**TACS Challenge Documents**

**SOP 5 – Data Sharing**

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**Last edited:** 28 August 2025

**List of material / Required hardware:**

|  |  |
| --- | --- |
| **Quantity** | **Item** |
| 1 | OSF account |
| For each subject | tsv output for each experimental block |
| For each subject | tsv output for staircase |
| For each subject | tACS Challenge Data table (tsv) |
| For each subject | EEG data in BIDS format |
| 1 | Notes.txt – optional, containing relevant information (e.g., additional participants because of technical issues) |

**Required structure and files for data sharing**

1. Create a data folder for your lab on OSF: <https://osf.io/gz84a/files/osfstorage>

and label it with a code (L+number of your lab as assigned on <https://tacschallenge.github.io/labs/>). For example: ‘L06’ if you are in the Bergmann lab, or ‘L40’ if you are in the Tarantino lab.

1. Create a folder for each subject that you can then store in your lab folder on OSF. Label each participant’s folder with your lab code and an individual participant code. Example: ‘sub-L01\_P01’ for the first participant in the Aglioti lab.
2. Create three subfolders inside each subject folder names: beh, eeg, metadata

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1. **beh folder**

The following files are required in each subject’s **beh** folder:

* **.tsv output file from each experimental block**, labelled according to lab code, participant code, block number (between 1 and 13), and montage. For example:

‘sub-L04\_P03\_B4\_A.tsv’ for the Battaglini Lab, participant nr 3, Block 4, Montage A. Note that the order of montages varies from participant to participant according to a latin square permutation (see [here](https://docs.google.com/spreadsheets/d/1MRDyuQfRs2Qrba2FPHCHmhYVWcm5l-9s/edit?gid=818416461#gid=818416461)). Montage labels correspond to those on the tACS Challenge Sensation Questionnaire and the registered report (Sh = sham, A=occipital, B=phosphene, C=cutaneous).

* **.tsv output file from the staircase procedure**, labelled as described above, e.g.

sub-L01\_P01\_Staircase.tsv

1. **eeg folder**

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The following files are required in each subject’s **eeg** folder:

* **.edf** or **.vhdr, .vmrk, .eeg** files from Pre and Post, EO and EC EEG recordings, labelled according to lab code, participant code, Pre/Post, EO/EC

More information about eeg data formats here - <https://bids-specification.readthedocs.io/en/stable/modality-specific-files/electroencephalography.html>

Although other formats are available, we will follow EEG BIDS recommendation to use the European data format, or the BrainVision data format.

* **.json** files – one per EEG recording with information on EEG condition, EEG hardware, EEG electrodes, lab, etc. Follow the structure available for sub-L18\_S01\_Pre\_EO.json

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* **\*\_channels.tsv** – 2 files in total, one for Pre and one for Post, labelled according to labelled according to lab code, participant code, Pre/Post. For example:

‘sub-L04\_P03\_ Pre\_EC\_channels.tsv’

This file contains information on the EEG channels used as per below

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And following the [EEG BIDS format](https://bids-specification.readthedocs.io/en/stable/modality-specific-files/electroencephalography.html#hardware-information)

1. **metadata folder**

Add the **table tACSChallenge\_Data**, labelled as described above, e.g.

sub-L01\_P01\_Meta\_Data.tsv

Please fill in the required information:

* + Lab Code (same as above)
  + Subject Code (same as above. Ideally the same as in the Demographic Information Form)
  + Gender (from the Demographic Information Form)
  + Age (5-year bracket; from the Demographic Information Form)
  + Stimulation intensity (separately for each montage)
  + Impedance difference between hemispheres (separately for each montage)
  + Use of EMLA cream (y/n)
  + Individual Alpha frequency (IAF) (if applicable)