Le jeudi 15 novembre à 11h,
Nano-Innov, Building 862, Amphi 33

Novel Materials and Architectures for Neural Inspired Algorithms and Applications

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Abstract

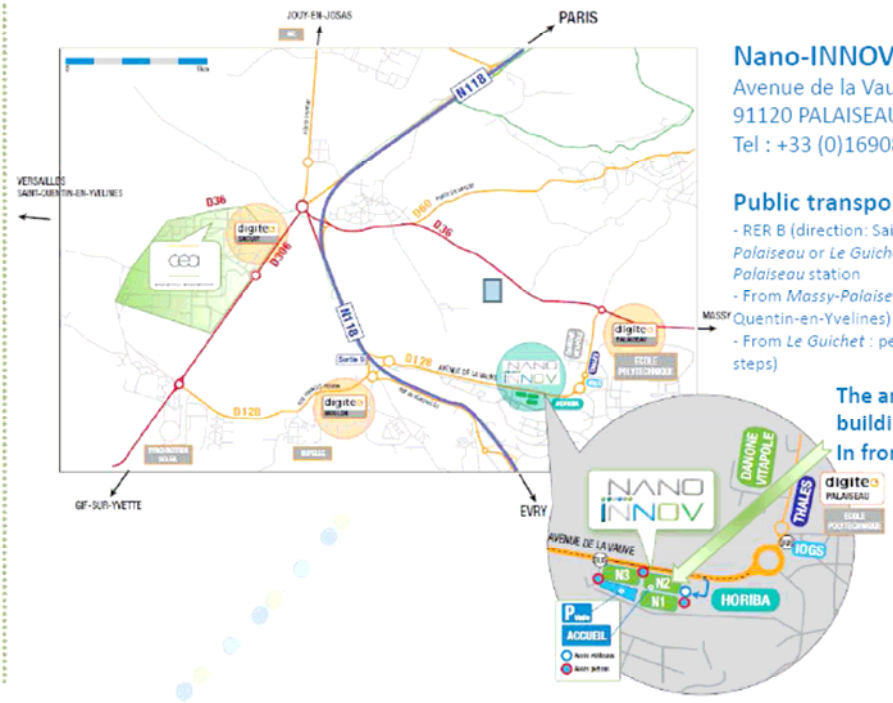
The grand challenge of neuromorphic computation is to develop a flexible brain-like architecture capable of a wide array of real-time applications, while striving towards the ultra-low power consumption and compact size of the human brain—within the constraints of existing silicon and post-silicon technologies. To this end, IBM has embarked on a multi-disciplinary search spanning neuroscience, super-computing, and nanotechnology for efficient neuromorphic designs using both emerging non-volatile memory and architectural innovations. This talk will explored the relative merits of phase change memory, magnetic tunnel junctions, and a novel RRAM material as potential synaptic elements, then present a proof-of-concept fully digital CMOS implementation of a novel computation fabric for neural inspired computation.

Biography

Dr. Bryan L. Jackson joined IBM in 2008 in order do develop nano-scale synaptic technologies for neuromorphic electronics. He is currently the Technical Project Manager for hardware design in the Cognitive Computing group at IBM Almaden Research Center. Prior to IBM, Dr. Jackson attended the University of California, Berkeley where he studied Biophysics and Chemistry. His undergraduate education, in Chemistry, was supported by the Occidental College Trustees' Scholarship. His previous research positions include Hewlett-Packard Labs and Zyomyx.

http://researcher.ibm.com/researcher/view.php?person=us-bryanlj

Nano-Innov access (GPS N 48°42,736' - E 02°11,708')



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Public transport:

- RER B (direction: Saint-Remy-les-Chevreuse) : *Massy-Palaiseau* or *Le Guichet* stations, RER C or TGV : *Massy-Palaiseau* station
- From *Massy-Palaiseau*, bus line 91.06 (Massy ←→ Saint-Quentin-en-Yvelines) *Thomson-Corbeville* stop.
- From *Le Guichet* : pedestrian itinerary ≈ 15 minutes (300 steps)

The amphitheater is in the N2 building,
In front of the reception desk.