

Machine Learning in Manufacturing: Review, Synthesis, and Theoretical Framework
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Complete List of 250 Articles Subjected to Descriptive Literature Review

ID	YEAR	AUTHOR	TITLE
1	2019	Li, Zhixiong; Zhang, Ziyang; Shi, Junchuan; Wu, Dazhong;	Prediction of surface roughness in extrusion-based additive manufacturing with machine learning
2	2019	Kumar, Akhlesh; Chinnam, Ratna Babu; Tseng, Finn;	An HMM and polynomial regression based approach for remaining useful life and health state estimation of cutting tools
3	2019	Boudjelida, Abdelhamid;	On the robustness of joint production and maintenance scheduling in presence of uncertainties
4	2019	Aminzadeh, Masoumeh; Kurfess, Thomas R;	Online quality inspection using Bayesian classification in powder-bed additive manufacturing from high-resolution visual camera images
5	2019	Liu, Lizhe and Cao, Danhua and Wu, Yubin and Wei, Taoran	Defective samples simulation through adversarial training for automatic surface inspection
6	2019	Zhang, Binbin and Jaiswal, Prakar and Rai, Rahul and Guerrier, Paul and Baggs, George	Convolutional neural network-based inspection of metal additive manufacturing parts
7	2018	Jurkovic, Zoran; Cukor, Goran; Brezocnik, Miran; Brajkovic, Tomislav;	A comparison of machine learning methods for cutting parameters prediction in high speed turning process
8	2018	Wu, Yuting; Yuan, Mei; Dong, Shaopeng; Lin, Li; Liu, Yingqi;	Remaining useful life estimation of engineered systems using vanilla LSTM neural networks
9	2018	Khakifirooz, Marzieh; Chien, Chen Fu; Chen, Ying-Jen;	Bayesian inference for mining semiconductor manufacturing big data for yield enhancement and smart production to empower industry 4.0
10	2018	Ragab, Ahmed; El-Koujok, Mohamed; Poulin, Bruno; Amazouz, Mouloud; Yacout, Soumaya;	Fault diagnosis in industrial chemical processes using interpretable patterns based on Logical Analysis of Data
11	2018	Ruiz, Magda; Mujica, Luis E; Alferéz, Santiago; Acho, Leonardo; Tutiven, Christian; Vidal, Yolanda; Rodellar, Jose; Pozo, Francesc;	Wind turbine fault detection and classification by means of image texture analysis
12	2018	Liu, Changqing; Li, Yingguang; Zhou, Guanyan; Shen, Weiming;	A sensor fusion and support vector machine based approach for recognition of complex machining conditions
13	2018	Diez-Olivan, Alberto; Pagan, Jose A; Khoa, Nguyen Lu Dang; Sanz, Ricardo; Sierra, Basilio;	Kernel-based support vector machines for automated health status assessment in monitoring sensor data
14	2018	Kumar, Ajay; Shankar, Ravi; Thakur, Lakshman S;	A big data driven sustainable manufacturing framework for condition-based maintenance prediction
15	2018	Animah, Isaac; Shafiee, Mahmood;	Condition assessment, remaining useful life prediction and life extension decision making for offshore oil and gas assets
16	2018	Liu, Zheng; Meyendorf, Norbert; Mrad, Nezih;	The role of data fusion in predictive maintenance using digital twin
17	2018	Cui, Weiwei; Lu, Zhiqiang; Li, Chen; Han, Xiaole;	A proactive approach to solve integrated production scheduling and maintenance planning problem in flow shops
18	2018	McComb, Christopher; Meisel, Nicholas; Murphy, Christian; Simpson, TW;	Predicting Part Mass, Required Support Material, and Build Time via Autoencoded Voxel Patterns
19	2018	Chan, Siu L; Lu, Yanglong; Wang, Yan;	Data-driven cost estimation for additive manufacturing in cybermanufacturing
20	2018	Zhu, Zuowei; Anwer, Nabil; Huang, Qiang; Mathieu, Luc;	Machine learning in tolerancing for additive manufacturing
21	2018	Yang, Zhuo; Eddy, Douglas; Krishnamurty, Sundar; Grosse, Ian; Denno, Peter; Witherell, Paul William; Lopez, Felipe;	Dynamic metamodeling for predictive analytics in advanced manufacturing
22	2018	Yan, Wentao; Lin, Stephen; Kaika, Orion L; Lian, Yanping; Yu, Cheng; Liu, Zeliang; Yan, Jinhu; Wolff, Sarah; Wu, Hao; Ndiip-Agbor, Ebot;	Data-driven multi-scale multi-physics models to derive process-structure-property relationships for additive manufacturing
23	2018	Kappes, Brandon; Moorthy, Senthilaruvi; Drake, Dana; Geerlings, Henry; Stebner, Aaron;	Machine learning to optimize additive manufacturing parameters for laser powder bed fusion of Inconel 718
24	2018	Yang, Zhuo; Eddy, Douglas; Krishnamurty, Sundar; Grosse, Ian; Lu, Yan;	A Super-Metamodeling Framework to Optimize System Predictability
25	2018	Imani, Farhad; Gaikwad, Aniruddha; Montazeri, Mohammad; Rao, Prahalada; Yang, Hui; Reutzel, Edward;	Layerwise in-process quality monitoring in laser powder bed fusion
26	2018	Scime, Luke; Beuth, Jack;	Anomaly detection and classification in a laser powder bed additive manufacturing process using a trained computer vision algorithm
27	2018	Scime, Luke; Beuth, Jack;	A multi-scale convolutional neural network for autonomous anomaly detection and classification in a laser powder bed fusion additive manufacturing process
28	2018	Zhang, Yingjie; Hong, Geok Soon; Ye, Dongseng; Zhu, Kumpeng; Fuh, Jerry YH;	Extraction and evaluation of melt pool, plume and spatter information for powder-bed fusion AM process monitoring
