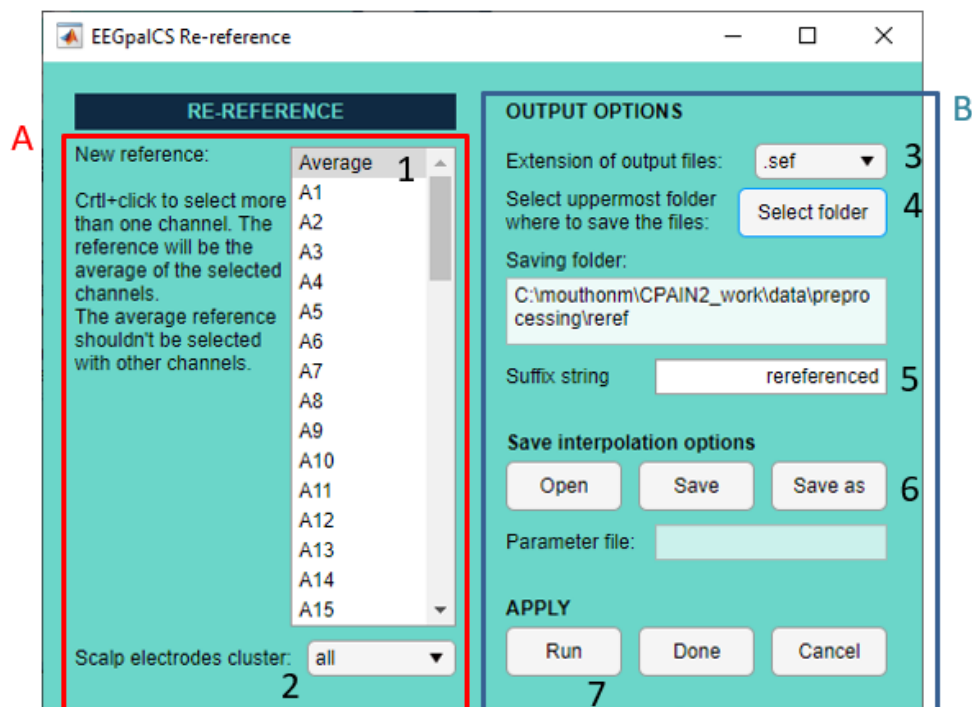


EEGpal: Re-referencing module

Version 1.3, 27.10.2024

The 'Re-referencing' module can be used to change the reference channel of the EEG signal. As you probably know, the EEG measures the difference in electrical potential between each channel and a reference channel. The reference channel has a large influence and completely changes the signal. The usual convention is to use the average reference (the average signal from all electrodes). However, you can use this module to re-reference the signal to any scalp or auxiliary channel.



Pannel A

1. Select the new signal reference. The default option '**Average**' is to use the average reference (standard). However, you can select any other scalp channel. You can even select several channels (with Ctrl+click) to create a custom average reference. However in this case, you can not select the **Average** option.
2. In the majority, leave the default option "all". **Need explanations from MichaelDP for the use of this option.**

Pannel B

3. Select the format for the output files.
4. Select the destination folder where the results files will be saved (note: it reproduces the input structure. For example, a folder per participants if the input files where in subfolder).
5. The suffix added to the input filename to obtain the output filename
6. You can save a parameters file which will recode all the chosen options for a later processing (**save** and **save as**). You can use the button **open** to call a previous saved parameters file.

- Click on **Run** to carry out the processing parameterized in the Filtering module. The button **Done** will close the Filtering module without perform the processing but keep in memory your parameters if you open again the Filtering module. The button **Cancel** closes the module without processing and without keep the entered parameters in memory.

FAQ

Can I use the mastoid as reference electrode?

Yes, you can specify in the Electrode Setting module of EEGpal the Mastoid electrode as the channel 65 for this example. Then you can choose this channel as reference.

nr	labels	x	y	z	theta	radius	cluster	source	inc...
43	B11	42.4830	8.5205	1.0898	-11.3409	0.4920	XYZfile	Setting File	<input checked="" type="checkbox"/>
44	B12	40.1111	8.3921	20.1965	-11.8170	0.3542	XYZfile	Setting File	<input checked="" type="checkbox"/>
45	B13	29.6403	6.8103	37.5567	-12.9399	0.2167	XYZfile	Setting File	<input checked="" type="checkbox"/>
46	B14	15.9802	6.0294	47.8759	-20.6718	0.1091	XYZfile	Setting File	<input checked="" type="checkbox"/>
47	B15	-0.0892	6.4108	51.6476	-90.7971	0.0393	XYZfile	Setting File	<input checked="" type="checkbox"/>
48	B16	0.1141	-14.2595	55.9785	89.5417	0.0794	XYZfile	Setting File	<input checked="" type="checkbox"/>
49	B17	17.9807	-13.7753	51.9183	37.4562	0.1309	XYZfile	Setting File	<input checked="" type="checkbox"/>
50	B18	33.9444	-12.2825	40.5808	19.8921	0.2314	XYZfile	Setting File	<input checked="" type="checkbox"/>
51	B19	44.4227	-10.2168	20.8747	12.9522	0.3633	XYZfile	Setting File	<input checked="" type="checkbox"/>
52	B20	45.8697	-7.8586	-0.7895	9.7218	0.5054	XYZfile	Setting File	<input checked="" type="checkbox"/>
53	B21	44.8565	-25.8566	-2.6767	29.9604	0.5164	XYZfile	Setting File	<input checked="" type="checkbox"/>
54	B22	42.2911	-29.4692	15.7284	34.8695	0.4057	XYZfile	Setting File	<input checked="" type="checkbox"/>
55	B23	33.2378	-33.4491	35.7678	45.1815	0.2934	XYZfile	Setting File	<input checked="" type="checkbox"/>
56	B24	17.8356	-35.1995	47.1934	63.1287	0.2217	XYZfile	Setting File	<input checked="" type="checkbox"/>
57	B25	13.1753	-52.2422	31.9978	75.8454	0.3294	XYZfile	Setting File	<input checked="" type="checkbox"/>
58	B26	25.7244	-49.8279	24.9975	62.6943	0.3665	XYZfile	Setting File	<input checked="" type="checkbox"/>
59	B27	34.3136	-45.5615	11.3420	53.0156	0.4375	XYZfile	Setting File	<input checked="" type="checkbox"/>
60	B28	38.1241	-40.9269	-4.2307	47.0306	0.5240	XYZfile	Setting File	<input checked="" type="checkbox"/>
61	B29	36.3167	-39.5530	-30.3368	47.4426	0.6637	XYZfile	Setting File	<input checked="" type="checkbox"/>
62	B30	28.1760	-54.3141	-5.8442	62.5816	0.5303	XYZfile	Setting File	<input checked="" type="checkbox"/>
63	B31	18.7607	-58.5977	11.0656	72.2469	0.4434	XYZfile	Setting File	<input checked="" type="checkbox"/>
64	B32	14.5642	-62.0352	-6.7208	76.7878	0.5334	XYZfile	Setting File	<input checked="" type="checkbox"/>
65	Mastoid	1.0000	1.0000	1.0000	1.0000	1.0000	Mastoid	Manual	<input checked="" type="checkbox"/>