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The Design and Modeling of Intelligent Learners Assistance System (ILASS)

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Abstract : The problem of vehicle mishap as a result of miscalculation, recklessness, or malfunction of some part in a vehicle is acknowledged to be a global issue. In most of the cases, it results into death or life injuries, all over the world; the issue becomes a nightmare to the stakeholders on how to curb mishaps on our roads due to these endemic factors. Hence this research typically examined the design of a device, specifically for learners that can lead to a society of intelligent vehicles (traffic) without withdrawing the driving authority from them, unlike pre-existing systems. Though ILASS shears a lot of principle with existing advance drivers assistance systems, yet there are two fundamental differences between ILASS system and existing systems. Firstly ILASS is meant to accept continuous input from the throttle at all time such that the devices will not constraint the driving process unnecessarily and ensure a change of speed at any point in time. Secondly, it made use of a variable threshold distance between the host vehicle and front vehicle which can be set by the host driver under the constraint of road maintenance agency, who communicates the minimum possible threshold for a different lane to the host vehicle. The results obtained from the simulation of the ILASS system concluded that ILASS is a good solution to road accidents, particularly road accident which occurs as a result of driving at high speed.

Keywords : front-vehicle, host-speed, threshold-distance, ILASS
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