29	2018	Shevchik, Sergey A; Kenel, Christoph; Leinenbach, Christian; Wasmer, Kilian;	Acoustic emission for in situ quality monitoring in additive manufacturing using spectral convolutional neural networks
30	2018	Ye, Dongseng; Hong, Geok Soon; Zhang, Yingjie; Zhu, Kumpeng; Fuh, Jerry YH;	Defect detection in selective laser melting technology by acoustic signals with deep belief networks
31	2018	Grasso, Marco; Gallina, Francesco; Colosimo, Bianca Maria;	Data fusion methods for statistical process monitoring and quality characterization in metal additive manufacturing
32	2018	Wang, Zirui and Wang, Jun and Wang, Youren	An intelligent diagnosis scheme based on generative adversarial learning deep neural networks and its application to planetary gearbox fault pattern recognition
33	2018	Yao, Bing; Imani, Farhad; Yang, Hui;	Markov decision process for image-guided additive manufacturing
34	2017	Garcia-Ordás, Maite;	Wear characterization of the cutting tool in milling processes using shape and texture descriptors
35	2017	Wu, Dazhong; Jennings, Connor; Terpenney, Janis; Gao, Robert X; Kumara, Soundar;	A comparative study on machine learning algorithms for smart manufacturing: tool wear prediction using random forests
36	2017	Arnold, F; Hänel, A; Nestler, A; Brosius, A;	New Approaches for the Determination of Specific Values for Process Models in Machining Using Artificial Neural Networks
37	2017	D'Addona, Dorian M; Ullah, AMM Sharif; Matarazzo, D;	Tool-wear prediction and pattern-recognition using artificial neural network and DNA-based computing
38	2017	Saravanamurugan, S; Thyagu, S; Sakthivel, NR; Nair, Binoy B;	Chatter prediction in boring process using machine learning technique
39	2017	Ren, Ruoxu; Hung, Terence; Tan, Kay Chen;	A generic deep-learning-based approach for automated surface inspection
40	2017	Lu, Chen; Wang, Zhenya; Zhou, Bo;	Intelligent fault diagnosis of rolling bearing using hierarchical convolutional network based health state classification
41	2017	Verstraete, David; Ferrada, Andrés; Droguett, Enrique López; Meruane, Viviana; Modarres, Mohammad;	Deep learning enabled fault diagnosis using time-frequency image analysis of rolling element bearings
42	2017	Wang, Peng; Yan, Ruqiang; Gao, Robert X;	Virtualization and deep recognition for system fault classification
43	2017	Lu, Chen; Wang, Zhen-Ya; Qin, Wei-Li; Ma, Jian;	Fault diagnosis of rotary machinery components using a stacked denoising autoencoder-based health state identification
44	2017	Shao, Haidong; Jiang, Hongkai; Wang, Fuan; Zhao, Huiwei;	An enhancement deep feature fusion method for rotating machinery fault diagnosis
45	2017	Guo, Xiaojie; Shen, Changqing; Chen, Liang;	Deep fault recognizer: An integrated model to denoise and extract features for fault diagnosis in rotating machinery
46	2017	Chen, Zhiqiang; Deng, Shengcai; Chen, Xudong; Li, Chuan; Sanchez, Rene-Vinicio; Qin, Huafeng;	Deep neural networks-based rolling bearing fault diagnosis
47	2017	Zhao, Rui; Wang, Dongzhe; Yan, Ruqiang; Mao, Kezhi; Shen, Fei; Wang, Jinjiang;	Machine health monitoring using local feature-based gated recurrent unit networks
48	2017	Zhao, Rui; Yan, Ruqiang; Wang, Jinjiang; Mao, Kezhi;	Learning to monitor machine health with convolutional bi-directional LSTM networks
49	2017	Wang, Peng; Gao, Robert X; Yan, Ruqiang;	A deep learning-based approach to material removal rate prediction in polishing
50	2017	Deutsch, Jason; He, Miao; He, David;	Remaining useful life prediction of hybrid ceramic bearings using an integrated deep learning and particle filter approach
51	2017	Chien, Chen-Fu; Liu, Chiao-Wen; Chuang, Shih-Chung;	Analysing semiconductor manufacturing big data for root cause detection of excursion for yield enhancement
52	2017	Franciosa, Pasquale; Palit, Arnab; Vitolo, Ferdinando; Ceglarek, Darek;	Rapid response diagnosis of multi-stage assembly process with compliant non-ideal parts using self-evolving measurement system
53	2017	Chen, Hongge; Boning, Duane;	Online and incremental machine learning approaches for IC yield improvement
54	2017	Jian, Chuanxia; Gao, Jian; Ao, Yinhui;	Automatic surface defect detection for mobile phone screen glass based on machine vision
55	2017	Manco, Giuseppe; Ritacco, Ettore; Rullo, Pasquale; Gallucci, Lorenzo; Astill, Will; Kimber, Dianne; Antonelli, Marco;	Fault detection and explanation through big data analysis on sensor streams
56	2017	Krishnakumari, A; Elayaperumal, A; Saravanan, M; Arvindan, C;	Fault diagnostics of spur gear using decision tree and fuzzy classifier

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57	2017	Diez-Olivan, Alberto; Penalva, Mariluz; Veiga, Fernando; Deitert, Lutz; Sanz, Ricardo; Sierra, Basilio;	Kernel density-based pattern classification in blind fasteners installation
58	2017	Jaramillo, Victor H; Otteville, James R; Dudek, Rafal; Lepiarczyk, Dariusz; Pawlik, Pawel;	Condition monitoring of distributed systems using two-stage Bayesian inference data fusion
