

## Summary

**Work title:** The discomfort experienced by racing drivers when driving in comparison to the discomfort experienced by ordinary drivers of passenger cars.

**Work objectives:** The objective of this theses is actual detection of discomfort and comparison of the reaction time of professional racing drivers with drivers of passenger vehicles when driving and mutual comparison of their results. By using subjective and objective methods we will monitor and record how discomfort is manifested by individuals, how it influences their complexly dealing with movement manoeuvres and how it changes in time during the course of driving..

**Method:** Three professional racing drivers and a sample of randomly chosen subjects ranging in age from 20-28 years were tested in a reaction and decision making test, requiring reactions to visual impulses from the upper and lower limbs. Additional tests evaluated the discomfort of the test subjects and the current mental state of the individual.

**Results:** With regard to the current mental state of the individual the mood profile of the professional drivers was 5 points more stable, which shows that the racing drivers have a greater mental endurance in comparison to ordinary passenger vehicle drivers. The discomfort intensity was 5.34 points lower for professional drivers compared to ordinary drivers. The reaction time of racing drivers was markedly better than that of ordinary drivers of passenger vehicles.

**Key words:** Professional car racing drivers, ordinary drivers of passenger vehicles, driving simulation, reaction time, discomfort, mood profile.