Fuzzy Logic Concept for Safety Driven Vehicle-Pedestrian Traffic Interaction

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Abstract

In recent times, it has been discovered that fuzzy logic is an important tool for effective traffic control system. Research on intelligent traffic systems has revealed that the implementation of linguistic variables in fuzzy systems help in taking care of diverse possible decisions that can be taken by humans in traffic control. However, the majority of these works focus on vehicular traffic without adequate consideration for pedestrian crossings. This research therefore focuses on incorporation of pedestrian crossing variables into vehicular traffic control using fuzzy logic. The implementation of the fuzzy logic inference system was carried out using MATLAB 2014a. The impact of pedestrian delay, total pedestrian were part of consideration for signal time allocation. The result proved that pedestrian delay has significant contribution to traffic control systems to enhance safety of pedestrians.

References

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Index Terms

Computer Science Fuzzy Systems

Keywords

Fuzzy Logic, Pedestrian, Vehicular traffic control