59	2017	Lee, Jay; Jin, Chao; Liu, Zongchang; Ardakani, Hossein Davari;	Introduction to data-driven methodologies for prognostics and health management
60	2017	Diez-Olivan, Alberto; Pagan, Jose A; Sanz, Ricardo; Sierra, Basilio;	Data-driven prognostics using a combination of constrained K-means clustering, fuzzy modeling and LOF-based score
61	2017	Niu, Gang; Jiang, Junjie;	Prognostic control-enhanced maintenance optimization for multi-component systems
62	2017	Niu, Gang; Li, Hao;	IETM centered intelligent maintenance system integrating fuzzy semantic inference and data fusion
63	2017	Costello, Jason JA; West, Graeme M; McArthur, Stephen DJ;	Machine learning model for event-based prognostics in gas circulator condition monitoring
64	2017	Guo, Liang; Li, Naipeng; Jia, Feng; Lei, Yaguo; Lin, Jing;	A recurrent neural network based health indicator for remaining useful life prediction of bearings
65	2017	X. Fang , N.Z. Gebraeel , K. Paynabar	Scalable prognostic models for large-scale condition monitoring applications
66	2017	El Khoukhi, Fatima; Boukachour, Jaouad; Alaoui, Ahmed El Hilali;	The "Dual-Ants Colony": A novel hybrid approach for the flexible job shop scheduling problem with preventive maintenance
67	2017	Khatami, Mostafa; Zegordi, Seyed Hessameddin;	Coordinative production and maintenance scheduling problem with flexible maintenance time intervals
68	2017	Liao, Wenzhu; Chen, Maocai; Yang, Xiaoxia;	Joint optimization of preventive maintenance and production scheduling for parallel machines system
69	2017	Liao, Wenzhu; Zhang, Xiufang; Jiang, Min;	Multi-objective group scheduling optimization integrated with preventive maintenance
70	2017	Seidgar, Hany; Zandieh, M; Mahdavi, Iraj;	An efficient meta-heuristic algorithm for scheduling a two-stage assembly flow shop problem with preventive maintenance activities and reliability approach
71	2017	Diaz, Juan Esteban; Handl, Julia; Xu, Dong-Ling;	Evolutionary robust optimization in production planning—interactions between number of objectives, sample size and choice of robustness measure
72	2017	Biondi, Matteo; Sand, Guido; Harjunoski, Iiro;	Optimization of multipurpose process plant operations: A multi-time-scale maintenance and production scheduling approach
73	2017	Yao, Xiling; Moon, Seung Ki; Bi, Guijun;	A hybrid machine learning approach for additive manufacturing design feature recommendation
74	2017	Ling, Julia; Hutchinson, Maxwell; Antono, Erin; DeCost, Brian; Holm, Elizabeth A; Meredig, Bryce;	Building data-driven models with microstructural images: Generalization and interpretability
75	2017	DeCost, Brian L; Jain, Harshvardhan; Rollett, Anthony D; Holm, Elizabeth A;	Computer vision and machine learning for autonomous characterization of am powder feedstocks
76	2017	Zhang, Wentai; Mehta, Akash; Desai, Prathamesh S; Higgs, C;	Machine learning enabled powder spreading process map for metal additive manufacturing (AM)
77	2017	Petrich, Jan; Gobert, Christian; Phoha, Shashi; Nassar, Abdalla R; Reutzler, Edward W;	Machine Learning for Defect Detection for PBFAM Using High Resolution Layerwise Imaging Coupled with Post-Build CT Scans
78	2017	Uhlmann, Eckart; Pastl Pontes, Rodrigo; Laghmouchi, Abdelhakim; Bergmann, André;	Intelligent pattern recognition of a SLM machine process and sensor data
79	2017	Wu, Haixi; Yu, Zhonghua; Wang, Yan;	Real-time FDM machine condition monitoring and diagnosis based on acoustic emission and hidden semi-Markov model
80	2017	Liu, Chenang; Roberson, David; Kong, Zhenyu;	Textural analysis-based online closed-loop quality control for additive manufacturing processes
81	2017	Samie Tootooni, M; Dsouza, Ashley; Donovan, Ryan; Rao, Prahalad K; Kong, Zhenyu James; Borgesen, Peter;	Classifying the dimensional variation in additive manufactured parts from laser-scanned three-dimensional point cloud data using machine learning approaches
82	2016	Klancnik, S; Brezocnik, M; Balic, J;	Intelligent CAD/CAM system for programming of CNC machine tools
83	2016	Lu, Xiaohong; Hu, Xiaochen; Wang, Hua; Si, Likun; Liu, Yongyun; Gao, Lusi;	Research on the prediction model of micro-milling surface roughness of Inconel718 based on SVM
84	2016	Yuan, Ye; Zhang, Hai-Tao; Wu, Yue, Zhu, Tao; Ding, Han;	Bayesian learning-based model-predictive vibration control for thin-walled workpiece machining processes
85	2016	Karam, Sara; Centobelli, Ptera; D'Addona, Doriana M; Teti, Roberto;	Online prediction of cutting tool life in turning via cognitive decision making
86	2016	Čořbašić, Zarko; Petković, Dalibor; Shamshirband, Shahaboddin; Tong, Chong Wen; Ch, Sudheer; Janković, Predrag; Dučić, Nedeljko; Baralić, Jelena;	Surface roughness prediction by extreme learning machine constructed with abrasive water jet
87	2016	Weimer, Daniel; Scholz-Reiter, Bernd; Shpitalni, Moshe;	Design of deep convolutional neural network architectures for automated feature extraction in industrial inspection
