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Developing Socially Acceptable Autonomous Vehicles

There are few new technologies these days that speak to the imagination like autonomous vehicles (AVs). A future with zero accidents, mobility access for all, and the possibility of reducing green house emissions would serve a social good and make AVs very desirable. AVs will also enable new businesses in the mobility sector. The regulators are frantically trying to adapt the rules of the road to allow testing of this new technology while maintaining public safety.

And yet, there remain formidable hurdles to the technological development of AVs, challenges that, I will argue, have their root in the social nature of driving; the normative nature of the rules of the road, and perhaps especially the interaction between AVs and other road users—pedestrians, bicyclists, motorcyclist, and other drivers. AVs cannot yet operate reliably in all contexts, and in places where traffic is self-organized it has proven difficult to find a comfortable median between yielding incessantly to other road users and being overly aggressive. Movement on the road is an act of communication about one's intentions, and it is this communicative aspect of movement that is still hard for AVs to perceive, let alone deliberately execute, as communication has not been at the forefront of technology development. This talk will outline the social challenges of autonomous driving and how Alliance Research Laboratory is working to address these challenges to construct what we call socially acceptable autonomous driving.