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# Special issue on deep learning for on-chip learning

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We are pleased to present this special issue entitled **Deep Learning for On-Chip Learning.**

On-chip learning algorithms can be used for choosing the best processor or electronic computing devices to enhance the efficiency of the applications, as well as, for speeding up the training of large neural-networks with ever increasing datasets. The current research direction has been towards fusing deep learning algorithms into application specific hardware components and on-chip devices.

This special issue presents 3 papers containing interesting advancements in these areas. We received 9 manuscripts, out of which, 3 were selected for publication after a strict peer review process. Details of these selected papers are as follows.

The first paper is entitled *Optimization of Multitask Parallel Mobile Edge Computing Strategy Based on Deep Learning Architecture*, by Zongkai Liu, Xiaoqiang Yang and Jinxing Shen of The Army Engineering University of PLA in China, proposes a deep learning architecture based on tightly connected network, and transplants it into mobile edge algorithm to realize the payload sharing process of edge computing.

The second paper is entitled *Deep Learning Parallel Computing and Evaluation for Embedded System Clustering Architecture Processor*, by Yue Zu of Jilin Institute of Chemical Technology in China, studies the parallel computing and evaluation for embedded system clustering architecture processor using deep learning algorithms.

The final paper is entitled *Deep Learning Controller Design of Embedded Control System for Maglev Train* via *Deep Belief Network Algorithm*, by Dinggang Gao, Yougang Sun, Shihui Luo, Guobin Lin and Laisheng Tong, of Southwest Jiaotong University, Tongji

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University and CRRC Zhuzhou locomotive Co., Ltd in China, proposes a hardware module for an embedded levitation controller, and deep learning algorithms are embedded into the controller.

We hope readers will enjoy and benefit from reading these three papers.