Method for Exactly Transferring Graded Information in a Neuromorphic Circuit

Tech ID: 24990 / UC Case 2015-136-0

ABSTRACT

A method whereby information encoded in spiking activity or current amplitude of a population of neurons may be transferred to a second population of neurons or simulated neurons.

FULL DESCRIPTION

Neuromorphic engineering refers to the design of artificial neural systems based on those of biological nervous systems. Research in neuromorphic engineering has led to the development of neuromorphic computers with millions of neurons (and soon many more) capable of computing with very high power efficiency.

Researchers at the University of California, Davis have developed a method for dynamically routing information between populations of neurons in neuromorphic systems. This method may be used to form the basis for on-chip, controllable parallel computation in which information in the form of spikes or current amplitudes may be dynamically routed through sets of neural circuits with both fixed and plastic synaptic connectivity.

APPLICATIONS

- Neuromorphic Engineering
- Neuromorphic Computation

FEATURES/BENEFITS

- Method of dynamically routing information between populations of neurons

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	9,916,530	03/13/2018	2015-136

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OTHER INFORMATION

CATEGORIZED AS

- **Communications**
  - Other
- **Computer**
  - Hardware
  - Other
- **Engineering**
  - Engineering

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2015-136-0

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