



Zachary Mabile

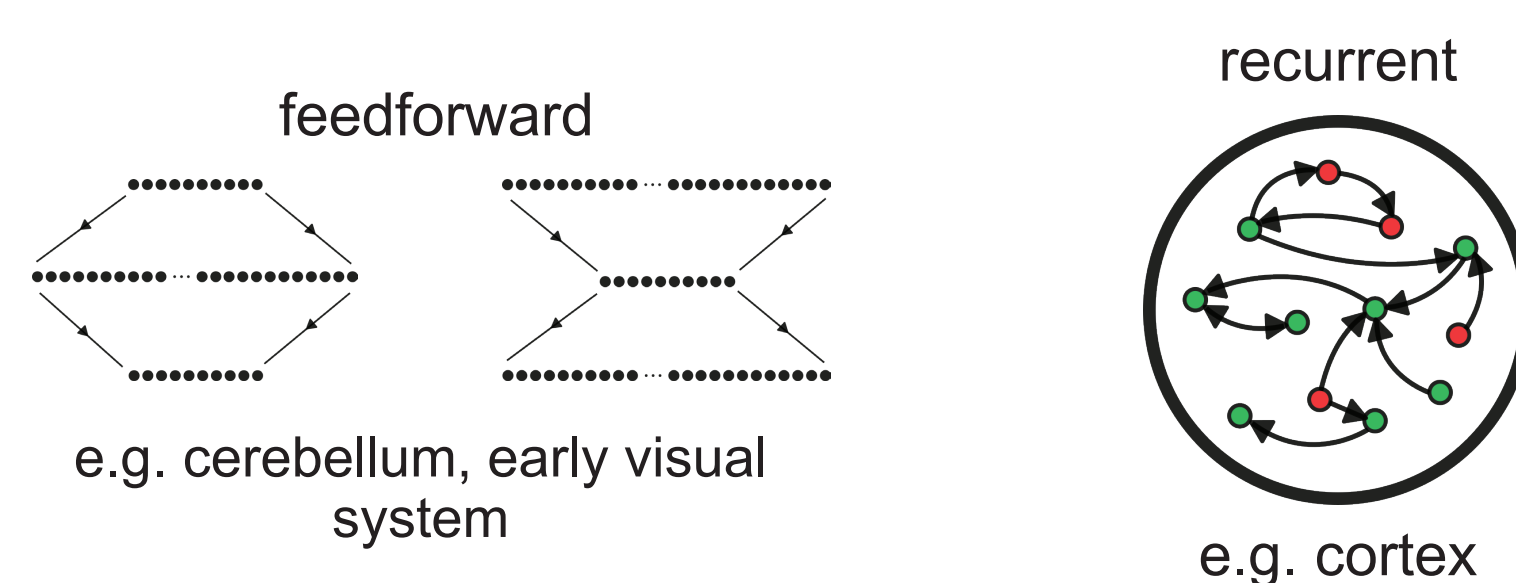
HA (Gus) Peed Award
Ph.D. Candidate, Quantitative Biosciences
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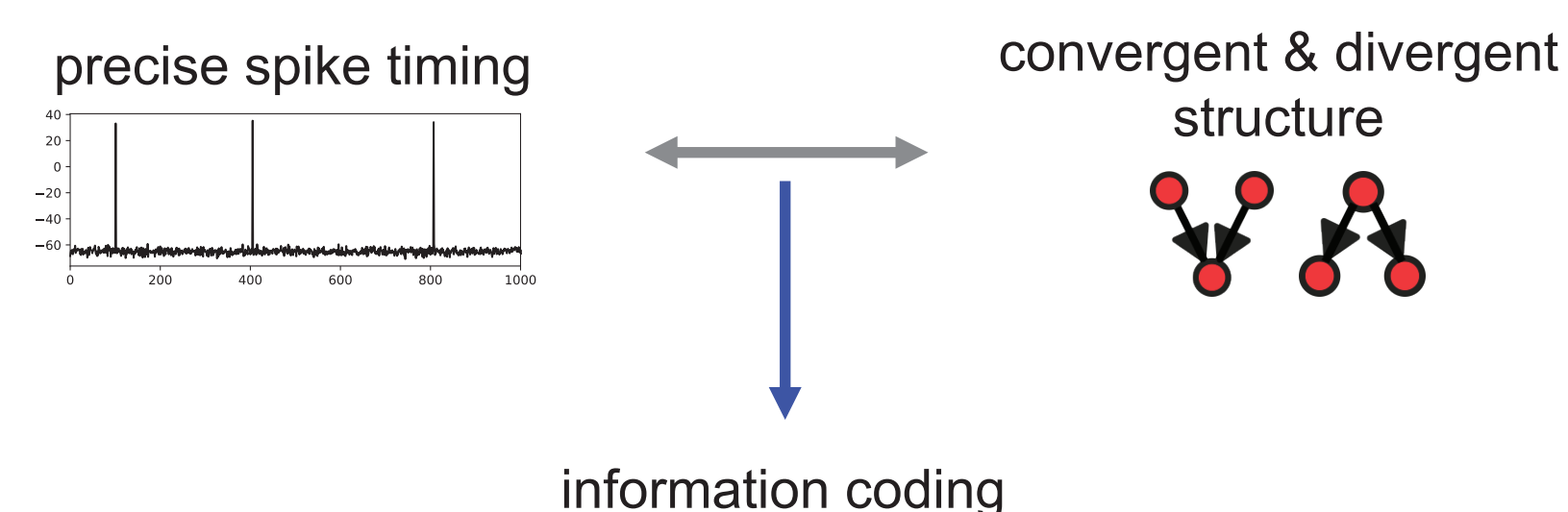
Information coding and structural motifs in spiking neural networks

