Introduction: A popular technique for electrical stimulation of the human brain is transcranial Direct Current Stimulation (tDCS). tDCS aims to stimulate brain target regions by sending constant low direct currents through electrodes that are usually attached to the scalp of the subject.

How to focus brain stimulation?

- Classical tDCS setup (2 electrodes)
- Novel tDCS setup (256 electrodes)

Use more stimulation electrodes from an EEG array (EGI) to modulate current in ROI.

**Medical Goals**

- **Vision restoration**
  - tDCS settings evaluation (BrainStimulator)

**tDCS Simulation**

**Objective Development**

**Current Optimization**

- Treatment support for depression
  - Target region: BA 47
  - Optimization of stimulation parameterization?

**Advanced Head Modeling**

- Deep Target (Parahypocampal gyrus)
- One current source optimization
- Effect of tissue anisotropy

**Method Development**

- Sphere Head Modeling
- Anisotropic model
- Isotropic model

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