

**PROTOTYPE SISTEM PARKIR OTOMATIS METODE TRAJECTORY
TRACKING CONTROL** (*Prototype auto parking system using trajectory
tracking control*). Pembimbing (Mochamad Irwan Nari, ST, MT)

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ABSTRACT

The difficulty when parking backwards is to adjust the steering wheel so that the car can park properly. Based on these problem, this study was aimed to autonomous reverse-parking. To increase success parking, trajectory tracking method with fuzzy logic control have implemented on 1/7.5 prototype model. Position from bicycle kinematic model compared with trajectory reference. The difference of current position with trajectory reference calculated with fuzzy logic controller to turn a servo as a steer. Emergency brake system also embedded in this study to maintain safety parking. The result showed that the position error of car when using fuzzy logic control is 1.58cm and 1.48°. The result when emergency brake sistem detected obstacle during parking is increased to 1.82 cm and 1.48°

Key words: trajectory, emergency brake, fuzzy