Ambiguity Resolution in a Spiking Network Model of Sentence Comprehension

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Presentation Abstract Summary Sentence processing involves the real-time combination of
word input into a stable semantic interpretation. How does the human
language system accomplish this feat in light of massive lexical
and structural ambiguity?

Here, we model sentence comprehension using an untrained recurrent
network of biologically realistic neurons with static, sparse connectivity.
A linear readout device maps internal network dynamics, generated by
sentence input, onto semantic
relations (who did what to whom).

Results suggest that ambiguity resolution could be
achieved with strictly local, adaptive neuronal memory.

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Keywords

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