

Title (en)
ANALOG HARDWARE REALIZATION OF NEURAL NETWORKS

Title (de)
ANALOGUE HARDWARE-REALISIERUNG NEURONALER NETZE

Title (fr)
RÉALISATION MATÉRIELLE ANALOGIQUE DE RÉSEAUX NEURONAUX

Publication
EP 3963514 A1 20220309 (EN)

Application
EP 20859652 A 20200625

Priority
RU 2020000306 W 20200625

Abstract (en)
[origin: WO2021262023A1] Systems and methods are provided for analog hardware realization of neural networks. The method includes obtaining a neural network topology and weights of a trained neural network. The method also includes transforming the neural network topology to an equivalent analog network of analog components. The method also includes computing a weight matrix for the equivalent analog network based on the weights of the trained neural network. Each element of the weight matrix represents a respective connection between analog components of the equivalent analog network. The method also includes generating a schematic model for implementing the equivalent analog network based on the weight matrix, including selecting component values for the analog components.

IPC 8 full level
G06N 3/063 (2006.01); **G06G 7/60** (2006.01)

CPC (source: EP KR)
G06F 17/16 (2013.01 - KR); **G06N 3/04** (2013.01 - KR); **G06N 3/044** (2023.01 - EP); **G06N 3/045** (2023.01 - EP); **G06N 3/065** (2023.01 - EP KR); **G06N 3/048** (2023.01 - EP)

Citation (search report)
See references of WO 2021262023A1

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AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

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BA ME

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