Travel time is widely accepted as a significant aspect of travel behavior and is commonly embedded in travel choice models. However, as the time perception theory suggests, humans tend to misperceive the duration of time intervals. A mismatch between the travel time that is included in travel choice models and the duration perceived by individuals could deteriorate the explanatory and prediction power of the applied models.

So far, the limited literature on the perception of travel time has been devoted to the perceived trip duration of commuting trips by car and public transport. Conversely, a lack of knowledge is noticed on the individual estimation of travel time of active mode trips, especially bike trips. This research intends to quantify the deviation between perceived and actual travel time of cyclists and define its determinants.

To reach the research objective, data was collected in the Netherlands, using the innovative UMO Research App mobile application. Via this app, objective and perceived travel times, as well as contextual features of the trips, were collected. More precisely, location, trip, and survey data were gathered for each registered cycling trip. The interaction of participants with the mobile application at the start and the end of their trips provided the necessary input for the derivation of the actual trip duration while perceived travel time was recorded in follow-up surveys. In these surveys, individuals also reported their trip satisfaction, information usage, duration expectation, stress level, and more.

Regression models will be applied to estimate the contribution of various variables such as stress level, sociodemographic and trip characteristics on travel time misperception. Preliminary findings suggest that there is a systematic difference between the subjective and the objective cycling duration.

**Keywords:** time perception, cycling, travel time, mobile application