. 269-278.
387. Wu, N. and H. Wang, *Deep learning adaptive dynamic programming for real time energy management and control strategy of micro-grid*. Journal of Cleaner Production, 2018. **204**: p. 1169-1177.
388. Wu, Q., J. Yu, and J. Zheng, *Energy consumption diagnosis methodology model of boiler hot water heating system*. Tumu Jianzhu yu Huanjing Gongcheng/Journal of Civil, Architectural and Environmental Engineering, 2018. **40**(4): p. 71-80.

389. Wu, W., et al., *Energy-efficient hadoop for big data analytics and computing: A systematic review and research insights*. Future Generation Computer Systems, 2018. **86**: p. 1351-1367.
390. Wu, X., et al., *BP neural network based continuous objects distribution detection in WSNs*. Wireless Networks, 2016. **22**(6): p. 1917-1929.
391. Wu, X. and V. Saxena, *Dendritic-inspired processing enables bio-plausible STDP in compound binary synapses*. IEEE Transactions on Nanotechnology, 2019. **18**: p. 149-159.
392. Xi, G., et al., *A hierarchical ensemble learning framework for energy-efficient automatic train driving*. Tsinghua Science and Technology, 2019. **24**(2): p. 226-237.
393. Xiao, J., et al., *A hybrid model based on selective ensemble for energy consumption forecasting in China*. Energy, 2018. **159**: p. 534-546.
394. Xie, L., et al., *China's energy consumption forecasting by GMDH based autoregressive model*. Journal of Systems Science and Complexity, 2017. **30**(6): p. 1332-1349.
395. Xie, S., et al., *Time-Efficient Stochastic Model Predictive Energy Management for a Plug-In Hybrid Electric Bus with an Adaptive Reference State-of-Charge Advisory*. IEEE Transactions on Vehicular Technology, 2018. **67**(7): p. 5671-5682.
396. Xie, T., Q. Zheng, and W. Zhang, *Recognizing physical contexts of mobile video learners via smartphone sensors*. Knowledge-Based Systems, 2017. **136**: p. 75-84.
397. Xie, X., et al., *Exploiting sparsity to accelerate fully connected layers of CNN-based applications on mobile SoCs*. ACM Transactions on Embedded Computing Systems, 2017. **17**(2).
398. Xin, J., et al., *Routing tree maintenance based on trajectory prediction in mobile sensor networks*. Memetic Computing, 2017. **9**(2): p. 109-120.
399. Xu, B., et al., *A cascade prediction model of CO/CO₂ in the sintering process*. Journal of Advanced Computational Intelligence and Intelligent Informatics, 2017. **21**(5): p. 785-794.
400. Xu, F., H. Cheng, and Y.Q. Fang, *A Gait Pattern Classification Method Based on CLSTM*. Huadong Ligong Daxue Xuebao/Journal of East China University of Science and Technology, 2017. **43**(4): p. 553-558.
401. Xu, W., et al., *Organometal Halide Perovskite Artificial Synapses*. Advanced Materials, 2016: p. 5916-5922.
402. Xu, W., et al., *Organic core-sheath nanowire artificial synapses with femtojoule energy consumption*. Science Advances, 2016. **2**(6).
403. Xu, X., et al., *Optimization of performance parameter design and energy use prediction for nearly zero energy buildings*. Energies, 2018. **11**(12).
404. Xu, X., et al., *On joint control of heating, ventilation, and air conditioning and natural ventilation in a meeting room for energy saving*. Asian Journal of Control, 2016. **18**(5): p. 1781-1804.
405. Xu, Y., et al., *A novel prediction intervals method integrating an error & self-feedback extreme learning machine with particle swarm optimization for energy consumption robust prediction*. Energy, 2018. **164**: p. 137-146.

406. Xu, Z., et al., *Modeling Relationship between Truck Fuel Consumption and Driving Behavior Using Data from Internet of Vehicles*. Computer-Aided Civil and Infrastructure Engineering, 2018. **33**(3): p. 209-219.
407. Yaeghoobi, K.S.B., M.K. Soni, and S.S. Tyagi, *Schedule communication routing approach to maximize energy efficiency in wireless body sensor networks*. Smart Structures and Systems, 2018. **21**(2): p. 225-234.
408. Yan, F., *Heating energy saving control system based on differential evolution algorithm*. Shenyang Gongye Daxue Xuebao/Journal of Shenyang University of Technology, 2017. **39**(3): p. 328-332.
409. Yan, H., et al., *Event-triggered asynchronous guaranteed cost control for markov jump discrete-time neural networks with distributed delay and channel fading*. IEEE Transactions on Neural Networks and Learning Systems, 2018. **29**(8): p. 3588-3598.
410. Yang, B., et al., *Quantization and training of object detection networks with low-precision weights and activations*. Journal of Electronic Imaging, 2018. **27**(1).
411. Yang, C., et al., *A practical solution for HVAC prognostics: Failure mode and effects analysis in building maintenance*. Journal of Building Engineering, 2018. **15**: p. 26-32.
412. Yang, J., et al., *AI-powered green cloud and data center*. IEEE Access, 2019. **7**: p. 4195-4203.
413. Yang, L., Q. Han, and C. Deng, *Walking control of humanoid robot based on extreme learning machine*. International Journal of Automation and Control, 2016. **10**(4): p. 375-388.
414. Yang, Q., et al., *MEG: Memory and energy efficient garbled circuit evaluation on smartphones*. IEEE Transactions on Information Forensics and Security, 2019. **14**(4): p. 913-922.
415. Yang, X., et al., *Node identification and localization algorithm based on aerial image for wireless sensor network*. Ruan Jian Xue Bao/Journal of Software, 2016. **27**: p. 28-35.
416. Yang, X., Z. Gao, and Q. Niu, *Unmanned aerial vehicle-assisted node localization for wireless sensor networks*. International Journal of Distributed Sensor Networks, 2017. **13**(12).
417. Yang, Z.Y., et al., *Energy saving control method of downslope speed for high-voltage transmission line inspection robot*. Jilin Daxue Xuebao (Gongxueban)/Journal of Jilin University (Engineering and Technology Edition), 2017. **47**(2): p. 567-576.
418. Yazdizadeh, M., M.R.J. Nasr, and A.K. Safekordi, *A new methodology for the production of furfural as a renewable energy source from bagasse in acidic aqueous media*. Energy Sources, Part A: Recovery, Utilization and Environmental Effects, 2018. **40**(2): p. 125-133.
419. Ye, H., et al., *Modeling energy-related CO₂ emissions from office buildings using general regression neural network*. Resources, Conservation and Recycling, 2018. **129**: p. 168-174.
420. Ye, N., T.Y. Fok, and O. Chong, *Modeling an energy consumption system with partial-value data associations*. Advances in Science, Technology and Engineering Systems, 2018. **3**(6): p. 372-379.

421. Ye, N., J.G. Li, and M.N. Hong, *Analysis of energy consumption and energy saving potential based on the monthly data of enterprises in paper industry*. Chung-kuo Tsao Chih/China Pulp and Paper, 2016. **35**(8): p. 35-39.
422. Yehia, A.M. and H.M. Mohamed, *Green approach using monolithic column for simultaneous determination of coformulated drugs*. Journal of Separation Science, 2016. **39**(11): p. 2114-2122.
423. Yoon, S.K., et al., *Design of DRAM-NAND flash hybrid main memory and Q-learning-based prefetching method*. Journal of Supercomputing, 2018. **74**(10): p. 5293-5313.
424. Yoon, Y.R. and H.J. Moon, *Energy consumption model with energy use factors of tenants in commercial buildings using Gaussian process regression*. Energy and Buildings, 2018. **168**: p. 215-224.
425. Yu, C.W., et al., *Vision-based Hand Recognition Based on ToF Depth Camera*. Smart Science, 2018. **6**(1): p. 21-28.
426. Yu, J., et al., *Instruction driven cross-layer CNN accelerator for fast detection on FPGA*. ACM Transactions on Reconfigurable Technology and Systems, 2018. **11**(3).
427. Yu, L., et al., *Efficient coding and energy efficiency are promoted by balanced excitatory and inhibitory synaptic currents in neuronal network*. Frontiers in Cellular Neuroscience, 2018. **12**.
428. Yu, W.X., Y. Sui, and J. Wang, *The Faults Diagnostic Analysis for Analog Circuit Based on FA-TM-ELM*. Journal of Electronic Testing: Theory and Applications (JETTA), 2016. **32**(4): p. 459-465.
429. Yu, X.W., et al., *Information Fusion Algorithm Based on Improved Ant Colony Optimization BP Neural Network in WSN*. Beijing Youdian Daxue Xuebao/Journal of Beijing University of Posts and Telecommunications, 2018. **41**(4): p. 91-96.
430. Yuan, T., et al., *Sample data selection method for improving the prediction accuracy of the heating energy consumption*. Energy and Buildings, 2018. **158**: p. 234-243.
431. Yuce, B. and Y. Rezgui, *An ANN-GA Semantic Rule-Based System to Reduce the Gap Between Predicted and Actual Energy Consumption in Buildings*. IEEE Transactions on Automation Science and Engineering, 2017. **14**(3): p. 1351-1363.
432. Yue, J., et al., *A comparison of regression techniques for estimation of above-ground winter wheat biomass using near-surface spectroscopy*. Remote Sensing, 2018. **10**(1).
433. Yue, J., et al., *Cloud-fog architecture based energy management and decision-making for next-generation distribution network with prosumers and internet of things devices*. Applied Sciences (Switzerland), 2019. **9**(3).
434. Yun, J.T., et al., *Regression prefetcher with preprocessing for DRAM-PCM hybrid main memory*. IEEE Computer Architecture Letters, 2018. **17**(2): p. 163-166.
435. Zarei, T., R. Behyad, and E. Abedini, *Study on parameters effective on the performance of a humidification-dehumidification seawater greenhouse using support vector regression*. Desalination, 2018. **435**: p. 235-245.
436. Zarubin, M., *Results of development optimized adaptive ACS on neural network for mining*. Journal of Chemical Technology and Metallurgy, 2016. **51**(4): p. 473-482.

