# Machine learning and the physical sciences

Reviews of Modern Physics
91,
DOI: 10.1103/revmodphys.91.045002

Citation Report

| # | Article | IF | Citations |
|---|---|---|---|
| 1 | Deep learning-assisted classification of site-resolved quantum gas microscope images. Measurement Science and Technology, 2020, 31, 025201. | 1.4 | 10 |
| 2 | Learning Entropy Production via Neural Networks. Physical Review Letters, 2020, 125, 140604. | 2.9 | 24 |
| 3 | Insulation Fault Diagnosis of Disconnecting Switches Based on Wavelet Packet Transform and PCA-IPSO-SVM of Electric Fields. IEEE Access, 2020, 8, 176676-176690. | 2.6 | 10 |
| 4 | Quantum embedding electronic structure methods. International Journal of Quantum Chemistry, 2020, 120, e26495. | 1.0 | 17 |
| 5 | From Ionic Surfactants to Nafion through Convolutional Neural Networks. Journal of Physical Chemistry B, 2020, 124, 8918-8927. | 1.2 | 7 |
| 6 | Setting Up Experimental Bell Tests with Reinforcement Learning. Physical Review Letters, 2020, 125, 160401. | 2.9 | 20 |
| 7 | Unsupervised Phase Discovery with Deep Anomaly Detection. Physical Review Letters, 2020, 125, 170603. | 2.9 | 51 |
| 8 | Information Processing Capacity of Spin-Based Quantum Reservoir Computing Systems. Cognitive Computation, 2023, 15, 1440-1451. | 3.6 | 20 |
| 9 | Topological Quantum Compiling with Reinforcement Learning. Physical Review Letters, 2020, 125, 170501. | 2.9 | 46 |
| 10 | Understanding Human Intelligence through Human Limitations. Trends in Cognitive Sciences, 2020, 24, 873-883. | 4.0 | 26 |
| 11 | Toward exascale design of soft mesoscale materials. Journal of Computational Science, 2020, 46, 101175. | 1.5 | 6 |
| 12 | Neural-network quantum state tomography in a two-qubit experiment. Physical Review A, 2020, 102, . | 1.0 | 45 |
| 13 | Neural Networks for Detecting Multimode Wigner Negativity. Physical Review Letters, 2020, 125, 160504. | 2.9 | 18 |
| 14 | Data-driven Detection of Multimessenger Transients. Astrophysical Journal Letters, 2020, 894, L25. | 3.0 | 5 |
| 15 | Recent advances in bioelectronics chemistry. Chemical Society Reviews, 2020, 49, 7978-8035. | 18.7 | 54 |
| 16 | Entropic Dynamics in Neural Networks, the Renormalization Group and the Hamilton-Jacobi-Bellman Equation. Entropy, 2020, 22, 587. | 1.1 | 5 |
| 17 | Machine learning meets quantum foundations: A brief survey. AVS Quantum Science, 2020, 2, 034101. | 1.8 | 30 |
| 18 | Machine Learning for Electronically Excited States of Molecules. Chemical Reviews, 2021, 121, 9873-9926. | 23.0 | 207 |

| # | Article | IF | Citations |
|---|---|---|---|
| 19 | Statistical Physics for Medical Diagnostics: Learning, Inference, and Optimization Algorithms. Diagnostics, 2020, 10, 972. | 1.3 | 3 |
| 20 | Machine learning the deuteron. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2020, 809, 135743. | 1.5 | 33 |
| 21 | A deep learning approach for determining the chiral indices of carbon nanotubes from high-resolution transmission electron microscopy images. Carbon, 2020, 169, 465-474. | 5.4 | 27 |
| 22 | Machine learning for quantum matter. Advances in Physics: X, 2020, 5, 1797528. | 1.5 | 100 |
| 23 | Differentiable strong lensing: uniting gravity and neural nets through differentiable probabilistic programming. Monthly Notices of the Royal Astronomical Society, 2020, 496, 381-393. | 1.6 | 23 |
| 24 | Variational quantum eigensolver for frustrated quantum systems. Physical Review B, 2020, 102, . | 1.1 | 37 |
| 25 | Cataloging accreted stars withinGaiaDR2 using deep learning. Astronomy and Astrophysics, 2020, 636, A75. | 2.1 | 17 |
| 26 | A deep neural network for molecular wave functions in quasi-atomic minimal basis representation. Journal of Chemical Physics, 2020, 153, 044123. | 1.2 | 34 |
| 27 | Machine learning on quantifying quantum steerability. Quantum Information Processing, 2020, 19, 1. | 1.0 | 7 |
| 28 | Single-Exposure Absorption Imaging of Ultracold Atoms Using Deep Learning. Physical Review Applied, 2020, 14, . | 1.5 | 17 |
| 29 | Deep Learning the Hohenberg-Kohn Maps of Density Functional Theory. Physical Review Letters, 2020, 125, 076402. | 2.9 | 38 |
| 30 | Variational Quantum Circuits for Deep Reinforcement Learning. IEEE Access, 2020, 8, 141007-141024. | 2.6 | 134 |
| 31 | Towards novel insights in lattice field theory with explainable machine learning. Physical Review D, 2020, 101, . | 1.6 | 30 |
| 32 | Effective models and predictability of chaotic multiscale systems via machine learning. Physical Review E, 2020, 102, 052203. | 0.8 | 13 |
| 33 | Machine Learning Tackles Spacetime. Physics Magazine, 2020, 13, . | 0.1 | 0 |
| 34 | Modeling Complex Quantum Dynamics: Evolution of Numerical Algorithms in the HPC Context. Lobachevskii Journal of Mathematics, 2020, 41, 1509-1520. | 0.1 | 1 |
| 35 | Controlling Rayleighâ€“BÃ©nard convection via reinforcement learning. Journal of Turbulence, 2020, 21, 585-605. | 0.5 | 49 |
| 36 | Topological quantum phase transitions retrieved through unsupervised machine learning. Physical Review B, 2020, 102, . | 1.1 | 54 |

| # | Article | IF | Citations |
|---|---|---|---|
| 37 | Machine learning identifies scale-free properties in disordered materials. Nature Communications, 2020, 11, 4842. | 5.8 | 18 |
| 38 | Data-driven prediction and analysis of chaotic origami dynamics. Communications Physics, 2020, 3, . | 2.0 | 13 |
| 39 | Machine learning depinning of dislocation pileups. APL Materials, 2020, 8, . | 2.2 | 6 |
| 40 | Scalable neural networks for the efficient learning of disordered quantum systems. Physical Review E, 2020, 102, 033301. | 0.8 | 11 |
| 41 | Semi-Empirical Simulation of Learned Force Response Models for Heterogeneous Elastic Objects. , 2020, , . | | 1 |
| 42 | Approximation of correlation functions in phaseâ€field crystal model by machine learning approach. Mathematical Methods in the Applied Sciences, 2021, 44, 12203-12210. | 1.2 | 1 |
| 44 | Insights into one-body density matrices using deep learning. Faraday Discussions, 2020, 224, 265-291. | 1.6 | 3 |
| 45 | Topological defects and confinement with machine learning: The case of monopoles in compact electrodynamics. Physical Review D, 2020, 102, . | 1.6 | 8 |
| 46 | Extending machine learning classification capabilities with histogram reweighting. Physical Review E, 2020, 102, 033303. | 0.8 | 22 |
| 47 | Classifying the pole of an amplitude using a deep neural network. Physical Review D, 2020, 102, . | 1.6 | 10 |
| 48 | Machine-learning study using improved correlation configuration and application to quantum Monte Carlo simulation. Physical Review E, 2020, 102, 021302. | 0.8 | 12 |
| 49 | Photonic Inverse Design with Neural Networks: The Case of Invisibility in the Visible. Physical Review Applied, 2020, 14, . | 1.5 | 30 |
| 50 | Predicting critical transitions in multiscale dynamical systems using reservoir computing. Chaos, 2020, 30, 123126. | 1.0 | 12 |
| 51 | DNN-assisted statistical analysis of a model of local cortical circuits. Scientific Reports, 2020, 10, 20139. | 1.6 | 4 |
| 52 | Machine Learning: Quantum vs Classical. IEEE Access, 2020, 8, 219275-219294. | 2.6 | 79 |
| 53 | Classical dynamical density functional theory: from fundamentals to applications. Advances in Physics, 2020, 69, 121-247. | 35.9 | 126 |
| 54 | Unsupervised Machine Learning of Quantum Phase Transitions Using Diffusion Maps. Physical Review Letters, 2020, 125, 225701. | 2.9 | 32 |
| 55 | Covariantizing phase space. Physical Review D, 2020, 102, . | 1.6 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 56 | Mapping distinct phase transitions to a neural network. Physical Review E, 2020, 102, 053306. | 0.8 | 19 |
| 57 | Phases of two-dimensional spinless lattice fermions with first-quantized deep neural-network quantum states. Physical Review B, 2020, 102, . | 1.1 | 25 |
| 58 | The World as a Neural Network. Entropy, 2020, 22, 1210. | 1.1 | 36 |
| 59 | Machine Learning Analysis of Raman Spectra of MoS2. Nanomaterials, 2020, 10, 2223. | 1.9 | 13 |
| 60 | Deep learning and AdS/QCD. Physical Review D, 2020, 102, . | 1.6 | 20 |
| 61 | Semileptonic decays of heavy mesons with artificial neural networks. Physical Review D, 2020, 102, . | 1.6 | 0 |
| 62 | Mean-field inference methods for neural networks. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 223002. | 0.7 | 18 |
| 63 | Identification of light sources using machine learning. Applied Physics Reviews, 2020, 7, 021404. | 5.5 | 46 |
| 64 | Unsupervised Manifold Clustering of Topological Phononics. Physical Review Letters, 2020, 124, 185501. | 2.9 | 74 |
| 65 | Learning physical properties of liquid crystals with deep convolutional neural networks. Scientific Reports, 2020, 10, 7664. | 1.6 | 44 |
| 66 | Convolutional neural networks for direct detection of dark matter. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 095201. | 1.4 | 19 |
| 67 | A machine learning workflow for molecular analysis: application to melting points. Machine Learning: Science and Technology, 2020, 1, 025015. | 2.4 | 23 |
| 68 | Shear-induced ordering in systems with competing interactions: A machine learning study. Journal of Chemical Physics, 2020, 152, 204905. | 1.2 | 8 |
| 69 | Unsupervised Machine Learning and Band Topology. Physical Review Letters, 2020, 124, 226401. | 2.9 | 99 |
| 70 | Exploring phononic properties of two-dimensional materials using machine learning interatomic potentials. Applied Materials Today, 2020, 20, 100685. | 2.3 | 96 |
| 71 | Transfer learning for scalability of neural-network quantum states. Physical Review E, 2020, 101, 053301. | 0.8 | 26 |
| 72 | The frontier of simulation-based inference. Proceedings of the National Academy of Sciences of the United States of America, 2020, 117, 30055-30062. | 3.3 | 289 |
| 73 | Artificial neural network based computation for out-of-time-ordered correlators. Physical Review B, 2020, 101, . | 1.1 | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 74 | Entanglement classification via neural network quantum states. New Journal of Physics, 2020, 22, 045001. | 1.2 | 31 |
| 75 | Generative models of T-cell receptor sequences. Physical Review E, 2020, 101, 062414. | 0.8 | 9 |
| 76 | Boosting Monte Carlo simulations of spin glasses using autoregressive neural networks. Physical Review E, 2020, 101, 053312. | 0.8 | 25 |
| 77 | Purifying Electron Spectra from Noisy Pulses with Machine Learning Using Synthetic Hamilton Matrices. Physical Review Letters, 2020, 124, 113201. | 2.9 | 10 |
| 78 | Data-Driven Collective Variables for Enhanced Sampling. Journal of Physical Chemistry Letters, 2020, 11, 2998-3004. | 2.1 | 97 |
| 79 | Restricted Boltzmann Machines for Quantum States with Non-Abelian or Anyonic Symmetries. Physical Review Letters, 2020, 124, 097201. | 2.9 | 56 |
| 80 | Explainable Machine Learning for Scientific Insights and Discoveries. IEEE Access, 2020, 8, 42200-42216. | 2.6 | 466 |
| 81 | Effective classical correspondence of the Mott transition. Physical Review B, 2020, 101, . | 1.1 | 2 |
| 82 | Neural hierarchical models of ecological populations. Ecology Letters, 2020, 23, 734-747. | 3.0 | 28 |
| 83 | Drawing Phase Diagrams of Random Quantum Systems by Deep Learning the Wave Functions. Journal of the Physical Society of Japan, 2020, 89, 022001. | 0.7 | 39 |
| 84 | Generalization properties of neural network approximations to frustrated magnet ground states. Nature Communications, 2020, 11, 1593. | 5.8 | 73 |
| 85 | Machine Learning Non-Markovian Quantum Dynamics. Physical Review Letters, 2020, 124, 140502. | 2.9 | 63 |
| 86 | Property-Oriented Material Design Based on a Data-Driven Machine Learning Technique. Journal of Physical Chemistry Letters, 2020, 11, 3920-3927. | 2.1 | 54 |
| 87 | Physics Insights from Neural Networks. Physics Magazine, 0, 13, . | 0.1 | 1 |
| 88 | A perspective on machine learning in turbulent flows. Journal of Turbulence, 2020, 21, 567-584. | 0.5 | 51 |
| 89 | Combining SchNet and SHARC: The SchNarc Machine Learning Approach for Excited-State Dynamics. Journal of Physical Chemistry Letters, 2020, 11, 3828-3834. | 2.1 | 114 |
| 90 | A handle on the scandal: Data driven approaches to structure prediction. APL Materials, 2020, 8, 040903. | 2.2 | 4 |
| 91 | What Can Artificial Intelligence Do for Scientific Realism?. Axiomathes, 2021, 31, 85-104. | 0.3 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 92 | Towards a machine learned thermodynamics: exploration of free energy landscapes in molecular fluids, biological systems and for gas storage and separation in metalâ€“organic frameworks. Molecular Systems Design and Engineering, 2021, 6, 52-65. | 1.7 | 8 |
| 93 | ClasSOMfier: A neural network for cluster analysis and detection of lattice defects. Computational Materials Science, 2021, 188, 110167. | 1.4 | 3 |
| 94 | Hidden unit specialization in layered neural networks: ReLU vs. sigmoidal activation. Physica A: Statistical Mechanics and Its Applications, 2021, 564, 125517. | 1.2 | 29 |
| 95 | Machine learning the thermodynamic arrow of time. Nature Physics, 2021, 17, 105-113. | 6.5 | 55 |
| 96 | Toward Machine Learning Optimization of Experimental Design. Nuclear Physics News, 2021, 31, 25-28. | 0.1 | 8 |
| 97 | Predicting long- and short-range order with restricted Boltzmann machine. AIP Advances, 2021, 11, 015027. | 0.6 | 2 |
| 98 | Finding symmetry breaking order parameters with Euclidean neural networks. Physical Review Research, 2021, 3, . | 1.3 | 20 |
| 99 | Interaction from structure using machine learning: in and out of equilibrium. Soft Matter, 2021, 17, 8322-8330. | 1.2 | 5 |
| 100 | Scheme for automatic differentiation of complex loss functions with applications in quantum physics. Physical Review E, 2021, 103, 013309. | 0.8 | 13 |
| 102 | Federated Transfer Learning for IIoT Devices With Low Computing Power Based on Blockchain and Edge Computing. IEEE Access, 2021, 9, 98630-98638. | 2.6 | 28 |
| 103 | Machine-learning engineering of quantum currents. Physical Review Research, 2021, 3, . | 1.3 | 14 |
| 104 | Data-driven approximations to the bridge function yield improved closures for the Ornsteinâ€“Zernike equation. Soft Matter, 2021, 17, 5393-5400. | 1.2 | 6 |
| 105 | Quantum system compression: A Hamiltonian guided walk through Hilbert space. Physical Review A, 2021, 103, . | 1.0 | 3 |
| 106 | Graph neural networks in particle physics. Machine Learning: Science and Technology, 2021, 2, 021001. | 2.4 | 87 |
| 107 | Machine learning based on wave and diffusion physical systems. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 144204. | 0.2 | 2 |
| 108 | Investigating the Use of Machine Learning Techniques in a Random Physical System. Communications in Computer and Information Science, 2021, , 109-118. | 0.4 | 0 |
| 109 | Machine learning toward advanced energy storage devices and systems. IScience, 2021, 24, 101936. | 1.9 | 79 |
| 110 | Machine learning non-Hermitian topological phases. Physical Review B, 2021, 103, . | 1.1 | 13 |

| # | Article | IF | Citations |
|---|---|---|---|
| 111 | Unsupervised learning of topological phase transitions using the Calinski-Harabaz index. Physical Review Research, 2021, 3, . | 1.3 | 22 |
| 112 | The place of artificial intelligence in the risk management process. SHS Web of Conferences, 2021, 120, 02013. | 0.1 | 0 |
| 113 | Security Systems for Smart Cities Based on Acoustic Sensors and Machine Learning Applications. Studies in Computational Intelligence, 2021, , 369-393. | 0.7 | 6 |
| 114 | Comparison of Multiple Machine Learning Models Based on Enterprise Revenue Forecasting. , 2021, , . | | 6 |
| 115 | Finding the deconfinement temperature in lattice Yang-Mills theories from outside the scaling window with machine learning. Physical Review D, 2021, 103, . | 1.6 | 15 |
| 116 | Spatial Mode Correction of Single Photons Using Machine Learning. Advanced Quantum Technologies, 2021, 4, 2000103. | 1.8 | 19 |
| 117 | Experimental progress of quantum machine learning based on spin systems. Wuli Xuebao/Acta Physica Sinica, 2021, 70, 140305-140305. | 0.2 | 1 |
| 118 | Using Deep Learning to Understand and Mitigate the Qubit Noise Environment. PRX Quantum, 2021, 2, . | 3.5 | 27 |
| 119 | Application of Support Vector Machines and Holt-winters Model in Local Finance Forecast. , 2021, , . | | 0 |
| 120 | Geometric Calculi and Automatic Learning An Outline. SEMA SIMAI Springer Series, 2021, , 153-178. | 0.4 | 0 |
| 121 | Emergence of a finite-size-scaling function in the supervised learning of the Ising phase transition. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 023202. | 0.9 | 0 |
| 122 | The view of TK-SVM on the phase hierarchy in the classical kagome Heisenberg antiferromagnet. Journal of Physics Condensed Matter, 2021, 33, 054002. | 0.7 | 4 |
| 123 | Automatic learning of topological phase boundaries. Physical Review E, 2021, 103, 023310. | 0.8 | 4 |
| 124 | Deep neural network application: Higgs boson CP state mixing angle in Hâ†'Ï„Ï„ decay and at the LHC. Physical Review D, 2021, 103, . | 1.6 | 2 |
| 126 | Predicting ultrafast nonlinear dynamics in fibre optics with a recurrent neural network. Nature Machine Intelligence, 2021, 3, 344-354. | 8.3 | 92 |
| 127 | Quantifying information accumulation encoded in the dynamics of biochemical signaling. Nature Communications, 2021, 12, 1272. | 5.8 | 18 |
| 128 | Efficient Decoding Scheme of Non-Uniform Concatenation Quantum Code with Deep Neural Network. International Journal of Theoretical Physics, 2021, 60, 848-864. | 0.5 | 1 |
| 129 | A Survey of Bayesian Calibration and Physics-informed Neural Networks in Scientific Modeling. Archives of Computational Methods in Engineering, 2021, 28, 3801-3830. | 6.0 | 27 |

