

Detailed changes in global functional connectivity during attentional tracking

João V. Dornas, Jochen Braun
Cognitive Biology, Otto-von-Guericke University, Magdeburg, Germany

Motion Object Tracking (MOT) Stimuli

16 Balls
area = 12° x 12°, 400 x 400 pixels
v = 25 pixels/s

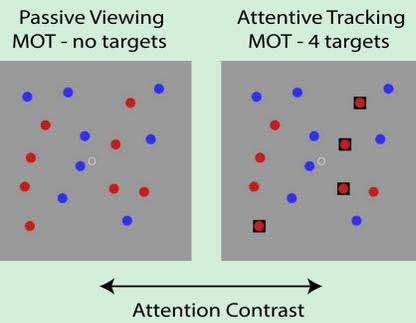
Protocol

5 min/run
4 runs/condition
8 subjects

fMRI

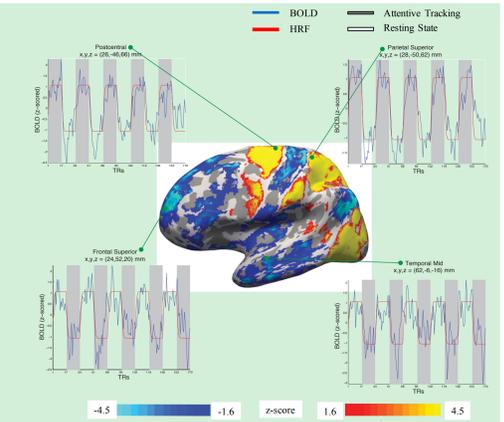
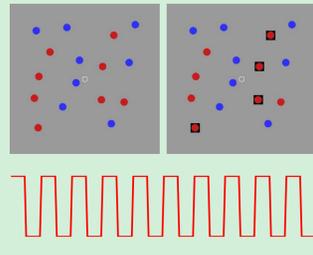
3 T Siemens scanner
TR = 2s
voxel = 3 x 3 x 3.6 mm³

Two Steady-State Conditions

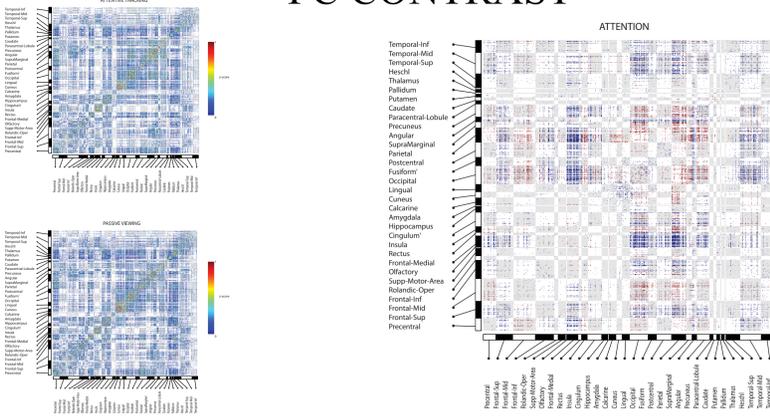


Interleaved Control

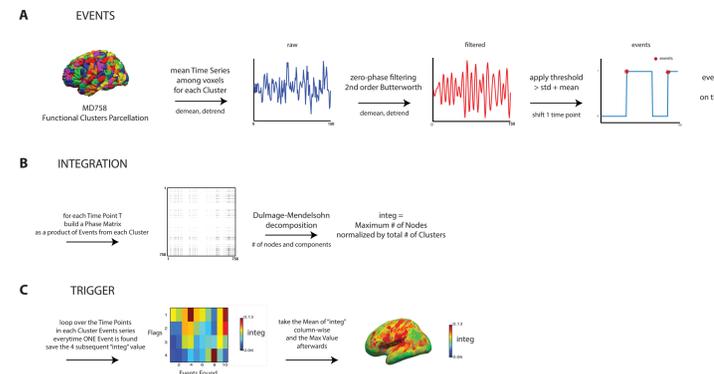
10 Trials (30s each)
alternate Passive - Tracking