437. Zeng, T., et al., *Modelling and predicting energy consumption of a range extender fuel cell hybrid vehicle*. Energy, 2018. **165**: p. 187-197.
438. Zeng, Y.R., et al., *Multifactor-influenced energy consumption forecasting using enhanced back-propagation neural network*. Energy, 2017. **127**: p. 381-396.
439. Zhai, D., T. Chaudhuri, and Y.C. Soh, *Modeling and optimization of different sparse Augmented Firefly Algorithms for ACMV systems under two case studies*. Building and Environment, 2017. **125**: p. 129-142.
440. Zhai, D. and Y.C. Soh, *Balancing indoor thermal comfort and energy consumption of ACMV systems via sparse swarm algorithms in optimizations*. Energy and Buildings, 2017. **149**: p. 1-15.
441. Zhang, B., A. Davoodi, and Y.H. Hu, *Exploring Energy and Accuracy Tradeoff in Structure Simplification of Trained Deep Neural Networks*. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018. **8**(4): p. 836-848.
442. Zhang, C., L. Cao, and A. Romagnoli, *On the feature engineering of building energy data mining*. Sustainable Cities and Society, 2018. **39**: p. 508-518.
443. Zhang, C., et al., *A deep reinforcement learning based approach for cost- and energy-aware multi-flow mobile data offloading*. IEICE Transactions on Communications, 2018. **E101B**(7): p. 1625-1634.
444. Zhang, C.Y., et al., *Data-driven train operation models based on data mining and driving experience for the diesel-electric locomotive*. Advanced Engineering Informatics, 2016. **30**(3): p. 553-563.
445. Zhang, D., et al., *A radial-basis-function neural network-based energy reserving strategy for energy-saving elevator*. IEEE Transactions on Electrical and Electronic Engineering, 2018. **13**(7): p. 1044-1051.
446. Zhang, D., et al., *An Optimal and Learning-Based Demand Response and Home Energy Management System*. IEEE Transactions on Smart Grid, 2016. **7**(4): p. 1790-1801.
447. Zhang, H., et al., *Design of nondestructive detection device for moldy core in apples based on characteristic spectrum*. Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering, 2016. **32**(18): p. 255-262.
448. Zhang, J., et al., *Human-in-the-loop optimization of exoskeleton assistance during walking*. Science, 2017. **356**(6344): p. 1280-1283.
449. Zhang, L., et al., *Modeling and optimization study on sulfamethoxazole degradation by electrochemically activated persulfate process*. Journal of Cleaner Production, 2018. **197**: p. 297-305.
450. Zhang, L., et al., *Mathematical modeling and evolutionary generation of rule sets for energy-efficient flexible job shops*. Energy, 2017. **138**: p. 210-227.
451. Zhang, Q., et al., *Mechanical properties and strength prediction of straw ash concrete*. Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering, 2017. **33**(2): p. 259-265.
452. Zhang, Q., et al., *Sign backpropagation: An on-chip learning algorithm for analog RRAM neuromorphic computing systems*. Neural Networks, 2018. **108**: p. 217-223.
453. Zhang, S., et al., *The prediction of the gas utilization ratio based on ts fuzzy neural network and particle swarm optimization*. Sensors (Switzerland), 2018. **18**(2).

454. Zhang, W., et al., *Optimization control of coal methanol chemical process based on neural network algorithm*. Chemical Engineering Transactions, 2017. **62**: p. 883-888.
455. Zhang, W., et al., *Estimating residential energy consumption in metropolitan areas: A microsimulation approach*. Energy, 2018: p. 162-173.
456. Zhang, Y., et al., *Highly Compact Artificial Memristive Neuron with Low Energy Consumption*. Small, 2018. **14**(51).
457. Zhang, Y., et al., *Velocity-Level Control with Compliance to Acceleration-Level Constraints: A Novel Scheme for Manipulator Redundancy Resolution*. IEEE Transactions on Industrial Informatics, 2018. **14**(3): p. 921-930.
458. Zhang, Y., et al., *Consumption Behavior Analytics-Aided Energy Forecasting and Dispatch*. IEEE Intelligent Systems, 2017. **32**(4): p. 59-63.
459. Zhang, Y., M. Zhong, and Y. Jiang, *A data-driven quantitative assessment model for taxi industry: the scope of business ecosystem's health*. European Transport Research Review, 2017. **9**(2).
460. Zhang, Z., et al., *Modeling and optimization of a wastewater pumping system with data-mining methods*. Applied Energy, 2016. **164**: p. 303-311.
461. Zhao, D., et al., *Energy consumption predicting model of VRV (Variable refrigerant volume) system in office buildings based on data mining*. Energy, 2016. **102**: p. 660-668.
462. Zhao, G., et al., *Energy consumption characteristics evaluation method in turning*. Advances in Mechanical Engineering, 2016. **8**(11): p. 1-8.
463. Zhao, H., G. Huang, and N. Yan, *Forecasting energy-related CO₂ emissions employing a novel ssa-lssvm model: Considering structural factors in China*. Energies, 2018. **11**(4).
464. Zhao, X.H., et al., *Prediction model of driving energy consumption based on PCA and BP network*. Jiaotong Yunshu Xitong Gongcheng Yu Xinxi/Journal of Transportation Systems Engineering and Information Technology, 2016. **16**(5): p. 185-191 and 204.
465. Zhao, Y., et al., *Seasonal artificial neural network model for water quality prediction via a clustering analysis method in a wastewater treatment plant of China*. Desalination and Water Treatment, 2016. **57**(8): p. 3452-3465.
466. Zhao, Z. and H. Xin, *An improved application method for data mining technology in ocean forecasting based on wireless sensor network*. Boletin Tecnico/Technical Bulletin, 2017. **55**(19): p. 255-262.
467. Zheng, H., W. Guo, and N. Xiong, *A Kernel-Based Compressive Sensing Approach for Mobile Data Gathering in Wireless Sensor Network Systems*. IEEE Transactions on Systems, Man, and Cybernetics: Systems, 2018. **48**(12): p. 2315-2327.
468. Zheng, H. and S. Yang, *A trajectory tracking control strategy of 4WIS/4WID electric vehicle with adaptation of driving conditions*. Applied Sciences (Switzerland), 2019. **9**(1).
469. Zheng, J., et al., *A voyage with minimal fuel consumption for cruise ships*. Journal of Cleaner Production, 2019. **215**: p. 144-153.

470. Zheng, S., et al., *Towards an adaptive human-centric computing resource management framework based on resource prediction and multi-objective genetic algorithm*. Multimedia Tools and Applications, 2017. **76**(17): p. 17821-17838.
471. Zheng, Z., H. Chen, and X. Luo, *A supervised event-based non-intrusive load monitoring for non-linear appliances*. Sustainability (Switzerland), 2018. **10**(4).
472. Zhong, C., et al., *Energy efficiency solutions for buildings: Automated fault diagnosis of air handling units using generative adversarial networks*. Energies, 2019. **12**(3).
473. Zhong, J., W. Du, and W. Wu, *Adaptive systemic modeling for wireless sensor networks*. Shuju Caiji Yu Chuli/Journal of Data Acquisition and Processing, 2016. **31**(4): p. 832-837.
474. Zhong, J., et al., *Low carbon optimization decision for high-speed dry hobbing process parameters based on BP neural networks and FPA*. Chinese Journal of Engineering Design, 2017. **24**(4): p. 449-458.
475. Zhong, W., et al., *A load prediction model for cloud computing using PSO-based weighted wavelet support vector machine*. Applied Intelligence, 2018. **48**(11): p. 4072-4083.
476. Zhou, C., et al., *A Wireless Sensor Network Model considering Energy Consumption Balance*. Mathematical Problems in Engineering, 2018. **2018**.
477. Zhou, H., et al., *Analysis of correlation between actual heating energy consumption and building physics, heating system, and room position using data mining approach*. Energy and Buildings, 2018. **166**: p. 73-82.
478. Zhou, H. and J. Qiao, *Multiobjective optimal control for wastewater treatment process using adaptive MOEA/D*. Applied Intelligence, 2019. **49**(3): p. 1098-1126.
479. Zhou, J., et al., *Scenario analysis of carbon emissions of Beijing-tianjin-hebei*. Energies, 2018. **11**(6).
480. Zhou, P., et al., *Modeling for output fiber length distribution of refining process using wavelet neural networks trained by NSGA II and gradient based two-stage hybrid algorithm*. Neurocomputing, 2017. **238**: p. 24-32.
481. Zhou, Y., et al., *Energy consumption prediction model of plane grinder processing system based on BP neural network*. International Journal of Wireless and Mobile Computing, 2018. **14**(4): p. 320-327.
482. Zhu, H., et al., *Evaluation of non-linear power estimation models in a computing cluster*. Sustainable Computing: Informatics and Systems, 2016. **11**: p. 26-37.
483. Zhu, J.J., L. Kang, and P.R. Anderson, *Predicting influent biochemical oxygen demand: Balancing energy demand and risk management*. Water Research, 2018. **128**: p. 304-313.
484. Zhu, L., et al., *Communication-based train control system performance optimization using deep reinforcement learning*. IEEE Transactions on Vehicular Technology, 2017. **66**(12): p. 10705-10717.
485. Zhu, L., C. Yao, and L. Wang, *Optimal Energy Efficiency Distributed Relay Decision in UAV Swarms*. Wireless Personal Communications, 2018. **102**(4): p. 2997-3008.
486. Zhu, Q.X., et al., *Energy modeling and saving potential analysis using a novel extreme learning fuzzy logic network: A case study of ethylene industry*. Applied Energy, 2018. **213**: p. 322-333.

