Hybrid SORS/LOCA Series: SpiNNaker: a neuromorphic platform to model large-scale spiking neural networks in biological real time

Objectives

Abstract: In this talk SpiNNaker will be presented, a brain-inspired million-core computer whose interconnect architecture is inspired by the connectivity characteristics of the mammalian brain, and which is suited to the modelling of large-scale spiking neural networks in biological real time. The motivations that led to the design and construction of the machine as well as the architectural decisions made in the process will be discussed. The system software and the event-driven programming model developed for the machine will be also described. Finally, some interesting applications that have run on SpiNNaker will be shown.

Short bio: He received the PhD degree in Computer Science from Columbia University, New York. He was Professor of Electronic Engineering at Universidad Politécnica, Venezuela and Research Fellow with the School of Computer Science, University of Manchester. Nowadays, he is at BSC as leader researcher in the European Exascale Accelerator group, contributing to the MEEP project.

Speakers

Speaker: Luis Plana Cabrera, European Exascale Accelerator group, Computer Sciences
Host: John Davis, LOCA director and EEA group leader, Computer Sciences
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