A Representation of Approximation Functions as Convolutional Neural Networks and Probing the Corresponding Extension

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In this talk, the approach of approximation functions is regarded as convolutional neural networks (CNN). Meanwhile, the hidden layers represents a construction of bases and the functional values appear in the last dense layer. Such CNN representation seems an extension of approximation by generalizing polynomials to be activation functions. Finally, we further probe the behavior of the effectness of this extension using ReLu activation functions.