

## **ABSTRACT**

*Elements of road traffic performance includes several parameters such as capacity, speed, delay, and density. In this research, Nagel-Schreckenberg (Nasch) and Rickert-Nagel-Schreckenberg-Latour (RNSL) a microscopic model based on cellular automata are used to set rules of change of pace and movement of vehicles from one lane to another lane. Implementation of both models in the simulation is used to create a graph of flow and density through changing parameters. The graph will be analyzed. There are a total of six scenarios simulations done by distinguishing number of iterations, the number of samples, as well as the possibility of switching lanes. The greater the number of iterations, then the value of flow and density will increasingly converge at one point. While the transfer of vehicle lanes result in reduced flow and the growing density in a row.*

*Keywords : Cellular Automata, NaSch, RNSL, Traffic Movement*