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From biophysics of neurons to neocortical learning and percept

Vendredi 20 janvier 2023

11 h 30 à 12 h 30

En présentiel

Campus MIL – Complexe des sciences | 1375, avenue Thérèse-Lavoie-Roux, **A3521.1**

En ligne

<https://umontreal.zoom.us/j/88066173443?pwd=ajlvdzA0a09FSGIFc3NuRUDFNvhNdz09>

Résumé

The human brain is perhaps the most complex piece of matter in the known universe. Composed of an intricate network of relatively simple electrochemical I/O devices, neurons, whose combined emergent behavior underlie our capacity for adaptive perception and action, it is of natural interest for physicists. I will provide an overview for how biophysical principles have been applied to develop data-driven simulations of the region of the brain known as the neocortex. When combined with complementary functional models made possible by modern AI approaches, I will show how they enable the mathematical study of the neocortical mechanisms of learning and perception.

Entrée libre

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