Short Introduction for Grammar Neural

Artificial neural networks are parametric machine learning models, widely used nowadays in a huge range of applications. Also, global optimization techniques such as particle swarm optimization or genetic algorithms can be used for their effective training. However, in order for the optimization techniques to be effective, the knowledge of the domain range of the network parameters is also required, which is not always possible. Here an innovative two-step method is proposed for efficient training of artificial neural networks. In the first stage, using Grammatical Evolution and partitioning and expansion rules, the definition field of the parameters is determined and in the second stage, the network is trained within the field of definition identified in the first stage.