487. Zhu, Z., R. Wang, and F. Zhu, *The energy coding of a structural neural network based on the Hodgkin-Huxley model*. *Frontiers in Neuroscience*, 2018. **12**(MAR).
488. Zia Ullah, Q., S. Hassan, and G.M. Khan, *Adaptive Resource Utilization Prediction System for Infrastructure as a Service Cloud*. *Computational Intelligence and Neuroscience*, 2017. **2017**.
489. Zuraimi, M.S., et al., *Predicting occupancy counts using physical and statistical Co²-based modeling methodologies*. *Building and Environment*, 2017. **123**: p. 517-528.
490. Kuai, W., *Prediction method for energy consumption of high-rise buildings based on artificial neural network and big data analysis*. *NeuroQuantology*, 2018. **16**(6): p. 524-530.
491. Kulkarni, A., et al., *An energy-efficient programmable manycore accelerator for personalized biomedical applications*. *IEEE Transactions on Very Large Scale Integration (VLSI) Systems*, 2018. **26**(1): p. 96-109.
492. Kumar, K.S., P.U. Bhaskar, and K.P. Kumari, *A novel approach for prediction of future environmental impacts of urban growth*. *International Journal of Civil Engineering and Technology*, 2018. **9**(4): p. 1208-1219.
493. Kumar, S., et al., *Prediction of performance and emission characteristics in a biodiesel engine using WCO ester: a comparative study of neural networks*. *Soft Computing*, 2016. **20**(7): p. 2665-2676.
494. Kumar, S., S.K. Pal, and R.P. Singh, *A novel method based on extreme learning machine to predict heating and cooling load through design and structural attributes*. *Energy and Buildings*, 2018. **176**: p. 275-286.
495. Kurumbanshi, S. and S. Rathkanthiwar, *Empirical model for improving the capacity of wireless adhoc network*. *International Journal of Applied Engineering Research*, 2017. **12**(24): p. 15551-15559.
496. Kwon, M.W., et al., *Integrate-and-fire neuron circuit using positive feedback field effect transistor for low power operation*. *Journal of Applied Physics*, 2018. **124**(15).
497. Lalos, A.S., et al., *Energy Efficient Monitoring of Metered Dose Inhaler Usage*. *Journal of Medical Systems*, 2016. **40**(12).
498. Lang, L., H. Yonghong, and L. Xingming, *Study on the mining method for specific fault data of multimedia sensor networks in cloud computing environment*. *Multimedia Tools and Applications*, 2017. **76**(16): p. 17113-17128.
499. Larras, B., et al., *Ultra-Low-Energy Mixed-Signal IC Implementing Encoded Neural Networks*. *IEEE Transactions on Circuits and Systems I: Regular Papers*, 2016. **63**(11): p. 1974-1985.
500. Le, T.T.H. and H. Kim, *Non-intrusive load monitoring based on novel transient signal in household appliances with low sampling rate*. *Energies*, 2018. **11**(12).
501. Lechevalier, D., et al., *A methodology for the semi-automatic generation of analytical models in manufacturing*. *Computers in Industry*, 2018. **95**: p. 54-67.
502. Ledesma, S., et al., *Mathematical Models to Predict and Analyze the Energy Consumption of a Domestic Refrigerator for Different Position of the Shelves*. *IEEE Access*, 2018. **6**: p. 68882-68891.

503. Lee, D. and K. Yoon, *An efficient spatio-temporal index for spatio-temporal query in wireless sensor networks*. KSII Transactions on Internet and Information Systems, 2017. **11**(10): p. 4908-4928.
504. Lee, J., et al., *UNPU: An energy-efficient deep neural network accelerator with fully variable weight bit precision*. IEEE Journal of Solid-State Circuits, 2019. **54**(1): p. 173-185.
505. Lee, J.H., et al., *Development of economizer control method with variable mixed air temperature*. Energies, 2018. **11**(9).
506. Lee, M.K.F., et al., *A system-level simulator for RRAM-based neuromorphic computing chips*. ACM Transactions on Architecture and Code Optimization, 2019. **15**(4).
507. Lee, S., S. Jung, and J. Lee, *Prediction model based on an artificial neural network for user-based building energy consumption in South Korea*. Energies, 2019. **12**(4).
508. Lesel, J., et al., *Real time electrical power estimation for the energy management of automatic metro lines*. Mathematics and Computers in Simulation, 2017. **131**: p. 3-20.
509. Li, C., et al., *Deep belief network based hybrid model for building energy consumption prediction*. Energies, 2018. **11**(1).
510. Li, C., et al., *Building energy consumption prediction: An extreme deep learning approach*. Energies, 2017. **10**(10).
511. Li, G., et al., *An energy-efficient data collection scheme using denoising autoencoder in wireless sensor networks*. Tsinghua Science and Technology, 2019. **24**(1): p. 86-96.
512. Li, H., et al., *Deep reinforcement learning: Algorithm, applications, and ultra-low-power implementation*. Nano Communication Networks, 2018. **16**: p. 81-90.
513. Li, H., P. Duan, and F. Liu, *Prediction model of dynamic cooling load for shopping mall building in summer*. Tumu Jianzhu yu Huanjing Gongcheng/Journal of Civil, Architectural and Environmental Engineering, 2016. **38**(2): p. 104-110.
514. Li, H.J. and W.Z. Xiong, *Prediction and optimal operation on byproduct gas system in steel enterprises*. Kang T'ieh/Iron and Steel, 2016. **51**(8): p. 90-98.
515. Li, J., et al., *A modeling approach for energy saving based on GA-BP neural network*. Journal of Electrical Engineering and Technology, 2016. **11**(5): p. 1289-1298.
516. Li, J., et al., *Support vector machine based fault detection and diagnosis for HVAC systems*. International Journal of Intelligent Systems Technologies and Applications, 2019. **18**(1-2): p. 204-222.
517. Li, K., et al., *Multi-Objective Optimization for Energy Performance Improvement of Residential Buildings: A Comparative Study*. Energies, 2017. **10**(2).
518. Li, K., et al., *A hybrid teaching-learning artificial neural network for building electrical energy consumption prediction*. Energy and Buildings, 2018. **174**: p. 323-334.
519. Li, L., *Data aggregation in wireless sensor networks*. International Journal of Online Engineering, 2016. **12**(11): p. 28-33.

520. Li, L., L. Sun, and G. Wang, *An intrusion detection model based on danger theory for Wireless Sensor Networks*. International Journal of Online Engineering, 2018. **14**(9): p. 53-65.
521. Li, L., et al., *A prediction-based charging policy and interference mitigation approach in the wireless powered internet of things*. IEEE Journal on Selected Areas in Communications, 2019. **37**(2): p. 439-451.
522. Li, M., et al., *Forecasting carbon emissions related to energy consumption in Beijing-Tianjin-Hebei region based on grey prediction theory and extreme learning machine optimized by support vector machine algorithm*. Energies, 2018. **11**(9).
523. Li, M., L. Zhou, and J. Wang, *Neural network predictive control for dissolved oxygen based on levenberg-marquardt algorithm*. Nongye Jixie Xuebao/Transactions of the Chinese Society for Agricultural Machinery, 2016. **47**(6): p. 297-302.
524. Li, W. and B. Liu, *Vibration model of structural dynamic engineering based on neural network optimization algorithm*. IPPTA: Quarterly Journal of Indian Pulp and Paper Technical Association, 2018. **30**(6): p. 617-622.
525. Li, W., et al., *Implemented IoT-based self-learning home management system (SHMS) for Singapore*. IEEE Internet of Things Journal, 2018. **5**(3): p. 2212-2219.
526. Li, Y., et al., *A MBCRF algorithm based on ensemble learning for building demand response considering the thermal comfort*. Energies, 2018. **11**(12).
527. Li, Y., et al., *Can We Speculate Running Application with Server Power Consumption Trace?* IEEE Transactions on Cybernetics, 2018. **48**(5): p. 1500-1512.
528. Li, Y., et al., *Automatic road detection system for an air-land amphibious car drone*. Future Generation Computer Systems, 2018. **85**: p. 51-59.
529. Li, Y., et al., *A novel online sequential extreme learning machine for gas utilization ratio prediction in blast furnaces*. Sensors (Switzerland), 2017. **17**(8).
530. Li, Y., et al., *Influence of industrialization and environmental protection on environmental pollution: A case study of Taihu Lake, China*. International Journal of Environmental Research and Public Health, 2018. **15**(12).
531. Li, Y.J., et al., *Research on optimization model of blast furnace burden surface based on data driven*. Kongzhi Lilun Yu Yingyong/Control Theory and Applications, 2018. **35**(3): p. 324-334.
532. Li, Z., et al., *Design of Ternary Neural Network with 3-D Vertical RRAM Array*. IEEE Transactions on Electron Devices, 2017. **64**(6): p. 2721-2727.
533. Li, Z. and B. Dong, *A new modeling approach for short-term prediction of occupancy in residential buildings*. Building and Environment, 2017. **121**: p. 277-290.
534. Li, Z., et al., *Improved cooperative spectrum sensing model based on machine learning for cognitive radio networks*. IET Communications, 2018. **12**(19): p. 2485-2492.
535. Li, Z.B. and J.G. Li, *Study on energy saving optimization of vacuum system of paper machine*. Chung-kuo Tsao Chih/China Pulp and Paper, 2016. **35**(9): p. 8-15.
536. Li, Z.P., et al., *Optimization of iron ore sintering process based on ELM model and multi-criteria evaluation*. Neural Computing and Applications, 2017. **28**(8): p. 2247-2253.