88	2016	Park, Je-Kang; Kwon, Bae-Keun; Park, Jun-Hyuh; Kang, Dong-Joong;	Machine learning-based imaging system for surface defect inspection
89	2016	Janssens, Olivier; Slavkovič, Viktor; Vervisch, Bram; Stockman, Kurt; Loccufer, Mia; Verstockt, Steven; Van de Walle, Rick; Van Hoecke, Sofie;	Convolutional neural network based fault detection for rotating machinery
90	2016	Guo, Xiaojie; Chen, Liang; Shen, Changqing;	Hierarchical adaptive deep convolution neural network and its application to bearing fault diagnosis
91	2016	Dong, H; Yang, L; Li, H;	Small fault diagnosis of front-end speed controlled wind generator based on deep learning
92	2016	Wang, Jinjiang; Zhuang, Junfei; Duan, Lixiang; Cheng, Weidong;	A multi-scale convolution neural network for featureless fault diagnosis
93	2016	Gan, Meng; Wang, Cong;	Construction of hierarchical diagnosis network based on deep learning and its application in the fault pattern recognition of rolling element bearings
94	2016	Yin, Jiateng; Zhao, Wentian;	Fault diagnosis network design for vehicle on-board equipments of high-speed railway: A deep learning approach
95	2016	Li C, Sanchez RV, Zurita G, Cerrada M, Cabrera D, Vasquez RE	Gearbox fault diagnosis based on deep random forest fusion of acoustic and vibratory signals
96	2016	Jia F, Lei Y, Lin J, Zhou X, Lu N	Deep neural networks: a promising tool for fault characteristic mining and intelligent diagnosis of rotating machinery with massive data
97	2016	Sun, Wenjun; Shao, Siyu; Zhao, Rui; Yan, Ruqiang; Zhang, Xingwu; Chen, Xuefeng;	A sparse auto-encoder-based deep neural network approach for induction motor faults classification
98	2016	Yang, Zhi-Xin; Wang, Xian-Bo; Zhong, Jian-Hua;	Representational learning for fault diagnosis of wind turbine equipment: A multi-layered extreme learning machines approach
99	2016	Wang, Lukun; Zhao, Xiaoying; Pei, Jiangnan; Tang, Gongyou;	Transformer fault diagnosis using continuous sparse autoencoder
100	2016	Lei, Yaguo; Jia, Feng; Lin, Jing; Xing, Saibo; Ding, Steven X;	An intelligent fault diagnosis method using unsupervised feature learning towards mechanical big data
101	2016	Weiss, Sholom M; Dhurandhar, Amit; Baseman, Robert J; White, Brian F; Logan, Ronald; Winslow, Jonathan K; Poindexter, Daniel;	Continuous prediction of manufacturing performance throughout the production lifecycle
102	2016	Diez, Alberto; Khoa, Nguyen Lu Dang; Alamdari, Mehrisadat Makki; Wang, Yang; Chen, Fang; Runcic, Peter;	A clustering approach for structural health monitoring on bridges
103	2016	Li, Chuan; Sánchez, René-Vinicio; Zurita, Grover; Cerrada, Mariela; Cabrera, Diego;	Fault diagnosis for rotating machinery using vibration measurement deep statistical feature learning
104	2016	Mosallam, Ahmed; Medjajer, Kamal; Zerhouni, Noureddine;	Data-driven prognostic method based on Bayesian approaches for direct remaining useful life prediction
105	2016	Ragab, Ahmed; Ouali, Mohamed-Salah; Yacout, Soumaya; Osman, Hany;	Remaining useful life prediction using prognostic methodology based on logical analysis of data and Kaplan–Meier estimation
106	2016	Cristaldi, Loredana; Leone, Giacomo; Ottoboni, Roberto; Subbiah, Subanatarajan; Turrin, Simone;	A comparative study on data-driven prognostic approaches using fleet knowledge
107	2016	Li, Zhaojun; Guo, Jian; Zhou, Ruolin;	Maintenance scheduling optimization based on reliability and prognostics information
108	2016	Ahmadi, Ehsan; Zandieh, Mostafa; Farrok, Mojtaba; Emami, Seyed Mohammad;	A multi objective optimization approach for flexible job shop scheduling problem under random machine breakdown by evolutionary algorithms
109	2016	Baban, Calin Florin; Baban, Marius; Suteu, Marius Darius;	Using a fuzzy logic approach for the predictive maintenance of textile machines
110	2016	Chowdhury, Sushmit; Anand, Sam;	Artificial neural network based geometric compensation for thermal deformation in additive manufacturing processes
111	2016	Balu, Aditya; Lore, Kin Gwn; Young, Gavin; Krishnamurthy, Adarsh; Sarkar, Soumik;	A deep 3d convolutional neural network based design for manufacturability framework
112	2016	Wu, Haixi; Wang, Yan; Yu, Zhonghua;	In situ monitoring of FDM machine condition via acoustic emission
113	2016	Wu, Haixi; Yu, Zhonghua; Wang, Yan;	A new approach for online monitoring of additive manufacturing based on acoustic emission
114	2015	Park, Jinkyoo; Law, Kincho H; Bhringe, Raunak; Biswas, Nishant; Srinivasan, Amrita; Dornfeld, David A; Helu, Moneer; Rachuri, Sudarshan;	A generalized data-driven energy prediction model with uncertainty for a milling machine tool using Gaussian Process
115	2015	Benkedjough, Tarak; Medjajer, Kamal; Zerhouni, Noureddine; Rechak, Saïd;	Health assessment and life prediction of cutting tools based on support vector regression
116	2015	Huang, PoTsang B; Ma, Cheng-Chieh; Kuo, Chia-Hao;	A PNN self-learning tool breakage detection system in end milling operations
117	2015	Peng, Chong; Wang, Lun; Liao, T Warren;	A new method for the prediction of chatter stability lobes based on dynamic cutting force simulation model and support vector machine
