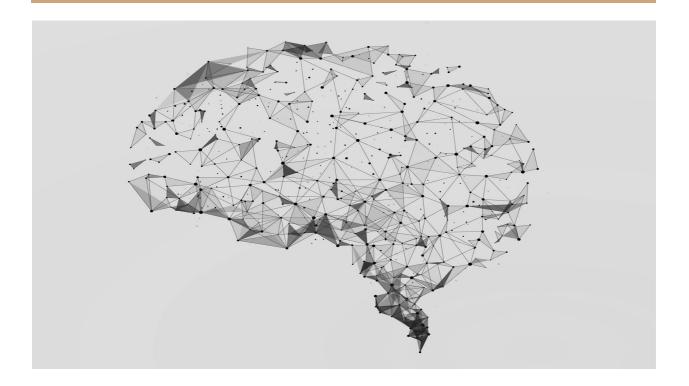# Brain-computer interfaces: Sci-fi or Reality?

Dr Romy Lorenz & Khosrov Alexander Grigoryan

Abstract

Hooking up a brain to a computer is no more science fiction but an actual field of research. However, it is important to have in mind a clear distinction between fiction and reality. During this workshop, you'll be introduced to the basics of Brain-Computer Interface (BCI) systems, their broad application areas but also their limitations. As an added bonus, we'll debunk several media-reported "myths" on BCIs. The workshop will proceed in two sessions: theoretical (20 min), and practical (40 min), during which a BCI system detecting brain waves (EEG) associated with the imagination of hand movements is demonstrated with help from a brave volunteer*.

*No volunteer will be harmed during the demo :)

Learning Objectives:

Basic understanding of BCI principles;
Basic understanding of different types of BCIs and EEG-based control signals;
Basic knowledge of BCI application potential and limitations.

Level:

Basic/Introductory

Room/Equipment needs:

Seminar room, projector, BCI system