

Universität Regensburg · D-93040 Regensburg

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**Prof. Dr. Mark W. Greenlee**  
**Lehrstuhl für Allgem. Experimentelle Psychologie**  
**und Methodenlehre**

Telefon +49 941 943-3281

Telefax +49 941 943-3233

Sekretariat:

Telefon +49 941 943-2402

Telefax +49 941 943-3233

Universitätsstraße 31

D-93053 Regensburg

mark.greenlee@psychologie.uni-regensburg.de  
www.uni-regensburg.de

## Vortragseinladung

**Montag, den 05.02.2018, 14 ct****Thema: Towards a general event detector for head-mounted eye trackers****Ort: Universität Regensburg, VG 0.04 (Vielberth-Gebäude)****Referent: Prof. Dr. Kenneth Holmqvist, Visiting Professor,  
Institute of Psychology, University of Regensburg**

Algorithmic event-detection for remote and tower eye-trackers have existed for half a century. Event classification for data from these eye-trackers is now as good as or even slightly better in some algorithms than what expert human coders can perform. These new algorithms are also increasingly noise-resilient and can detect more events than before, such as PSOs and smooth pursuit. In contrast, for head-mounted eye-trackers, no algorithms exist that can reliably detect fixations and saccades in the data. This is because head-mounted eye-trackers overlay head movements onto the eye-movement signal, so that saccade profiles are smoothed and fixations look like smooth pursuit, which confuses existing algorithms for monitor-based studies when used for head-mounted data. Head-mounted eye-trackers also tend to output specific eye-movements such as the vestibular-ocular reflex or motion-induced events such as spontaneous optokinetic nystagmus and vergence that are seldom of interest in monitor-based eye tracking. If all these events could be detected, it would not only allow for correct measurement of fixations and saccades from head-mounted eye-trackers, but open up for studies that use many new measures. In my presentation I will describe the method we are using to solve this problem, and the challenges that we have encountered so far.