| # | Article | IF | Citations |
|---|---|---|---|
| 130 | Bayesian neural networks for fast SUSY predictions. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 813, 136041. | 1.5 | 10 |
| 131 | Approximate Bayesian Uncertainties on Deep Learning Dynamical Mass Estimates of Galaxy Clusters. Astrophysical Journal, 2021, 908, 204. | 1.6 | 13 |
| 132 | Multiscale Sample Entropy of Two-Dimensional Decaying Turbulence. Entropy, 2021, 23, 245. | 1.1 | 6 |
| 133 | Quantum Simulators: Architectures and Opportunities. PRX Quantum, 2021, 2, . | 3.5 | 229 |
| 134 | On the descriptive power of Neural-Networks as constrained Tensor Networks with exponentially large bond dimension. SciPost Physics Core, 2021, 4, . | 0.9 | 6 |
| 135 | Estimating the degree of non-Markovianity using machine learning. Physical Review A, 2021, 103, . | 1.0 | 17 |
| 136 | Unsupervised Learning Universal Critical Behavior via the Intrinsic Dimension. Physical Review X, 2021, 11, . | 2.8 | 26 |
| 137 | Adding machine learning within Hamiltonians: Renormalization group transformations, symmetry breaking and restoration. Physical Review Research, 2021, 3, . | 1.3 | 11 |
| 138 | Latent Representation Learning for Structural Characterization of Catalysts. Journal of Physical Chemistry Letters, 2021, 12, 2086-2094. | 2.1 | 27 |
| 139 | Machine learning approach for the prediction and optimization of thermal transport properties. Frontiers of Physics, 2021, 16, 1. | 2.4 | 39 |
| 140 | Designing a physical quantum agent. Physical Review A, 2021, 103, . | 1.0 | 5 |
| 141 | A Linear Frequency Principle Model to Understand the Absence of Overfitting in Neural Networks. Chinese Physics Letters, 2021, 38, 038701. | 1.3 | 8 |
| 143 | Many-body localization in large systems: Matrix-product-state approach. Annals of Physics, 2021, 435, 168437. | 1.0 | 13 |
| 144 | Semantic segmentation with a sparse convolutional neural network for event reconstruction in MicroBooNE. Physical Review D, 2021, 103, . | 1.6 | 19 |
| 145 | Four Generations of High-Dimensional Neural Network Potentials. Chemical Reviews, 2021, 121, 10037-10072. | 23.0 | 292 |
| 146 | Determining the temperature in heavy-ion collisions with multiplicity distribution. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 814, 136084. | 1.5 | 15 |
| 147 | Convolutional Neural Networks for Long Time Dissipative Quantum Dynamics. Journal of Physical Chemistry Letters, 2021, 12, 2476-2483. | 2.1 | 28 |
| 148 | Deep learning in electron microscopy. Machine Learning: Science and Technology, 2021, 2, 011004. | 2.4 | 50 |

| # | Article | IF | Citations |
|---|---|---|---|
| 149 | Deep neural network-based automatic metasurface design with a wide frequency range. Scientific Reports, 2021, 11, 7102. | 1.6 | 48 |
| 150 | Experimental Quantum Principal Component Analysis via Parametrized Quantum Circuits. Physical Review Letters, 2021, 126, 110502. | 2.9 | 27 |
| 151 | Channel-noise tracking for sub-shot-noise-limited receivers with neural networks. Physical Review Research, 2021, 3, . | 1.3 | 1 |
| 152 | Absorbing phase transition with a continuously varying exponent in a quantum contact process: A neural network approach. Physical Review Research, 2021, 3, . | 1.3 | 20 |
| 153 | Electric Power Forecasting Based on Logistic Regression and Gradient Boost Regression Tree. , 2021, , . | | 0 |
| 154 | Operator learning for predicting multiscale bubble growth dynamics. Journal of Chemical Physics, 2021, 154, 104118. | 1.2 | 71 |
| 155 | Classification Based on Decision Tree Algorithm for Machine Learning. Journal of Applied Science and Technology Trends, 2021, 2, 20-28. | 10.8 | 536 |
| 156 | PASP: Property analysis and simulation package for materials. Journal of Chemical Physics, 2021, 154, 114103. | 1.2 | 32 |
| 157 | Machine learning active-nematic hydrodynamics. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 44 |
| 158 | Learning active nematics one step at a time. Proceedings of the National Academy of Sciences of the United States of America, 2021, 118, . | 3.3 | 4 |
| 159 | Machine-learning-based inversion of nuclear responses. Physical Review C, 2021, 103, . | 1.1 | 16 |
| 160 | Supervised learning of few dirty bosons with variable particle number. SciPost Physics, 2021, 10, . | 1.5 | 7 |
| 161 | Molecular design and performance improvement in organic solar cells guided by highâ€throughput screening and machine learning. Nano Select, 2021, 2, 1629-1641. | 1.9 | 12 |
| 162 | Application of machine learning for predicting strong phonon blockade. Applied Physics Letters, 2021, 118, 164003. | 1.5 | 8 |
| 163 | Machine learning outperforms thermodynamics in measuring how well a many-body system learns a drive. Scientific Reports, 2021, 11, 9333. | 1.6 | 8 |
| 164 | Calibration of Multiparameter Sensors via Machine Learning at the Single-Photon Level. Physical Review Applied, 2021, 15, . | 1.5 | 23 |
| 165 | Scientific intuition inspired by machine learning-generated hypotheses. Machine Learning: Science and Technology, 2021, 2, 025027. | 2.4 | 23 |
| 166 | Quantum State Learning via Single-Shot Measurements. Physical Review Letters, 2021, 126, 170504. | 2.9 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 167 | Computational Infrared Spectroscopy of 958 Phosphorus-Bearing Molecules. Frontiers in Astronomy and Space Sciences, 2021, 8, . | 1.1 | 10 |
| 168 | Learning DFT. European Physical Journal: Special Topics, 2021, 230, 1021-1029. | 1.2 | 0 |
| 169 | Machine learning approach to muon spectroscopy analysis. Journal of Physics Condensed Matter, 2021, 33, 194002. | 0.7 | 3 |
| 170 | Sensitivity-Informed Bayesian Inference for Home PLC Network Models with Unknown Parameters. Energies, 2021, 14, 2402. | 1.6 | 3 |
| 171 | Modified empirical formulas and machine learning for Î±-decay systematics. Journal of Physics G: Nuclear and Particle Physics, 2021, 48, 055103. | 1.4 | 19 |
| 172 | Machine learning time-local generators of open quantum dynamics. Physical Review Research, 2021, 3, . | 1.3 | 11 |
| 173 | Learning single-particle mobility edges by a neural network based on data compression. Physical Review B, 2021, 103, . | 1.1 | 5 |
| 174 | Theoretical Research and Framework Design of Spanish-Chinese Smart Translation System from Machine Learning Perspectives. , 2021, , . | | 0 |
| 175 | Optimal Beam Loading in a Laser-Plasma Accelerator. Physical Review Letters, 2021, 126, 174801. | 2.9 | 42 |
| 176 | Helping restricted Boltzmann machines with quantum-state representation by restoring symmetry. Journal of Physics Condensed Matter, 2021, 33, 174003. | 0.7 | 38 |
| 177 | Quantum field-theoretic machine learning. Physical Review D, 2021, 103, . | 1.6 | 19 |
| 178 | Deep reinforcement learning for feedback control in a collective flashing ratchet. Physical Review Research, 2021, 3, . | 1.3 | 2 |
| 179 | Learning models of quantum systems from experiments. Nature Physics, 2021, 17, 837-843. | 6.5 | 28 |
| 180 | Social hierarchy promotes the cooperation prevalence. Physica A: Statistical Mechanics and Its Applications, 2021, 567, 125726. | 1.2 | 4 |
| 181 | Revealing the phase diagram of Kitaev materials by machine learning: Cooperation and competition between spin liquids. Physical Review Research, 2021, 3, . | 1.3 | 16 |
| 182 | Solving quasiparticle band spectra of real solids using neural-network quantum states. Communications Physics, 2021, 4, . | 2.0 | 19 |
| 183 | Machine learning study of the deformed one-dimensional topological superconductor. Journal of the Korean Physical Society, 2021, 79, 173-184. | 0.3 | 3 |
| 184 | Modelling self-similar parabolic pulses in optical fibres with a neural network. Results in Optics, 2021, 3, 100066. | 0.9 | 20 |

| # | Article | IF | Citations |
|---|---|---|---|
| 185 | Machine learning the dynamics of quantum kicked rotor. Annals of Physics, 2021, 435, 168500. | 1.0 | 3 |
| 186 | Supervised and unsupervised learning of directed percolation. Physical Review E, 2021, 103, 052140. | 0.8 | 11 |
| 187 | Reconstruction of nanoscale particles from single-shot wide-angle free-electron-laser diffraction patterns with physics-informed neural networks. Physical Review E, 2021, 103, 053312. | 0.8 | 3 |
| 188 | Classification of periodic variable stars with novel cyclic-permutation invariant neural networks. Monthly Notices of the Royal Astronomical Society, 2021, 505, 515-522. | 1.6 | 10 |
| 189 | Conservation laws and spin system modeling through principal component analysis. Computer Physics Communications, 2021, 262, 107832. | 3.0 | 4 |
| 190 | Machine learning and quantum devices. SciPost Physics Lecture Notes, 0, , . | 0.0 | 12 |
| 191 | Machine learning pipeline for quantum state estimation with incomplete measurements. Machine Learning: Science and Technology, 2021, 2, 035014. | 2.4 | 14 |
| 192 | Toward a theory of machine learning. Machine Learning: Science and Technology, 2021, 2, 035012. | 2.4 | 10 |
| 193 | A data-driven approach to violin making. Scientific Reports, 2021, 11, 9455. | 1.6 | 27 |
| 194 | Neural ordinary differential equation and holographic quantum chromodynamics. Machine Learning: Science and Technology, 2021, 2, 035011. | 2.4 | 8 |
| 195 | Adaptable Hamiltonian neural networks. Physical Review Research, 2021, 3, . | 1.3 | 22 |
| 196 | Recurrent localization networks applied to the Lippmann-Schwinger equation. Computational Materials Science, 2021, 192, 110356. | 1.4 | 4 |
| 197 | Inverse renormalization group based on image super-resolution using deep convolutional networks. Scientific Reports, 2021, 11, 9617. | 1.6 | 7 |
| 198 | Second Harmonic Imaging Enhanced by Deep Learning Decipher. ACS Photonics, 2021, 8, 1562-1568. | 3.2 | 2 |
| 199 | Can a CNN trained on the Ising model detect the phase transition of the q-state Potts model?. Progress of Theoretical and Experimental Physics, 2021, 2021, . | 1.8 | 3 |
| 200 | Sampling asymmetric open quantum systems for artificial neural networks. Physical Review B, 2021, 103, . | 1.1 | 4 |
| 201 | Topological persistence machine of phase transitions. Physical Review E, 2021, 103, 052127. | 0.8 | 20 |
| 202 | Renormalized Mutual Information for Artificial Scientific Discovery. Physical Review Letters, 2021, 126, 200601. | 2.9 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 203 | Cosmic Velocity Field Reconstruction Using AI. Astrophysical Journal, 2021, 913, 2. | 1.6 | 11 |
| 204 | Estimation of impact parameter and transverse spherocity in heavy-ion collisions at the LHC energies using machine learning. Physical Review D, 2021, 103, . | 1.6 | 13 |
| 206 | Scalability of All-Optical Neural Networks Based on Spatial Light Modulators. Physical Review Applied, 2021, 15, . | 1.5 | 14 |
| 207 | Inverse design of an optical film filter by a recurrent neural adjoint method: an example for a solar simulator. Journal of the Optical Society of America B: Optical Physics, 2021, 38, 1814. | 0.9 | 8 |
| 208 | Optimal quantum state transformations based on machine learning. Quantum Information Processing, 2021, 20, 1. | 1.0 | 2 |
| 209 | A convolutional-neural-network estimator of CMB constraints on dark matter energy injection. Journal of Cosmology and Astroparticle Physics, 2021, 2021, 025. | 1.9 | 1 |
| 210 | Extracting Local Symmetry of Mono-Atomic Systems from Extended X-ray Absorption Fine Structure Using Deep Neural Networks. Symmetry, 2021, 13, 1070. | 1.1 | 2 |
| 211 | Unsupervised Learning of Non-Hermitian Topological Phases. Physical Review Letters, 2021, 126, 240402. | 2.9 | 22 |
| 212 | Opportunities in Quantum Reservoir Computing and Extreme Learning Machines. Advanced Quantum Technologies, 2021, 4, 2100027. | 1.8 | 45 |
| 213 | Relevance in the Renormalization Group and in Information Theory. Physical Review Letters, 2021, 126, 240601. | 2.9 | 9 |
| 214 | Perspective on integrating machine learning into computational chemistry and materials science. Journal of Chemical Physics, 2021, 154, 230903. | 1.2 | 107 |
| 215 | Feature space approximation for kernel-based supervised learning. Knowledge-Based Systems, 2021, 221, 106935. | 4.0 | 3 |
| 216 | Morphology of three-body quantum states from machine learning. New Journal of Physics, 2021, 23, 065009. | 1.2 | 5 |
| 217 | Protocol Discovery for the Quantum Control of Majoranas by Differentiable Programming and Natural Evolution Strategies. PRX Quantum, 2021, 2, . | 3.5 | 15 |
| 218 | The forgotten channels: charged Higgs boson decays to a WÂ± and a non-SM-like Higgs boson. Journal of High Energy Physics, 2021, 2021, 1. | 1.6 | 21 |
| 219 | Application of kernel extreme learning machine and Kriging model in prediction of heavy metals removal by biochar. Bioresource Technology, 2021, 329, 124876. | 4.8 | 36 |
| 220 | Neural Monte Carlo renormalization group. Physical Review Research, 2021, 3, . | 1.3 | 6 |
| 221 | Machine-learning semilocal density functional theory for many-body lattice models at zero and finite temperature. Physical Review B, 2021, 103, . | 1.1 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 222 | Incorporation of Physics into Machine Learning for Production Prediction from Unconventional Reservoirs: A Brief Review of the Gray-Box Approach. SPE Reservoir Evaluation and Engineering, 2021, 24, 847-858. | 1.1 | 19 |
| 223 | Machine learning for complete intersection Calabi-Yau manifolds: A methodological study. Physical Review D, 2021, 103, . | 1.6 | 18 |
| 224 | Efficient bit encoding of neural networks for Fock states. Physical Review A, 2021, 103, . | 1.0 | 0 |
| 225 | Quantum gates by adiabatic and superadiabatic probabilistic controlled evolutions. Europhysics Letters, 2021, 134, 50005. | 0.7 | 0 |
| 226 | Mixed state entanglement classification using artificial neural networks. New Journal of Physics, 2021, 23, 063033. | 1.2 | 9 |
| 227 | Deep generative models of gravitational waveforms via conditional autoencoder. Physical Review D, 2021, 103, . | 1.6 | 5 |
| 228 | Sparse Neural Networks for Inference of Interwell Connectivity and Production Prediction. SPE Journal, 2021, , 1-22. | 1.7 | 6 |
| 229 | Learning the ground state of a non-stoquastic quantum Hamiltonian in a rugged neural network landscape. SciPost Physics, 2021, 10, . | 1.5 | 37 |
| 230 | Highlighting photonics: looking into the next decade. ELight, 2021, 1, . | 11.9 | 218 |
| 231 | Deep learning stochastic processes with QCD phase transition. Physical Review D, 2021, 103, . | 1.6 | 25 |
| 232 | Implementation of Quantum Machine Learning for Electronic Structure Calculations of Periodic Systems on Quantum Computing Devices. Journal of Chemical Information and Modeling, 2021, 61, 2667-2674. | 2.5 | 17 |
| 233 | Deterministic modeling of the diffusive memristor. Chaos, 2021, 31, 073111. | 1.0 | 8 |
| 234 | HInet: Generating Neutral Hydrogen from Dark Matter with Neural Networks. Astrophysical Journal, 2021, 916, 42. | 1.6 | 16 |
| 235 | Unsupervised machine learning of topological phase transitions from experimental data. Machine Learning: Science and Technology, 2021, 2, 035037. | 2.4 | 41 |
| 236 | Storage capacity and learning capability of quantum neural networks. Quantum Science and Technology, 2021, 6, 045002. | 2.6 | 12 |
| 237 | A neural network for prediction of high intensity resonance modes in magnetic multilayers. New Journal of Physics, 2021, 23, 073021. | 1.2 | 0 |
| 238 | Towards Automated Superconducting Circuit Calibration using Deep Reinforcement Learning. , 2021, , . | | 2 |
| 239 | Determining fundamental parameters of detached double-lined eclipsing binary systems via a statistically robust machine learning method. Monthly Notices of the Royal Astronomical Society, 2021, 507, 1795-1813. | 1.6 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 240 | U(1)-symmetric recurrent neural networks for quantum state reconstruction. Physical Review A, 2021, 104, . | 1.0 | 15 |
| 241 | Discrimination of nano-objects via cluster analysis techniques applied to time-resolved thermo-acoustic microscopy. Ultrasonics, 2021, 114, 106403. | 2.1 | 19 |
| 242 | Classifying Near-Threshold Enhancement Using Deep Neural Network. Few-Body Systems, 2021, 62, 1. | 0.7 | 7 |
| 243 | Riemannian geometry and automatic differentiation for optimization problems of quantum physics and quantum technologies. New Journal of Physics, 2021, 23, 073006. | 1.2 | 17 |
| 244 | Deep Learning Transient Detection with VERITAS. , 2021, , . | | 1 |
| 245 | Quantum-inspired machine learning on high-energy physics data. Npj Quantum Information, 2021, 7, . | 2.8 | 14 |
| 246 | Adversarial Multi-task Learning Enhanced Physics-informed Neural Networks for Solving Partial Differential Equations. , 2021, , . | | 6 |
| 247 | Interpretable and unsupervised phase classification. Physical Review Research, 2021, 3, . | 1.3 | 15 |
| 248 | Inferring hidden symmetries of exotic magnets from detecting explicit order parameters. Physical Review E, 2021, 104, 015311. | 0.8 | 3 |
| 249 | Machine-learning-assisted modeling. Physics Today, 2021, 74, 36-41. | 0.3 | 11 |
| 250 | Framework for evaluating statistical models in physics education research. Physical Review Physics Education Research, 2021, 17, . | 1.4 | 10 |
| 251 | A rigorous and robust quantum speed-up in supervised machine learning. Nature Physics, 2021, 17, 1013-1017. | 6.5 | 197 |
| 252 | Neural network enhanced hybrid quantum many-body dynamical distributions. Physical Review Research, 2021, 3, . | 1.3 | 4 |
| 253 | Entanglement structure detection via machine learning. Quantum Science and Technology, 2021, 6, 035017. | 2.6 | 5 |
| 254 | Machine Learning Versus Semidefinite Programming Approach to a Particular Problem of the Theory of Open Quantum Systems. Lobachevskii Journal of Mathematics, 2021, 42, 1622-1629. | 0.1 | 1 |
| 255 | Extraction of the muon signals recorded with the surface detector of the Pierre Auger Observatory using recurrent neural networks. Journal of Instrumentation, 2021, 16, P07016. | 0.5 | 11 |
| 256 | Machine Learning Link Inference of Noisy Delay-Coupled Networks with Optoelectronic Experimental Tests. Physical Review X, 2021, 11, . | 2.8 | 14 |
| 257 | Disentangling boosted Higgs Boson production modes with machine learning. Journal of Instrumentation, 2021, 16, P07002. | 0.5 | 8 |

