

Abstract Submitted
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Calculation of correlation function of a spatially coupled spiking neural network¹ SIWEI QIU, CARSON CHOW, Lab of Biological Mathematics, NIDDK, National Institute of Health — The dynamics of a large but finite number of coupled spiking neurons is not well understood. We analyze finite size effects in a network of synaptically coupled theta neurons. We show how the system can be characterized by a functional integral from which finite size effects are calculated perturbatively. We discuss the implications of this technique for bump attractors.

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