Universität Regensburg

FAKULTÄT PSYCHOLOGIE
PÄDAGOGIK UND SPORTWISSENSCHAFTEN
Institut für Psychologie

Universität Regensburg · D-93040 Regensburg

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

26.09.2017

Vortragseinladung

Montag, den 09.10.2017, 14 ct, VG 1.31

Thema: **Two aspects of multisensory integration for self-motion perception**

Ort: **Universität Regensburg, VG 1.31 (Vielberth-Gebäude)**

Referent: **Professor Kenzo Sakurai, Department of Psychology**
Tohoku Gakuin University, Sendai, Japan

Perception of self-motion is a typical case of multisensory processing mainly derived from simultaneous visual and vestibular inputs. One aspect is that these sensory inputs seem to be integrated in Bayesian fashion of weighted combination. Another aspect is that the integration seems to be an either-or process resulting in perceptual alternation. In this talk, I will report on a series of experiments conducted using a swing apparatus and provide evidence that the integration process for self-motion perception has these aspects. We investigated whether perceived directions of self-motion is multimodal integration of orthogonally directed visual and vestibular information. Observers passively experienced real oscillatory forward/backward somatic motion while viewing leftward/rightward visual flow patterns consistent with rightward/leftward body motion. They reported their perceived self-motion direction by a rod-pointing task. Results were in-between those specified by visual and vestibular information. We also measured the range of the multimodal integration by introducing multiple levels of angular differences between body-motion direction and visually specified motion direction. The equally weighted range reached up to 90 degrees angular differences. In 180 degrees angular difference condition, however, observers showed either-or responses rather than the weighted combination responses.

Supported by the JSPS Grant-in-Aid for Scientific Research (B) Grant Number 25285202 and Cooperative Research Project of the Research Institute of Electrical Communication, Tohoku University.