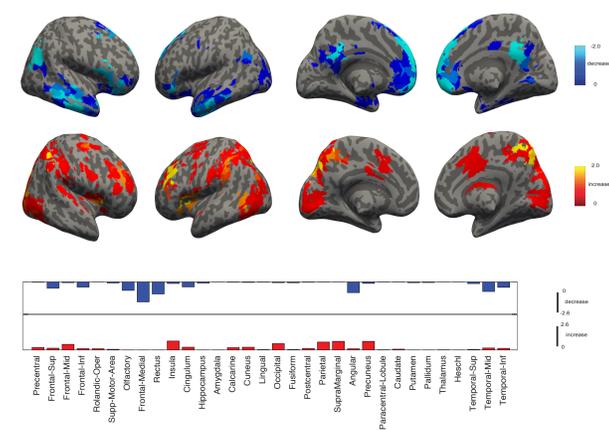
FC CONTRAST



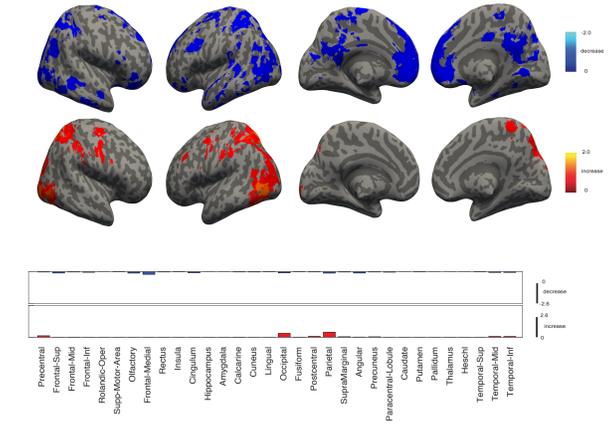
IGNITION



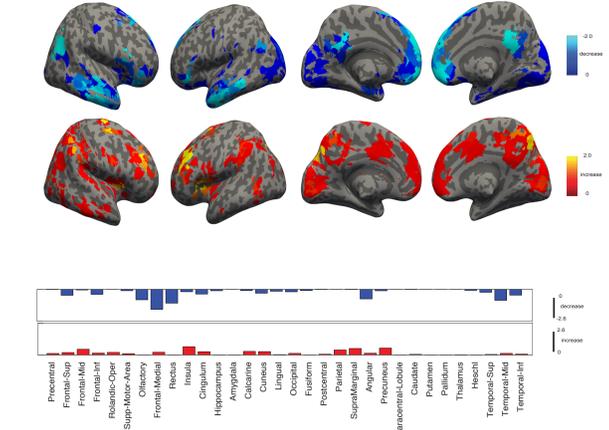
DAN DENSITY OF SIGNIFICANT CHANGE ON ATTENTION CONTRAST RELATIVE TO CLUSTERS WITH SEEDS FROM DORSAL ATTENTION NETWORK MEAN (POS, NEG) Z-SCORE



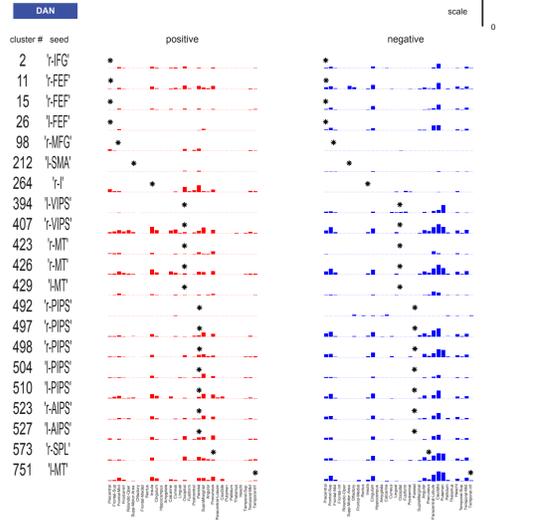
VAN DENSITY OF SIGNIFICANT CHANGE ON ATTENTION CONTRAST RELATIVE TO CLUSTERS WITH SEEDS FROM VENTRAL ATTENTION NETWORK MEAN (POS, NEG) Z-SCORE