537. Lian, J., et al., *A mixed logical dynamical-model predictive control (MLD-MPC) energy management control strategy for plug-in hybrid electric vehicles (PHEVs)*. Energies, 2017. **10**(1).
538. Lian, J., et al., *Plug-in hybrid electric vehicle speed prediction and control strategy*. Kongzhi Lilun Yu Yingyong/Control Theory and Applications, 2017. **34**(5): p. 564-574.
539. Liang, L., Y. Liu, and H. Xu, *Multiobjective Trajectory Optimization and Adaptive Backstepping Control for Rubber Unstacking Robot Based on RFWNN Method*. Mathematical Problems in Engineering, 2018. **2018**.
540. Liang, X., T. Hong, and G.Q. Shen, *Occupancy data analytics and prediction: A case study*. Building and Environment, 2016. **102**: p. 179-192.
541. Liang, Y., et al., *Seed implantation planning method and experimental study of robot based on virtual safety operation plane*. Gaojishu Tongxin/Chinese High Technology Letters, 2018. **28**(8): p. 719-727.
542. Liang, Y., et al., *Assessment analysis and forecasting for security early warning of energy consumption carbon emissions in Hebei Province, China*. Energies, 2017. **10**(3).
543. Lin, M., A. Afshari, and E. Azar, *A data-driven analysis of building energy use with emphasis on operation and maintenance: A case study from the UAE*. Journal of Cleaner Production, 2018. **192**: p. 169-178.
544. Lin, X. and W. Kong, *Adaptive dynamic programming in raw meal fineness control of vertical mill grinding process based on extreme learning machine*. Xitong Fangzhen Xuebao / Journal of System Simulation, 2016. **28**(11): p. 2764-2770.
545. Lin, Z., et al., *Recyclable magnetic-Pickering emulsion liquid membrane for extracting phenol compounds from wastewater*. Journal of Materials Science, 2016. **51**(13): p. 6370-6378.
546. Liu, B., et al., *Forecasting of Chinese Primary Energy Consumption in 2021 with GRU artificial neural network*. Energies, 2017. **10**(10).
547. Liu, B., et al., *Modelling and optimizing an electrochemical oxidation process using artificial neural network, genetic algorithm and particle swarm optimization*. Journal of the Serbian Chemical Society, 2018. **83**(3): p. 379-390.
548. Liu, B., et al., *EERA-ASR: An Energy-Efficient Reconfigurable Architecture for Automatic Speech Recognition with Hybrid DNN and Approximate Computing*. IEEE Access, 2018. **6**: p. 52227-52237.
549. Liu, C., et al., *Memory-efficient deep learning on a SpiNNaker 2 prototype*. Frontiers in Neuroscience, 2018. **12**(NOV).
550. Liu, C., et al., *A New Deep Learning-Based Food Recognition System for Dietary Assessment on An Edge Computing Service Infrastructure*. IEEE Transactions on Services Computing, 2018. **11**(2): p. 249-261.
551. Liu, C.H., et al., *Energy-efficient UAV control for effective and fair communication coverage: A deep reinforcement learning approach*. IEEE Journal on Selected Areas in Communications, 2018. **36**(9): p. 2059-2070.
552. Liu, J., F. Chen, and D. Wang, *Data compression based on stacked RBM-AE model for wireless sensor networks*. Sensors (Switzerland), 2018. **18**(12).

553. Liu, J., et al., *An energy performance evaluation methodology for individual office building with dynamic energy benchmarks using limited information*. Applied Energy, 2017. **206**: p. 193-205.
554. Liu, J., et al., *Bio-inspired fault detection circuits based on synapse and spiking neuron models*. Neurocomputing, 2019. **331**: p. 473-482.
555. Liu, J., et al., *DeepNap: Data-Driven Base Station Sleeping Operations Through Deep Reinforcement Learning*. IEEE Internet of Things Journal, 2018. **5**(6): p. 4273-4282.
556. Liu, J., et al., *Energy consumption analysis for the read and write mode of the memristor with voltage threshold in the real-time control system*. Neurocomputing, 2017. **266**: p. 477-484.
557. Liu, J., et al., *Evaluation of the energy performance of variable refrigerant flow systems using dynamic energy benchmarks based on data mining techniques*. Applied Energy, 2017. **208**: p. 522-539.
558. Liu, J., C. Zhang, and Y. Fang, *EPIC: A Differential Privacy Framework to Defend Smart Homes Against Internet Traffic Analysis*. IEEE Internet of Things Journal, 2018. **5**(2): p. 1206-1217.
559. Liu, J.P., X.B. Zhang, and X.H. Song, *Regional carbon emission evolution mechanism and its prediction approach driven by carbon trading – A case study of Beijing*. Journal of Cleaner Production, 2016. **172**: p. 2793-2810.
560. Liu, K., et al., *Comprehensive approach to modeling and simulation of dynamic soft-sensing design for real-time building energy consumption*. International Journal of Distributed Sensor Networks, 2017. **13**(5).
561. Liu, Q.Y., et al., *Hourly Power Load Forecasting of Office Building based on Kmeans Clustering and BP Neural Network Algorithm*. Reneng Dongli Gongcheng/Journal of Engineering for Thermal Energy and Power, 2018. **33**(3): p. 138-144.
562. Liu, X., et al., *Two approaches for synthesizing scalable residential energy consumption data*. Future Generation Computer Systems, 2019. **95**: p. 586-600.
563. Liu, X., B. Moreno, and A.S. García, *A grey neural network and input-output combined forecasting model. Primary energy consumption forecasts in Spanish economic sectors*. Energy, 2016. **115**: p. 1042-1054.
564. Liu, X. and P.S. Nielsen, *A hybrid ICT-solution for smart meter data analytics*. Energy, 2016. **115**: p. 1710-1722.
565. Liu, Y., et al., *A Stochastic Computational Multi-Layer Perceptron with Backward Propagation*. IEEE Transactions on Computers, 2018. **67**(9): p. 1273-1286.
566. Liu, Y., et al., *An Energy-Efficient Online-Learning Stochastic Computational Deep Belief Network*. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018. **8**(3): p. 454-465.
567. Liu, Y., et al., *Queuing-Based Energy Consumption Management for Heterogeneous Residential Demands in Smart Grid*. IEEE Transactions on Smart Grid, 2016. **7**(3): p. 1650-1659.
568. Liu, Z., et al., *SiMul: An Algorithm-Driven Approximate Multiplier Design for Machine Learning*. IEEE Micro, 2018. **38**(4): p. 50-59.

569. Liu, Z., C. Zhuo, and X. Xu, *Efficient segmentation method using quantised and non-linear CeNN for breast tumour classification*. Electronics Letters, 2018. **54**(12): p. 737-738.
570. Lopes, M.N. and R. Lamberts, *Development of a metamodel to predict cooling energy consumption of HVAC systems in office buildings in different climates*. Sustainability (Switzerland), 2018. **10**(12).
571. Loukas, G., et al., *Computation offloading of a vehicle's continuous intrusion detection workload for energy efficiency and performance*. Simulation Modelling Practice and Theory, 2017. **73**: p. 83-94.
572. Lu, D.N., et al., *Vehicle mode and driving activity detection based on analyzing sensor data of smartphones*. Sensors (Switzerland), 2018. **18**(4).
573. Lü, H. and X. Gu, *A two level information fusion algorithm based on ant colony neural network*. Shanghai Jiaotong Daxue Xuebao/Journal of Shanghai Jiaotong University, 2016. **50**(8): p. 1323-1330.
574. Lu, J., et al., *Artificial agent: The fusion of artificial intelligence and a mobile agent for energy-efficient traffic control in wireless sensor networks*. Future Generation Computer Systems, 2019. **95**: p. 45-51.
575. Lu, M., et al., *Multiagent spatial simulation of autonomous taxis for urban commute: Travel economics and environmental impacts*. Journal of Urban Planning and Development, 2018. **144**(4).
576. Lu, Y., et al., *RVLBPNN: A workload forecasting model for smart cloud computing*. Scientific Programming, 2016. **2016**.
577. Lü, Y., J. Shi, and Y. Yang, *Energy Saving Strategy Based on Lightpath Holding Time Aware for Elastic Optical Network*. Shanghai Jiaotong Daxue Xuebao/Journal of Shanghai Jiaotong University, 2018. **52**(9): p. 1104-1111.
578. Lundbæk, L.N., et al., *Proof of Kernel Work: A democratic low-energy consensus for distributed access-control protocols*. Royal Society Open Science, 2018. **5**(8).
579. Luo, Y., et al., *Dynamic heat transfer modeling and parametric study of thermoelectric radiant cooling and heating panel system*. Energy Conversion and Management, 2016. **124**: p. 504-516.
580. Luo, Z., et al., *An improved CSMA/CA algorithm based on WSNs of the drug control system*. Cluster Computing, 2017. **20**(2): p. 1345-1357.
581. Luo, Z., et al., *An efficient intelligent algorithm based on WSNs of the drug control system*. Tehnicki Vjesnik, 2017. **24**(1): p. 273-282.
582. Luz, T.C., F.L. Verdi, and T.A. Almeida, *Towards novelty detection in electronic devices based on their energy consumption*. Energy Efficiency, 2018. **11**(4): p. 939-953.
583. Ma, J. and J.C.P. Cheng, *Estimation of the building energy use intensity in the urban scale by integrating GIS and big data technology*. Applied Energy, 2016. **183**: p. 182-192.
584. Ma, J. and J.C.P. Cheng, *Identifying the influential features on the regional energy use intensity of residential buildings based on Random Forests*. Applied Energy, 2016. **183**: p. 193-201.

