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Neuromorphic Computing for Event-Based Sensors and Actuators

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Message from the Guest Editors

Dear Colleagues,

Neuromorphic computation proposes a paradigm shift from Von Neumann architectures that requires the support of unconventional (neuromorphic) hardware devices. Big companies and university spin-offs are investing in the development of such platforms, with notable examples of Loihi (INTEL), TrueNorth (IBM), SpiNNaker (U. Manchester), Dynap (INI-UZH-ETHZ, AiCTX) and Neurogrid (Stanford U.). On the other hand, Field-Programmable Gate Arrays (FPGA) are easily configurable devices that proved to be useful to develop, test and demonstrate neuromorphic algorithms, especially useful in embedded applications.

All these platforms can deploy algorithms that process the information in a neuro-inspired way, using spikes all the way from sensory encoding (from neuromorphic sensors) up to control of actuators.

This special issue focusses on neuromorphic sensing, processing and control algorithms implemented on neuromorphic platforms and FPGAs, especially dealing with event-by-event information processing that best exploits the advantage of neuromorphic sensing.

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Special Issue



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Message from the Editor-in-Chief

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