

Solving optimisation problems using NEUCOMP - a neural network compiler

ABSTRACT

NEUCOMP is a Neural Network Compiler that compiles a program written as a list of mathematical specifications of Neural Network (NN) models and then translates it into a chosen target program. A simulation program written in the NEUCOMP language based on selected NN models for Optimisation problems, i.e. Travelling Salesman problem (TSP) is presented. The models are the Continuous Hopfield and Potts-Glass single-layer networks. The compiler is written on the Sequent Balance 8000 machine at PARC. It combines with the graphical package, i.e. Mathematica, to portray some graphical features.

Keyword: A general-purpose simulation tool; Aequent balance 8000; NEUCOMP; Neural network compiler; Neural network models; Potts-Glass models; The continuous Hopfield; Travelling salesman problem