

Application of NNs to solve PDE based physical systems

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Lately, it has sprouted an interest of bringing deep learning success to the computation of dynamic systems and PDEs solutions, having in mind their capacity to implement non local and nonlinear order reduction as well as performing transfer learning. The exploration of this possibility bring some light in the mathematical foundations of neural networks. Along this path, the recent perspective of neural networks as dynamic systems has been remarked, and the potential to integrate mathematical knowledge with learning models has been solidly stablished.