<div align="center">

DATA SET

SSVEP for four classes of stimuli

</div>

The data set in this database is distributed under open access license. This means that you can freely download and use the data according to this license. Additionally, if the database will be used in any article, you should add the appropriate citation.

Participants:	5
Signals:	16 EEG
License:	Creative Commons Attribution No Derivatives license (CC BY-ND 4.0).
Licensor:	Institute of Theory of Electrical Engineering, Measurement and Information Systems, Warsaw University of Technology.
Publication:	M. Kolodziej, A. Majkowski, and R. J. Rak, "A new method of spatial filters design for brain-computer interface based on steady state visually evoked potentials," *in 2015 IEEE 8th International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS)*, 2015, vol. 2, pp. 697–700.
Contact:	Marcin Kołodziej, Andrzej Majkowski.

Experimental Setup

Five users, at the age of 23, 25 31, 42, and 46 participated in the experiment. Users sat comfortably in a chair. A green LED of a 1cm diameter was placed at a distance of about 1 meter from the eyes of a person. EEG signals were recorded using g.USBAmp with 16 active electrodes.

Users were stimulated with flickering LED light of frequencies: 5Hz, 6Hz, 7Hz and 8Hz. The stimulation lasted 30 seconds. All sessions took place at the same time of the day to avoid circadian influences on the measurements.

The electrodes were placed according to the international 10-20 system at positions: O2, AF3, AF4, P4, P3, F4, Fz, F3, FCz, Pz, C4, C3, CPz, Cz, Oz, O1. EEG sampling frequency was 256Hz. The signals were recorded using a Butterworth bandpass filter (0.1-100Hz) and notch filter (48-52Hz) to correct a technical artifact from the power network.

Format of the Data

For every user there are 4 files (for the stimuli of 5Hz, 6Hz, 7Hz and 8Hz each). Data are provided in Matlab format (*.mat) as **X** variable containing raw EEG signals: the 16 EEG potentials acquired in order: O2, AF3, AF4, P4, P3, F4, Fz, F3, FCz, Pz, C4, C3, CPz, Cz, Oz, O1.

References

If the database will be used in any publication, please make sure to cite the following paper:

M. Kolodziej, A. Majkowski, and R. J. Rak, "A new method of spatial filters design for brain-computer interface based on steady state visually evoked potentials," *in 2015 IEEE 8th International Conference on Intelligent Data Acquisition and Advanced Computing Systems: Technology and Applications (IDAACS)*, 2015, vol. 2, pp. 697–700. [pdf]