

Abstract Submitted  
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**Pattern recognition through collective behaviour in neural networks** JAN R. ENGELBRECHT, Boston College — We investigate how collective order in networks of integrate-and-fire neurons can lead to computation. Specifically we show that patterns in static and dynamic sensory stimuli can be recognized through the development of synchrony in a simple neural network with a hierarchy of layers. The recognition events ultimately trigger activity in ‘grandmother’ neurons in the last layer.

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