The advent of autonomous vehicles is both exciting and alarming. The success or failure of such systems will very much depend on the driver-vehicle interaction: whether people have a good assessment of what the car perceives and is likely to do, and how they might respond to different situations. In my research lab, we are looking at how people will interact with vehicles in the future, particularly around shared control with automation, the emotional experience of automated driving, and opportunities of learning and adaptation. By using simulation technologies and techniques we can prototype and test interfaces to understand how best to design our future automobiles.