585. Ma, J., et al., *Forecasting renewable energy consumption under zero assumptions*. Sustainability (Switzerland), 2018. **10**(3).
586. Ma, X., P.K. Wong, and J. Zhao, *Practical multi-objective control for automotive semi-active suspension system with nonlinear hydraulic adjustable damper*. Mechanical Systems and Signal Processing, 2019. **117**: p. 667-688.
587. Maachou, R., et al., *Modeling of activated sludge process using artificial neuro-fuzzy-inference system (ANFIS)*. Desalination and Water Treatment, 2016. **57**(45): p. 21182-21188.
588. Macas, M., et al., *The role of data sample size and dimensionality in neural network based forecasting of building heating related variables*. Energy and Buildings, 2016. **111**: p. 299-310.
589. Magno, M., et al., *An energy efficient E-skin embedded system for real-time tactile data decoding*. Journal of Low Power Electronics, 2018. **14**(1): p. 101-109.
590. Mahapatra, C., A.K. Moharana, and V.C.M. Leung, *Energy management in smart cities based on internet of things: Peak demand reduction and energy savings*. Sensors (Switzerland), 2017. **17**(12).
591. Malet-Damour, B., et al., *Study of tubular daylight guide systems in buildings: Experimentation, modelling and validation*. Energy and Buildings, 2016. **129**: p. 308-321.
592. Malik, S. and D. Kim, *Prediction-learning algorithm for efficient energy consumption in smart buildings based on particle regeneration and velocity boost in particle swarm optimization neural networks*. Energies, 2018. **11**(5).
593. Mammadli, R., F. Wolf, and A. Jannesari, *The art of getting deep neural networks in shape*. ACM Transactions on Architecture and Code Optimization, 2019. **15**(4).
594. Man, Y., et al., *Dissolved oxygen control strategies for the industrial sequencing batch reactor of the wastewater treatment process in the papermaking industry*. Environmental Science: Water Research and Technology, 2018. **4**(5): p. 654-662.
595. Manjarres, D., et al., *An energy-efficient predictive control for HVAC systems applied to tertiary buildings based on regression techniques*. Energy and Buildings, 2017. **152**: p. 409-417.
596. Manju, S. Chand, and B. Kumar, *Genetic algorithm-based meta-heuristic for target coverage problem*. IET Wireless Sensor Systems, 2018. **8**(4): p. 170-175.
597. Mardani, A., et al., *Energy consumption, economic growth, and CO₂ emissions in G20 countries: Application of adaptive neuro-fuzzy inference system*. Energies, 2018. **11**(10).
598. Maria, J., et al., *Stacked Autoencoders Using Low-Power Accelerated Architectures for Object Recognition in Autonomous Systems*. Neural Processing Letters, 2016. **43**(2): p. 445-458.
599. Marjani, A. and A.M. Baghmolai, *Analytical and numerical modeling of non-isothermal and steady-state gas transportation network and the comparison with the results of artificial neural network(ANN) and fuzzy inference system (FIS)*. Journal of Natural Gas Science and Engineering, 2016. **36**: p. 1-12.
600. Markovic, R., et al., *Window opening model using deep learning methods*. Building and Environment, 2018. **145**: p. 319-329.

601. Marrugo, N., J. Ospina, and D. Amaya, *Estimated energy consumption for a building based on weather and time conditions using neural networks*. International Journal of Control and Automation, 2016. **9**(3): p. 15-22.
602. Martí, D., et al., *Energy-efficient neuromorphic classifiers*. Neural Computation, 2016. **28**(10): p. 2011-2044.
603. Masiur Rahman, S., et al., *Neurogenetic modeling of energy demand in the United Arab Emirates, Saudi Arabia, and Qatar*. Environmental Progress and Sustainable Energy, 2017. **36**(4): p. 1208-1216.
604. Mason, K., et al., *Predicting host CPU utilization in the cloud using evolutionary neural networks*. Future Generation Computer Systems, 2018. **86**: p. 162-173.
605. Maté, A., et al., *A hybrid integrated architecture for energy consumption prediction*. Future Generation Computer Systems, 2016. **63**: p. 131-147.
606. Mba, L., P. Meukam, and A. Kemajou, *Application of artificial neural network for predicting hourly indoor air temperature and relative humidity in modern building in humid region*. Energy and Buildings, 2016. **121**: p. 32-42.
607. Mbarek, M.B. and R. Feki, *Using fuzzy logic to renewable energy forecasting: A case study of France*. International Journal of Energy Technology and Policy, 2016. **12**(4): p. 357-376.
608. McGlinn, K., et al., *Usability evaluation of a web-based tool for supporting holistic building energy management*. Automation in Construction, 2017. **84**: p. 154-165.
609. Mellem, D., et al., *Mitochondrial morphologies driven by energy-consuming cell sites in a spatially and time-resolved quality model*. Journal of Computational Biology, 2019. **26**(1): p. 76-85.
610. Melo, A.P., et al., *Development and analysis of a metamodel to represent the thermal behavior of naturally ventilated and artificially air-conditioned residential buildings*. Energy and Buildings, 2016. **112**: p. 209-221.
611. Meng, D., C. Shao, and L. Zhu, *Ethylene cracking furnace TOPSIS energy efficiency evaluation method based on dynamic energy efficiency baselines*. Energy, 2018: p. 620-634.
612. Mesmoudi, S., B. Benadda, and A. Mesmoudi, *SKWN: Smart and dynamic key management scheme for wireless sensor networks*. International Journal of Communication Systems, 2019.
613. Mihai, F.C. and C. Ingraio, *Assessment of biowaste losses through unsound waste management practices in rural areas and the role of home composting*. Journal of Cleaner Production, 2018. **172**: p. 1631-1638.
614. Miller, C. and F. Meggers, *Mining electrical meter data to predict principal building use, performance class, and operations strategy for hundreds of non-residential buildings*. Energy and Buildings, 2017. **156**: p. 360-373.
615. Mirzaei, F., et al., *Modeling and predict environmental indicators for land leveling using adaptive neuro-fuzzy inference system (ANFIS), and regression*. International Journal of Energy Sector Management, 2018. **12**(4): p. 484-506.
616. Moawad, A., et al., *Novel large scale simulation process to support dot's cafe modeling system*. International Journal of Automotive Technology, 2016. **17**(6): p. 1067-1077.

617. Mocanu, E., et al., *Deep learning for estimating building energy consumption*. Sustainable Energy, Grids and Networks, 2016. **6**: p. 91-99.
618. Mocanu, E., et al., *Unsupervised energy prediction in a Smart Grid context using reinforcement cross-building transfer learning*. Energy and Buildings, 2016. **116**: p. 646-655.
619. Moghaddam, M.G., W. Guan, and C. Ababei, *Dynamic Energy Optimization in Chip Multiprocessors Using Deep Neural Networks*. IEEE Transactions on Multi-Scale Computing Systems, 2018. **4**(4): p. 649-661.
620. Mohamed, M. and M. Cheffena, *Received signal strength based gait authentication*. IEEE Sensors Journal, 2018. **18**(16): p. 6727-6734.
621. Mohammadinia Samakoosh, H., J. Ghasemi, and J. Kazemitabar, *Optimized neural network based thermal and electrical scheduling of virtual power plant in the presence of energy storage*. Journal of Renewable and Sustainable Energy, 2017. **9**(2).
622. Mohammed, S.A.M., N. Zouli, and M. Al-Dahhan, *Removal of benzoic acid from wastewater by pickering emulsion liquid membrane stabilized by magnetic Fe_2O_3 nanoparticles*. Desalination and Water Treatment, 2017. **68**: p. 114-121.
623. MohanaPriya, P. and S.M. Shalinie, *Restricted Boltzmann machine-based cognitive protocol for secure routing in software defined wireless networks*. IET Networks, 2017. **6**(6): p. 162-168.
624. Mohandes, S.R., X. Zhang, and A. Mahdiyar, *A comprehensive review on the application of artificial neural networks in building energy analysis*. Neurocomputing, 2019.
625. Moon, J.W. and S.K. Jung, *Development of a thermal control algorithm using artificial neural network models for improved thermal comfort and energy efficiency in accommodation buildings*. Applied Thermal Engineering, 2016. **103**: p. 1135-1144.
626. Moon, J.W., et al., *Prediction models and control algorithms for predictive applications of setback temperature in cooling systems*. Applied Thermal Engineering, 2017. **113**: p. 1290-1302.
627. Moons, B. and M. Verhelst, *An Energy-Efficient Precision-Scalable ConvNet Processor in 40-nm CMOS*. IEEE Journal of Solid-State Circuits, 2017. **52**(4): p. 903-914.
628. Motamedi, M., P. Gysel, and S. Ghiasi, *PLACID: A platform for FPGA-based accelerator creation for DCNNs*. ACM Transactions on Multimedia Computing, Communications and Applications, 2017. **13**(4).
629. Mrówczyńska, M., et al., *Social and infrastructural conditioning of lowering energy costs and improving the energy efficiency of buildings in the context of the local energy policy*. Energies, 2018. **11**(9).
630. Mukhutdinov, D., et al., *Multi-agent deep learning for simultaneous optimization for time and energy in distributed routing system*. Future Generation Computer Systems, 2019. **94**: p. 587-600.

631. Muñoz, P.M., et al., *Energy management control design for fuel cell hybrid electric vehicles using neural networks*. International Journal of Hydrogen Energy, 2017. **42**(48): p. 28932-28944.
632. Nabavi-Pelesaraei, A., R. Abdi, and S. Rafiee, *Neural network modeling of energy use and greenhouse gas emissions of watermelon production systems*. Journal of the Saudi Society of Agricultural Sciences, 2016. **15**(1): p. 38-47.
633. Nabavi-Pelesaraei, A., et al., *Resource management in cropping systems using artificial intelligence techniques: a case study of orange orchards in north of Iran*. Stochastic Environmental Research and Risk Assessment, 2016. **30**(1): p. 413-427.
634. Nabavi-Pelesaraei, A., et al., *Prognostication of energy use and environmental impacts for recycle system of municipal solid waste management*. Journal of Cleaner Production, 2017. **154**: p. 602-613.
635. Nabavi-Pelesaraei, A., et al., *Modeling of energy consumption and environmental life cycle assessment for incineration and landfill systems of municipal solid waste management - A case study in Tehran Metropolis of Iran*. Journal of Cleaner Production, 2017. **148**: p. 427-440.
636. Nabavi-Pelesaraei, A., et al., *Modeling energy consumption and greenhouse gas emissions for kiwifruit production using artificial neural networks*. Journal of Cleaner Production, 2016. **133**: p. 924-931.
637. Nacer, A., et al., *ALOS: Automatic learning of an occupancy schedule based on a new prediction model for a smart heating management system*. Building and Environment, 2018. **142**: p. 484-501.
638. Nadesh, R.K., P.G. Shynu, and A. Jangir, *An innovative technique for identification of packet droppers and modifiers in Ad Hoc networks*. International Journal of Pharmacy and Technology, 2016. **8**(4): p. 26076-26083.
639. Naeem, S., S. Shahhosseini, and A. Ghaemi, *Simulation of CO₂ capture using sodium hydroxide solid sorbent in a fluidized bed reactor by a multi-layer perceptron neural network*. Journal of Natural Gas Science and Engineering, 2016. **31**: p. 305-312.
640. Naganathan, H., W.O. Chong, and X. Chen, *Building energy modeling (BEM) using clustering algorithms and semi-supervised machine learning approaches*. Automation in Construction, 2016. **72**: p. 187-194.
641. Naji, S., et al., *Estimating building energy consumption using extreme learning machine method*. Energy, 2016. **97**: p. 506-516.
642. Naji, S., et al., *Soft computing methodologies for estimation of energy consumption in buildings with different envelope parameters*. Energy Efficiency, 2016. **9**(2): p. 435-453.
643. Nalini, S. and A. Valarmathi, *A collaborative composite event detection approach in wireless sensor network using fuzzy assisted decision system*. Applied Mathematics and Information Sciences, 2018. **12**(3): p. 567-577.
644. Nasr, M., M. Ateia, and K. Hassan, *Artificial intelligence for greywater treatment using electrocoagulation process*. Separation Science and Technology (Philadelphia), 2016. **51**(1): p. 96-105.