| # | Article | IF | Citations |
|---|---|---|---|
| 258 | Symmetry meets AI. SciPost Physics, 2021, 11, . | 1.5 | 16 |
| 259 | Learning crystal field parameters using convolutional neural networks. SciPost Physics, 2021, 11, . | 1.5 | 2 |
| 260 | Variational Monte Carlo Calculations of <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mrow><mml:mi>A</mml:mi><mml:mo>â‰¤</mml:mo><mml:mn>4</mml:mn></mml:mrow></mml:math> Nuclei with an Artificial Neural-Network Correlator Ansatz. Physical Review Letters, 2021, 127, 022502. | 2.9 | 37 |
| 261 | Turbulence theories and statistical closure approaches. Physics Reports, 2021, 935, 1-117. | 10.3 | 49 |
| 262 | Representations of hypergraph states with neural networks*. Communications in Theoretical Physics, 2021, 73, 105103. | 1.1 | 1 |
| 263 | Reinforcement learning approach for deterministic SOT-MRAM switching. , 2021, , . | | 0 |
| 264 | Neural-network-based parameter estimation for quantum detection. Quantum Science and Technology, 2021, 6, 045012. | 2.6 | 6 |
| 265 | Bandgap prediction of two-dimensional materials using machine learning. PLoS ONE, 2021, 16, e0255637. | 1.1 | 11 |
| 266 | Linear and nonlinear machine learning correlation of transition metal cluster characteristics. Journal of Nanoparticle Research, 2021, 23, 1. | 0.8 | 2 |
| 267 | Model-free prediction of emergence of extreme events in a parametrically driven nonlinear dynamical system by deep learning. European Physical Journal B, 2021, 94, 1. | 0.6 | 14 |
| 268 | A Short Review on the Machine Learning-Guided Oxygen Uptake Prediction for Sport Science Applications. Electronics (Switzerland), 2021, 10, 1956. | 1.8 | 5 |
| 269 | Quantum compiling by deep reinforcement learning. Communications Physics, 2021, 4, . | 2.0 | 29 |
| 270 | Purifying Deep Boltzmann Machines for Thermal Quantum States. Physical Review Letters, 2021, 127, 060601. | 2.9 | 12 |
| 271 | Direct detection of plasticity onset through total-strain profile evolution. Physical Review Materials, 2021, 5, . | 0.9 | 2 |
| 272 | Experimental Implementation of Universal Holonomic Quantum Computation on Solid-State Spins with Optimal Control. Physical Review Applied, 2021, 16, . | 1.5 | 14 |
| 273 | Modal decomposition of a partially coherent Ince-Gaussian beams. , 2021, , . | | 0 |
| 274 | Characterizing the acceleration time of laser-driven ion acceleration with data-informed neural networks. Plasma Physics and Controlled Fusion, 2021, 63, 094005. | 0.9 | 4 |
| 275 | Pairwise Difference Regression: A Machine Learning Meta-algorithm for Improved Prediction and Uncertainty Quantification in Chemical Search. Journal of Chemical Information and Modeling, 2021, 61, 3846-3857. | 2.5 | 17 |

| # | Article | IF | Citations |
|---|---|---|---|
| 276 | Conceptual Understanding through Efficient Automated Design of Quantum Optical Experiments. Physical Review X, 2021, 11, . | 2.8 | 17 |
| 277 | Deep neural networks for inverse problems in mesoscopic physics: Characterization of the disorder configuration from quantum transport properties. Physical Review B, 2021, 104, . | 1.1 | 6 |
| 278 | Developing a multilateral-based neural network model for engineering of high entropy amorphous alloys. Modelling and Simulation in Materials Science and Engineering, 2021, 29, 065019. | 0.8 | 7 |
| 279 | Correlation Length in Random MPS and PEPS. Annales Henri Poincare, 2022, 23, 141-222. | 0.8 | 5 |
| 280 | Application of Artificial Intelligence in Food Industryâ€"a Guideline. Food Engineering Reviews, 2022, 14, 134-175. | 3.1 | 56 |
| 281 | Classification of Fermi-LAT sources with deep learning using energy and time spectra. Monthly Notices of the Royal Astronomical Society, 2021, 507, 4061-4073. | 1.6 | 13 |
| 282 | 2022 Roadmap on integrated quantum photonics. JPhys Photonics, 2022, 4, 012501. | 2.2 | 152 |
| 283 | Intrinsic Dimension of Path Integrals: Data-Mining Quantum Criticality and Emergent Simplicity. PRX Quantum, 2021, 2, . | 3.5 | 18 |
| 284 | Tracking droplets in soft granular flows with deep learning techniques. European Physical Journal Plus, 2021, 136, 864. | 1.2 | 8 |
| 285 | Model independent analysis of coupled-channel scattering: A deep learning approach. Physical Review D, 2021, 104, . | 1.6 | 8 |
| 286 | Conditional generative models for sampling and phase transition indication in spin systems. SciPost Physics, 2021, 11, . | 1.5 | 11 |
| 287 | Vision based supervised restricted Boltzmann machine helps to actuate novel shape memory alloy accurately. Scientific Reports, 2021, 11, 16446. | 1.6 | 5 |
| 288 | Machine learning identification of symmetrized base states of Rydberg atoms. Frontiers of Physics, 2022, 17, 1. | 2.4 | 2 |
| 289 | Machine learning detection of Berezinskii-Kosterlitz-Thouless transitions in <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>q</mml:mi></mml:math> -state clock models. Physical Review B, 2021, 104, . | 1.1 | 17 |
| 290 | Genetic Algorithms and Machine Learning for Predicting Surface Composition, Structure, and Chemistry: A Historical Perspective and Assessment. Chemistry of Materials, 2021, 33, 6589-6615. | 3.2 | 8 |
| 291 | A Reconfigurable Neural Network ASIC for Detector Front-End Data Compression at the HL-LHC. IEEE Transactions on Nuclear Science, 2021, 68, 2179-2186. | 1.2 | 25 |
| 292 | Unsupervised mapping of phase diagrams of 2D systems from infinite projected entangled-pair states via deep anomaly detection. SciPost Physics, 2021, 11, . | 1.5 | 8 |
| 293 | Deep learning for estimating parameters of gravitational waves. Monthly Notices of the Royal Astronomical Society, 2021, 508, 1358-1370. | 1.6 | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 294 | Boltzmann machines as two-dimensional tensor networks. Physical Review B, 2021, 104, . | 1.1 | 6 |
| 295 | Gaussian Process Regression for Materials and Molecules. Chemical Reviews, 2021, 121, 10073-10141. | 23.0 | 384 |
| 296 | A fast and efficient deep learning procedure for tracking droplet motion in dense microfluidic emulsions. Philosophical Transactions Series A, Mathematical, Physical, and Engineering Sciences, 2021, 379, 20200400. | 1.6 | 10 |
| 297 | Physics-Based Feature Makes Machine Learning Cognizing Crystal Properties Simple. Journal of Physical Chemistry Letters, 2021, 12, 8521-8527. | 2.1 | 3 |
| 298 | Dirac-Type Nodal Spin Liquid Revealed by Refined Quantum Many-Body Solver Using Neural-Network Wave Function, Correlation Ratio, and Level Spectroscopy. Physical Review X, 2021, 11, . | 2.8 | 60 |
| 299 | Quantum reservoir computing in bosonic networks. , 2021, , . | | 0 |
| 300 | Predicting quantum potentials by deep neural network and metropolis sampling. SciPost Physics Core, 2021, 4, . | 0.9 | 3 |
| 301 | Machine learning on neutron and x-ray scattering and spectroscopies. Chemical Physics Reviews, 2021, 2, . | 2.6 | 49 |
| 302 | Hybrid Machine Learning for Scanning Near-Field Optical Spectroscopy. ACS Photonics, 2021, 8, 2987-2996. | 3.2 | 22 |
| 303 | Frequentist parameter estimation with supervised learning. AVS Quantum Science, 2021, 3, . | 1.8 | 3 |
| 304 | Minimization of the micromotion of trapped ions with artificial neural networks. Applied Physics Letters, 2021, 119, . | 1.5 | 1 |
| 305 | Quantum federated learning through blind quantum computing. Science China: Physics, Mechanics and Astronomy, 2021, 64, 1. | 2.0 | 31 |
| 306 | Analysis of Kohnâ€“Sham Eigenfunctions Using a Convolutional Neural Network in Simulations of the Metalâ€“Insulator Transition in Doped Semiconductors. Journal of the Physical Society of Japan, 2021, 90, 094001. | 0.7 | 0 |
| 307 | Uncertainty-aware machine learning for high energy physics. Physical Review D, 2021, 104, . | 1.6 | 24 |
| 308 | Statistical Mechanics of Deep Linear Neural Networks: The Backpropagating Kernel Renormalization. Physical Review X, 2021, 11, . | 2.8 | 15 |
| 309 | Rapid parameter estimation of discrete decaying signals using autoencoder networks. Machine Learning: Science and Technology, 2021, 2, 045024. | 2.4 | 0 |
| 310 | Data-driven effective model shows a liquid-like deep learning. Physical Review Research, 2021, 3, . | 1.3 | 2 |
| 311 | Selected Artificial Intelligence Methods in the Risk Analysis of Damage to Masonry Buildings Subject to Long-Term Underground Mining Exploitation. Minerals (Basel, Switzerland), 2021, 11, 958. | 0.8 | 7 |

| # | Article | IF | Citations |
|---|---|---|---|
| 312 | Bulk reconstruction of metrics inside black holes by complexity. Journal of High Energy Physics, 2021, 2021, 1. | 1.6 | 5 |
| 313 | Data-driven flood hazard zonation of Italy. Journal of Environmental Management, 2021, 294, 112986. | 3.8 | 7 |
| 314 | Compact neural-network quantum state representations of Jastrow and stabilizer states. Journal of Physics A: Mathematical and Theoretical, 2021, 54, 405304. | 0.7 | 2 |
| 315 | Simulation and Optimization Studies of the LHCb Beetle Readout ASIC and Machine Learning Approach for Pulse Shape Reconstruction. Sensors, 2021, 21, 6075. | 2.1 | 1 |
| 316 | Reinforcement Learning for Many-Body Ground-State Preparation Inspired by Counterdiabatic Driving. Physical Review X, 2021, 11, . | 2.8 | 29 |
| 317 | Classification and reconstruction of optical quantum states with deep neural networks. Physical Review Research, 2021, 3, . | 1.3 | 25 |
| 318 | Neural Network Approach to Construction of Classical Integrable Systems. Journal of the Physical Society of Japan, 2021, 90, 093001. | 0.7 | 0 |
| 319 | Magnetic moment predictions of odd-A nuclei with the Bayesian neural network approach *. Chinese Physics C, 2021, 45, 124107. | 1.5 | 6 |
| 320 | Open Issues in Statistical Forecasting of Solar Proton Events: A Machine Learning Perspective. Space Weather, 2021, 19, e2021SW002794. | 1.3 | 13 |
| 321 | Machine-learned phase diagrams of generalized Kitaev honeycomb magnets. Physical Review Research, 2021, 3, . | 1.3 | 9 |
| 322 | Optical lattice experiments at unobserved conditions with generative adversarial deep learning. Physical Review Research, 2021, 3, . | 1.3 | 4 |
| 323 | Application of machine learning in the determination of impact parameter in the <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mrow><mml:mmultiscripts><mml:mi>Sn</mml:mi><mml:mprescripts /><mml:none /><mml:mn>132</mml:mn></mml:mmultiscripts><mml:mo>+</mml:mo><mml:mmultiscripts><mml:mi>Sn</mml:mi><mml:mprescripts /><mml:none /><mml:mn>124</mml:mn></mml:mmultiscripts></mml:mrow></mml:math> system. Physical Review C, 2021, 104, . | 1.1 | 13 |
| 324 | Machine learning universal bosonic functionals. Physical Review Research, 2021, 3, . | 1.3 | 11 |
| 325 | Learning impurity spectral functions from density of states. Journal of Physics Condensed Matter, 2021, 33, 495601. | 0.7 | 0 |
| 326 | Mode-assisted joint training of deep Boltzmann machines. Scientific Reports, 2021, 11, 19000. | 1.6 | 1 |
| 327 | Using machine-learning methods for analysing the results of numerical simulation of laser-plasma acceleration of electrons. Quantum Electronics, 2021, 51, 854-860. | 0.3 | 5 |
| 328 | Application of quantum machine learning using the quantum kernel algorithm on high energy physics analysis at the LHC. Physical Review Research, 2021, 3, . | 1.3 | 35 |
| 329 | The machine-learned radii of atoms. Computational and Theoretical Chemistry, 2021, 1204, 113389. | 1.1 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 330 | A novel method of multiaxial fatigue life prediction based on deep learning. International Journal of Fatigue, 2021, 151, 106356. | 2.8 | 74 |
| 331 | Tree-based interpretable machine learning of the thermodynamic phases. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 412, 127589. | 0.9 | 3 |
| 332 | Exploring neural network training strategies to determine phase transitions in frustrated magnetic models. Computational Materials Science, 2021, 198, 110702. | 1.4 | 13 |
| 333 | Finding signatures of the nuclear symmetry energy in heavy-ion collisions with deep learning. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2021, 822, 136669. | 1.5 | 15 |
| 334 | Determination of thermodynamic state variables of liquids from their microscopic structures using an artificial neural network. Soft Matter, 2021, 17, 1975-1984. | 1.2 | 5 |
| 335 | A Deep Learning Approach to Ancient Egyptian Hieroglyphs Classification. IEEE Access, 2021, 9, 123438-123447. | 2.6 | 22 |
| 336 | Machine learning topological invariants of non-Hermitian systems. Physical Review A, 2021, 103, . | 1.0 | 20 |
| 337 | Validity of Machine Learning in the Quantitative Analysis of Complex Scanning Near-Field Optical Microscopy Signals Using Simulated Data. Physical Review Applied, 2021, 15, . | 1.5 | 13 |
| 338 | Random Features for Kernel Approximation: A Survey on Algorithms, Theory, and Beyond. IEEE Transactions on Pattern Analysis and Machine Intelligence, 2022, 44, 7128-7148. | 9.7 | 33 |
| 339 | Machine Learning in Physics and Engineering. Studies in Computational Intelligence, 2021, , 47-54. | 0.7 | 0 |
| 340 | Demonstration of background rejection using deep convolutional neural networks in the NEXT experiment. Journal of High Energy Physics, 2021, 2021, 1. | 1.6 | 13 |
| 341 | AI for Humanity: The Global Challenges. Lecture Notes in Computer Science, 2021, , 116-126. | 1.0 | 1 |
| 342 | Hybrid convolutional neural network and projected entangled pair states wave functions for quantum many-particle states. Physical Review B, 2021, 103, . | 1.1 | 11 |
| 343 | Determining usefulness of machine learning in materials discovery using simulated research landscapes. Physical Chemistry Chemical Physics, 2021, 23, 14156-14163. | 1.3 | 13 |
| 344 | DLODE: a deep learning-based ODE solver for chemistry kinetics. , 2021, , . | | 8 |
| 345 | The hidden geometry of particle collisions. Journal of High Energy Physics, 2020, 2020, 1. | 1.6 | 29 |
| 346 | Artificial neural networks for nonlinear pulse shaping in optical fibers. Optics and Laser Technology, 2020, 131, 106439. | 2.2 | 50 |
| 347 | Learning from the Machine: Uncovering Sustainable Nanoparticle Design Rules. Journal of Physical Chemistry C, 2020, 124, 13409-13420. | 1.5 | 11 |

| # | Article | IF | Citations |
|---|---|---|---|
| 348 | Understanding deep learning is also a job for physicists. Nature Physics, 2020, 16, 602-604. | 6.5 | 39 |
| 349 | Computer-inspired quantum experiments. Nature Reviews Physics, 2020, 2, 649-661. | 11.9 | 48 |
| 350 | Machine Learning for Nonadiabatic Molecular Dynamics. RSC Theoretical and Computational Chemistry Series, 2020, , 76-108. | 0.7 | 3 |
| 351 | Introduction to the dynamics of driven nonlinear systems. Contemporary Physics, 2020, 61, 169-192. | 0.8 | 7 |
| 352 | Application of artificial intelligence in the determination of impact parameter in heavy-ion collisions at intermediate energies. Journal of Physics G: Nuclear and Particle Physics, 2020, 47, 115104. | 1.4 | 24 |
| 353 | Machine learning for condensed matter physics. Journal of Physics Condensed Matter, 2021, 33, 053001. | 0.7 | 47 |
| 354 | Detecting composite orders in layered models via machine learning. New Journal of Physics, 2020, 22, 093026. | 1.2 | 5 |
| 355 | Phase detection with neural networks: interpreting the black box. New Journal of Physics, 2020, 22, 115001. | 1.2 | 19 |
| 356 | Identifying nearby sources of ultra-high-energy cosmic rays with deep learning. Journal of Cosmology and Astroparticle Physics, 2020, 2020, 005-005. | 1.9 | 7 |
| 357 | Ultrametric fitting by gradient descent <sup>*</sup>. Journal of Statistical Mechanics: Theory and Experiment, 2020, 2020, 124004. | 0.9 | 6 |
| 358 | Universal and optimal coin sequences for high entanglement generation in 1D discrete time quantum walks. Journal of Physics A: Mathematical and Theoretical, 2020, 53, 445306. | 0.7 | 15 |
| 359 | Probing criticality in quantum spin chains with neural networks. Journal of Physics Complexity, 2020, 1, 03LT01. | 0.9 | 5 |
| 360 | Machine learning at the (sub)atomic scale: next generation scanning probe microscopy. Machine Learning: Science and Technology, 2020, 1, 023001. | 2.4 | 24 |
| 361 | Quantum machine learning and quantum biomimetics: A perspective. Machine Learning: Science and Technology, 2020, 1, 033002. | 2.4 | 41 |
| 362 | Machine learning and excited-state molecular dynamics. Machine Learning: Science and Technology, 2020, 1, 043001. | 2.4 | 50 |
| 363 | Predicting excited states from ground state wavefunction by supervised quantum machine learning. Machine Learning: Science and Technology, 2020, 1, 045027. | 2.4 | 13 |
| 364 | Towards recognizing the light facet of the Higgs boson. Machine Learning: Science and Technology, 2020, 1, 045025. | 2.4 | 5 |
| 365 | Classifying global state preparation via deep reinforcement learning. Machine Learning: Science and Technology, 2021, 2, 01LT02. | 2.4 | 25 |

