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Complex patterns of synchrony in networks undergoing exogenous drive JACK WADDELL, Department of Physics, University of Michigan, MICHAL ZOCHOWSKI, Department of Physics & Biophysics Resesarch Division, University of Michgian — It has been established that various exogenous oscillatory drives modulate neural activity (and potentially information processing) in the brain. We explore the effect of an exogenous drive on the spatio-temporal pattern formation of a network of coupled non-identical Rössler oscillators. We investigate the formation and properties of the phase locked states, dependent on the network properties as well as those of the external drive. We have found that such drive has a complex effect on the pattern formation in the network, depending on the coupling strength between the oscillators, drive strength as well as its frequency relative to the oscillators.

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