

## **Learning Grounded Word Representations**

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This talk will discuss the potential of neural network models to learn grounded and structured lexical concepts by modeling the physical world. I will discuss results from two recent sets of experiments. In the first, we train large neural network models on a sequence prediction task--i.e., modeling the future trajectories of objects in motion--and find that many verb concepts (e.g., roll vs. slide, push vs. hit) emerge organically from such training. In the second, we train a neural network on a simple object-naming task and investigate the extent to which the learned conceptual representations exhibit desirable internal compositional structure. Taken together, these projects provide a preview of the possible role of neural networks in both theoretical and empirical lexical semantic research.