



*Brain-Computer Interfaces (BCIs) for Rehabilitation
Laboratory (BCI-Rehab Lab) and
Sensory Motor Integration Lab. (SMILe)
Faculty of Mechanical Engineering
Technion, Israel*



Project: Implementation of Brain Computer Interface.

Background:

- **Electroencephalography (EEG)** - is the recording of electrical activity along the scalp produced by the firing of neurons within the brain.
- **Brain Computer interface (BCI)** – is brain activity driven interface, which enables a person to control an external agent by thinking, for example imagination of appropriate hand motion.
- <http://www.youtube.com/watch?v=LtVLsxoN-M>
- http://www.youtube.com/watch?v=0-1sdtnuqcE&feature=player_embedded

Details: During this project students will implement Brain Computer Interface based on EEG brain signal. This project includes: (1) Single trial signal processing; (2) Building of Brain Computer Interface, which will detect and correct (possibly) user's errors; (3) Real time implementation.

Requirements: Matlab, C+, signal processing.

Length: 2 semesters.

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