645. Natsui, M., T. Chiba, and T. Hanyu, *Design of MTJ-Based nonvolatile logic gates for quantized neural networks*. Microelectronics Journal, 2018. **82**: p. 13-21.
646. Naveen Chakkaravarthy, A., et al., *Solar irradiance forecasting and energy optimization for achieving nearly net zero energy building*. Journal of Renewable and Sustainable Energy, 2018. **10**(3).
647. Nazábal, A. and A. Artés, *Active sensing in human activity recognition*, in *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*. 2017. p. 157-166.
648. Ni, Q., et al., *An improved dynamic deployment method for wireless sensor network based on multi-swarm particle swarm optimization*. Natural Computing, 2017. **16**(1): p. 5-13.
649. Niu, D., D. Pu, and S. Dai, *Ultra-short-term wind-power forecasting based on the weighted random forest optimized by the niche immune lion algorithm*. Energies, 2018. **11**(5).
650. Niu, J., et al., *User-aware partitioning algorithm for mobile cloud computing based on maximum graph cuts*. Computer Networks, 2017. **129**: p. 193-206.
651. Noah, N.N.F.M. and N.N. Othman, *Emulsion stability of palladium extraction containing cyanex 302 as a mobile carrier in emulsion liquid membrane process*. Chemical Engineering Transactions, 2017. **56**: p. 1069-1074.
652. Nutkiewicz, A., Z. Yang, and R.K. Jain, *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**: p. 1176-1189.
653. Ochoa-Estopier, L.M., et al., *Industrial application of surrogate models to optimize crude oil distillation units*. Chemical Engineering Transactions, 2018. **69**: p. 289-294.
654. Okezue, C. and D. Kuvshinov, *A comprehensive study of the effect of chemical impurities on selection and sizing of centrifugal machines for supercritical carbon dioxide transport pipelines*. Applied Energy, 2018. **230**: p. 816-835.
655. Okonskaya, N.K., et al., *Functional asymmetry of the brain: Mechanics of the spatial organization of the human brain*. Russian Journal of Biomechanics, 2018. **22**(2): p. 221-232.
656. Oliveira-Lima, J.A., et al., *Load forecast on intelligent buildings based on temporary occupancy monitoring*. Energy and Buildings, 2016. **116**: p. 512-521.
657. Olson, J., I. Valova, and H. Michel, *WSCISOM: wireless sensor data cluster identification through a hybrid SOM/MLP/RBF architecture*. Progress in Artificial Intelligence, 2016. **5**(4): p. 233-250.
658. Omari, A., N. Behroozi-Khazaei, and F. Sharifian, *Drying kinetic and artificial neural network modeling of mushroom drying process in microwave-hot air dryer*. Journal of Food Process Engineering, 2018. **41**(7).
659. Oprea, S.V., A. Bâra, and A. Reveiu, *Informatics solution for energy efficiency improvement and consumption management of householders*. Energies, 2018. **11**(1).
660. Ortega, J.L.G., L. Han, and N. Bowring, *Modelling and detection of user activity patterns for energy saving in buildings*, in *Studies in Computational Intelligence*. 2016. p. 165-185.

661. Oses, N., et al., *Uncertainty reduction in measuring and verification of energy savings by statistical learning in manufacturing environments*. International Journal on Interactive Design and Manufacturing, 2016. **10**(3): p. 291-299.
662. Osipov, V. and M. Osipova, *Space-time signal binding in recurrent neural networks with controlled elements*. Neurocomputing, 2018. **308**: p. 194-204.
663. Ouyang, Z., J. Niu, and M. Guizani, *Improved Vehicle Steering Pattern Recognition by Using Selected Sensor Data*. IEEE Transactions on Mobile Computing, 2018. **17**(6): p. 1383-1396.
664. Özdemir, M.B., et al., *Modeling of a convective-infrared kiwifruit drying process*. International Journal of Hydrogen Energy, 2017. **42**(28): p. 18005-18013.
665. P. R. Filho, G., et al., *ResiDI: Towards a smarter smart home system for decision-making using wireless sensors and actuators*. Computer Networks, 2018. **135**: p. 54-69.
666. Padaganur, S.K. and J.D. Mallapur, *Neural embedded smart link generation scheme for heterogeneous network*. Heliyon, 2018. **4**(12).
667. Pahlevan, A., et al., *Integrating Heuristic and Machine-Learning Methods for Efficient Virtual Machine Allocation in Data Centers*. IEEE Transactions on Computer-Aided Design of Integrated Circuits and Systems, 2018. **37**(8): p. 1667-1680.
668. Pan, C., et al., *Driving range estimation for electric vehicles based on driving condition identification and forecast*. AIP Advances, 2017. **7**(10).
669. Pan, S., et al., *A model based on Gauss Distribution for predicting window behavior in building*. Building and Environment, 2019. **149**: p. 210-219.
670. Panda, M., *Intelligent data analysis for sustainable smart grids using hybrid classification by genetic algorithm based discretization*. Intelligent Decision Technologies, 2017. **11**(2): p. 137-151.
671. Panyala, A., et al., *Exploring performance and energy tradeoffs for irregular applications: A case study on the Tiler many-core architecture*. Journal of Parallel and Distributed Computing, 2017. **104**: p. 234-251.
672. Papadopoulos, S., et al., *Evaluation of tree-based ensemble learning algorithms for building energy performance estimation*. Journal of Building Performance Simulation, 2018. **11**(3): p. 322-332.
673. Pappas, S.S. and S. Adam, *Prediction of the long-term electrical energy consumption in Greece using adaptive algorithms*. WSEAS Transactions on Power Systems, 2018. **13**: p. 291-299.
674. Parhizkar, E., et al., *Partial least squares-least squares-support vector machine modeling of ATR-IR as a spectrophotometric method for detection and determination of iron in pharmaceutical formulations*. Iranian Journal of Pharmaceutical Research, 2019. **18**(1): p. 72-79.
675. Park, H., et al., *Toward optimal FPGA implementation of deep convolutional neural networks for handwritten Hangul character recognition*. Journal of Computing Science and Engineering, 2018. **12**(1): p. 24-35.

676. Park, H.S., et al., *Development of a new energy benchmark for improving the operational rating system of office buildings using various data-mining techniques*. Applied Energy, 2016. **173**: p. 225-237.
677. Park, J.Y., et al., *LightLearn: An adaptive and occupant centered controller for lighting based on reinforcement learning*. Building and Environment, 2019. **147**: p. 397-414.
678. Park, S. and J. Kim, *Energy efficiency in Korea: analysis using a hybrid DEA model*. Geosystem Engineering, 2016. **19**(3): p. 143-150.
679. Paterson, G., et al., *Energy use predictions with machine learning during architectural concept design*. Science and Technology for the Built Environment, 2017. **23**(6): p. 1036-1048.
680. Patil, A., et al., *Hardware architecture for large parallel array of Random Feature Extractors applied to image recognition*. Neurocomputing, 2017. **261**: p. 193-203.
681. Peng, Y., et al., *Using machine learning techniques for occupancy-prediction-based cooling control in office buildings*. Applied Energy, 2018. **211**: p. 1343-1358.
682. Peng, Z., et al., *Indoor Floor Plan Construction Through Sensing Data Collected from Smartphones*. IEEE Internet of Things Journal, 2018. **5**(6): p. 4351-4364.
683. Pérez-Chacón, R., et al., *Big data analytics for discovering electricity consumption patterns in smart cities*. Energies, 2018. **11**(3).
684. Piatkowski, N., S. Lee, and K. Morik, *Integer undirected graphical models for resource-constrained systems*. Neurocomputing, 2016. **173**: p. 9-23.
685. Picos-Benítez, A.R., et al., *Artificial intelligence based model for optimization of COD removal efficiency of an up-flow anaerobic sludge blanket reactor in the saline wastewater treatment*. Water Science and Technology, 2017. **75**(6): p. 1351-1361.
686. Pineda-Jaramillo, J.D., R. Insa, and P. Martínez, *Modeling the energy consumption of trains by applying neural networks*. Proceedings of the Institution of Mechanical Engineers, Part F: Journal of Rail and Rapid Transit, 2018. **232**(3): p. 816-823.
687. Pineda-Jaramillo, J.D., P. Salvador-Zuriaga, and R. Insa-Franco, *Comparing energy consumption for rail transit routes through symmetric vertical sinusoid alignments (SVSA), and applying artificial neural networks. A case study of metro valencia (Spain)*. DYNA (Colombia), 2017. **84**(203): p. 17-23.
688. Pino-Mejías, R., et al., *Comparison of linear regression and artificial neural networks models to predict heating and cooling energy demand, energy consumption and CO₂ emissions*. Energy, 2017. **118**: p. 24-36.
689. Pîrjan, A., et al., *Devising hourly forecasting solutions regarding electricity consumption in the case of commercial center type consumers*. Energies, 2017. **10**(11).
690. Połap, D., *Human-machine interaction in intelligent technologies using the augmented reality*. Information Technology and Control, 2018. **47**(4): p. 691-703.
691. Pombeiro, H., et al., *Comparative assessment of low-complexity models to predict electricity consumption in an institutional building: Linear regression vs. fuzzy modeling vs. neural networks*. Energy and Buildings, 2017. **146**: p. 141-151.
692. Posewsky, T. and D. Ziener, *Throughput optimizations for FPGA-based deep neural network inference*. Microprocessors and Microsystems, 2018. **60**: p. 151-161.

