Moving forward: developing multi-method experimental approaches to investigate human locomotion in real life

Project description: Locomotion represents a fundamental motor skill and is an essential part of human everyday activities. Accounting for its relevance for self-dependent living, locomotion has always been in the focus of scientific interest in various fields of research and application. While important knowledge has been gained by investigating individual aspects of human locomotion in well-controlled, laboratory-based experimental settings within the different fields of research, interdisciplinary assessments of complex human locomotor behavior in ecologically valid, i.e., real-world conditions are still rare. To bridge the gap between well-controlled laboratory experiments and complex real-world locomotor behavior, experimental set-ups have to be developed and validated that enable multi-level behavioral assessment using multi-method approaches, such as e.g., combined mobile EEG and motion tracking. The aim of the project is to initiate a joint research program between the Center of Mobile Cognition, University of Stirling and the Sports and Cognition-Group at Leibniz University Hannover on this topic.

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