| # | Article | IF | Citations |
|---|---|---|---|
| 366 | Building bulk from Wilson loops. Progress of Theoretical and Experimental Physics, 2021, 2021, . | 1.8 | 4 |
| 367 | Tensor-network-based machine learning of non-Markovian quantum processes. Physical Review A, 2020, 102, . | 1.0 | 30 |
| 368 | Active learning algorithm for computational physics. Physical Review Research, 2020, 2, . | 1.3 | 14 |
| 369 | Precise measurement of quantum observables with neural-network estimators. Physical Review Research, 2020, 2, . | 1.3 | 53 |
| 370 | Geometry of learning neural quantum states. Physical Review Research, 2020, 2, . | 1.3 | 26 |
| 371 | Compressing deep neural networks by matrix product operators. Physical Review Research, 2020, 2, . | 1.3 | 15 |
| 372 | Recurrent neural network wave functions. Physical Review Research, 2020, 2, . | 1.3 | 112 |
| 373 | Neural network wave functions and the sign problem. Physical Review Research, 2020, 2, . | 1.3 | 49 |
| 374 | Learning the constitutive relation of polymeric flows with memory. Physical Review Research, 2020, 2, . | 1.3 | 15 |
| 375 | Casimir effect with machine learning. Physical Review Research, 2020, 2, . | 1.3 | 4 |
| 376 | Density functionals and Kohn-Sham potentials with minimal wavefunction preparations on a quantum computer. Physical Review Research, 2020, 2, . | 1.3 | 4 |
| 377 | Machine Learning for Long-Distance Quantum Communication. PRX Quantum, 2020, 1, . | 3.5 | 55 |
| 378 | Enhanced lightâ€“matter interactions in dielectric nanostructures via machine-learning approach. Advanced Photonics, 2020, 2, 1. | 6.2 | 81 |
| 379 | Physics Inspired Models in Artificial Intelligence. , 2020, , . | | 3 |
| 380 | Reproducibility and Replication of Experimental Particle Physics Results. , 2020, 2, . | | 7 |
| 381 | From complex to simple : hierarchical free-energy landscape renormalized in deep neural networks. , 2020, 2, . | | 5 |
| 382 | A non-review of Quantum Machine Learning: trends and explorations. , 0, 4, 32. | | 40 |
| 383 | The First Application of Neural Networks to the Analysis of the TUS Orbital Detector Data. Moscow University Physics Bulletin (English Translation of Vestnik Moskovskogo Universiteta, Fizika), 2020, 75, 657-664. | 0.1 | 5 |

| # | Article | IF | Citations |
|---|---|---|---|
| 384 | Deep Learning the Morphology of Dark Matter Substructure. Astrophysical Journal, 2020, 893, 15. | 1.6 | 29 |
| 385 | Full-sky Cosmic Microwave Background Foreground Cleaning Using Machine Learning. Astrophysical Journal, 2020, 903, 104. | 1.6 | 26 |
| 386 | Approaches Based on the Ising Model. Quantum Science and Technology, 2021, , 273-287. | 1.5 | 0 |
| 387 | Classifying lymphoma and tuberculosis case reports using machine learning algorithms. Bulletin of Electrical Engineering and Informatics, 2021, 10, 2857-2865. | 0.6 | 0 |
| 388 | Real-time artificial intelligence for accelerator control: A study at the Fermilab Booster. Physical Review Accelerators and Beams, 2021, 24, . | 0.6 | 15 |
| 389 | Machine learning for high-throughput experimental exploration of metal halide perovskites. Joule, 2021, 5, 2797-2822. | 11.7 | 44 |
| 390 | Training Gaussian boson sampling by quantum machine learning. Quantum Machine Intelligence, 2021, 3, 1. | 2.7 | 3 |
| 391 | A Hybrid Neural Networkâ€“Particle Swarm Optimization Informed Spatial Interpolation Technique for Groundwater Quality Mapping in a Small Island Province of the Philippines. Toxics, 2021, 9, 273. | 1.6 | 18 |
| 392 | Simultaneous serotonin and dopamine monitoring across timescales by rapid pulse voltammetry with partial least squares regression. Analytical and Bioanalytical Chemistry, 2021, 413, 6747-6767. | 1.9 | 9 |
| 393 | Towards ML-Based Diagnostics of Laserâ€“Plasma Interactions. Sensors, 2021, 21, 6982. | 2.1 | 3 |
| 394 | Phase classification using neural networks: application to supercooled, polymorphic core-softened mixtures. Journal of Physics Condensed Matter, 2022, 34, 024002. | 0.7 | 6 |
| 395 | Machine learning the nuclear mass. Nuclear Science and Techniques/Hewuli, 2021, 32, 1. | 1.3 | 37 |
| 396 | Markovian Quantum Neuroevolution for Machine Learning. Physical Review Applied, 2021, 16, . | 1.5 | 13 |
| 397 | Analysis and Prediction of Hydrothermally Synthesized ZnO-Based Dye-Sensitized Solar Cell Properties Using Statistical and Machine-Learning Techniques. ACS Omega, 2021, 6, 29982-29992. | 1.6 | 14 |
| 398 | Programming with neural surrogates of programs. , 2021, , . | | 1 |
| 399 | Improving failure rates in pulsed SOT-MRAM switching by reinforcement learning. Microelectronics Reliability, 2021, 126, 114231. | 0.9 | 0 |
| 400 | Nonequilibrium thermodynamics of self-supervised learning. Physics Letters, Section A: General, Atomic and Solid State Physics, 2021, 419, 127756. | 0.9 | 1 |
| 403 | Magnetism trends in doped Ce-Cu intermetallics in the vicinity of quantum criticality: Realistic Kondo lattice models based on dynamical mean-field theory. Physical Review Materials, 2020, 4, . | 0.9 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 404 | A comprehensive neural networks study of the phase transitions of Potts model. New Journal of Physics, 2020, 22, 063016. | 1.2 | 18 |
| 405 | Determining Crucial Factors for the Popularity of Scientific Articles. Acta Physica Polonica A, 2020, 138, 41-47. | 0.2 | 0 |
| 406 | Artificial Intelligence for Monte Carlo Simulation in Medical Physics. Frontiers in Physics, 2021, 9, . | 1.0 | 11 |
| 407 | Deep Learning Analysis of Polaritonic Wave Images. ACS Nano, 2021, 15, 18182-18191. | 7.3 | 10 |
| 409 | Combining Particle-Based Simulations and Machine Learning to Understand Defect Kinetics in Thin Films of Symmetric Diblock Copolymers. Macromolecules, 2021, 54, 10074-10085. | 2.2 | 11 |
| 410 | Quantum Machine-Learning for Eigenstate Filtration in Two-Dimensional Materials. Journal of the American Chemical Society, 2021, 143, 18426-18445. | 6.6 | 22 |
| 411 | Generalization in Quantum Machine Learning: A Quantum Information Standpoint. PRX Quantum, 2021, 2, . | 3.5 | 55 |
| 412 | Machine learning on the electronâ€“boson mechanism in superconductors. New Journal of Physics, 2020, 22, 123014. | 1.2 | 3 |
| 413 | New trends in quantum machine learning <sup>(a)</sup>. Europhysics Letters, 2020, 132, 60004. | 0.7 | 13 |
| 414 | ML-Based Analysis of Particle Distributions in High-Intensity Laser Experiments: Role of Binning Strategy. Entropy, 2021, 23, 21. | 1.1 | 1 |
| 415 | Machine learning phases and criticalities without using real data for training. Physical Review B, 2020, 102, . | 1.1 | 8 |
| 416 | The role of machine learning to boost the bioenergy and biofuels conversion. Bioresource Technology, 2022, 343, 126099. | 4.8 | 76 |
| 417 | Using Graph Databases. EPJ Web of Conferences, 2020, 245, 04004. | 0.1 | 1 |
| 418 | Contemplating the Future. Thirty Years of Astronomical Discovery With UKIRT, 2020, , 335-343. | 0.3 | 0 |
| 419 | Reinforcement Learning Approach for Sub-Critical Current SOT-MRAM Switching. , 2021, , . | | 0 |
| 420 | Integrating advanced measurement and signal processing for reliability decision-making. Eksploatacja I Niezawodnosc, 2021, 23, 777-787. | 1.1 | 14 |
| 421 | Cluster Fragments in Amorphous Phosphorus and their Evolution under Pressure. Advanced Materials, 2022, 34, e2107515. | 11.1 | 13 |
| 422 | Nonclassical kernels in continuous-variable systems. Physical Review A, 2021, 104, . | 1.0 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 423 | A universal neural network for learning phases. European Physical Journal Plus, 2021, 136, 1. | 1.2 | 10 |
| 424 | Measurement-Based Feedback Quantum Control with Deep Reinforcement Learning for a Double-Well Nonlinear Potential. Physical Review Letters, 2021, 127, 190403. | 2.9 | 30 |
| 425 | Independent component analysis combined with Laplace inversion of spectrally resolved spin-alignment echo/T <sub>1</sub> 3D <sup>7</sup>Li NMR of superionic Li<sub>10</sub>GeP<sub>2</sub>S<sub>12</sub>. Zeitschrift Fur Physikalische Chemie, 2022, 236, 899-922. | 1.4 | 1 |
| 426 | Current Advances in Neural Networks. Annual Review of Statistics and Its Application, 2022, 9, 197-222. | 4.1 | 8 |
| 427 | Convolutional neural network applied for nanoparticle classification using coherent scatterometry data. Applied Optics, 2020, 59, 8426. | 0.9 | 9 |
| 428 | The viewing angle in AGN SED models: a data-driven analysis. Monthly Notices of the Royal Astronomical Society, 2021, 510, 687-707. | 1.6 | 13 |
| 429 | Determining liquid crystal properties with ordinal networks and machine learning. Chaos, Solitons and Fractals, 2022, 154, 111607. | 2.5 | 19 |
| 430 | Reinforcement Learning to Reduce Failures in SOT-MRAM Switching. , 2021, , . | | 0 |
| 431 | Biomaterials by design: Harnessing data for future development. Materials Today Bio, 2021, 12, 100165. | 2.6 | 13 |
| 432 | Unbiased Monte Carlo cluster updates with autoregressive neural networks. Physical Review Research, 2021, 3, . | 1.3 | 20 |
| 433 | Entanglement-Structured LSTM Boosts Chaotic Time Series Forecasting. Entropy, 2021, 23, 1491. | 1.1 | 4 |
| 434 | How to Use Machine Learning to Improve the Discrimination between Signal and Background at Particle Colliders. Applied Sciences (Switzerland), 2021, 11, 11076. | 1.3 | 3 |
| 435 | Global exploration of phase behavior in frustrated Ising models using unsupervised learning techniques. Physica A: Statistical Mechanics and Its Applications, 2022, 589, 126653. | 1.2 | 2 |
| 436 | Mismatching as a tool to enhance algorithmic performances of Monte Carlo methods for the planted clique model. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 113406. | 0.9 | 3 |
| 437 | Determinant-free fermionic wave function using feed-forward neural networks. Physical Review Research, 2021, 3, . | 1.3 | 11 |
| 438 | Electrostatic Discovery Atomic Force Microscopy. ACS Nano, 2022, 16, 89-97. | 7.3 | 11 |
| 439 | Dynamical symmetry breaking through AI: The dimer self-trapping transition. International Journal of Modern Physics B, 2022, 36, . | 1.0 | 1 |
| 440 | How To Use Neural Networks To Investigate Quantum Many-Body Physics. PRX Quantum, 2021, 2, . | 3.5 | 25 |

| # | Article | IF | Citations |
|---|---|---|---|
| 441 | Sapsan: Framework for Supernovae Turbulence Modeling with Machine Learning. Journal of Open Source Software, 2021, 6, 3199. | 2.0 | 1 |
| 442 | Recognition of orbital-angular-momentum modes with different topological charges and their unknown superpositions via machine learning. Physical Review A, 2021, 104, . | 1.0 | 12 |
| 443 | Gradient domain machine learning with composite kernels: improving the accuracy of PES and force fields for large molecules. Machine Learning: Science and Technology, 2022, 3, 015005. | 2.4 | 4 |
| 444 | Machineâ€Learningâ€Assisted Accurate Prediction of Molecular Optical Properties upon Aggregation. Advanced Science, 2022, 9, e2101074. | 5.6 | 17 |
| 445 | An introduction to quantum machine learning: from quantum logic to quantum deep learning. Quantum Machine Intelligence, 2021, 3, 1. | 2.7 | 34 |
| 446 | Neural network architectures based on the classical XY model. Physical Review B, 2021, 104, . | 1.1 | 2 |
| 447 | Tomography of time-dependent quantum Hamiltonians with machine learning. Physical Review A, 2021, 104, . | 1.0 | 4 |
| 448 | Quantum generative adversarial networks with multiple superconducting qubits. Npj Quantum Information, 2021, 7, . | 2.8 | 14 |
| 449 | Machine-Learning-Based Parameter Estimation of Gaussian Quantum States. IEEE Transactions on Quantum Engineering, 2022, 3, 1-13. | 2.9 | 7 |
| 450 | Machine Learning in High Energy Physics. Springer Theses, 2021, , 21-33. | 0.0 | 0 |
| 451 | A Study of First-Passage Time Minimization via Q-Learning in Heated Gridworlds. IEEE Access, 2021, 9, 159349-159363. | 2.6 | 1 |
| 452 | Supervised Classification Problemsâ€“Taxonomy of Dimensions and Notation for Problems Identification. IEEE Access, 2021, 9, 151386-151400. | 2.6 | 4 |
| 453 | Eigenvalue distribution of some nonlinear models of random matrices. Electronic Journal of Probability, 2021, 26, . | 0.5 | 2 |
| 454 | Machine learning of phase transitions in nonlinear polariton lattices. Communications Physics, 2022, 5, . | 2.0 | 7 |
| 455 | Deep learning in searching the spectroscopic redshift of quasars. Monthly Notices of the Royal Astronomical Society, 2022, 511, 4490-4499. | 1.6 | 4 |
| 456 | Reconstructing the kinematics of deep inelastic scattering with deep learning. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2022, 1025, 166164. | 0.7 | 12 |
| 457 | Social physics. Physics Reports, 2022, 948, 1-148. | 10.3 | 231 |
| 458 | Appearance of Random Matrix Theory in deep learning. Physica A: Statistical Mechanics and Its Applications, 2022, 590, 126742. | 1.2 | 6 |

| # | Article | IF | Citations |
|---|---|---|---|
| 459 | Learning phase transitions in the ferrimagnetic GdFeCo alloy. , 2020, , . | | 0 |
| 461 | Sample complexity of learning parametric quantum circuits. Quantum Science and Technology, 2022, 7, 025014. | 2.6 | 9 |
| 462 | The neutron star outer crust equation of state: a machine learning approach. Journal of Cosmology and Astroparticle Physics, 2022, 2022, 045. | 1.9 | 7 |
| 463 | Autoencoder-aided analysis of low-dimensional Hilbert spaces. Lithuanian Journal of Physics, 2021, 61, . | 0.1 | 0 |
| 464 | Efficient parametrization of the atomic cluster expansion. Physical Review Materials, 2022, 6, . | 0.9 | 23 |
| 465 | An artificial intelligence model for heart disease detection using machine learning algorithms. Healthcare Analytics, 2022, 2, 100016. | 2.6 | 65 |
| 466 | Physics-informed deep learning for data-driven solutions of computational fluid dynamics. Korean Journal of Chemical Engineering, 2022, 39, 515-528. | 1.2 | 13 |
| 467 | Estimation for iron contamination in Si solar cell by ideality factor: Deep neural network approach. Progress in Photovoltaics: Research and Applications, 0, , . | 4.4 | 2 |
| 468 | Astronomical big data processing using machine learning: A comprehensive review. Experimental Astronomy, 2022, 53, 1-43. | 1.6 | 25 |
| 469 | Novel Bayesian neural network based approach for nuclear charge radii. Physical Review C, 2022, 105, . | 1.1 | 26 |
| 470 | Natural language based analysis of SQuAD: An analytical approach for BERT. Expert Systems With Applications, 2022, 195, 116592. | 4.4 | 11 |
| 471 | Stark spectral line broadening modeling by machine learning algorithms. Neural Computing and Applications, 2022, 34, 6349. | 3.2 | 0 |
| 472 | Learning Langevin dynamics with QCD phase transition. EPJ Web of Conferences, 2022, 259, 10017. | 0.1 | 1 |
| 473 | Search for glitches in gamma-ray pulsars with deep learning. Astronomy and Astrophysics, 0, , . | 2.1 | 0 |
| 474 | A cautionary tale of decorrelating theory uncertainties. European Physical Journal C, 2022, 82, 1. | 1.4 | 9 |
| 475 | SUPPNet: Neural network for stellar spectrum normalisation. Astronomy and Astrophysics, 2022, 659, A199. | 2.1 | 4 |
| 476 | Quantum Reservoir Computing for Speckle Disorder Potentials. Condensed Matter, 2022, 7, 17. | 0.8 | 3 |
| 477 | Contactâ€Free Remote Manipulation of Hydrogel Properties Using Lightâ€Triggerable Nanoparticles: A Materials Science Perspective for Biomedical Applications. Advanced Healthcare Materials, 2022, 11, e2102088. | 3.9 | 12 |

