## **SIKS-Symposium on Brain Computer Interfaces**

It is our pleasure to invite you to the mini symposium "Brain Computer Interfaces", to be held on October 21 on the occasion of the PhD defense of Boris Reuderink. The event is part of the Advanced Components stage of SIKS educational program. Especially SIKS-PhD-students working on the focus of Human Computer Interaction are strongly encouraged to participate.

The tentative program is as follows:

10:45 hour: Fabien Lotte (INRIA Bordeaux): Robust classification of EEG signals & Virtual Reality applications of Brain Computer Interfaces

## Abstract:

In order to use a Brain-Computer Interface (BCI) in a concrete application, it is necessary to robustly identify the BCI user's mental state. This happens to be a difficult task, due to the noisy and non-stationary nature of EEG signals. Moreover, the number of EEG trials available to calibrate the BCI is usually rather limited. In this talk, I will present a few approaches to address these issues, such as suitable regularization techniques to exploit prior information or artificial EEG data generation. I will finish this talk with a concrete example of BCI application in which a user can explore a virtual museum by means of brain activity.

11:30 hour: Peter Desain (Radboud University): Title and abstract to be announced later

12:15 hour: Lunch and demo's

13:30 hour: Klaus-Robert Mueller (TU Berlin): Learning under non stationarity with application to Brain Computer Interfaces

Following the symposium, at 16:30, Boris Reuderink will give hour a short introduction of the work that he did in the past few years, concerning "Robust Brain Computer Interfaces". Immediately thereafter, the official defense will take place.

You are kindly invited to attend the symposium as well as the introduction and the defense. Registration is not mandatory; however, if you announce your intention to participate in the symposium we can take it into account when organizing coffee and lunch.

Date: October 21 Location: University of Twente Room: to be announced in due time Registration: by email to <u>m.poel@utwente.nl</u>