
Departmental Seminar

Seminar Title : Conference Return Seminar: Data-Driven Three-Wheeler Delay Prediction in Mixed Traffic conditions at Signalized Intersections Using YOLOv8 and Machine Learning

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Venue : CE Seminar Hall

Date and Time : 06 Jan 2025 (1200 noon)

Abstract : Signalized intersections they do make things quite difficult in traffics management, particularly in developing countries like India where explicit traffic controlling measures often are not there. These intersections then become the hotspots for a lot of conflicts and collisions because of the lack of defined priority movements. Spearman's correlation analysis and ANOVA test were performed to identify the variable with a significant impact on the Delay model, which in turn influences 3W Delay. Red time, Effective width of approach, Volume per effective width, Queue length, Effective green time per cycle Time, Volume per Capacity ratio and Average Three-Wheeled Vehicle Speed at the Intersection are significant parameters included in this study. Using these variables as model inputs, SVR approach is employed to develop Delay models for Signalized intersections and compared with proven MLR modelling approach. Based on statistical parameters like the coefficient of determination (R^2), the performance prediction of the best fit SVR model was evaluated.