A computational model for spatial cognition inspired by multiscale dorsal and ventral hippocampal place field maps

by

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For the Ph.D. degree in Computer Science & Engineering

Classic studies in rodents have shown that place cells are organized along the dorsoventral axis of the hippocampus according to their field size, where smaller place fields are primarily involved in spatial navigation, and larger place fields are primarily involved in context and emotional encoding. Recent studies however show that the entire longitudinal axis of the hippocampus may be involved in navigation. Based on these studies, this work presents a computational model for spatial cognition inspired by the multiscale organization of place field maps, and analyzes the benefits of such architecture.

Wednesday, February 26, 2020
11:00 AM
ENB 313

THE PUBLIC IS INVITED

Examining Committee
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