| # | Article | IF | Citations |
|---|---|---|---|
| 478 | Toward Excellence of Electrocatalyst Design by Emerging Descriptorâ€Oriented Machine Learning. Advanced Functional Materials, 2022, 32, . | 7.8 | 43 |
| 479 | Screening toward the Development of Fingerprints of Atomic Environments Using Bond-Orientational Order Parameters. ACS Omega, 2022, 7, 4606-4613. | 1.6 | 2 |
| 480 | Seeking new physics in cosmology with Bayesian neural networks: Dark energy and modified gravity. Physical Review D, 2022, 105, . | 1.6 | 2 |
| 481 | Highly accurate machine learning prediction of crystal point groups for ternary materials from chemical formula. Scientific Reports, 2022, 12, 1577. | 1.6 | 9 |
| 482 | Identification of moyamoya disease based on cerebral oxygen saturation signals using machine learning methods. Journal of Biophotonics, 2022, , e202100388. | 1.1 | 2 |
| 483 | Berezinskiiâ€“Kosterlitzâ€“Thouless transition â€“ A universal neural network study with benchmarks. Results in Physics, 2022, 33, 105134. | 2.0 | 3 |
| 484 | Predicting magnetic anisotropy energies using site-specific spin-orbit coupling energies and machine learning: Application to iron-cobalt nitrides. Physical Review Materials, 2022, 6, . | 0.9 | 3 |
| 485 | Phase diagram of quantum generalized Potts-Hopfield neural networks. New Journal of Physics, 2022, 24, 033012. | 1.2 | 8 |
| 486 | Machine classification for probe-based quantum thermometry. Physical Review A, 2022, 105, . | 1.0 | 4 |
| 487 | Graph Neural Networks for Particle Tracking and Reconstruction. , 2022, , 387-436. | | 1 |
| 488 | Evaporation of liquid nanofilms: A minireview. Physics of Fluids, 2022, 34, 021302. | 1.6 | 2 |
| 489 | Matrix-Model Simulations Using Quantum Computing, Deep Learning, and Lattice Monte Carlo. PRX Quantum, 2022, 3, . | 3.5 | 17 |
| 490 | Evaporation Forecasting through Interpretable Data Analysis Techniques. Electronics (Switzerland), 2022, 11, 536. | 1.8 | 8 |
| 491 | Recent advances for quantum classifiers. Science China: Physics, Mechanics and Astronomy, 2022, 65, 1. | 2.0 | 40 |
| 492 | Bell nonlocality in networks. Reports on Progress in Physics, 2022, 85, 056001. | 8.1 | 78 |
| 493 | Deep Learning for the Modeling and Inverse Design of Radiative Heat Transfer. Physical Review Applied, 2021, 16, . | 1.5 | 20 |
| 494 | Deep learning the astrometric signature of dark matter substructure. Physical Review D, 2021, 104, . | 1.6 | 3 |
| 495 | Gauge Equivariant Neural Networks for Quantum Lattice Gauge Theories. Physical Review Letters, 2021, 127, 276402. | 2.9 | 14 |

| # | Article | IF | Citations |
|---|---|---|---|
| 496 | Matrix product states and projected entangled pair states: Concepts, symmetries, theorems. Reviews of Modern Physics, 2021, 93, . | 16.4 | 221 |
| 497 | Entropic Alternatives to Initialization. SSRN Electronic Journal, 0, , . | 0.4 | 0 |
| 498 | Multiscale molecular modelling: from electronic structure to dynamics of nanosystems and beyond. Physical Chemistry Chemical Physics, 2022, 24, 9051-9081. | 1.3 | 10 |
| 499 | Modern Machine Learning: Applications and Methods. Management and Industrial Engineering, 2022, , 19-61. | 0.3 | 1 |
| 501 | Noisy intermediate-scale quantum algorithms. Reviews of Modern Physics, 2022, 94, . | 16.4 | 521 |
| 502 | Machine learning as a tool in theoretical science. Nature Reviews Physics, 2022, 4, 145-146. | 11.9 | 7 |
| 503 | Machine-Learning-Assisted Quantum Control in a Random Environment. Physical Review Applied, 2022, 17, . | 1.5 | 9 |
| 504 | Supervised graph classification for chiral quantum walks. Physical Review A, 2022, 105, . | 1.0 | 6 |
| 505 | Machine learning for percolation utilizing auxiliary Ising variables. Physical Review E, 2022, 105, 024144. | 0.8 | 5 |
| 506 | Quantum error reduction with deep neural network applied at the post-processing stage. Quantum Information Processing, 2022, 21, 1. | 1.0 | 5 |
| 507 | Low-Power Artificial Neural Network Perceptron Based on Monolayer MoS<sub>2</sub>. ACS Nano, 2022, 16, 3684-3694. | 7.3 | 20 |
| 508 | Deep learning of deformation-dependent conductance in thin films: Nanobubbles in graphene. Physical Review B, 2022, 105, . | 1.1 | 4 |
| 509 | Joint machine learning analysis of muon spectroscopy data from different materials. Journal of Physics: Conference Series, 2022, 2164, 012018. | 0.3 | 1 |
| 510 | Machine learning in energy storage materials. , 2022, 1, 175-195. | | 45 |
| 511 | Machine-learning classification of two-dimensional vortex configurations. Physical Review A, 2022, 105, . | 1.0 | 3 |
| 512 | Machine learning primordial black hole formation. Physical Review D, 2022, 105, . | 1.6 | 0 |
| 513 | Variational autoencoder analysis of Ising model statistical distributions and phase transitions. European Physical Journal B, 2022, 95, . | 0.6 | 2 |
| 514 | Identification of high order closure terms from fully kinetic simulations using machine learning. Physics of Plasmas, 2022, 29, 032706. | 0.7 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 515 | Accurate, affordable, and generalizable machine learning simulations of transition metal x-ray absorption spectra using the XANESNET deep neural network. Journal of Chemical Physics, 2022, 156, 164102. | 1.2 | 17 |
| 516 | Evaluation of performance of machine learning methods in mining structureâ€“property data of halide perovskite materials. Chinese Physics B, 2022, 31, 056302. | 0.7 | 8 |
| 517 | Detection of Berezinskii-Kosterlitz-Thouless transition via Generative Adversarial Networks. SciPost Physics, 2022, 12, . | 1.5 | 4 |
| 518 | Migration of self-propelling agent in a turbulent environment with minimal energy consumption. Physics of Fluids, 2022, 34, 035117. | 1.6 | 3 |
| 519 | Generalized scale behavior and renormalization group for data analysis. Journal of Statistical Mechanics: Theory and Experiment, 2022, 2022, 033101. | 0.9 | 3 |
| 520 | Machine learning methods in predicting Down Syndrome. , 2022, , . | | 0 |
| 521 | Perspective: Predicting and optimizing thermal transport properties with machine learning methods. Energy and AI, 2022, 8, 100153. | 5.8 | 18 |
| 522 | Nuclear energy density functionals from machine learning. Physical Review C, 2022, 105, . | 1.1 | 18 |
| 523 | Determining impact parameters of heavy-ion collisions at low-intermediate incident energies using deep learning with convolutional neural networks. Physical Review C, 2022, 105, . | 1.1 | 6 |
| 524 | Boosted decision trees in the era of new physics: a smuon analysis case study. Journal of High Energy Physics, 2022, 2022, 1. | 1.6 | 11 |
| 525 | Persistence in complex systems. Physics Reports, 2022, 957, 1-73. | 10.3 | 24 |
| 526 | Neural network flows of low q-state Potts and clock models. New Journal of Physics, 2022, 24, 043040. | 1.2 | 8 |
| 527 | Randomized-Gauge Test for Machine Learning of Ising Model Order Parameter. Journal of the Physical Society of Japan, 2022, 91, . | 0.7 | 1 |
| 528 | Exploring Fresnel diffraction at a straight edge with a neural network. European Journal of Physics, 2022, 43, 035306. | 0.3 | 1 |
| 529 | Integration of machine learning and first principles models. AICHE Journal, 2022, 68, . | 1.8 | 23 |
| 530 | Learning quantum dynamics with latent neural ordinary differential equationsÂ. Physical Review A, 2022, 105, . | 1.0 | 10 |
| 531 | A tutorial on optimal control and reinforcement learning methods for quantum technologies. Physics Letters, Section A: General, Atomic and Solid State Physics, 2022, 434, 128054. | 0.9 | 22 |
| 532 | æ·±åº¦å¦ä¹ åœ¨é«˜èƒ½æç‰©çš„å®””ç”¨. Scientia Sinica: Physica, Mechanica Et Astronomica, 2021, , . | 0.2 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 533 | Convolutional Neural Networks for Radio Frequency Ray Tracing. , 2021, , . | | 1 |
| 534 | JAX, M.D. A framework for differentiable physics*. Journal of Statistical Mechanics: Theory and Experiment, 2021, 2021, 124016. | 0.9 | 15 |
| 535 | A machine learning approach to Bayesian parameter estimation. Npj Quantum Information, 2021, 7, . | 2.8 | 19 |
| 536 | Imaging by Unsupervised Feature Learning of the Wave Equation. Physical Review Applied, 2021, 16, . | 1.5 | 3 |
| 537 | Learning quantum phase transitions through topological data analysis. Physical Review B, 2021, 104, . | 1.1 | 11 |
| 538 | Nonlinear interferometry beyond classical limit enabled by cyclic dynamics. Nature Physics, 2022, 18, 167-171. | 6.5 | 20 |
| 539 | Adversarial Domain Adaptation via Class Correlation. , 2021, , . | | 0 |
| 540 | Optimized Machine Learning: Training and Classification Performance Using Quantum Computing. , 2021, , . | | 4 |
| 541 | Prediction and Inverse Design of Structural Colors of Nanoparticle Systems via Deep Neural Network. Nanomaterials, 2021, 11, 3339. | 1.9 | 8 |
| 542 | Industry 4.0 and International Collaborative Online Learning in a Higher Education Course on Machine Learning. , 2021, , . | | 5 |
| 543 | Electron-boson spectral density functions of cuprates obtained from optical spectra via machine learning. Physical Review B, 2021, 104, . | 1.1 | 0 |
| 544 | Symmetries and phase diagrams with real-space mutual information neural estimation. Physical Review E, 2021, 104, 064106. | 0.8 | 7 |
| 545 | Machine Learning-Assisted Analysis of Small Angle X-ray Scattering. , 2021, , . | | 3 |
| 546 | Digraph states and their neural network representations. Chinese Physics B, 0, , . | 0.7 | 2 |
| 547 | Quantum-Tailored Machine-Learning Characterization of a Superconducting Qubit. PRX Quantum, 2021, 2, . | 3.5 | 10 |
| 548 | Prediction of occurrence of extreme events using machine learning. European Physical Journal Plus, 2022, 137, 1. | 1.2 | 9 |
| 549 | Nuclei with Up to $$varvec{A=6}$$ Nucleons with Artificial Neural Network Wave Functions. Few-Body Systems, 2022, 63, 1. | 0.7 | 13 |
| 550 | Machine learning S-wave scattering phase shifts bypassing the radial SchrÃ¶dinger equation. European Physical Journal B, 2021, 94, 1. | 0.6 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 551 | Variational quantum anomaly detection: Unsupervised mapping of phase diagrams on a physical quantum computer. Physical Review Research, 2021, 3, . | 1.3 | 13 |
| 552 | Probabilistic Autoencoder Using Fisher Information. Entropy, 2021, 23, 1640. | 1.1 | 1 |
| 553 | Frontiers in computing for artificial intelligence. Journal of Instrumentation, 2022, 17, C03037. | 0.5 | 1 |
| 554 | Ranking the information content of distance measures. , 2022, 1, . | | 13 |
| 555 | Scale-invariant representation of machine learning. Physical Review E, 2022, 105, 044306. | 0.8 | 2 |
| 556 | Machine learning approach to the Floquetâ€“Lindbladian problem. Chaos, 2022, 32, 043117. | 1.0 | 1 |
| 557 | Applications and Techniques for Fast Machine Learning in Science. Frontiers in Big Data, 2022, 5, 787421. | 1.8 | 20 |
| 558 | Utilizing Adaptive Boosting to Detect Quantum Steerability. International Journal of Theoretical Physics, 2022, 61, . | 0.5 | 1 |
| 559 | Application of Unsupervised Transfer Technique Based on Deep Learning Model in Physical Training. Computational Intelligence and Neuroscience, 2022, 2022, 1-12. | 1.1 | 1 |
| 560 | RotEqNet: Rotation-equivariant network for fluid systems with symmetric high-order tensors. Journal of Computational Physics, 2022, 461, 111205. | 1.9 | 2 |
| 561 | Philosophy of science at sea: Clarifying the interpretability of machine learning. Philosophy Compass, 2022, 17, . | 0.7 | 11 |
| 562 | Data-driven causal inference of process-structure relationships in nanocatalysis. Current Opinion in Chemical Engineering, 2022, 36, 100818. | 3.8 | 9 |
| 563 | Efficient dendritic learning as an alternative to synaptic plasticity hypothesis. Scientific Reports, 2022, 12, 6571. | 1.6 | 20 |
| 564 | Comparison of Catalysts with MIRA21 Model in Heterogeneous Catalytic Hydrogenation of Aromatic Nitro Compounds. Catalysts, 2022, 12, 467. | 1.6 | 5 |
| 565 | Quantum kernels to learn the phases of quantum matter. Physical Review A, 2022, 105, . | 1.0 | 8 |
| 566 | Learning aerodynamics with neural network. Scientific Reports, 2022, 12, 6779. | 1.6 | 9 |
| 567 | A Comprehensive Study on the Role of Machine Learning in Hybrid Biometric Recognition. , 2022, , . | | 0 |
| 568 | Modeling of electron nonlocal transport in plasmas using artificial neural networks. Physical Review E, 2022, 105, . | 0.8 | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 569 | Dynamical reciprocity in interacting games: Numerical results and mechanism analysis. Physical Review E, 2022, 105, . | 0.8 | 4 |
| 570 | Intelligent metasurfaces: control, communication and computing. ELight, 2022, 2, . | 11.9 | 158 |
| 571 | Adaptive random quantum eigensolver. Physical Review A, 2022, 105, . | 1.0 | 0 |
| 572 | Physicochemical properties and detection of glucose syrup adulterated Kelulut ( <i>Heterotrigona) Tj ETQq1 1 0.784314 rgBT /Overlock 46, . | 0.9 | 4 |
| 573 | Data driven soliton solution of the nonlinear SchrÃ¶dinger equation with certain PT-symmetric potentials via deep learning. Chaos, 2022, 32, . | 1.0 | 6 |
| 574 | Interpretable machine-learning identification of the crossover from subradiance to superradiance in an atomic array. Journal of Physics B: Atomic, Molecular and Optical Physics, 0, , . | 0.6 | 0 |
| 575 | Predictive Modelling of Statistical Downscaling Based on Hybrid Machine Learning Model for Daily Rainfall in East-Coast Peninsular Malaysia. Symmetry, 2022, 14, 927. | 1.1 | 8 |
| 576 | Interfacing finite elements with deep neural operators for fast multiscale modeling of mechanics problems. Computer Methods in Applied Mechanics and Engineering, 2022, 402, 115027. | 3.4 | 38 |
| 577 | A method for ï¬nding the background potential of quantum devices from scanning gate microscopy data using machine learning. Machine Learning: Science and Technology, 0, , . | 2.4 | 2 |
| 578 | Learning algorithm reflecting universal scaling behavior near phase transitions. Physical Review Research, 2022, 4, . | 1.3 | 5 |
| 579 | Inverse molecular design from first principles: Tailoring organic chromophore spectra for optoelectronic applications. Journal of Chemical Physics, 2022, 156, 180901. | 1.2 | 6 |
| 580 | A machine learning approach to correct for mass resolution effects in simulated halo clustering statistics. Monthly Notices of the Royal Astronomical Society, 2022, 513, 4318-4331. | 1.6 | 2 |
| 581 | Research on Intelligent Bodybuilding System Based on Machine Learning. Journal of Sensors, 2022, 2022, 1-8. | 0.6 | 2 |
| 582 | Incremental learning of phase transition in Ising model: Preprocessing, finite-size scaling and critical exponents. Physica A: Statistical Mechanics and Its Applications, 2022, 600, 127538. | 1.2 | 2 |
| 583 | Reinforcement learning explains various conditional cooperation. Applied Mathematics and Computation, 2022, 427, 127182. | 1.4 | 7 |
| 584 | State Classification via a Random-Walk-Based Quantum Neural Network. Chinese Physics Letters, 2022, 39, 050301. | 1.3 | 1 |
| 585 | Quantum Continual Learning Overcoming Catastrophic Forgetting. Chinese Physics Letters, 2022, 39, 050303. | 1.3 | 3 |
| 586 | Network-Initialized Monte Carlo Based on Generative Neural Networks. Chinese Physics Letters, 2022, 39, 050701. | 1.3 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 587 | A New Look at the Spin Glass Problem from a Deep Learning Perspective. Entropy, 2022, 24, 697. | 1.1 | 3 |
| 588 | Soft mode in the dynamics of over-realizable online learning for soft committee machines. Physical Review E, 2022, 105, . | 0.8 | 0 |
| 589 | The machine learning in lithium-ion batteries: A review. Engineering Analysis With Boundary Elements, 2022, 141, 1-16. | 2.0 | 13 |
| 590 | Forecasting molecular dynamics energetics of polymers in solution from supervised machine learning. Chemical Science, 2022, 13, 7021-7033. | 3.7 | 5 |
| 592 | Role of stochastic noise and generalization error in the time propagation of neural-network quantum states. SciPost Physics, 2022, 12, . | 1.5 | 9 |
| 595 | Deep-Learning-Based Electrical Noise Removal Enables High Spectral Optoacoustic Contrast in Deep Tissue. IEEE Transactions on Medical Imaging, 2022, 41, 3182-3193. | 5.4 | 12 |
| 596 | Neural Annealing and Visualization of Autoregressive Neural Networks in the Newmanâ€“Moore Model. Condensed Matter, 2022, 7, 38. | 0.8 | 3 |
| 597 | Finite-Size Scaling on a Digital Quantum Simulator Using Quantum Restricted Boltzmann Machine. Frontiers in Physics, 0, 10, . | 1.0 | 2 |
| 598 | Renormalization-group-inspired neural networks for computing topological invariants. Physical Review B, 2022, 105, . | 1.1 | 1 |
| 599 | Local order metrics for two-phase media across length scales*. Journal of Physics A: Mathematical and Theoretical, 2022, 55, 274003. | 0.7 | 7 |
| 600 | Applying machine learning methods to prediction problems of lattice observables. SciPost Physics Proceedings, 2022, , . | 0.2 | 0 |
| 601 | Metalearning and data augmentation for mass-generalized jet taggers. Physical Review D, 2022, 105, . | 1.6 | 4 |
| 602 | Unveiling the pole structure of S-matrix using deep learning. Suplemento De La Revista Mexicana De FÃsica, 2022, 3, . | 0.1 | 0 |
| 603 | Bi-LSTM-Augmented Deep Neural Network for Multi-Gbps VCSEL-Based Visible Light Communication Link. Sensors, 2022, 22, 4145. | 2.1 | 6 |
| 604 | Efficient Bayesian phase estimation via entropy-based sampling. Quantum Science and Technology, 2022, 7, 035022. | 2.6 | 1 |
| 605 | Reinforcement learning to reduce failures in SOT-MRAM switching. Microelectronics Reliability, 2022, 135, 114570. | 0.9 | 0 |
| 606 | Using machine learning to identify epidemic threshold in complex networks. , 2021, , . | | 0 |
| 607 | Neural-network quantum states for periodic systems in continuous space. Physical Review Research, 2022, 4, . | 1.3 | 18 |