118	2015	Krishnakumar, P; Rameshkumar, K; Ramachandran, KI;	Tool wear condition prediction using vibration signals in high speed machining (HSM) of titanium (Ti-6Al-4 V) alloy
119	2015	Elangovan, M; Sakthivel, NR; Saravanamurugan, S; Nair, Binoy B; Sugumaran, V;	Machine learning approach to the prediction of surface roughness using statistical features of vibration signal acquired in turning
120	2015	Arisoy, Yiğit M; Özel, Tuğrul;	Machine learning based predictive modeling of machining induced microhardness and grain size in Ti-6Al-4V alloy
121	2015	Lin, Wenwen; Yu, DY; Wang, S; Zhang, Chaoyong; Zhang, Sanqiang; Tian, Huiyu; Luo, Min; Liu, Shengqiang;	Multi-objective teaching–learning-based optimization algorithm for reducing carbon emissions and operation time in turning operations
122	2015	Zhang, Dongxu; Bi, Guo; Sun, Zhiji; Guo, Yinbiao;	Online monitoring of precision optics grinding using acoustic emission based on support vector machine

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123	2015	Shaban, Yasser; Yacout, Soumaya; Balazinski, Marek; Meshreki, Mouhab; Attia, Helmi;	Diagnosis of machining outcomes based on machine learning with Logical Analysis of Data
124	2015	Teixidor, Daniel; Grzenda, Maciej; Bustillo, Andrés; Ciurana, Joaquim;	Modeling pulsed laser micromachining of micro geometries using machine-learning techniques
125	2015	Majumder, Arindam;	Comparative study of three evolutionary algorithms coupled with neural network model for optimization of electric discharge machining process parameters
126	2015	Chen, ZhiQiang; Li, Chuan; Sanchez, René-Vinicio;	Gearbox fault identification and classification with convolutional neural networks
127	2015	Yu, Hongyang; Khan, Faisal; Garaniya, Vikram;	Nonlinear Gaussian Belief Network based fault diagnosis for industrial processes
128	2015	Shao, Haidong; Jiang, Hongkai; Zhang, Xun; Niu, Maogui;	Rolling bearing fault diagnosis using an optimization deep belief network
129	2015	Xie H, Yang Y, Wang H, Li T, Jin W	Fault diagnosis in high-speed train running gears with improved deep belief networks
130	2015	Li C, Sanchez RV, Zutita G, Cerrada M, Cabrera D, Vasquez RE	Multimodel deep support vector classification with homologous features and its application to gearbox fault diagnosis
131	2015	Malhotra, Pankaj; Vig, Lovekesh; Shroff, Gautam; Agarwal, Puneet;	Long short term memory networks for anomaly detection in time series
132	2015	Diao, Guangzhou; Zhao, Liping; Yao, Yiyong;	A dynamic quality control approach by improving dominant factors based on improved principal component analysis
133	2015	Basurko, Oihane C; Uriondo, Zigor;	Condition-based maintenance for medium speed diesel engines used in vessels in operation
134	2015	Baqqar, Mabrouka;	Machine Performance and Condition Monitoring Using Motor Operating Parameters Through Artificial Intelligence Techniques
135	2015	García-Santiago, CA; Del Ser, Javier; Upton, C; Quilligan, F; Gil-Lopez, S; Salcedo-Sanz, Sancho;	A random-key encoded harmony search approach for energy-efficient production scheduling with shared resources
136	2015	Wang, Shijin; Liu, Ming;	Multi-objective optimization of parallel machine scheduling integrated with multi-resources preventive maintenance planning
137	2015	Gaynor, Andrew Thomas;	Topology optimization algorithms for additive manufacturing
138	2015	Rao, Prahalad K; Liu, Jia Peter; Roberson, David; Kong, Zhenyu James; Williams, Christopher;	Online real-time quality monitoring in additive manufacturing processes using heterogeneous sensors
139	2014	Bhinge, Raunak; Biswas, Nishant; Dornfeld, David; Park, Jinkyoo; Law, Kincho H; Helu, Moneer; Rachuri, Sudarsan;	An intelligent machine monitoring system for energy prediction using a Gaussian Process regression
140	2014	Painuli, Sanidhya; Elangovan, M; Sugumar, V;	Tool condition monitoring using K-star algorithm
141	2014	Park, Hong-Seok; Tran, Ngoc-Hien;	Development of a smart machining system using self-optimizing control
142	2014	AlThobiani, Faisal; Ball, Andrew;	An approach to fault diagnosis of reciprocating compressor valves using Teager-Kaiser energy operator and deep belief networks
143	2014	Guo, Junqi; Xie, Xiaobo; Bie, Rongfang; Sun, Limin;	Structural health monitoring by using a sparse coding-based deep learning algorithm with wireless sensor networks
144	2014	Qiu, Xueheng; Zhang, Le; Ren, Ye; Suganthan, Ponnuthurai N; Amarapura, Gehan;	Ensemble deep learning for regression and time series forecasting
145	2014	Chien, Chen-Fu; Chuang, Shih-Chung;	A framework for root cause detection of sub-batch processing system for semiconductor manufacturing big data analytics
146	2014	Yun, Jong Pil; Choi, Doo-chul; Jeon, Yong-ju; Park, Changhyun; Kim, Sang Woo;	Defect inspection system for steel wire rods produced by hot rolling process
147	2014	Luo, Weiqiang; Rojas, Juan; Guan, TianQiang; Harada, Kensuke; Nagata, Kazuyuki;	Cantilever snap assemblies failure detection using svms and the rcbht
