Title (en)
NEUROMORPHIC CIRCUIT AND ASSOCIATED TRAINING METHOD

Title (de)
NEUROMORPHE SCHALTUNG UND ZUGEHÖRIGES TRAININGSVERFAHREN

Title (fr)
CIRCUIT NEUROMORPHIQUE ET PROCÉDÉ D'ENTRAÎNEMENT ASSOCIÉ

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Application
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Abstract (en)
[origin: WO2022171632A1] The present invention relates to a neuromorphic circuit implementing a spiking neural network and comprising: - bidirectional synapses (24) produced by a set of memristors (30) arranged in an array, - neurons (16) emitting pulses at a variable rate and connected to neurons (16) via a synapse (24), and - a training module (26) of the neural network comprising, for at least one bidirectional synapse (24), an estimation unit (32) obtaining an estimation of the temporal derivative of the pulse rate of each neuron (16), an interconnection (46) at at least two positions between the synapse (24) and each neuron (16), and a controller (34) sending a control signal to the interconnection (46) after a pulse, the signal modifying the position of the interconnection (46) in order to connect the estimation unit (32) and the synapse (24).

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