| # | Article | IF | Citations |
|---|---|---|---|
| 608 | Application of kernel ridge regression in predicting neutron-capture reaction cross-sections. Communications in Theoretical Physics, 2022, 74, 095302. | 1.1 | 6 |
| 609 | On the generalizability of artificial neural networks in spin models. SciPost Physics Core, 2022, 5, . | 0.9 | 5 |
| 610 | A machine learning-based methodology for pulse classification inÂdual-phase xenon time projection chambers. European Physical Journal C, 2022, 82, . | 1.4 | 0 |
| 611 | Self-learning emulators and eigenvector continuation. Physical Review Research, 2022, 4, . | 1.3 | 12 |
| 612 | Quantifying information of intracellular signaling: progress with machine learning. Reports on Progress in Physics, 2022, 85, 086602. | 8.1 | 10 |
| 613 | Deep-learning density functional theory Hamiltonian for efficient ab initio electronic-structure calculation. Nature Computational Science, 2022, 2, 367-377. | 3.8 | 38 |
| 614 | From predicting to learning dissipation from pair correlations of active liquids. Journal of Chemical Physics, 2022, 157, . | 1.2 | 4 |
| 615 | Deep learning approach to nuclear masses and <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi></mml:math> -decay half-lives. Physical Review C, 2022, 105, . | 1.1 | 8 |
| 616 | Estimating elliptic flow coefficient in heavy ion collisions using deep learning. Physical Review D, 2022, 105, . | 1.6 | 7 |
| 617 | Estimating the Euclidean quantum propagator with deep generative modeling of Feynman paths. Physical Review B, 2022, 105, . | 1.1 | 6 |
| 618 | Deciphering quantum fingerprints in electric conductance. Nature Communications, 2022, 13, . | 5.8 | 3 |
| 619 | A BFRC compressive strength prediction method via kernel extreme learning machine-genetic algorithm. Construction and Building Materials, 2022, 344, 128076. | 3.2 | 6 |
| 620 | Calculation of the Ground States of Spin Glasses Using a Restricted Boltzmann Machine. JETP Letters, 2022, 115, 466-470. | 0.4 | 2 |
| 621 | Development of a resource-efficient FPGA-based neural network regression model for the ATLAS muon trigger upgrades. European Physical Journal C, 2022, 82, . | 1.4 | 3 |
| 622 | Major Challenges and Future Approaches in the Employment of Blockchain and Machine Learning Techniques in the Health and Medicine. Security and Communication Networks, 2022, 2022, 1-11. | 1.0 | 11 |
| 623 | Graph representation-based machine learning framework for predicting electronic band structures of quantum-confined nanostructures. Science China Materials, 2022, 65, 3157-3170. | 3.5 | 5 |
| 624 | Experimental Quantumâ€Enhanced Machine Learning in Spinâ€Based Systems. Advanced Quantum Technologies, 0, , 2200005. | 1.8 | 3 |
| 625 | Transfer learning of phase transitions in percolation and directed percolation. Physical Review E, 2022, 105, . | 0.8 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 626 | Quantum neural networks force fields generation. Machine Learning: Science and Technology, 2022, 3, 035004. | 2.4 | 5 |
| 627 | Inferring Markovian quantum master equations of few-body observables in interacting spin chains. New Journal of Physics, 0, , . | 1.2 | 0 |
| 628 | Predicting the Properties of High-Performance Epoxy Resin by Machine Learning Using Molecular Dynamics Simulations. Nanomaterials, 2022, 12, 2353. | 1.9 | 4 |
| 629 | Configuration-Induced Directional Nonlinearity Enhancement in Composite Thermal Media. Frontiers in Physics, 0, 10, . | 1.0 | 2 |
| 630 | Singleâ€Shot Recognition of 3D Phase Images With Deep Learning. Laser and Photonics Reviews, 2022, 16, . | 4.4 | 7 |
| 631 | Stochastic normalizing flows as non-equilibrium transformations. Journal of High Energy Physics, 2022, 2022, . | 1.6 | 13 |
| 632 | Machine-Learning-Assisted Acceleration on High-Symmetry Materials Search: Space Group Predictions from Band Structures. Journal of Physical Chemistry C, 2022, 126, 12264-12273. | 1.5 | 2 |
| 633 | Metamaterials: From fundamental physics to intelligent design. , 2023, 2, 5-29. | | 30 |
| 634 | Learning deep Implicit Fourier Neural Operators (IFNOs) with applications to heterogeneous material modeling. Computer Methods in Applied Mechanics and Engineering, 2022, 398, 115296. | 3.4 | 21 |
| 635 | Recent progress in generative adversarial networks applied to inversely designing inorganic materials: A brief review. Computational Materials Science, 2022, 213, 111612. | 1.4 | 8 |
| 636 | On the neural network flow of spin configurations. Computational Materials Science, 2022, 213, 111634. | 1.4 | 1 |
| 637 | Efficient and robust entanglement generation with deep reinforcement learning for quantum metrology. New Journal of Physics, 2022, 24, 083011. | 1.2 | 5 |
| 638 | Quantum optimal control in quantum technologies. Strategic report on current status, visions and goals for research in Europe. EPJ Quantum Technology, 2022, 9, . | 2.9 | 123 |
| 639 | Causal Paths Allowing Simultaneous Control of Multiple Nanoparticle Properties Using Multiâ€Target Bayesian Inference. Advanced Theory and Simulations, 2022, 5, . | 1.3 | 2 |
| 640 | High-dimensional encryption in optical fibers using spatial modes of light and machine learning. Machine Learning: Science and Technology, 2022, 3, 035006. | 2.4 | 4 |
| 641 | Machine learning for microalgae detection and utilization. Frontiers in Marine Science, 0, 9, . | 1.2 | 16 |
| 642 | Machine learning estimation of magnetic parameters and classification of magnetic vortex states. Journal of Applied Physics, 2022, 132, 043904. | 1.1 | 1 |
| 643 | Variational quantum algorithm for Gaussian discrete solitons and their boson sampling. Physical Review A, 2022, 106, . | 1.0 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 644 | Exploring superadditivity of coherent information of noisy quantum channels through genetic algorithms. Physical Review A, 2022, 106, . | 1.0 | 2 |
| 645 | Genetic improvement of shoreline evolution forecasting models. , 2022, , . | | 2 |
| 646 | Machine learning predictions for local electronic properties of disordered correlated electron systems. Physical Review B, 2022, 106, . | 1.1 | 4 |
| 647 | A Critical Significance of Using Machine Learning in Strengthening Financial Risk Management in Banking Firms. , 2022, , . | | 3 |
| 648 | A Face Spoof Detection in Artificial Neural Networks Using Concepts of Machine Learning. , 2022, , . | | 0 |
| 649 | EL-RFSVM: An Ensemble Learning Framework Based on Support Vector Machine and Random Forests for Labour Resource Allocation. , 2022, , . | | 0 |
| 650 | Classification of Apples using Machine Learning. , 2022, , . | | 12 |
| 651 | Dark soliton detection using persistent homology. Chaos, 2022, 32, 073133. | 1.0 | 3 |
| 652 | Monitoring Fast Superconducting Qubit Dynamics Using a Neural Network. Physical Review X, 2022, 12, . | 2.8 | 9 |
| 653 | Towards an Approximation-Aware Computational Workflow Framework for Accelerating Large-Scale Discovery Tasks. , 2022, , . | | 0 |
| 654 | Semi-supervised physics guided deep learning framework: An application in modeling of gallium nitride based high electron mobility transistors. Journal of Applied Physics, 2022, 132, 044902. | 1.1 | 0 |
| 655 | Bayesian learning for optimal control of quantum many-body states in optical lattices. Physical Review A, 2022, 106, . | 1.0 | 2 |
| 656 | Data-driven model discovery of ideal four-wave mixing in nonlinear fibre optics. Scientific Reports, 2022, 12, . | 1.6 | 11 |
| 657 | Robust prediction of force chains in jammed solids using graph neural networks. Nature Communications, 2022, 13, . | 5.8 | 10 |
| 658 | Research on financial loan default risk prediction based on integrated model. , 2022, , . | | 0 |
| 659 | Neighborhood-based inference and restricted Boltzmann machine for microbe and drug associations prediction. PeerJ, 0, 10, e13848. | 0.9 | 3 |
| 660 | Neural network analysis of quasistationary magnetic fields in microcoils driven by short laser pulses. Scientific Reports, 2022, 12, . | 1.6 | 9 |
| 661 | Toward Deep-Learning-Assisted Spectrally Resolved Imaging of Magnetic Noise. Physical Review Applied, 2022, 18, . | 1.5 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 662 | Conditional Born machine for Monte Carlo event generation. Physical Review A, 2022, 106, . | 1.0 | 3 |
| 663 | NetKet 3: Machine Learning Toolbox for Many-Body Quantum Systems. , 0, , . | | 30 |
| 664 | Machine Learning Guides the Solution of Blocks Relocation Problem in Container Terminals. Transportation Research Record, 0, , 036119812211171. | 1.0 | 1 |
| 665 | Emerging technologies for combating pandemics. Expert Review of Medical Devices, 2022, 19, 533-538. | 1.4 | 3 |
| 666 | Gradient dynamics in reinforcement learning. Physical Review E, 2022, 106, . | 0.8 | 1 |
| 667 | DropTrackâ€"Automatic droplet tracking with YOLOv5 and DeepSORT for microfluidic applications. Physics of Fluids, 2022, 34, . | 1.6 | 11 |
| 668 | Matrix product states with backflow correlations. Physical Review B, 2022, 106, . | 1.1 | 3 |
| 669 | Machine learning in interpretation of electronic core-level spectra. Journal of Electron Spectroscopy and Related Phenomena, 2022, 260, 147243. | 0.8 | 4 |
| 670 | Experimental demonstration of adversarial examples in learning topological phases. Nature Communications, 2022, 13, . | 5.8 | 5 |
| 671 | Time-dependent Dirac Equation with Physics-Informed Neural Networks: Computation and Properties. Computer Physics Communications, 2022, 280, 108474. | 3.0 | 2 |
| 672 | Solutions to large beam-deflection problems by Taylor series and PadÃ© approximant for compliant mechanisms. Mechanism and Machine Theory, 2022, 177, 105033. | 2.7 | 6 |
| 674 | Predicting glass structure by physics-informed machine learning. Npj Computational Materials, 2022, 8, . | 3.5 | 9 |
| 675 | Machine-assisted agent-based modeling: Opening the black box. Journal of Computational Science, 2022, 64, 101854. | 1.5 | 8 |
| 676 | Multi-task learning on nuclear masses and separation energies with the kernel ridge regression. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2022, 834, 137394. | 1.5 | 14 |
| 677 | Prediction of threshold voltage of GaN HEMTs using deep learning model designed by genetic algorithm. Materials Science in Semiconductor Processing, 2022, 152, 107057. | 1.9 | 2 |
| 678 | Machine fault detection methods based on machine learning algorithms: A review. Mathematical Biosciences and Engineering, 2022, 19, 11453-11490. | 1.0 | 13 |
| 679 | Pure state tomography with adaptive Pauli measurements. , 2022, 52, 1. | | 1 |
| 680 | Numerical study on discharge characteristics of atmospheric dielectric barrier discharges by integrating machine learning. Wuli Xuebao/Acta Physica Sinica, 2022, . | 0.2 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 681 | Accelerating colloidal quantum dot innovation with algorithms and automation. Materials Advances, 2022, 3, 6950-6967. | 2.6 | 7 |
| 682 | Prediction ofÂChaotic Attractors inÂQuasiperiodically Forced Logistic Map Using Deep Learning. Springer Proceedings in Complexity, 2022, , 649-657. | 0.2 | 0 |
| 683 | Machine Learning Spectral Indicators of Topology. Springer Theses, 2022, , 79-93. | 0.0 | 1 |
| 684 | Emergence in Condensed Matter Physics. SpringerBriefs in Physics, 2022, , 11-43. | 0.2 | 0 |
| 685 | Quantum machine learning for chemistry and physics. Chemical Society Reviews, 2022, 51, 6475-6573. | 18.7 | 40 |
| 687 | Modeling Systems with Machine Learning BasedÂDifferential Equations. SSRN Electronic Journal, 0, , . | 0.4 | 1 |
| 688 | Numerical study on discharge characteristics of atmospheric dielectric barrier discharges by integrating machine learning. Wuli Xuebao/Acta Physica Sinica, 2022, . | 0.2 | 0 |
| 689 | Automated pH Adjustment Driven by Robotic Workflows and Active Machine Learning. Chemical Engineering Journal, 2023, 451, 139099. | 6.6 | 9 |
| 690 | Deep learning for non-parameterized MEMS structural design. Microsystems and Nanoengineering, 2022, 8, . | 3.4 | 12 |
| 691 | Persistent homology analysis of a generalized Aubry-AndrÃ©-Harper model. Physical Review B, 2022, 106, . | 1.1 | 7 |
| 692 | DADApy: Distance-based analysis of data-manifolds in Python. Patterns, 2022, 3, 100589. | 3.1 | 6 |
| 693 | Introduction to the dynamics of disordered systems: Equilibrium and gradient descent. Physica A: Statistical Mechanics and Its Applications, 2023, 631, 128152. | 1.2 | 3 |
| 694 | Data-centric machine learning in quantum information science. Machine Learning: Science and Technology, 2022, 3, 04LT01. | 2.4 | 6 |
| 695 | Thermodynamics and dielectric response of BaTiO3 by data-driven modeling. Npj Computational Materials, 2022, 8, . | 3.5 | 15 |
| 696 | Subaging in underparametrized deep neural networks. Machine Learning: Science and Technology, 2022, 3, 035013. | 2.4 | 0 |
| 697 | Decoding Optical Spectra with Neural Networks to Monitor the Elimination of Carbon Nanoagents from the Body. Optical Memory and Neural Networks (Information Optics), 2022, 31, 256-265. | 0.4 | 1 |
| 698 | Deep Learning the Functional Renormalization Group. Physical Review Letters, 2022, 129, . | 2.9 | 11 |
| 699 | Metric learning for kernel ridge regression: assessment of molecular similarity. Machine Learning: Science and Technology, 2022, 3, 035015. | 2.4 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 700 | A Posteriori Learning for Quasiâ€Geostrophic Turbulence Parametrization. Journal of Advances in Modeling Earth Systems, 2022, 14, . | 1.3 | 14 |
| 701 | Using machine learning to improve neutron identification in water Cherenkov detectors. Frontiers in Big Data, 0, 5, . | 1.8 | 2 |
| 702 | Provably efficient machine learning for quantum many-body problems. Science, 2022, 377, . | 6.0 | 65 |
| 703 | Machine learning-accelerated chemistry modeling of protoplanetary disks. Astronomy and Astrophysics, 2022, 666, L8. | 2.1 | 4 |
| 704 | Predicting solid state material platforms for quantum technologies. Npj Computational Materials, 2022, 8, . | 3.5 | 3 |
| 705 | Machine Learning for Detection and Prediction of Crop Diseases and Pests: A Comprehensive Survey. Agriculture (Switzerland), 2022, 12, 1350. | 1.4 | 39 |
| 706 | Designing quantum many-body matter with conditional generative adversarial networks. Physical Review Research, 2022, 4, . | 1.3 | 6 |
| 707 | Machine Learning for Harnessing Thermal Energy: From Materials Discovery to System Optimization. ACS Energy Letters, 2022, 7, 3204-3226. | 8.8 | 11 |
| 708 | The role of coherence theory in attractor quantum neural networks. Quantum - the Open Journal for Quantum Science, 0, 6, 794. | 0.0 | 1 |
| 709 | Rapid detection of phase transitions from Monte Carlo samples before equilibrium. SciPost Physics, 2022, 13, . | 1.5 | 0 |
| 710 | Imaging and computing with disorder. Nature Physics, 2022, 18, 980-985. | 6.5 | 14 |
| 711 | Replacing Neural Networks by Optimal Analytical Predictors for the Detection of Phase Transitions. Physical Review X, 2022, 12, . | 2.8 | 6 |
| 712 | Distance Measurement by Neural Network Learning of Near-Field Microwave Reflection Spectra. Journal of Sensors, 2022, 2022, 1-9. | 0.6 | 0 |
| 713 | Entanglement features of random neural network quantum states. Physical Review B, 2022, 106, . | 1.1 | 5 |
| 714 | The development of machine learning in lung surgery: A narrative review. Frontiers in Surgery, 0, 9, . | 0.6 | 0 |
| 715 | Analysis of Neural Network Predictions for Entanglement Self-Catalysis. Brazilian Journal of Physics, 2022, 52, . | 0.7 | 1 |
| 716 | Colloquium: Machine learning in nuclear physics. Reviews of Modern Physics, 2022, 94, . | 16.4 | 57 |
| 717 | A machine learning algorithm for direct detection of axion-like particle domain walls. Physics of the Dark Universe, 2022, 37, 101118. | 1.8 | 3 |

