

Simulation, physiology and real-world driver behavior in the internet-of-things

Driving simulators, instrumented vehicles and real-world sensors in the “internet of things” are revealing heretofore-unknown phenotypes of driver behavior and performance. Doctors, engineers, psychology and computer science experts are discovering links between health-related functional declines and driver safety.

This translational research is informing systems (e.g., driver monitoring, collision warning, “smart” cars with differing levels of autonomy) designed to improve mobility and safety in drivers with a range of disorders. This talk considers cars as tools for detecting and responding to driver impairments in health, aging and medical disorders; connected to sensors deployed at home, at work, and on the driver; and linked to clinical trials, EMRs and healthcare networks for improving patient/driver mobility, safety and quality of life.