148	2014	Kirby E, Zhang Z, Chen JC	Development of an accelerometer-based surface roughness prediction system in turning operations using multiple regression techniques
149	2014	Safizadeh, MS; Latifi, SK;	Using multi-sensor data fusion for vibration fault diagnosis of rolling element bearings by accelerometer and load cell
150	2014	Fathi, Alireza; Mozaffari, Ahmad;	Vector optimization of laser solid freeform fabrication system using a hierarchical mutable smart bee-fuzzy inference system and hybrid NSGA-II-self-organizing map
151	2014	Garg, Akhil; Tai, K;	An ensemble approach of machine learning in evaluation of mechanical property of the rapid prototyping fabricated prototype
152	2013	Azadeh, Ali; Saberi, Morteza; Kazem, Ahmad; Ebrahimpour, Vahid; Nourmohammadzadeh, A; Saberi, Zahra;	A flexible algorithm for fault diagnosis in a centrifugal pump with corrupted data and noise based on ANN and support vector machine with hyper-parameters optimization
153	2013	Miao, En-Ming; Gong, Ya-Yun; Niu, Peng-Cheng; Ji, Chang-Zhu; Chen, Hai-Dong;	Robustness of thermal error compensation modeling models of CNC machine tools
154	2013	Deris, Ashanira Mat; Zain, Azlan Mohd; Sallehuddin, Roselina;	Hybrid GR-SVM for prediction of surface roughness in abrasive water jet machining
155	2013	Tamilselvan, Prasanna; Wang, Pingfeng;	Failure diagnosis using deep belief learning based health state classification
156	2013	Chien, Chen-Fu; Hsu, Chia-Yu; Chen, Pei-Nong;	Semiconductor fault detection and classification for yield enhancement and manufacturing intelligence
157	2013	Lieber, Daniel; Stolpe, Marco; Konrad, Benedikt; Deuse, Jochen; Morik, Katharina;	Quality prediction in interlinked manufacturing processes based on supervised & unsupervised machine learning
158	2013	Konrad, Benedikt; Lieber, Daniel; Deuse, Jochen;	Striving for zero defect production: intelligent manufacturing control through data mining in continuous rolling mill processes
159	2013	Arif, Fahmi; Suryana, Nanna; Hussin, Burairah;	Cascade quality prediction method using multiple pca+ id3 for multi-stage manufacturing system
160	2013	Weiss, Sholom M; Dhurandhar, Amit; Baseman, Robert J;	Improving quality control by early prediction of manufacturing outcomes
161	2012	Masci, Jonathan; Meier, Ueli; Ciresan, Dan; Schmidhuber, Jürgen; Fricout, Gabriel;	Steel defect classification with max-pooling convolutional neural networks
162	2012	Scholz-Reiter, Bernd; Weimer, Daniel; Thamer, Hendrik;	Automated surface inspection of cold-formed micro-parts
163	2012	Ceglarek, D; Prakash, PKS;	Enhanced piecewise least squares approach for diagnosis of ill-conditioned multistation assembly with compliant parts
164	2011	Rao, RV; Kalyankar, VD;	Parameters optimization of advanced machining processes using TLBO algorithm
165	2011	Malhi, Arnaz; Yan, Ruqiang; Gao, Robert X;	Prognosis of defect propagation based on recurrent neural networks
166	2011	Kumar, Naveen; Mastrangelo, Christina; Montgomery, Doug;	Hierarchical modeling using generalized linear models
167	2011	Chen, Ssu-Han; Perng, Der-Baau;	Directional textures auto-inspection using principal component analysis
168	2011	Perng, Der-Baau; Chen, Ssu-Han;	Directional textures auto-inspection using discrete cosine transform
169	2011	Palani, S; Natarajan, U;	Prediction of surface roughness in CNC end milling by machine vision system using artificial neural network based on 2D Fourier transform
170	2011	Di Angelo, Luca; Di Stefano, Paolo;	A neural network-based build time estimator for layer manufactured objects
171	2010	Salahshoor, Karim; Kordestani, Mojtaba; Khoshro, Majid S;	Fault detection and diagnosis of an industrial steam turbine using fusion of SVM (support vector machine) and ANFIS (adaptive neuro-fuzzy inference system) classifiers
172	2010	Somashekhar, KP; Ramachandran, N; Mathew, Jose;	Optimization of material removal rate in micro-EDM using artificial neural network and genetic algorithms
173	2010	Rodriguez, Alberto; Bourne, David; Mason, Mathew; Rossano, Gregory F; Wang, JianJun;	Failure detection in assembly: Force signature analysis
174	2010	Saravanan, N; Ramachandran, KI;	Incipient gear box fault diagnosis using discrete wavelet transform (DWT) for feature extraction and classification using artificial neural network (ANN)
175	2010	Dhanasekar, B; Ramamoorthy, B;	Restoration of blurred images for surface roughness evaluation using machine vision
176	2010	Lu, ZL; Li, DC; Lu, BH; Zhang, AF; Zhu, GX; Pi, G;	The prediction of the building precision in the Laser Engineered Net Shaping process using advanced networks
177	2009	Kang, Pilsung; Lee, Hyoung-joo; Cho, Sungzoon; Kim, Dongil; Park, Jinwoo; Park, Chan-Kyoo; Doh, Seungyong;	A virtual metrology system for semiconductor manufacturing
178	2009	Demetgul, M; Tansel, Ibrahim N; Taskin, S;	Fault diagnosis of pneumatic systems with artificial neural network algorithms
179	2009	Alegre, Enrique; Alaiz-Rodriguez, Rocío; Barreiro, Joaquin; Ruiz, Jonathan;	Use of contour signatures and classification methods to optimize the tool life in metal machining.
