FRANCES SKINNER, Krembil Research Institute, UHN and University of Toronto
Mathematically modeling theta oscillations in the hippocampus

It is clear that oscillatory brain activities are a ubiquitous feature of brain recordings. In particular, theta rhythms (3-12Hz) in the hippocampus play fundamental roles in memory processing. Is it possible to have a cellular-based understanding of these activities? In this talk, I will describe some of our recent modeling work from the perspective of a particular cell type in the hippocampus and its contribution to theta rhythms by virtue of its biophysical characteristics.