


# UNSUPERVISED CLUSTERING OF GROUPS WITH DIFFERENT SELECTIVE ATTENTIONAL INSTRUCTIONS USING PHYSIOLOGICAL SYNCHRONY

Alexandre Merasli, Ivo Stuldreher, Anne-Marie Brouwer


### Background



96%  
73%  
73%


(Stuldreher et al., 2020)

### Research aim

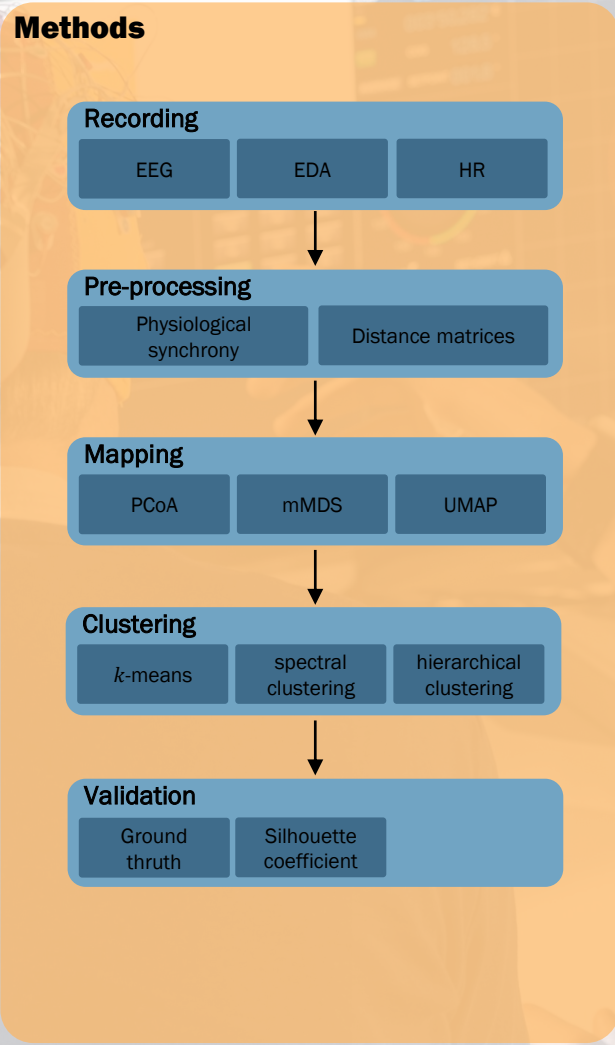


Correctly identify groups of individuals with shared attentional instructions based on physiological synchrony


**Ivo Stuldreher**  
Junior Scientist | PhD candidate  
Netherlands Organisation for Applied Scientific Research (TNO) | University of Twente



ivo.stuldreher@tno.nl



### Results



73%  
58%  
62%  
85%

Clustering directly applied on distance matrix

Clustering after mapping

### 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