180	2009	Munguia, J; Ciurana, J; Ribá, C;	Neural-network-based model for build-time estimation in selective laser sintering
181	2008	Çaydaş, Ulaş; Hascalk, Ahmet;	A study on surface roughness in abrasive waterjet machining process using artificial neural networks and regression analysis method
182	2008	Yuan, Jin; Wang, Kesheng; Yu, Tao; Fang, MingJun;	Reliable multi-objective optimization of high-speed WEDM process based on Gaussian process regression
183	2008	Wang, Chih-Hsuan;	Recognition of semiconductor defect patterns using spatial filtering and spectral clustering
184	2008	Khan, Aftab A; Moyné, James R; Tilbury, Dawn M;	Virtual metrology and feedback control for semiconductor manufacturing processes using recursive partial least squares
185	2008	Jager, Mark; Knoll, Christian; Hamprecht, Fred A;	Weakly supervised learning of a classifier for unusual event detection
186	2008	Tsai, Du-Ming; Lai, Shia-Chih;	Defect detection in periodically patterned surfaces using independent component analysis
187	2008	Bellini, Alberto; Filippetti, Fiorenzo; Tassoni, Carla; Capolino, Gérard-André;	Advances in diagnostic techniques for induction machines
188	2008	Lei, Yaguo; He, Zhengjia; Zi, Yanyang;	A new approach to intelligent fault diagnosis of rotating machinery

ID	YEAR	AUTHOR	TITLE
189	2008	Alegre, Enrique; Barreiro, Joaquín; Castejón, Manuel;	Computer vision and classification techniques on the surface finish control in machining processes
190	2008	Barreiro, J; Castejón, M; Alegre, E; Hernández, LK;	Use of descriptors based on moments from digital images for tool wear monitoring
191	2007	Widodo, Achmad; Yang, Bo-Suk;	Support vector machine in machine condition monitoring and fault diagnosis
192	2007	Chien, Chen-Fu; Wang, Wen-Chih; Cheng, Jen-Chieh;	Data mining for yield enhancement in semiconductor manufacturing and an empirical study
193	2007	Zhang, Julie Z; Chen, Joseph C;	The development of an in-process surface roughness adaptive control system in end milling operations
194	2007	Ghosh, N; Ravi, YB; Patra, A; Mukhopadhyay, S; Paul, S; Mohanty, AR; Chattopadhyay, AB;	Estimation of tool wear during CNC milling using neural network-based sensor fusion
195	2007	Shi, Dongfeng; Gindy, Nabil N;	Tool wear predictive model based on least squares support vector machines
196	2007	Çolak, Oğuz; Kurbanoğlu, Cahit; Kayacan, M Cengiz;	Milling surface roughness prediction using evolutionary programming methods
197	2007	Castejón, M; Alegre, E; Barreiro, J; Hernández, LK;	On-line tool wear monitoring using geometric descriptors from digital images
198	2006	Chiang, Ko-Ta; Chang, Fu-Ping;	Optimization of the WEDM process of particle-reinforced material with multiple performance characteristics using grey relational analysis
199	2006	Dong, Jianfei; Subrahmanyam, KVR; San Wong, Yoke; Hong, Geok Soon; Mohanty, AR;	Bayesian-inference-based neural networks for tool wear estimation
200	2006	Abhuri, NR; Dixit, US;	A knowledge-based system for the prediction of surface roughness in turning process
201	2006	AbellánNebot, José Vete; Morales-Menéndez, Rubén; Guevara, Antonio J Vallejo; Rodríguez, A Ciro;	Surface roughness and cutting tool-wear diagnosis based on Bayesian networks
202	2006	Akbari, Ali Akbar; Fard, Amin Milani; Chegini, Amir Goodarzvand;	An effective image based surface roughness estimation approach using neural network
203	2006	Kassim, Ashraf A; Mian, Zhu; Mannan, MA;	Tool condition classification using Hidden Markov Model based on fractal analysis of machined surface textures
204	2006	Zhang, Xiang; Krewet, Carsten; Kuhlentötter, Bernd;	Automatic classification of defects on the product surface in grinding and polishing
205	2005	Ribeiro, Bernardete;	Support vector machines for quality monitoring in a plastic injection molding process
206	2005	Cho, Sohyung; Asfour, Shihab; Onar, Arzu; Kaundinya, Nandita;	Tool breakage detection using support vector machine learning in a milling process
207	2005	Shin, Hyun Joon; Eom, Dong-Hwan; Kim, Sung-Shick;	One-class support vector machines—an application in machine fault detection and classification
208	2005	Dey, Story; Stori, JA;	A Bayesian network approach to root cause diagnosis of process variations
209	2005	Vallejo, Antonio G; Nolazco-Flores, Juan A; Morales-Menéndez, Rubén; Sucar, L Enrique; Rodríguez, Ciro A;	Tool-wear monitoring based on continuous hidden Markov models
210	2005	Kohli, A; Dixit, US;	A neural-network-based methodology for the prediction of surface roughness in a turning process
211	2005	Lee, Kuang-Chyi; Ho, Shinn-Jang; Ho, Shinn-Ying;	Accurate estimation of surface roughness from texture features of the surface image using an adaptive neuro-fuzzy inference system
212	2005	Stemmer, M; Pavim, A; Adur, M; Deschamps, F.; Schmitt, R., Hermes, R.	Machine Vision and Neural Networks Applied to Wear Classification on Cutting Tools
