

## **Driver's Reactions to Automated vehicles: Why do partially automated vehicles crash?**

### **Abstract:**

Over the past two decades, Prof Stanton and his research team have been testing the effects of automated driving on drivers - in simulators, on test-tracks, as well as on open roads. These studies have revealed that drivers of automated vehicles are less able to respond in an emergency than when driving manually. Prof Stanton asserts that the role of monitoring automation continuously with the task of intervening only very occasionally is (almost) impossible for drivers to undertake effectively (particularly for an extended duration). In fact, if drivers attempt to monitor as they are expected to do, it actually places greater mental demand on them than driving manually. In any case, they cannot sustain this level of attention for long. What happens in reality is that drivers adopt a more passive 'passenger' mentality, and start engaging with other tasks and devices in their vehicles. Watching vehicle automation for any extended period is very boring. These studies have led Prof Stanton and his team to the conclusion that partially automated driving (especially where the driver is expected to monitor and intervene) is a really bad idea. In this provocative presentation, he will present some of his research team's studies in simulators and on UK roads to explain why partially automated vehicles crash.