| # | Article | IF | Citations |
|---|---|---|---|
| 718 | Approximating solutions of the Chemical Master equation using neural networks. IScience, 2022, 25, 105010. | 1.9 | 17 |
| 719 | Symmetry-aware deep neural networks for high harmonic spectroscopy in solids. Optics Express, 0, , . | 1.7 | 0 |
| 720 | Three learning stages and accuracyâ€“efficiency tradeoff of restricted Boltzmann machines. Nature Communications, 2022, 13, . | 5.8 | 5 |
| 721 | Optimizing measurement-based cooling by reinforcement learning. Physical Review A, 2022, 106, . | 1.0 | 1 |
| 722 | Machine learning for excitation energy transfer dynamics. Physical Review Research, 2022, 4, . | 1.3 | 4 |
| 723 | Engine Overheating Prediction with Machine Learning Using Gaussian Mixture Model (GMM). , 0, , . | | 0 |
| 724 | Machineâ€Learning Spectral Indicators of Topology. Advanced Materials, 2022, 34, . | 11.1 | 10 |
| 725 | Investigation on Deep Learning Model of College English Based on Multimodal Learning Method. Computational Intelligence and Neuroscience, 2022, 2022, 1-10. | 1.1 | 1 |
| 726 | Machine learning models for photonic crystals band diagram prediction and gap optimisation. Photonics and Nanostructures - Fundamentals and Applications, 2022, 52, 101076. | 1.0 | 6 |
| 727 | Modelling dynamic 3D heat transfer in laser material processing based on physics informed neural networks. EPJ Web of Conferences, 2022, 266, 02010. | 0.1 | 1 |
| 728 | Machine learning assisted droplet trajectories extraction in dense emulsions. Communications in Applied and Industrial Mathematics, 2022, 13, 70-77. | 0.6 | 0 |
| 729 | Research and Application of Mathematical Knowledge Graph Based on Ontology Learning. Lecture Notes in Electrical Engineering, 2022, , 1387-1394. | 0.3 | 0 |
| 730 | Ancient Egyptian Hieroglyphs Segmentation and Classification with Convolutional Neural Networks. Communications in Computer and Information Science, 2022, , 126-139. | 0.4 | 3 |
| 731 | A Machine Learning approach to the classification of chemo-structural determinants in label-free SERS detection of proteins. , 2022, , . | | 1 |
| 732 | Quantum Multi-Agent Reinforcement Learning via Variational Quantum Circuit Design. , 2022, , . | | 18 |
| 733 | Hybrid Classical-Quantum Optimization for Ensemble Learning. , 2022, , . | | 2 |
| 734 | Training-free hyperparameter optimization of neural networks for electronic structures in matter. Machine Learning: Science and Technology, 2022, 3, 045008. | 2.4 | 5 |
| 735 | Unsupervised Learning of Rydberg Atom Array Phase Diagram with Siamese Neural Networks. New Journal of Physics, 0, , . | 1.2 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 736 | Flexible learning of quantum states with generative query neural networks. Nature Communications, 2022, 13, . | 5.8 | 3 |
| 737 | Measurement-induced criticality as a data-structure transition. Physical Review B, 2022, 106, . | 1.1 | 18 |
| 738 | Estimation and Mapping of Actual and Potential Grassland Root Carbon Storage: A Case Study in the Altay Region, China. Agronomy, 2022, 12, 2632. | 1.3 | 0 |
| 739 | Artificial neural network states for nonadditive systems. Physical Review B, 2022, 106, . | 1.1 | 0 |
| 740 | Deep-learning density functionals for gradient descent optimization. Physical Review E, 2022, 106, . | 0.8 | 2 |
| 741 | Observing how deep neural networks understand physics through the energy spectrum of 1D quantum mechanics. Progress of Theoretical and Experimental Physics, 2022, 2022, . | 1.8 | 1 |
| 742 | Generalization properties of restricted Boltzmann machine for short-range order. Chinese Physics B, 2023, 32, 067401. | 0.7 | 1 |
| 743 | Computational design of magnetic molecules and their environment using quantum chemistry, machine learning and multiscale simulations. Nature Reviews Chemistry, 2022, 6, 761-781. | 13.8 | 21 |
| 744 | Heat Conduction Plate Layout Optimization Using Physics-Driven Convolutional Neural Networks. Applied Sciences (Switzerland), 2022, 12, 10986. | 1.3 | 1 |
| 745 | Operationally meaningful representations of physical systems in neural networks. Machine Learning: Science and Technology, 2022, 3, 045025. | 2.4 | 3 |
| 746 | A Multidimensional Graph Fourier Transformation Neural Network for Vehicle Trajectory Prediction. , 2022, , . | | 2 |
| 747 | Obtaining Electronic Properties of Molecules through Combining Density Functional Tight Binding with Machine Learning. Journal of Physical Chemistry Letters, 2022, 13, 10132-10139. | 2.1 | 10 |
| 748 | Schwarz waveform relaxation-learning for advection-diffusion-reaction equations. Journal of Computational Physics, 2023, 473, 111657. | 1.9 | 1 |
| 749 | Decoding conformal field theories: From supervised to unsupervised learning. Physical Review Research, 2022, 4, . | 1.3 | 0 |
| 750 | Advancements in Dentistry with Artificial Intelligence: Current Clinical Applications and Future Perspectives. Healthcare (Switzerland), 2022, 10, 2188. | 1.0 | 21 |
| 751 | Detecting the chiral magnetic effect via deep learning. Physical Review C, 2022, 106, . | 1.1 | 5 |
| 752 | A simple guide from machine learning outputs to statistical criteria in particle physics. SciPost Physics Core, 2022, 5, . | 0.9 | 1 |
| 753 | Decoding the nuclear symmetry energy event-by-event in heavy-ion collisions with machine learning. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2022, 835, 137508. | 1.5 | 5 |

| # | Article | IF | Citations |
|---|---|---|---|
| 754 | Effects of environmental and anthropogenic factors on the distribution and abundance of microplastics in freshwater ecosystems. Science of the Total Environment, 2023, 856, 159030. | 3.9 | 19 |
| 755 | Combination of explainable machine learning and conceptual density functional theory: applications for the study of key solvation mechanisms. Physical Chemistry Chemical Physics, 2022, 24, 28314-28324. | 1.3 | 3 |
| 756 | Publisher's Note:. Astroparticle Physics, 2023, 147, 102794. | 1.9 | 14 |
| 757 | Application of machine and deep learning algorithms in optical microscopic detection of Plasmodium: A malaria diagnostic tool for the future. Photodiagnosis and Photodynamic Therapy, 2022, 40, 103198. | 1.3 | 11 |
| 758 | Machine Learning for Optical Scanning Probe Nanoscopy. Advanced Materials, 2023, 35, . | 11.1 | 8 |
| 759 | Random matrix analysis of deep neural network weight matrices. Physical Review E, 2022, 106, . | 0.8 | 5 |
| 760 | Experimental Identification of the Secondâ€Order Nonâ€Hermitian Skin Effect with Physicsâ€Graphâ€Informed Machine Learning. Advanced Science, 2022, 9, . | 5.6 | 27 |
| 761 | Analysis of the Application Efficiency of TensorFlow and PyTorch in Convolutional Neural Network. Sensors, 2022, 22, 8872. | 2.1 | 7 |
| 762 | Unsupervised machine learning approaches to the q-state Potts model. European Physical Journal B, 2022, 95, . | 0.6 | 3 |
| 763 | Machine learning of pair-contact process with diffusion. Scientific Reports, 2022, 12, . | 1.6 | 1 |
| 764 | Harnessing interpretable machine learning for holistic inverse design of origami. Scientific Reports, 2022, 12, . | 1.6 | 1 |
| 765 | Physics-informed Machine Learning for Modeling Turbulence in Supernovae. Astrophysical Journal, 2022, 940, 26. | 1.6 | 6 |
| 766 | A perspective on machine learning and data science for strongly correlated electron problems. Carbon Trends, 2022, 9, 100231. | 1.4 | 4 |
| 767 | Feature extended energy landscape model for interpreting coercivity mechanism. Communications Physics, 2022, 5, . | 2.0 | 5 |
| 768 | A method for approximating optimal statistical significances with machine-learned likelihoods. European Physical Journal C, 2022, 82, . | 1.4 | 6 |
| 769 | Modeling systems with machine learning based differential equations. Chaos, Solitons and Fractals, 2022, 165, 112872. | 2.5 | 0 |
| 770 | Extending the reach of quantum computing for materials science with machine learning potentials. AIP Advances, 2022, 12, 115321. | 0.6 | 1 |
| 771 | Learning physics-consistent particle interactions. , 2022, 1, . | | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 772 | Unsupervised machine learning of quenched gauge symmetries: A proof-of-concept demonstration. Physical Review Research, 2022, 4, . | 1.3 | 0 |
| 773 | Continuous-Mixture Autoregressive Networks Learning the Kosterlitz-Thouless Transition. Chinese Physics Letters, 2022, 39, 120502. | 1.3 | 8 |
| 774 | Electronic Synaptic Devices with High Thermostability Induced by Embedded Tungsten Disulfide Quantum Dots for Machine Learning. Advanced Electronic Materials, 0, , 2200876. | 2.6 | 0 |
| 775 | Tailoring Structureâ€Borne Sound through Bandgap Engineering in Phononic Crystals and Metamaterials: A Comprehensive Review. Advanced Functional Materials, 2023, 33, . | 7.8 | 37 |
| 776 | Towards Explainable AutoML Using Error Decomposition. Lecture Notes in Computer Science, 2022, , 177-190. | 1.0 | 0 |
| 777 | Noise-Adaptive Intelligent Programmable Meta-Imager. , 2022, 2022, . | | 4 |
| 778 | Photonic quantum Hall effects. , 2024, , 575-586. | | 0 |
| 779 | Neural network potentials for chemistry: concepts, applications and prospects. , 2023, 2, 28-58. | | 17 |
| 780 | Applying deep reinforcement learning to the HP model for protein structure prediction. Physica A: Statistical Mechanics and Its Applications, 2023, 609, 128395. | 1.2 | 2 |
| 781 | HADB: A materials-property database for hard-coating alloys. Thin Solid Films, 2023, 766, 139627. | 0.8 | 1 |
| 782 | Analysis of the effect of additives on the fermentation quality of whole-plant corn silage based on machine learning. Optik, 2023, 273, 170444. | 1.4 | 2 |
| 783 | A deep learning method for the trajectory reconstruction of cosmic rays with the DAMPE mission. Astroparticle Physics, 2023, 146, 102795. | 1.9 | 2 |
| 784 | Readability Research: An Interdisciplinary Approach. Foundations and Trends in Human-Computer Interaction, 2022, 16, 214-324. | 1.8 | 6 |
| 785 | CLASSIFICATION OF Phaseolus lunatus L. USING IMAGE ANALYSIS AND MACHINE LEARNING MODELS. Revista Caatinga, 2022, 35, 772-782. | 0.3 | 1 |
| 786 | Convolutional neural network-based image recognition for animals. , 2022, , . | | 0 |
| 787 | The physics of learning machines. Contemporary Physics, 2022, 63, 34-60. | 0.8 | 1 |
| 788 | Hammering with the telescope. Frontiers in Artificial Intelligence, 0, 5, . | 2.0 | 0 |
| 789 | Thermodynamics of the Ising Model Encoded in Restricted Boltzmann Machines. Entropy, 2022, 24, 1701. | 1.1 | 2 |

| # | Article | IF | Citations |
|---|---|---|---|
| 790 | Neural tensor contractions and the expressive power of deep neural quantum states. Physical Review B, 2022, 106, . | 1.1 | 18 |
| 791 | Implementation of BP neural network acceleration based on FPGA. , 2022, , . | | 1 |
| 792 | A Comparative Study for Machine Learning Models in Retail Demand Forecasting. Smart Innovation, Systems and Technologies, 2023, , 273-282. | 0.5 | 0 |
| 793 | Machine learning phase transitions of the three-dimensional Ising universality class*. Chinese Physics C, 2023, 47, 034101. | 1.5 | 3 |
| 794 | Quantum Teleportation Error Suppression Algorithm Based on Convolutional Neural Networks and Quantum Topological Semion Codes. Quantum Engineering, 2022, 2022, 1-10. | 1.2 | 3 |
| 795 | Partial quantisation scheme for optimising the performance of hopfield network. Frontiers in Physics, 0, 10, . | 1.0 | 0 |
| 796 | Supervised Hebbian learning. Europhysics Letters, 2023, 141, 11001. | 0.7 | 10 |
| 797 | Number-state preserving tensor networks as classifiers for supervised learning. Frontiers in Physics, 0, 10, . | 1.0 | 3 |
| 798 | Accelerated motional cooling with deep reinforcement learning. Physical Review Research, 2022, 4, . | 1.3 | 2 |
| 799 | Parallel Learning between Science for AI and AI for Science: A Brief Overview and Perspective. , 2022, , . | | 1 |
| 800 | Toward a Mobility-Preserving Coarse-Grained Model: A Data-Driven Approach. Journal of Chemical Theory and Computation, 2022, 18, 7108-7120. | 2.3 | 4 |
| 801 | Machine learning-aided atomic structure identification of interfacial ionic hydrates from AFM images. National Science Review, 2023, 10, . | 4.6 | 4 |
| 802 | Artificial Intelligence and Advanced Materials. Advanced Materials, 2023, 35, . | 11.1 | 10 |
| 804 | Searching topological magnetic textures with machine learning. Physics-Uspekhi, 0, , . | 0.8 | 0 |
| 805 | Machine-Learning-Assisted Manipulation and Readout of Molecular Spin Qubits. Physical Review Applied, 2022, 18, . | 1.5 | 1 |
| 806 | Controlling quantum effects in enhanced strong-field ionisation with machine-learning techniques. Journal of Physics B: Atomic, Molecular and Optical Physics, 2022, 55, 245501. | 0.6 | 1 |
| 807 | A universal training scheme and the resulting universality for machine learning phases. Progress of Theoretical and Experimental Physics, 2023, 2023, . | 1.8 | 3 |
| 808 | Assessing the foundation and applicability of some dark energy fluid models in the Dirac-Born-Infeld framework. International Journal of Modern Physics A, 0, , . | 0.5 | 4 |

| # | Article | IF | Citations |
|---|---|---|---|
| 809 | Neural network evidence of a weakly first-order phase transition for the two-dimensional 5-state Potts model. European Physical Journal Plus, 2022, 137, . | 1.2 | 1 |
| 810 | Stable Many-Body Resonances in Open Quantum Systems. Symmetry, 2022, 14, 2562. | 1.1 | 1 |
| 811 | Denoising scanning tunneling microscopy images of graphene with supervised machine learning. Physical Review Materials, 2022, 6, . | 0.9 | 6 |
| 812 | A transferable recommender approach for selecting the best density functional approximations in chemical discovery. Nature Computational Science, 2023, 3, 38-47. | 3.8 | 10 |
| 813 | Emulating quantum dynamics with neural networks via knowledge distillation. Frontiers in Materials, 0, 9, . | 1.2 | 1 |
| 814 | Machine learning-assisted materials development and device management in batteries and supercapacitors: performance comparison and challenges. Journal of Materials Chemistry A, 2023, 11, 3904-3936. | 5.2 | 5 |
| 815 | Machine learning based nonlinear adaptive optimal control of capacitive micro-actuator subjected to electrostatic field. Journal of the Brazilian Society of Mechanical Sciences and Engineering, 2023, 45, . | 0.8 | 0 |
| 816 | Machine learning and artificial intelligence in CNC machine tools, A review. , 2023, 2, 100009. | | 21 |
| 817 | Quantum Multiagent Actorâ€“Critic Neural Networks for Internet-Connected Multirobot Coordination in Smart Factory Management. IEEE Internet of Things Journal, 2023, 10, 9942-9952. | 5.5 | 7 |
| 818 | Artificial intelligence and machine learning for quantum technologies. Physical Review A, 2023, 107, . | 1.0 | 23 |
| 819 | SYMBA: symbolic computation of squared amplitudes in high energy physics with machine learning. Machine Learning: Science and Technology, 2023, 4, 015007. | 2.4 | 3 |
| 820 | Unsupervised Data-Driven Classification of Topological Gapped Systems with Symmetries. Physical Review Letters, 2023, 130, . | 2.9 | 5 |
| 821 | Categorical Variable Mapping Considerations in Classification Problems: Protein Application. Mathematics, 2023, 11, 279. | 1.1 | 0 |
| 822 | Framework for Contrastive Learning Phases of Matter Based on Visual Representations. Chinese Physics Letters, 2023, 40, 027501. | 1.3 | 1 |
| 823 | Reconstruction of fast neutron direction in segmented organic detectors using deep learning. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2023, 1049, 168024. | 0.7 | 1 |
| 824 | Machine learning applications for urban photovoltaic potential estimation: A survey. Neurocomputing, 2023, 526, 80-95. | 3.5 | 1 |
| 825 | Data-driven many-body potentials from density functional theory for aqueous phase chemistry. Chemical Physics Reviews, 2023, 4, . | 2.6 | 4 |
| 826 | On-line evaluation and monitoring technology for material surface integrity in laser shock peening â€“ A review. Journal of Materials Processing Technology, 2023, 313, 117851. | 3.1 | 15 |

| # | Article | IF | Citations |
|---|---|---|---|
| 827 | Proactive Push Research on Personalized Learning Resources Based on Machine Learning. , 2022, , . | | 1 |
| 828 | Neural-network quantum states for a two-leg Bose-Hubbard ladder under magnetic flux. Physical Review A, 2022, 106, . | 1.0 | 3 |
| 829 | Data Analytics and Machine Learning for Reliable Energy Management: A Case Study. , 2022, , . | | 1 |
| 830 | Inferring the Physics of Structural Evolution of Multicomponent Polymers via Machine-Learning-Accelerated Method. Chinese Journal of Polymer Science (English Edition), 2023, 41, 1377-1385. | 2.0 | 1 |
| 831 | Tuneable Gaussian entanglement in levitated nanoparticle arrays. Npj Quantum Information, 2022, 8, . | 2.8 | 2 |
| 832 | Exploring Explicit Coarse-Grained Structure in Artificial Neural Networks. Chinese Physics Letters, 2023, 40, 020501. | 1.3 | 1 |
| 833 | Presence and Absence of Barren Plateaus in Tensor-Network Based Machine Learning. Physical Review Letters, 2022, 129, . | 2.9 | 11 |
| 834 | Mateverse, the Future Materials Science Computation Platform Based on Metaverse. Journal of Physical Chemistry Letters, 2023, 14, 148-157. | 2.1 | 4 |
| 835 | Unsupervised generalization of correlated quantum dynamics on disordered lattices. Physical Review A, 2023, 107, . | 1.0 | 0 |
| 836 | Unsupervised and supervised learning of interacting topological phases from single-particle correlation functions. SciPost Physics, 2023, 14, . | 1.5 | 13 |
| 837 | Exponential data encoding for quantum supervised learning. Physical Review A, 2023, 107, . | 1.0 | 7 |
| 838 | Relevant Analytic Spontaneous Magnetization Relation for the Face-Centered-Cubic Ising Lattice. Entropy, 2023, 25, 197. | 1.1 | 0 |
| 839 | Unsupervised learning of interacting topological phases from experimental observables. Fundamental Research, 2023, , . | 1.6 | 1 |
| 840 | Deep Reinforcement Learning for Preparation of Thermal and Prethermal Quantum States. Physical Review Applied, 2023, 19, . | 1.5 | 2 |
| 841 | Simple deep-learning approach for <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î±</mml:mi></mml:math> -decay half-life studies. Physical Review C, 2023, 107, . | 1.1 | 2 |
| 842 | Machine learning for nanoplasmonics. Nature Nanotechnology, 2023, 18, 111-123. | 15.6 | 15 |
| 843 | Role of Buccal Cells in Neurodegeneration. , 2023, , 1-16. | | 0 |
| 844 | Assessing Metabolic Markers in Glioblastoma Using Machine Learning: A Systematic Review. Metabolites, 2023, 13, 161. | 1.3 | 1 |

