

Estimating the Physical and Mental State of Drivers Using Physiological Indicators

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Using physiological data from a basic experiment simulating railroad driving in general participants, we studied a method for detecting mental and physical states that may interfere with driving. As a result, characteristic changes in brain activity are observed in the group that experienced a psychological upset. In addition, we selected heart rate and respiration as physiological indices that can be easily measured during driving and proposed a method for selecting effective indices for estimating mental and physical states for each individual. We examine the relationship between brain activity associated with psychological agitation and a questionnaire score on resilience (ability to adapt well) and find a weak correlation between them.