Utilizing data-driven mathematical models, we seek to understand how complex network structure and precisely-timed neural activity interact to shape information processing in the brain.

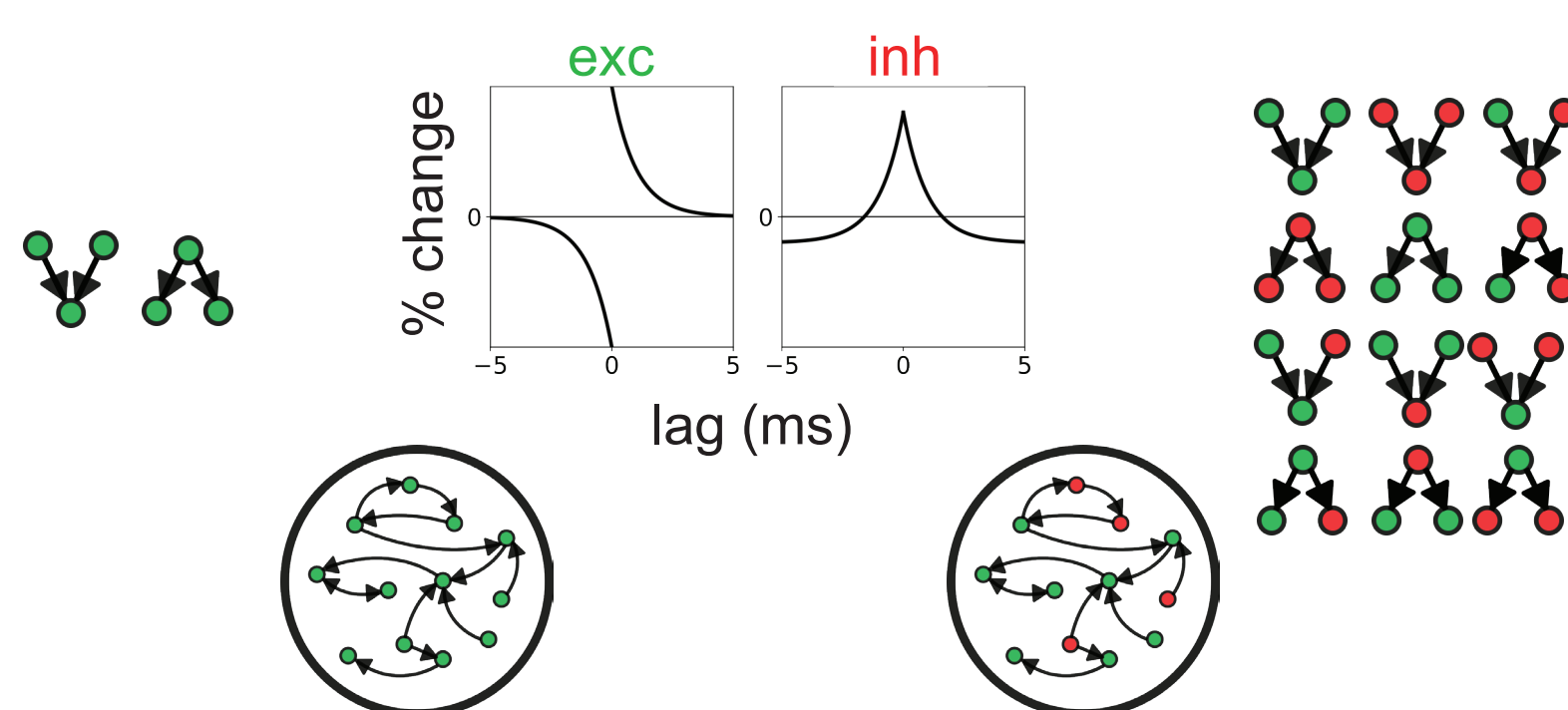
The brain is a network with complex connectivity “motifs”



Mathematical modeling approach



Extend previous theories to account for both **excitatory** and **inhibitory** neurons



Novel information decomposition analysis of 3-neuron motifs

