

# Decoding Word Semantics and Learning in EEG Data via an Artificial Language

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**Presentation Abstract Summary** EEG is an effective method for collecting brain data due to its low cost and the flexibility to collect data anywhere. However, using EEG can be challenging due to the lower signal-to-noise ratio and poor spatial resolution. MEG/fMRI have long been used to study semantic processing in the brain because of the better signal-to-noise ratio and increased resolution, but these technologies are also extremely expensive and require a dedicated shielded room. Here we show that semantics can be detected via EEG, and further that we can detect learning of semantic concepts as they are developed in the brain. This opens the door to new possibilities for studying semantics and learning via EEG.

**Paper Upload (PDF)** [Decoding Word Semantics and Learning in EEG Data via an Artificial Language.pdf](#)

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## Keywords

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