

Measurement of the Directional Information Flow in fNIRS-Hyperscanning Data using the Partial Wavelet Transform Coherence Method

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Materials

Name	Company	Catalog Number	Comments
fNIRS topography system	Shimadzu Corporation	Shimadzu LABNIRS system	LABNIRS system contains 40 emitters and 40 detectors for fNIRS signals measurement. In this protocol we used these emitters and detectors created two customized 26-channels probe sets and attached to two caps according to 10-20 system. Further, LABNIRS system also contains built-in GUI softwares for data quality check, data convert and data export.
MATLAB	The MathWorks, Inc.	MATLAB 2019a	In this protocol, several toolboxes and functions built in MATLAB were used: SPM12 toolbox was used to normalize the validated MRI data through its GUI. NIRS_SPM toolbox was used to project the MNI coordinates of the probes to the AAL template through its GUI. Homer3 toolbox was used to remove motion artifacts through its function hmrMotionCorrectWavelet with default parameters. Wavelet toolbox was used to compute WTC and pWTC through its function wcoherence.
MRI scanner	Siemens Healthineers	TRIO 3-Tesla scanner	In this protocol, the MRI scanner was used to obtain MNI coordinates of each channel and optode. Scan parameters are described in main text.
customized caps			In this protocol, we first marked two nylon caps with 10-20 system. Then, we made two 26-channels customized optode probe sets.

		Finally, we attached probes sets to caps aligned with landmarks.
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