213	2004	Sun, J; Rahman, M; Wong, YS; Hong, GS;	Multiclassification of tool wear with support vector machine by manufacturing loss consideration
214	2004	Haber, Rodolfo E; Jiménez, Jose E; Peres, C Ronei; Alique, José R;	An investigation of tool-wear monitoring in a high-speed machining process
215	2004	Brezocnik, Miran; Kovacic, Miha; Fieko, Mirko;	Prediction of surface roughness with genetic programming
216	2004	Kassim, Ashraf A; Mian, Zhu; Mannan, MA;	Connectivity oriented fast Hough transform for tool wear monitoring
217	2004	Lee, BY; Yu, SF; Juan, H;	The model of surface roughness inspection by vision system in turning
218	2003	Ertekin, Yalcin M; Kwon, Yongjin; Tseng, Tzu-Liang Bill;	Identification of common sensory features for the control of CNC milling operations under varying cutting conditions
219	2003	Choudhury, SK; Bartarya, G;	Role of temperature and surface finish in predicting tool wear using neural network and design of experiments
220	2003	Risbood, KA; Dixit, US; Sahasrabudhe, AD;	Prediction of surface roughness and dimensional deviation by measuring cutting forces and vibrations in turning process
221	2003	Dweiri, F; Al-Jarrah, M; Al-Wedyan, H;	Fuzzy surface roughness modeling of CNC down milling of Aluic-79
222	2003	Lo, Ship-Peng;	An adaptive-network based fuzzy inference system for prediction of workpiece surface roughness in end milling
223	2003	Al-Najjar, Basim; Alsyouf, Imad;	Selecting the most efficient maintenance approach using fuzzy multiple criteria decision making
224	2002	Tosun, Nihat; Özler, Latif;	A study of tool life in hot machining using artificial neural networks and regression analysis method
225	2002	Benardos, PG; Vossniakos, G Cl;	Prediction of surface roughness in CNC face milling using neural networks and Taguchi's design of experiments
226	2002	Dimla, Dimla Eric;	The correlation of vibration signal features to cutting tool wear in a metal turning operation
227	2002	Wang, Ltao; Mehrabi, Mostafa G; Kannatey-Asibu Jr, Elijah;	Hidden Markov model-based tool wear monitoring in turning
228	2002	Ho, Shinn-Ying; Lee, Kuang-Chyi; Chen, Shih-Shin; Ho, Shinn-Jang;	Accurate modeling and prediction of surface roughness by computer vision in turning operations using an adaptive neuro-fuzzy inference system
229	2002	Kassim, Ashraf A; Mian, Zhu; Mannan, MA;	Texture analysis using fractals for tool wear monitoring
230	2001	Abouelatta, OB; Madl, J;	Surface roughness prediction based on cutting parameters and tool vibrations in turning operations
231	2001	Lee, BY; Targ, YS;	Surface roughness inspection by computer vision in turning operations
232	2001	Prasad, K Niranjan; Ramamoorthy, B;	Tool wear evaluation by stereo vision and prediction by artificial neural network
233	2000	Chen, Shang-Liang; Jen, YW;	Data fusion neural network for tool condition monitoring in CNC milling machining
234	2000	El Ouafi, Abderrazak; Guillot, Michel; Bedrouni, Abdellah;	Accuracy enhancement of multi-axis CNC machines through on-line neurocompensation
235	2000	Al-Habaibeh, A; Gindy, N;	A new approach for systematic design of condition monitoring systems for milling processes
236	2000	Li, Xiaoli; Dong, Shen; Venuviod, PK;	Hybrid learning for tool wear monitoring
237	2000	Jack LB, Nandi AK	Genetic algorithms for feature selection in machine condition monitoring with vibration signals
238	2000	Mannan, MA; Kassim, Ashraf A; Jing, Ma;	Application of image and sound analysis techniques to monitor the condition of cutting tools
239	1999	Tsai, Yu-Hsuan; Chen, Joseph C; Lou, Shi-Jer;	An in-process surface recognition system based on neural networks in end milling cutting operations
240	1999	Li, Xiaoli; Dong, Shen; Yuan, Zhejun;	Discrete wavelet transform for tool breakage monitoring
241	1999	Kuo, RJ; Cohen, PH;	Multi-sensor integration for on-line tool wear estimation through radial basis function networks and fuzzy neural network
242	1998	Niu, YM; Wong, YS; Hong, GS;	An intelligent sensor system approach for reliable tool flank wear recognition
243	1998	Tsai, Du-Ming; Chen, Jeng-Jong; Chen, Jeng-Fung;	A vision system for surface roughness assessment using neural networks
244	1997	Bahr, B; Motavalli, S; Arfi, T;	Sensor fusion for monitoring machine tool conditions
245	1997	Azouzi, R; Guillot, M;	On-line prediction of surface finish and dimensional deviation in turning using neural network based sensor fusion
246	1997	Xiaoli, Li; Yingxue, Yao; Zhejun, Yuan;	On-line tool condition monitoring system with wavelet fuzzy neural network
247	1997	Karthik, A; Chandra, S; Ramamoorthy, B; Das, S;	3D tool wear measurement and visualisation using stereo imaging
248	1996	Jędrzejewski, J; Kwaśny, W;	Artificial intelligence tools in diagnostics of machine tool drives
249	1995	Si, Yoo; TJ, Ko; Kim, HS;	Tool wear monitoring in milling operation using ART2 neural network
250	1991	Hoy, DEP; Yu, F;	Surface quality assessment using computer vision methods