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Revealing structure-dynamics relationships in neuronal networks

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We established a relationship between an important structural property of an inhibitory network, its colorings, and the dynamics it constrains. Using a model of the insect antennal lobe we show that our description allows the explicit identification of the groups of inhibitory interneurons that switch, during odor stimulation, between activity and quiescence. This description optimally matches the perspective of the downstream neurons looking for synchrony in ensembles of pre-synaptic cells.