

Physics of Data. Part XII

[Physics of Data. Part XII](#) | [Alfonso R. Reyes](#)

The richness and variety of Physics Learning Machines

The next frontier of data science, machine learning, and more intelligent artificial intelligence is one of [Physics](#), differential equations, and prevalence of the laws of nature integrated in the algorithms.

The literature already have many successes of smart [small Data](#) vs dumb [Big Data](#).

Here are some keywords for your search:

- Physics-Informed Neural Networks;
- Neural ODEs, Neural PDEs;
- Physics-informed deep learning;
- Physics-informed neural ODEs;
- Physics-informed machine learning;
- Physics-Informed DeepONets;
- Physics-informed Generative Adversarial Networks;
- Physics-induced, Physics-constrained, Physics-integrated, Physics-aware; Physics-inspired; Physics-based, Physics-embedded; Physics-encoded;
- Physics Graph Neural Networks;
- Deep hidden physics models;
- Hybrid Physics-informed neural networks;
- Conservative physics-informed neural networks;
- Self-adaptive physics-informed Quantum machine learning;
- Bayesian physics-informed Korkmorov-Arnold networks (KAN);
- Finite Basis physics-informed neural networks;
- Stochastic physics-informed neural ODEs;
- Deep Hidden Physics models;
- Multi physics-informed neural networks;
- hybrid neural network-first principles modeling;
- Physics-informed data analytics;
- Deep Hidden Physics Models;
- Deep Operator Networks for learning physical systems;
- Variational Physics-Informed Neural Operator;

- data-driven physical simulation;
etc.

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