
Neural Field Models Which Include Gap Junctions

Carlo Laing*¹

¹Massey University, Auckland – New Zealand

Abstract

Neural field models are normally derived under the assumption that connections between neurons are synaptic rather than via gap junctions. I will show how to derive a neural field model from a network of quadratic integrate and fire neurons with both synaptic and gap junction connectivity. The derivation is exact in the limit of an infinite number of neurons.

*Speaker