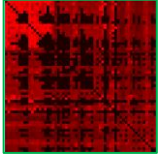
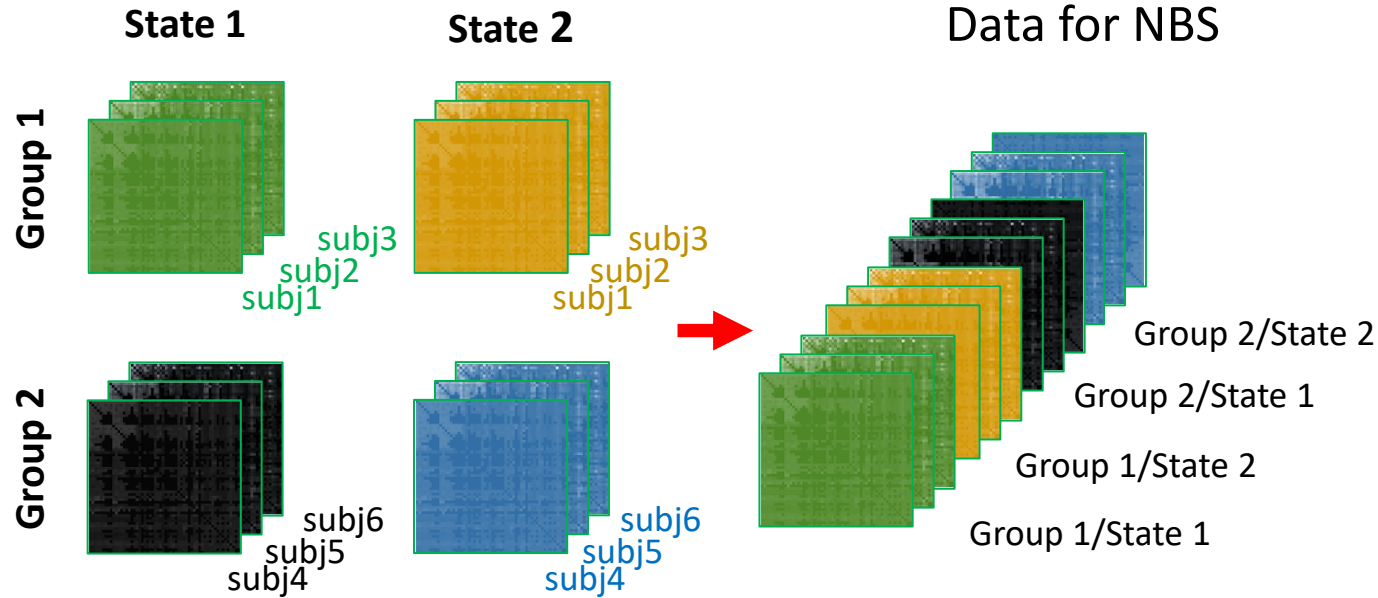


# Two-factor model for Network-based statistics (NBS)

(Download NBS here: <https://www.nitrc.org/projects/nbs>)



- Connectivity matrix [ch x ch]



Design matrix

Subjects

Contrast

1	0	0	0	0	0	1	1	subj1	State 1	Group 1
0	1	0	0	0	0	1	1	subj2		
0	0	1	0	0	0	1	1	subj3		
1	0	0	0	0	0	-1	-1	subj1	State 2	
0	1	0	0	0	0	-1	-1	subj2		
0	0	1	0	0	0	-1	-1	subj3		
0	0	0	1	0	0	1	-1	subj4	State 1	Group 2
0	0	0	0	1	0	1	-1	subj5		
0	0	0	0	0	1	1	-1	subj6		
0	0	0	1	0	0	-1	1	subj4	State 2	
0	0	0	0	1	0	-1	1	subj5		
0	0	0	0	0	1	-1	1	subj6		

## Design matrix

Subjects						Contrast			
1	0	0	0	0	0	1	1	subj1	State 1
0	1	0	0	0	0	1	1	subj2	
0	0	1	0	0	0	1	1	subj3	
1	0	0	0	0	0	-1	-1	subj1	State 2
0	1	0	0	0	0	-1	-1	subj2	
0	0	1	0	0	0	-1	-1	subj3	
0	0	0	1	0	0	1	-1	subj4	State 1
0	0	0	0	1	0	1	-1	subj5	
0	0	0	0	0	1	1	-1	subj6	
0	0	0	1	0	0	-1	1	subj4	State 2
0	0	0	0	1	0	-1	1	subj5	
0	0	0	0	0	1	-1	1	subj6	

Group 1

Group 2

## Contrast

Group effect

1	1	1	-1	-1	-1	0	0	Group 1 > Group 2
-1	-1	-1	1	1	1	0	0	Group 1 < Group 2

Sleep effect

0	0	0	0	0	0	1	0	State 1 > State 2
0	0	0	0	0	0	-1	0	State 1 < State 2

Interaction

0	0	0	0	0	0	0	1
0	0	0	0	0	0	0	-1

## Exchange block

(no exchange block)

+

1	2	3	1	2	3	4	5	6	4	5	6
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+

1	2	3	1	2	3	4	5	6	4	5	6
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