693. Potapov, V.I., et al., *Using neural network for building short) term forecast of electricity load of LLC "oMSK energy retail company"*. Bulletin of the Tomsk Polytechnic University, Geo Assets Engineering, 2016. **327**(8): p. 44-51.
694. Prado, Á.J., M.M. Michalek, and F.A. Cheein, *Machine-learning based approaches for self-tuning trajectory tracking controllers under terrain changes in repetitive tasks*. Engineering Applications of Artificial Intelligence, 2018. **67**: p. 63-80.
695. Prince, P., et al., *Deploying acoustic detection algorithms on low-cost, open-source acoustic sensors for environmental monitoring*. Sensors (Switzerland), 2019. **19**(3).
696. Qi, J. and D. Wu, *Green Energy Management of the Energy Internet Based on Service Composition Quality*. IEEE Access, 2018. **6**: p. 15723-15732.
697. Qiao, J. and W. Zhang, *Dynamic multi-objective optimization control for wastewater treatment process*. Neural Computing and Applications, 2018. **29**(11): p. 1261-1271.
698. Qiao, J. and H. Zhou, *Modeling of energy consumption and effluent quality using density peaks-based adaptive fuzzy neural network*. IEEE/CAA Journal of Automatica Sinica, 2018. **5**(5): p. 968-976.
699. Qiao, J.F., et al., *Adaptive fuzzy neural network control of wastewater treatment process with multiobjective operation*. Neurocomputing, 2018. **275**: p. 383-393.
700. Qin, J., Y. Liu, and R. Grosvenor, *Multi-source data analytics for AM energy consumption prediction*. Advanced Engineering Informatics, 2018. **38**: p. 840-850.
701. Qin, Y., et al., *Road excitation classification for semi-active suspension system based on system response*. JVC/Journal of Vibration and Control, 2018. **24**(13): p. 2732-2748.
702. Qiqieh, I., et al., *Significance-Driven Logic Compression for Energy-Efficient Multiplier Design*. IEEE Journal on Emerging and Selected Topics in Circuits and Systems, 2018. **8**(3): p. 417-430.
703. Ragu, V., et al., *Analysis and forecasting of electric power energy consumption in IoT environments*. International Journal of Grid and Distributed Computing, 2018. **11**(6): p. 1-14.
704. Rahman, A. and A.D. Smith, *Predicting heating demand and sizing a stratified thermal storage tank using deep learning algorithms*. Applied Energy, 2018. **228**: p. 108-121.
705. Rahman, A., V. Srikumar, and A.D. Smith, *Predicting electricity consumption for commercial and residential buildings using deep recurrent neural networks*. Applied Energy, 2018. **212**: p. 372-385.
706. Rahman, M.A., Y. Lee, and I. Koo, *Energy-efficient power allocation and relay selection schemes for relay-assisted D2D communications in 5g wireless networks*. Sensors (Switzerland), 2018. **18**(9).
707. Rahmani, P. and H. Haj Seyyed Javadi, *Topology Control in MANETs Using the Bayesian Pursuit Algorithm*. Wireless Personal Communications, 2019.
708. Rai, A. and R. Jagadeesh Kannan, *Multi-scale modeling of territorial dynamics of geospatial anthropogenic energy consumption*. Asian Journal of Pharmaceutical and Clinical Research, 2017. **10**: p. 305-311.

709. Raihanian Mashhadi, A. and S. Behdad, *Discriminant effects of consumer electronics use-phase attributes on household energy prediction*. Energy Policy, 2018. **118**: p. 346-355.
710. Rajasekaran, B. and C. Arun, *Detection of malicious nodes in wireless sensor networks based on features using neural network computing approach*. International Journal of Recent Technology and Engineering, 2018. **7**(4): p. 188-192.
711. Rakhi and G.L. Pahuja, *A reliable solution of path optimisation in LEACH protocol by implementing trust-based neural network*. International Journal of Communication Networks and Distributed Systems, 2019. **22**(1): p. 55-73.
712. Rao, N.D. and K. Ummel, *White goods for white people? Drivers of electric appliance growth in emerging economies*. Energy Research and Social Science, 2017. **27**: p. 106-116.
713. Rasiulis, R., et al., *Decision model for selection of modernization measures: Public building case*. Journal of Civil Engineering and Management, 2016. **22**(1): p. 124-133.
714. Rasouli, M., et al., *An extreme learning machine-based neuromorphic tactile sensing system for texture recognition*. IEEE Transactions on Biomedical Circuits and Systems, 2018. **12**(2): p. 313-325.
715. Razafimandimby, C., V. Loscri, and A.M. Vegni, *Towards Efficient Deployment in Internet of Robotic Things*, in *Internet of Things*. 2018. p. 21-37.
716. Razafimandimby, C., et al., *Neuro-Dominating set scheme for a fast and efficient robot deployment in internet of robotic things*. Ad Hoc Networks, 2019. **86**: p. 36-45.
717. Razali, C.M.C., et al., *Estimation of building energy efficiency performance using Radial Basis Function Neural Network*. International Journal of Engineering and Technology(UAE), 2018. **7**(4): p. 755-759.
718. Razavi, R., et al., *Occupancy detection of residential buildings using smart meter data: A large-scale study*. Energy and Buildings, 2019. **183**: p. 195-208.
719. Rehaiem, G., H. Gharsellaoui, and S.B. Ahmed, *Real-Time Scheduling Approach of Reconfigurable Embedded Systems Based On Neural Networks with Minimization of Power Consumption*. IFAC-PapersOnLine, 2016. **49**(12): p. 1827-1831.
720. Rehan, W., S. Fischer, and M. Rehan, *Machine-learning based channel quality and stability estimation for stream-based multichannel wireless sensor networks*. Sensors (Switzerland), 2016. **16**(9).
721. Rejitha, R.S., et al., *Energy prediction of CUDA application instances using dynamic regression models*. Computing, 2017. **99**(8): p. 765-790.
722. Ren, J., et al., *Primary energy consumption and its structure in Heilongjiang province*. Beijing Huagong Daxue Xuebao (Ziran Kexueban)/Journal of Beijing University of Chemical Technology (Natural Science Edition), 2018. **45**(2): p. 89-94.
723. Reynolds, J., et al., *A zone-level, building energy optimisation combining an artificial neural network, a genetic algorithm, and model predictive control*. Energy, 2018. **151**: p. 729-739.
724. Rezaei, M.H., et al., *Applying GMDH artificial neural network in modeling CO₂ emissions in four nordic countries*. International Journal of Low-Carbon Technologies, 2018. **13**(3): p. 266-271.

725. Ribeiro, M., et al., *Transfer learning with seasonal and trend adjustment for cross-building energy forecasting*. Energy and Buildings, 2018. **165**: p. 352-363.
726. Robecke, U. and T. Klein, *Artificial neural networks in biological wastewater treatment*. GWF, Wasser - Abwasser, 2016. **157**: p. 87-91.
727. Robinson, C., et al., *Machine learning approaches for estimating commercial building energy consumption*. Applied Energy, 2017. **208**: p. 889-904.
728. Rodriguez-Lozano, D., et al., *Energy prediction of access points in Wi-Fi networks according to users' behaviour*. Applied Sciences (Switzerland), 2017. **7**(8).
729. Roozegar, M., Y.D. Setiawan, and J. Angeles, *Design, modelling and estimation of a novel modular multi-speed transmission system for electric vehicles*. Mechatronics, 2017. **45**: p. 119-129.
730. Rostami, A., et al., *Accurate estimation of CO₂ adsorption on activated carbon with multi-layer feed-forward neural network (MLFNN) algorithm*. Egyptian Journal of Petroleum, 2018. **27**(1): p. 65-73.
731. Roy, A. and M.M. Noel, *Design of a high-speed line following robot that smoothly follows tight curves*. Computers and Electrical Engineering, 2016. **56**: p. 732-747.
732. Ruelens, F., et al., *Reinforcement Learning Applied to an Electric Water Heater: From Theory to Practice*. IEEE Transactions on Smart Grid, 2018. **9**(4): p. 3792-3800.
733. Ruiz, L.G.B., M.I. Capel, and M.C. Pegalajar, *Parallel memetic algorithm for training recurrent neural networks for the energy efficiency problem*. Applied Soft Computing Journal, 2019. **76**: p. 356-368.
734. Ruiz, L.G.B., et al., *Energy consumption forecasting based on Elman neural networks with evolutive optimization*. Expert Systems with Applications, 2018. **92**: p. 380-389.
735. Ruiz-García, A. and J. Feo-García, *Operating and maintenance cost in seawater reverse osmosis desalination plants. Artificial neural network based model*. Desalination and Water Treatment, 2017. **73**: p. 73-79.
736. Ryu, S.H. and H.J. Moon, *Development of an occupancy prediction model using indoor environmental data based on machine learning techniques*. Building and Environment, 2016. **107**: p. 1-9.
737. Sadeghian, R. and M.R. Sadeghian, *A decision support system based on artificial neural network and fuzzy analytic network process for selection of machine tools in a flexible manufacturing system*. International Journal of Advanced Manufacturing Technology, 2016. **82**(9-12): p. 1795-1803.
738. Saeed, A. and M. Kolberg, *Towards Optimizing WLANs Power Saving: Novel Context-Aware Network Traffic Classification Based on a Machine Learning Approach*. IEEE Access, 2019. **7**: p. 3122-3135.
739. Saeedan, M., et al., *CFD Investigation and neural network modeling of heat transfer and pressure drop of nanofluids in double pipe helically baffled heat exchanger with a 3-D finned tube*. Applied Thermal Engineering, 2016. **100**: p. 721-729.
740. Ijadi Maghsoodi, A.*, **A. Mosavi**, T. Rabczuk and E. Zavadskas (2018): Renewable Energy Technology Selection Problem Using Integrated H-SWARA-MULTIMOORA Approach. Published in: **Sustainability** 10(12): 4481.

