UNSUPERVISED CLUSTERING OF GROUPS WITH DIFFERENT SELECTIVE ATTENTIONAL INSTRUCTIONS USING PHYSIOLOGICAL SYNCHRONY
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Background
Correctly identify groups of individuals with shared attentional instructions based on physiological synchrony

Methods
Recording
EEG | EDA | HR

Pre-processing
Physiological synchrony | Distance matrices

Mapping
PCoA | mMDS | UMAP

Clustering
\( k \)-means | spectral clustering | hierarchical clustering

Validation
Ground truth | Silhouette coefficient

Results

Conclusions
Groups of shared attending individuals can be identified based on physiological synchrony combined with unsupervised learning

Best results for EEG, EDA and HR do not perform above chance level.

Combining multiple measures in a multimodal approach increases robustness regarding different approaches