

## Divera Twisk - SWOV

Several studies have demonstrated human failure to be the cause of the vast majority of injuries in road traffic. Understanding the causes of these failures and the implementation of effective remedies has led to a substantial reduction in injury crashes in most Western countries. This presentation will illustrate how in addition to road engineering and car design, psychology and in particular psychophysiology has contributed to these improvements. Examples come from fields such as the impact of fatigue & workload, distraction & hazard perception, fear & anger, and that of alcohol & drugs. Further psychophysiology plays an important role in identifying groups with elevated risks, because of medical conditions such as ADHD or Alzheimers. Methods used in these studies include eye tracking, workload measures, reaction times, and - less successful - skin conduction measures. The presentation will further illustrate how methods developed to be used in laboratory conditions are successfully introduced in on-road studies.