741. Choubin, B.*, E. Moradi, M. Golshan, J. Adamowski, F. Sajedi-Hosseini and **A. Mosavi** (2019): An ensemble prediction of flood susceptibility using multivariate discriminant analysis, classification and regression trees, and support vector machines. Published in: **Science of the Total Environment** 651: 2087-2096.
742. Torabi, M., S. Hashemi, M. R. Saybani, S. Shamshirband* and **A. Mosavi** (2019): A Hybrid clustering and classification technique for forecasting short-term energy consumption. Published in: **Environmental Progress and Sustainable Energy** 38(1): 66-76.
743. Moeini, I., M. Ahmadpour, **A. Mosavi**, N. Alharbi and N. E. Gorji*(2018): Modeling the time-dependent characteristics of perovskite solar cells. Published in: **Solar Energy** 170: 969-973.
744. Ardabili, S. F., B. Najafi, M. Alizamir, **A. Mosavi**, S. Shamshirband* and T. Rabczuk (2018): Using SVM-RSM and ELM-RSM approaches for optimizing the production process of methyl and ethyl esters. Published in: **Energies** 11(11).
745. Najafi, B., S. F. Ardabili, **A. Mosavi**, S. Shamshirband* and T. Rabczuk (2018): An intelligent artificial neural network-response surface methodology method for accessing the optimum biodiesel and diesel fuel blending conditions in a diesel engine from the viewpoint of exergy and energy analysis. Published in: **Energies** 11(4).
746. Nosratabadi, S., **A. Mosavi***, S. Shamshirband*, E. K. Zavadskas, A. Rakotonirainy, K.Wing-Chau, Sustainable business models: a review. Published in: **Sustainability** 11(4). doi: 10.20944/preprints201810.0378.v2
747. Rezakazemi, M., **A. Mosavi** and S. Shirazian* (2019): ANFIS pattern for molecular membranes separation optimization. Published in: **Journal of Molecular Liquids** 274: 470-476.
748. **Mosavi, A.***, (2019): Prediction of remaining service life of pavement using an optimized support vector machine. Published in: **Engineering Applications of Computational Fluid Mechanics** 13(1): 188-198.
749. Ghazvinei, P. T., H. H. Darvishi, **A. Mosavi**, K. b. W. Yusof, M. Alizamir, S. Shamshirband and K.-w. Chau (2018): Sugarcane growth prediction based on meteorological parameters using extreme learning machine and artificial neural network. Published in: **Engineering Applications of Computational Fluid Mechanics** 12:1, 738-749.
750. Baranyai, M., **A. Mosavi***, I. Vajda and A. R. Varkonyi-Koczy (2018): Optimal design of electrical machines: State of the art survey. Published in: *Advances in Intelligent Systems and Computing*. 660: 209-216.

751. Darvishzadeh, A., N. Alharbi, **A. Mosavi** and N. E. Gorji* (2018): Modeling the strain impact on refractive index and optical transmission rate. Published in: **Physica B: Condensed Matter** 543: 14-17.
752. Dehghani, M., H. Riahi-Madvar, F. Hooshyaripor, **A. Mosavi**, S. Shamshirband, E. K. Zavadskas and K. W. Chau (2019): Prediction of hydropower generation using grey Wolf optimization adaptive neuro-fuzzy inference system. Published in: **Energies** 12(2).
753. Fardad, K., B. Najafi, S. F. Ardabili, **A. Mosavi**, S. Shamshirband and T. Rabczuk (2018): Biodegradation of medicinal plants waste in an anaerobic digestion reactor for biogas production. Published in: **Computers, Materials and Continua** 55(3): 318-392.
754. Imani, M. H., S. Zalzar, **A. Mosavi** and S. Shamshirband (2018): Strategic Behavior of Retailers for Risk Reduction and Profit Increment via Distributed Generators and Demand Response Programs. Published in: **Energies** 11(6).
755. Moeini, I., M. Ahmadpour, **A. Mosavi**, N. Alharbi and N. E. Gorji (2018): Modeling the detection efficiency in photodetectors with temperature-dependent mobility and carrier lifetime. Published in: **Superlattices and Microstructures** 122: 557-562.
756. Karballaezadeh, N., D. Mohammadzadeh S, S. Shamshirband, P. Hajikhodaverdikhan, **Mosavi A.** and K.-w. Chau (2019): Prediction of remaining service life of pavement using an optimized support vector machine. Published in: **Engineering Applications of Computational Fluid Mechanics** 13(1): 188-198.
757. Shamshirband, S., E. Jafari Nodoushan, J. E. Adolf, A. Abdul Manaf, **A. Mosavi** and K.-w. Chau (2019): Ensemble models with uncertainty analysis for multi-day ahead forecasting of chlorophyll a concentration in coastal waters. Published in: **Engineering Applications of Computational Fluid Mechanics** 13(1): 91-101.
758. Torabi, M., **A. Mosavi***, P. Ozturk, A. Varkonyi-Koczy and I. Vajda (2018): A Hybrid Machine Learning Approach for Daily Prediction of Solar Radiation. Published in: Lecture Notes in Networks and Systems. **LNNS**: 53: 266-274. Springer Nature
759. **Mosavi, A.*** and M. Edalatifar (2018): A Hybrid Neuro-Fuzzy Algorithm for Prediction of Reference Evapotranspiration. Published in: Lecture Notes in Networks and Systems, **LNNS**: 53: 235-243. Springer Nature Switzerland.
760. Zhang, S., S. Karimi, S. Shamshirband and **A. Mosavi** (2019): Optimization Algorithm for Reduction the Size of Dixon Resultant Matrix: A Case Study on Mechanical Application. Published in: **Computers, Materials and Continua** 58(2): 567-583.
761. **Mosavi, A.***, Y. Bathla and A. Varkonyi-Koczy (2018): Predicting the future using web knowledge: State of the art survey. Published in: Advances in Intelligent Systems and Computing. **LNCS**: 660: 341-349. Springer Nature Switzerland.

762. **Mosavi, A.**, R. Benkreif and A. R. Varkonyi-Koczy (2018): Comparison of Euler-Bernoulli and Timoshenko beam equations for railway system dynamics. Published in: *Advances in Intelligent Systems and Computing*. **LNCS**: 660: 32-40. Springer Nature Switzerland.
763. Mousavi, S., **Mosavi, A.***, Varkonyi-Koczy, A. R., & Fazekas, G. (2017). Dynamic resource allocation in cloud computing. Published in: **Acta Polytechnica Hungarica**, 14(4).
764. **Mosavi, A.***, A. Lopez and A. R. Varkonyi-Koczy (2018): Industrial applications of big data: State of the art survey. Published in: *Advances in Intelligent Systems and Computing*. **LNCS**: 660: 225-232. Springer Nature Switzerland.
765. **Mosavi, A.*** and T. Rabczuk (2017): Learning and intelligent optimization for material design innovation. Published in: *Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)*: 10556 **LNCS**: 358-363. Springer Nature Switzerland.
766. **Mosavi, A.***, T. Rabczuk and A. R. Varkonyi-Koczy (2018): Reviewing the novel machine learning tools for materials design. Published in: *Advances in Intelligent Systems and Computing*. **LNCS**: 660: 50-58. Springer Nature Switzerland.
767. **Mosavi, A.***, R. Rituraj and A. R. Varkonyi-Koczy (2018): Review on the usage of the multiobjective optimization package of modeFrontier in the energy sector. Published in: *Advances in Intelligent Systems and Computing*. **LNCS**: 660: 217-224. Springer Nature Switzerland.
768. **Mosavi, A.*** and A. R. Varkonyi-Koczy (2017): Integration of machine learning and optimization for robot learning. Published in: *Advances in Intelligent Systems and Computing*. **LNCS**: 519: 349-355. Springer Nature Switzerland.
769. Mousavi, S., **A. Mosavi*** and A. R. Varkonyi-Koczy (2018): A load balancing algorithm for resource allocation in cloud computing. Published in: *Advances in Intelligent Systems and Computing*. **LNCS**: 660: 289-296. Springer Nature Switzerland.
770. A) Mosavi, A.* (2013): Data mining for decision making in engineering optimal design. Published in: *Journal of Artificial Intelligence & Data Mining*, V1, 2013.
771. Mosavi, A.* and A. Varkonyi (2016): Integration of Machine Learning and Optimization for Robot Learning. Published in: *Advances in Intelligent Systems and Computing*. **LNCS**: 519 349-355.
772. Mosavi, A.*, P. Ozturk and K. W. Chau (2018): Flood prediction using machine learning models. Published in: *Water (Switzerland)* 10(11).

773. Mohammadzadeh, D.; Kazemi, S.; Mosavi, A. Evolutionary Prediction Model for Fine-Grained Soils Compression Index Using Gene-Expression Programming. Preprints 2019, 2019030049.
774. Mosavi, A. and Vaezipour, A., 2012. Reactive search optimization; application to multiobjective optimization problems. Applied Mathematics, 3(10), p.1572.
775. Mosavi, A., 2010. Multiple criteria decision-making preprocessing using data mining tools. arXiv preprint arXiv:1004.3258.
776. Dehkordi, S.G., Larue, G.S., Cholette, M.E., Rakotonirainy, A. and Rakha, H.A., 2019. Ecological and safe driving: A model predictive control approach considering spatial and temporal constraints. Transportation Research Part D: Transport and Environment, 67, pp.208-222.
777. Dehkordi, S.G., Larue, G.S., Cholette, M.E. and Rakotonirainy, A., 2018, June. Benefit Assessment of New Ecological and Safe driving Algorithm using Naturalistic Driving Data. In 2018 IEEE Intelligent Vehicles Symposium (IV) (pp. 1931-1936). IEEE.