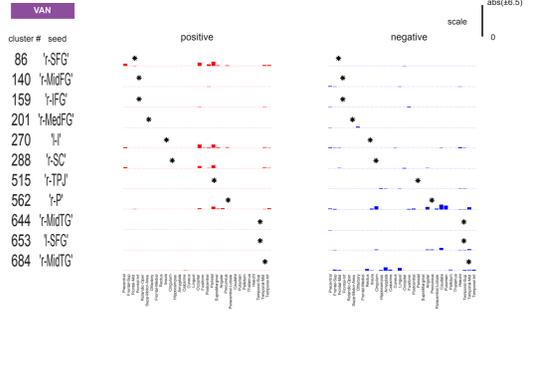
VIS DENSITY OF SIGNIFICANT CHANGE ON ATTENTION CONTRAST RELATIVE TO CLUSTERS WITH SEEDS FROM VISUAL NETWORK MEAN (POS, NEG) Z-SCORE



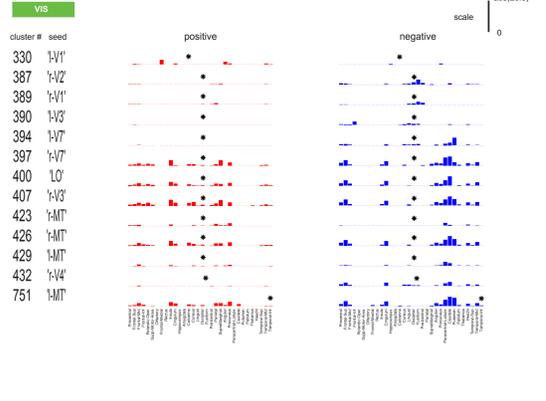
DENSITY OF SIGNIFICANT CHANGE ON ATTENTION CONTRAST RELATIVE TO CLUSTERS WITH SEEDS FROM DORSAL ATTENTION NETWORK MEAN (POS, NEG) Z-SCORE



DENSITY OF SIGNIFICANT CHANGE ON ATTENTION CONTRAST RELATIVE TO CLUSTERS WITH SEEDS FROM VENTRAL ATTENTION NETWORK MEAN (POS, NEG) Z-SCORE

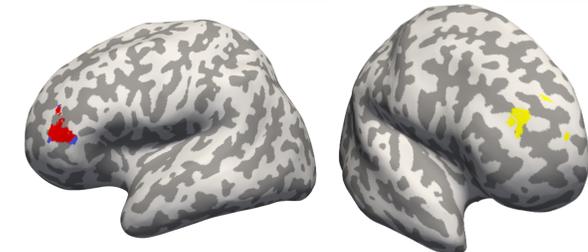


DENSITY OF SIGNIFICANT CHANGE ON ATTENTION CONTRAST RELATIVE TO CLUSTERS WITH SEEDS FROM VISUAL NETWORK MEAN (POS, NEG) Z-SCORE

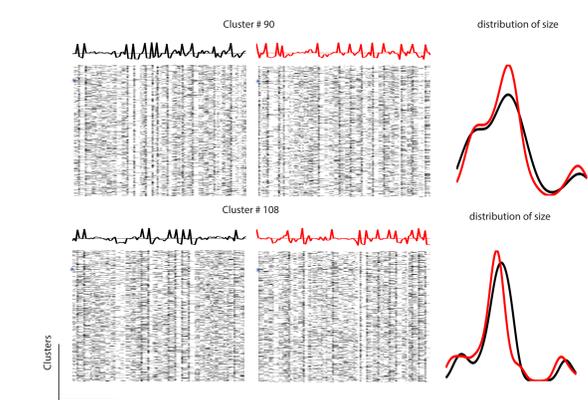


Attention Contrast Significant Change in Ignition Strength (MEAN)

AAL Parcel	Cluster			
	#	color	p-value	direction
Frontal Mid R	108	red	0.0025	↑
	112	blue	0.0030	↑
Frontal Mid L	90	yellow	0.0089	↑



Clusters Activated by Ignition per Event



{ FREQUENCY OF MEMBERSHIP (OVER EVENTS) IN BIGGEST SUBGRAPH } (subgraph from FLAG with Max Size of Components) MEAN (OVER RUNS)