| # | Article | IF | Citations |
|---|---|---|---|
| 845 | Analysis and design of transition radiation in layered uniaxial crystals using Tandem neural networks. Journal of the Optical Society of America B: Optical Physics, 0, , . | 0.9 | 0 |
| 846 | Machine Learning Reveals Memory of the Parent Phases in Ferroelectric Relaxors Ba(Ti1â^'x$_{1-x}$,Zr) Tj ETQq1 1 0.784314 rgBT /O | 1.3 | 0 |
| 847 | Optimization of TCP Congestion Control Algorithms Loss-Based in Wireless Network. Communications in Computer and Information Science, 2023, , 381-392. | 0.4 | 0 |
| 848 | Shielded Reinforcement Learning: A review of reactive methods for safe learning. , 2023, , . | | 0 |
| 849 | <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline" id="d1e1121" altimg="si485.svg"><mml:mi>p</mml:mi></mml:math>-adic statistical field theory and deep belief networks. Physica A: Statistical Mechanics and Its Applications, 2023, 612, 128492. | 1.2 | 4 |
| 850 | Egyptian Hieroglyphs Segmentation with Convolutional Neural Networks. Algorithms, 2023, 16, 79. | 1.2 | 5 |
| 851 | mlpack 4: a fast, header-only C++ machine learning library. Journal of Open Source Software, 2023, 8, 5026. | 2.0 | 2 |
| 852 | Taming hyperparameter tuning in continuous normalizing flows using the JKO scheme. Scientific Reports, 2023, 13, . | 1.6 | 2 |
| 853 | Machine learning light hypernuclei. Nuclear Physics A, 2023, 1032, 122625. | 0.6 | 2 |
| 854 | Physical information-fused deep learning model ensembled with a subregion-specific sampling method for predicting flood dynamics. Journal of Hydrology, 2023, 620, 129465. | 2.3 | 4 |
| 855 | Study of phase transition of Potts model with Domain Adversarial Neural Network. Physica A: Statistical Mechanics and Its Applications, 2023, 617, 128666. | 1.2 | 3 |
| 856 | Diagnosis of ultrafast ultraintense laser pulse characteristics by machine-learning-assisted electron spin. Matter and Radiation at Extremes, 2023, 8, . | 1.5 | 1 |
| 857 | Photon/electron classification in liquid argon detectors by means of Soft Computing. Engineering Applications of Artificial Intelligence, 2023, 122, 106079. | 4.3 | 0 |
| 858 | New metric formulas that include measurement errors in machine learning for natural sciences. Expert Systems With Applications, 2023, 224, 120013. | 4.4 | 0 |
| 859 | Sophisticated deep learning with on-chip optical diffractive tensor processing. Photonics Research, 2023, 11, 1125. | 3.4 | 4 |
| 860 | Identifying lightning structures via machine learning. Chaos, Solitons and Fractals, 2023, 170, 113346. | 2.5 | 1 |
| 861 | Ultra high energy cosmic rays The intersection of the Cosmic and Energy Frontiers. Astroparticle Physics, 2023, 149, 102819. | 1.9 | 10 |
| 862 | Machine Learning Approach in Human Resources Department. Advances in Computer and Electrical Engineering Book Series, 2023, , 271-294. | 0.2 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 863 | Efficient numerical simulation of atmospheric pulsed discharges by introducing deep learning. Frontiers in Physics, 0, 11, . | 1.0 | 2 |
| 864 | Neural Network Driven by Space-time Partial Differential Equation for Predicting Sea Surface Temperature. , 2022, , . | | 2 |
| 865 | Target Detection Framework for Lobster Eye X-Ray Telescopes with Machine-learning Algorithms. Astrophysical Journal, Supplement Series, 2023, 264, 43. | 3.0 | 2 |
| 866 | Nuclear charge radii in Bayesian neural networks revisited. Physics Letters, Section B: Nuclear, Elementary Particle and High-Energy Physics, 2023, 838, 137726. | 1.5 | 12 |
| 867 | Kernel-based quantum regressor models learning non-Markovianity. Physical Review A, 2023, 107, . | 1.0 | 2 |
| 868 | Physics-guided genetic programming for predicting field-monitored suction variation with effects of vegetation and atmosphere. Engineering Geology, 2023, 315, 107031. | 2.9 | 0 |
| 869 | Efficient numerical simulation on dielectric barrier discharges at atmospheric pressure integrated by deep neural network. Journal of Applied Physics, 2023, 133, . | 1.1 | 3 |
| 870 | Virtual distillation with noise dilution. Physical Review A, 2023, 107, . | 1.0 | 2 |
| 871 | Spatial distribution order parameter prediction of collective system using graph network. Chinese Physics B, 0, , . | 0.7 | 1 |
| 872 | Reigniting the power of artificial intelligence in education sector for the educators and students competence. , 2023, , 103-116. | | 5 |
| 873 | Certificates of quantum many-body properties assisted by machine learning. Physical Review Research, 2023, 5, . | 1.3 | 0 |
| 875 | Learning quantum systems. Nature Reviews Physics, 2023, 5, 141-156. | 11.9 | 24 |
| 876 | Benchmarking energy consumption and latency for neuromorphic computing in condensed matter and particle physics. , 2023, 1, 016101. | | 3 |
| 877 | Confinement in non-Abelian lattice gauge theory via persistent homology. Physical Review D, 2023, 107, . | 1.6 | 2 |
| 878 | Quantum machine learning: from physics to software engineering. Advances in Physics: X, 2023, 8, . | 1.5 | 10 |
| 879 | Improving the performance of fermionic neural networks with the <scp>Slater</scp> exponential Ansatz. International Journal of Quantum Chemistry, 0, , . | 1.0 | 0 |
| 880 | Data-driven selection and spectral classification of white dwarf stars. Monthly Notices of the Royal Astronomical Society, 2023, 521, 760-771. | 1.6 | 4 |
| 881 | Data-driven approximation for extracting the transition dynamics of a genetic regulatory network with non-Gaussian LÃ©vy noise. Journal of Statistical Mechanics: Theory and Experiment, 2023, 2023, 023403. | 0.9 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 882 | Inverse design of microwave waveguide devices based on deep physics-informed neural networks. Wuli Xuebao/Acta Physica Sinica, 2023, 72, 080201. | 0.2 | 0 |
| 883 | Fundamental limits to learning closed-form mathematical models from data. Nature Communications, 2023, 14, . | 5.8 | 4 |
| 884 | QBoost for regression problems: solving partial differential equations. Quantum Information Processing, 2023, 22, . | 1.0 | 0 |
| 885 | Similarity assessment and model migration for measurement processes. International Journal of Quality and Reliability Management, 2023, ahead-of-print, . | 1.3 | 0 |
| 886 | Studies of different kernel functions in nuclear mass predictions with kernel ridge regression. Frontiers in Physics, 0, 11, . | 1.0 | 2 |
| 887 | Imaginary components of out-of-time-order correlator and information scrambling for navigating the learning landscape of a quantum machine learning model. Physical Review Research, 2023, 5, . | 1.3 | 7 |
| 888 | Machine learning phases in swarming systems. Machine Learning: Science and Technology, 2023, 4, 015028. | 2.4 | 1 |
| 889 | Machine learning coarse-grained models of dissolutive wetting: a droplet on soluble surfaces. Physical Chemistry Chemical Physics, 2023, 25, 7487-7495. | 1.3 | 2 |
| 891 | Foundations of machine learning for low-temperature plasmas: methods and case studies. Plasma Sources Science and Technology, 2023, 32, 024003. | 1.3 | 8 |
| 892 | Application of neural networks to the prediction of the compressive capacity of corroded steel plates. Frontiers in Built Environment, 0, 9, . | 1.2 | 0 |
| 893 | Machine learning nonequilibrium electron forces for spin dynamics of itinerant magnets. Npj Computational Materials, 2023, 9, . | 3.5 | 3 |
| 894 | Supernova search with active learning in ZTF DR3. Astronomy and Astrophysics, 2023, 672, A111. | 2.1 | 1 |
| 895 | Precision studies of QCD in the low energy domain of the EIC. Progress in Particle and Nuclear Physics, 2023, 131, 104032. | 5.6 | 19 |
| 896 | Characterization of a Driven Two-Level Quantum System by Supervised Learning. Entropy, 2023, 25, 446. | 1.1 | 1 |
| 897 | ESR-PINNs: Physics-Informed Neural Networks with Expansion-Shrinkage Resampling Selection Strategies. Chinese Physics B, 0, , . | 0.7 | 0 |
| 898 | Prediction and Control in DNA Nanotechnology. ACS Applied Bio Materials, 2024, 7, 626-645. | 2.3 | 5 |
| 899 | A quantum information processing machine for computing by observables. Proceedings of the National Academy of Sciences of the United States of America, 2023, 120, . | 3.3 | 1 |
| 900 | Neural network-based control of an ultrafast laser. Nuclear Instruments and Methods in Physics Research, Section A: Accelerators, Spectrometers, Detectors and Associated Equipment, 2023, , 168195. | 0.7 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 901 | The Gulf of Mexico in trouble: Big data solutions to climate change science. Frontiers in Marine Science, 0, 10, . | 1.2 | 4 |
| 902 | Systematically improvable mean-field variational ansatz for strongly correlated systems: Application to the Hubbard model. Physical Review B, 2023, 107, . | 1.1 | 2 |
| 903 | Uncertainty-aware predictions of molecular x-ray absorption spectra using neural network ensembles. Physical Review Research, 2023, 5, . | 1.3 | 9 |
| 904 | Application of artificial neural networks for modeling of electronic excitation dynamics in 2D lattice: Direct and inverse problems. AIP Advances, 2023, 13, 035224. | 0.6 | 0 |
| 905 | Trigger Detection forÂtheÂsPHENIX Experiment viaÂBipartite Graph Networks withÂSet Transformer. Lecture Notes in Computer Science, 2023, , 51-67. | 1.0 | 1 |
| 906 | Metabolomics integrated with machine learning to discriminate the geographic origin of Rougui Wuyi rock tea. Npj Science of Food, 2023, 7, . | 2.5 | 5 |
| 907 | Neural-network solutions to stochastic reaction networks. Nature Machine Intelligence, 2023, 5, 376-385. | 8.3 | 5 |
| 908 | Deep learning representations for quantum many-body systems on heterogeneous hardware. Machine Learning: Science and Technology, 2023, 4, 015035. | 2.4 | 1 |
| 909 | A review of deep learning and machine learning techniques for hydrological inflow forecasting. Environment, Development and Sustainability, 2023, 25, 12189-12216. | 2.7 | 6 |
| 910 | Fill in the Blank: Transferrable Deep Learning Approaches to Recover Missing Physical Field Information. Advanced Materials, 2023, 35, . | 11.1 | 6 |
| 911 | Machine learning of the well-known things. Theoretical and Mathematical Physics(Russian) Tj ETQq0 0 0 rgBT /Overlock 10 Tf 50 342 Td | 0.3 | 0 |
| 912 | Assessing machine learning adoption at the firm level: the moderating effect of the environmental context. Procedia Computer Science, 2023, 219, 1034-1042. | 1.2 | 0 |
| 913 | Learning the black hole metric from holographic conductivity. Physical Review D, 2023, 107, . | 1.6 | 2 |
| 914 | Application of Computer Vision in Machine Learning-Based Diagnosis of Water Production Mechanisms in Oil Wells. SPE Journal, 2023, 28, 2365-2384. | 1.7 | 1 |
| 915 | Classification of four-qubit entangled states via machine learning. Physical Review A, 2023, 107, . | 1.0 | 3 |
| 916 | Machine Learning Understands Knotted Polymers. Macromolecules, 2023, 56, 2899-2909. | 2.2 | 3 |
| 917 | Machine-learning screening of luminogens with aggregation-induced emission characteristics for fluorescence imaging. Journal of Nanobiotechnology, 2023, 21, . | 4.2 | 1 |
| 918 | Association between Posttreatment Serum Platelet-to-Lymphocyte Ratio and Distant Metastases in Patients with Hepatocellular Carcinoma Receiving Curative Radiation Therapy. Cancers, 2023, 15, 1978. | 1.7 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 919 | Examination of machine learning for assessing physical effects: Learning the relativistic continuum mass table with kernel ridge regression*. Chinese Physics C, 2023, 47, 074108. | 1.5 | 3 |
| 920 | Two types of neural network representations of quantum mixed states. Wuli Xuebao/Acta Physica Sinica, 2023, . | 0.2 | 1 |
| 921 | Machine learning enables precise holographic characterization of colloidal materials in real time. Soft Matter, 2023, 19, 3002-3014. | 1.2 | 2 |
| 922 | Predicting <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML"><mml:mi>Î²</mml:mi></mml:math> -decay energy with machine learning. Physical Review C, 2023, 107, . | 1.1 | 3 |
| 923 | Deep-neural-network approach to solving the ab initio nuclear structure problem. Physical Review C, 2023, 107, . | 1.1 | 2 |
| 924 | Fabrication-Aware Joint Clustering in Freeform Space-Frames. Buildings, 2023, 13, 962. | 1.4 | 1 |
| 925 | A nonlinear autoregressive with external input neural network for predicting the nonlinear dynamics of supercontinuum generation in optical fibers. Journal of the Optical Society of America B: Optical Physics, 0, , . | 0.9 | 0 |
| 926 | Reduced basis emulation of pairing in finite systems. Physical Review B, 2023, 107, . | 1.1 | 3 |
| 927 | Emergence of hierarchical modes from deep learning. Physical Review Research, 2023, 5, . | 1.3 | 1 |
| 928 | Machine learning amplitudes for faster event generation. Physical Review D, 2023, 107, . | 1.6 | 8 |
| 929 | Superpolynomial quantum-classical separation for density modeling. Physical Review A, 2023, 107, . | 1.0 | 3 |
| 930 | Generative Models as an Emerging Paradigm in the Chemical Sciences. Journal of the American Chemical Society, 2023, 145, 8736-8750. | 6.6 | 36 |
| 931 | Extracting electronic many-body correlations from local measurements with artificial neural networks. SciPost Physics Core, 2023, 6, . | 0.9 | 5 |
| 932 | Machine-learning detection of the Berezinskii-Kosterlitz-Thouless transition and the second-order phase transition in XXZ models. Physical Review B, 2023, 107, . | 1.1 | 2 |
| 933 | Optimized numerical gradient and Hessian estimation for variational quantum algorithms. Physical Review A, 2023, 107, . | 1.0 | 1 |
| 934 | Using machine learning to compress the matter transfer function <mml:math xmlns:mml="http://www.w3.org/1998/Math/MathML" display="inline"><mml:mi>T</mml:mi><mml:mo stretchy="false">(</mml:mo><mml:mi>k</mml:mi><mml:mo stretchy="false">)</mml:mo></mml:math>. Physical Review D, 2023, 107, . | 1.6 | 2 |
| 935 | Uncertainty aware machine-learning-based surrogate models for particle accelerators: Study at the Fermilab Booster Accelerator Complex. Physical Review Accelerators and Beams, 2023, 26, . | 0.6 | 1 |
| 936 | Graphical User Interface for the Development of Probabilistic Convolutional Neural Networks. Signals, 2023, 4, 297-314. | 1.2 | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 943 | Automated Radar Data Labeling through Computer Vision. , 2023, , . | | 0 |
| 945 | Machine Learning: An Analytical Approach for Pattern Detection in Diabetes. Lecture Notes in Networks and Systems, 2023, , 135-145. | 0.5 | 1 |
| 959 | Integrated photonic platforms for quantum technology: a review. ISSS Journal of Micro and Smart Systems, 2023, 12, 83-104. | 1.0 | 1 |
| 961 | Discussing the Future Perspective of Machine Learning and Artificial Intelligence in COVID-19 Vaccination: A Review. Springer Proceedings in Mathematics and Statistics, 2023, , 151-160. | 0.1 | 0 |
| 965 | Deep learning for novel drug development. , 2023, , 263-284. | | 0 |
| 968 | Challenges Encountered in the Implementation of Machine Learning in the Healthcare Industry. Springer Proceedings in Mathematics and Statistics, 2023, , 377-386. | 0.1 | 0 |
| 970 | Enhancing Education Performance through Machine Learning: A Study of Student Learning Outcomes Prediction Using GANs and ANNs. , 2023, , . | | 0 |
| 975 | Quantum Machine Learning. , 2023, , 1-12. | | 1 |
| 979 | The State of Art in Machine Learning Applications in Civil Engineering. Studies in Systems, Decision and Control, 2023, , 147-177. | 0.8 | 1 |
| 984 | Machine learning enabled rational design of atomic catalysts for electrochemical reactions. Materials Chemistry Frontiers, 2023, 7, 4445-4459. | 3.2 | 3 |
| 1003 | Approximation of Physicochemical Properties Based on a Message Passing Neural Network Approach. Studies in Computational Intelligence, 2023, , 15-26. | 0.7 | 0 |
| 1010 | Machine learning in nuclear physics at low and intermediate energies. Science China: Physics, Mechanics and Astronomy, 2023, 66, . | 2.0 | 15 |
| 1016 | A Machine Learning Approach for Predicting Emissions Based on GDP: A Case of South Africa in Comparison with the United Kingdom. Advances in African Economic, Social and Political Development, 2023, , 91-116. | 0.1 | 0 |
| 1022 | Role of Buccal Cells in Neurodegeneration. , 2023, , 245-260. | | 0 |
| 1031 | Ab initio quantum chemistry with neural-network wavefunctions. Nature Reviews Chemistry, 2023, 7, 692-709. | 13.8 | 8 |
| 1068 | The Coming Decades of Quantum Simulation. Lecture Notes in Physics, 2023, , 85-125. | 0.3 | 2 |
| 1072 | Demultiplexing OAM beams via Fourier optical convolutional neural network. , 2023, , . | | 0 |
| 1073 | Application of Neural Network Methods for Crossword Prediction. , 2023, , . | | 0 |

| # | Article | IF | Citations |
|---|---|---|---|
| 1078 | Machine-Learning for Static andÂDynamic Electronic StructureÂTheory. Challenges and Advances in Computational Chemistry and Physics, 2023, , 113-160. | 0.6 | 0 |
| 1080 | Machine Learning in Computer Aided Engineering. Computational Methods in Engineering & the Sciences, 2023, , 1-83. | 0.3 | 0 |
| 1094 | An Incremental MaxSAT-Based Model toÂLearn Interpretable andÂBalanced Classification Rules. Lecture Notes in Computer Science, 2023, , 227-242. | 1.0 | 0 |
| 1097 | A Review on Rural Womenâ€™s Entrepreneurship Using Machine Learning Models. Lecture Notes in Networks and Systems, 2023, , 375-395. | 0.5 | 0 |
| 1113 | Advances of machine learning in materials science: Ideas and techniques. Frontiers of Physics, 2024, 19, . | 2.4 | 0 |
| 1136 | Forest Cover Type Prediction using Automatic Machine Learning. , 2023, , . | | 0 |
| 1155 | Artificial Intelligence in Phycochemicals Recognition. , 2024, , 97-122. | | 0 |
| 1158 | Neural Networks And Machine Learning. , 2023, , . | | 1 |
| 1167 | Variational Circuits for Quantum Solitons. Quantum Science and Technology, 2024, , 347-373. | 1.5 | 0 |
| 1168 | Variational Algorithms, Quantum Approximate Optimization Algorithm, and Neural Network Quantum States with Two Qubits. Quantum Science and Technology, 2024, , 141-167. | 1.5 | 0 |
| 1173 | The use of Open-Source Boards for Data Collection and Machine Learning in Remote Deployments. , 2023, , . | | 0 |
| 1178 | Improving Creditworthiness Prediction Using Preprocessing Stages and Feature Selection. , 2023, , . | | 0 |
| 1179 | Modification of the Haar Wavelet Algorithm for Texture Identification of Types of Meat Using Machine Learning. Lecture Notes in Networks and Systems, 2024, , 225-239. | 0.5 | 0 |
| 1185 | Unravelling abnormal in-plane stretchability of two-dimensional metalâ€“organic frameworks by machine learning potential molecular dynamics. Nanoscale, 2024, 16, 3438-3447. | 2.8 | 0 |
| 1190 | Machine learning methods for liquid crystal research: phases, textures, defects and physical properties. Soft Matter, 2024, 20, 1380-1391. | 1.2 | 1 |
| 1192 | Shallow water equations-fused dam-break wave propagation prediction model ensembled with a training process resampling method. , 2023, , . | | 0 |
| 1225 | An Uncertainty-Aware Auction Mechanism forÂFederated Learning. Lecture Notes in Computer Science, 2024, , 1-18. | 1.0 | 0 |
| 1226 | Decision Tree using Feature Grouping. , 2023, , . | | 0 |

| # | Article | IF | Citations |
|---|---|---|---|